A CONTRIBUTION TO THE KNOWLEDGE OF THE MELASTOMATACEAE OCCURRING IN THE MALAY ARCHIPELAGO ESPECIALLY IN THE NETHERLANDS EAST INDIES

by

R. C. BAKHUIZEN VAN DEN BRINK Jr. (Utrecht).

CONTENTS

page

I. INTRODUCTION 2
List of herbarium abbreviations 4
II. GENERAL PART 4
A. Survey of the literature dealing with the Malayan Melastomataceae 4
B. Geographical distribution and affinities 8
C. Habitat 11
D. Use 16
E. List of literature belonging to the general part 18
III. CRITICAL PART 19
A. General remarks on the Melastomataceae 19
B. Critical survey of the Malayan genera. 22
IV. TAXONOMICAL PART 37
V. COLLECTORS' NUMBERS 368
VI. VERNACULAR NAMES 375
VII. INDEX NOMINUM 378

I. INTRODUCTION.

Originally it had been my intention to write a monograph of the Melastomataceae occurring in the Malay Archipelago. Owing to difficulties caused by the development of the political situation it was impossible for me, to carry out this plan to its full extent. As the important collections of the Herbarium of the Buitenzorg Botanical Garden could not be consulted and as most foreign herbaria too were inaccessible, I had to restrict myself almost entirely to the study of the collections preserved in the Utrecht and Leyden Herbaria. These however, though not so rich as those of the Buitenzorg herbarium, are very important, especially by the large number of type specimens. Of the great number of species described from parts of the Malay Archipelago outside the Dutch influence sphere, the types themselves could as a rule not be examined, and duplicates too were but rarely available. For this reason I was forced to restrict my endeavours almost entirely to the examination of the material collected in the parts known as the Netherlands East Indies. However, all genera known from the malayan region, for so far as they are in my opinion well-defined, have been incorporated in my keys.

A detailed study of the Netherlands East Indian species was possible for me, as almost all important types are present in the Leyden and Utrecht Herbaria. The Melastomataceae especially those from Sumatra, Java and New Guinea are richly represented in these collections. Borneo, Celebes and the Lesser Sunda Islands probably would yield interesting results. The rich collections obtained from British North Borneo and Sarawak make it probable that the harvest obtained from the Netherlands part of Borneo will also contain many new and interesting forms, but of these collections but a small part has been distributed so far by the Buitenzorg herbarium.

Although these studies therefore are but fragmentary and cannot be regarded as a complete monograph, they are nevertheless for convenience sake presented in the form used as a rule in monographic works. In the general part I have summarized and discussed our knowledge regarding distribution, habitat, use a.s.o. of the Malayan Melastomataceae. Moreover I have at the end of the general part given a list of literature dealing with subjects like anatomy, biology, and so on, which lie outside the scope of this work. I hope that my

work in this way may have become a useful prodrome to a comprehensive study of the Malayan Melastomataceae.

The regions studied embrace the Netherlands East Indies, namely: Sumatra with the islandgroups to the West and East of it, Java, Netherlands Borneo with the Anambas and Natuna Islands, Celebes with the Sangi and Talaud Islands, the Lesser Sunda Islands, except Portuguese Timor, the Moluccas and Netherlands New Guinea with the islets in the Geelvink Bay (See the map on p. 36). Owing to circumstances of various kinds, to my regret illustrations could not be given. The delimitation of the subfamilies has slightly been changed (v. infra) and for this reason but also because of the unsatisfactory nature of the existing ones, new keys have been worked out. Of the genera, not yet found in the Netherlands East Indies, descriptions have not been given but the literature dealing with them is duly recorded, and a few remarks on the number of species and their distribution have been added. In the descriptions of the species, in order to save space, works of a general nature and important special studies, are indicated by the name of the author and the characters „l.c." (loco citato) which refer to the list of literature accompanying the description of the genus. The synonymy has everywhere been verified by me, either by a study of the type specimens of the synonyms or by comparing their original descriptions. At the end of each genus I have added a list of those species, which have been described from the Netherlands East Indies, but which could not be incorporated in the key, because they were insufficiently known to me.

Acknowledgements:

I wish to express my indebtedness to all those who assisted me in one way or another with my work. In the first place my thanks are due to Prof. Dr. A. A. PULLE, Director of the Botanical Museum and Herbarium, Utrecht, on whose suggestion these studies were begun, for his interest in their progress which has been a great encouragement to me, and also for the aid he has given me in other respects.

For the liberality with which he has placed the collections of the Leyden Herbarium at my disposal I am greatly obliged to Prof. Dr. H. J. LAM, Director of the "Rijksherbarium".

To Dr. C. A. BACKER, Heemstede, I am much indebted for his valuable suggestions regarding the delimitation of some of the genera and for the way in which he discussed with me various problems.

To the Staff of the Botanical Museum and Herbarium, Utrecht, and especially to Dr. J. LANJOUW I tend my best thanks for the friendliness with which they were always prepared to help me.

Finally I wish to thank Prof. Dr. C. E. B. BREMEKAMP who was kind enough to read my manuscript and to help me with the translation of difficult passages.

List of herbarium abbreviations:

Buitenzorg: Herbarium en Museum voor Systematische Botanie van 's Lands Plantentuin [BZ]
Genève: Institut de Botanique Systématique de l'Université. G.
Hamburg: Institut für Allgemeine Botanik der Universität. HBG.
Leiden: Rijks Herbarium. L.
Manila: Philippine National Herbarium, Bureau of Science. PNH.
München: Botanische Anstalten M.
Pasoeroean: Herbarium of the Java Sugar Experiment Station PAS.
Peradenya: Gvt. Economic Botanist PDA.
Utrecht: Botanisch Museum en Herbarium U.

II. GENERAL PART.

A. Survey of the literature dealing with the Malayan Melastomataceae.

The first botanist to make an extensive study of the Malayan Melastomataceae was the Englishman WILLIAM JACK. His work on the Memecyleae and Melastomataceae appeared as a part of the "Descriptions of Malayan Plants" in "Malayan Miscellanies Vol. I § II", published at the Sumatran Mission Press, Bencoolen. 1820—1822. In a shipping - disaster his collections and manuscripts were lost, so that now several of his species cannot with certainty be identified. As the "Malayan Miscellanies" are a very rare book, his "Descriptions of Malayan Plants" have been reprinted in several periodicals. He mentioned 4 genera: Melastoma, Sonerila, Pternandra and Memecylon, together comprising 26 species, of which 14 occur in West Sumatra and other parts of the Archipelago. Between 1830—1860 much has been published on the Malayan Melastomataceae, part in the form of monographs (BLUME, NAUDIN), part in floras or other publications of a more comprehensive nature. (BLUME, KORTHALS, MORITZI, MIQUEL). After JACK, BLUME was the next botanist who made extensive studies on the Melastomataceae. His first publication appeared in „Bijdragen tot de Flora van Nederlandsch Indie" (1826). He distinguished here 3 genera: Melastoma, Tristemma (Osbeckia) and Astronia together with 36 species and Memecylon with 6 species was also dealt with, but this genus was placed in the

Myrtaceae. Among the 33 species of Melastoma several are at present referred to other genera: Pachycentria, Pogonanthera, Neodissochaeta, Diplectria, Medinilla, Macrolenes, Backeria, Hypenanthe, Creochiton and Kibessia. Of great importance was his next work „Over eenige Oost-Indische, in het bijzonder Javaansche Melastomaceae", published in Flora 14 (1831) and in „Bijdragen tot de natuurkundige wetenschappen VI" (1831). He now realized that Melastoma could not be considered as a natural genus, but had to be split up to several genera. The division into new genera was carried through with great skill and was at least for that time very satisfactory, for although the delimitation of the genera at the present time differs somewhat from that given by BLUME, his genera could for the greater part be maintained. In "Museum Botanicum Lugduno-Batavum I" (1849—1851), appeared from the hand of BLUME publications on the true Melastomataceae, and also for the first time an extensive study on the genus Memecylon. The latter work is not very satisfactory; many species have been based on small and illusive differences, so that it was necessary for me to reduce their number considerably. KORTHALS in Temminck's „Verhandelingen der natuurlijke Geschiedenis etc.", (1839—1842), published an excellent paper on Malayan Melastomaceae, which is especially interesting for the sketches regarding their habitat and for other information. MORITZI in „Zollinger, Systematisches Verzeichnisz" (1845—1846), enumerated many species, all found in Java. In this work is described the mysterious Lyndenia laurina Z. et M., which puzzled many specialists. NAUDIN's monograph on the Melastomataceae of the Paris Herbarium is of little interest for us as the representatives of the Malay Archipelago were but imperfectly known to him. Many species were not well defined and can be reduced to others. His views concerning the subdivisions of the family, has been fully accepted by MIQUEL in his „Flora van Nederlandsch-Indië I", (1855), a work which for the greater part is a compilation of the species known up to that time. TRIANA's deserving studies in the subdivisions of the Melastomateae in Trans. Linn. Soc. XXVIII (1871), are of little interest for the Malay Archipelago, as descriptions are very scanty and as the larger part of his work is merely an enumeration of the forms known at the time. COGNIAUX in De Candolle, Monographiae Phanerogamarum VII, (1891), dealt with the species from the whole world. This voluminous book has besides deserving qualities also disappointing ones. Owing to lack of material of the Asiatic species, his elaboration of the latter is much less satisfactory than that of the American species. Moreover in his keys to the higher systematic units he was not always consequent.

The Melastomataceae in BOERLAGE, Handleiding tot de kennis der Flora van Nederlandsch-Indie I (1890), are deservingly worked out. This has also been done by COGNIAUX. The descriptions confine themselves to the genera, but of each of them a list of species is given. This is the last publication dealing with the Melastomataceae of the whole Malayan region. The literature after 1891 consists only of studies dealing with more restricted areas. It seems to me advisable in continuing this survey to arrange these studies in a geographic, not in chronological order.

The Javanese Melastomataceae have been studied by KOORDERS and BACKER. The revision given by KOORDERS in his „Exkursions Flora von Java II", (1912), is not satisfactory: the short descriptions are for the greater part based on the more extensive ones of MIQUEL.

Detailed descriptions of several species, especially of the higher regions, are given in KOORDERS and VALETON „Bijdragen nr. 5 tot de Boomsoorten van Java", (1910) and in „Flora von Tjibodas". (1918). BACKER, the eminent investigator of the Java flora has lead down his wide knowledge of this flora, the fruit of many years of exploration and herbarium work, in the „Nooduitgave van de Flora van Java" (since 1941). This manuscript of the Melastomataceae has been kindly given to the present author to complete it according to his own views. In this manuscript BACKER has given his views concerning the delimitation of some of the genera (see in the critical part e.g. the discussion of Dissochaeta and its allies.). Collections made in Sumatra have been described in some periodicals by RIDLEY and BAKER f. In "Dr. H. O. FORBES's Malayan Plants", (in Journ. Bot. Vol. LXII Suppl. I (1924)), worked out for the greater part by BAKER f., one finds a rather extensive list of Melastomataceae collected in Sumatra and Java. A survey of the plants (a few number of Melastomataceae included) collected in the Mentawei Islands by C. Boden Kloss is given by RIDLEY in Kew. Bull. (1926). The Melastomataceae of the Dutch part of Borneo were studied by SCHWARTZ only, who in Mitt. Inst. Bot. Hamburg, 1931, dealt with the Winkler's collection from West Borneo.

On the Melastomataceae of Celebes, KOORDERS gave a few notes in „Mededeelingen van 's Lands Plantentuin nr. XIX. 1898" and an enumeration of his plants is given too in KOORDERS-SCHUMACHER „Systematisches Verzeichnisz III, Abt. Celebes". (1914).

New Guinea has with regards of the Melastomataceae been rather well explored. BAKER F., GIBBS and MANSFELD published meritorious studies. BAKER F. [in Trans. Linn. Soc. Sér. II. Vol. IX (1914)] worked out the collection of the Wollaston Expedition, in which the number of Medinilla species already was striking; in 1916 he gave in the

same periodical a compilation of all Papuan forms known at that time.

GIBBS in "Contributions to the Flora of the Arfak Mounts" (1917), studied a few forms. The last extensive work on the Papuan Melastomataceae is from the hand of MANSFELD, in Engl. Bot. Jahrb. 60 (1926) and in Nova Guinea Vol. XIV livr II (1927).

With a few words I will for the sake of completeness refer to the literature of the other parts of the Malayan region. The forms of the Malay Peninsula have been worked out in great detail by KING in King and Gamble's "Materials for a Flora of the Malay Peninsula" (Journ. As. Soc. Bengal. Vol. LXIX part II [1900]), and somewhat more cursorily by RIDLEY, in his "Flora of the Malay Peninsula. Vol. I", (1922).

The Melastomataceae of the British parts of Borneo have not yet been fully studied, although sufficient material is present (e.g. the collections of Mr. and Mrs. Clemens). COGNIAUX, STAPF and GIBBS have given some information regarding the Melastomataceae of these parts. STAPF in "On the flora of Mt. Kinabalu" [Trans. Linn. Soc. Bot. 2 sér. Vol. IV(1894—1896) p. 153] and GIBBS in "A contribution to the Flora and Plant-formations of Mt. Kinabalu and the Highlands of British North Borneo" [Journ. Linn. Soc. Vol. XLII [1914] Bot. p. 78] and MERRILL in „Plantae Elmerianae Borneenses" (Univ. Calif. Public. XV [1929] p. 222).

The Philippine species have been extensively studied by MERRILL a.o. in "Studies on Philippine Melastomataceae" (Philipp. Journ. Sc. Vol. VIII [1913] Bot. p. 207 and 335) and further one finds a list of all species known in his "Enumeration of Philippine Flowering plants", Vol. 3. fasc. 5 [1923] p. 185. ELMER too described many new species. The very large number of Medinilla, Astronia and Memecylon species described in these publications, can probably be strongly reduced. The diagnoses are extensive, but differential features are often hardly conspicuous and there appears to be much overlapping. So far as I have been able to study the duplicates present in the Utrecht and Leyden Herbaria, the Philippine species are as a rule different from those of other parts of the Malayan region, but several of them nevertheless can be reduced to them, and a thorough revision seems very desirable.

The Melastomataceae of the former Kaiser-Wilhelmsland (N. E. New Guinea) have been studied by SCHUMANN and LAUTERBACH, and more in detail by MANSFELD (v. supra).

B. Geographical distribution and affinities.

In despite of the insufficiency of the available material, which is partly due to the circumstance that regions such as North Sumatra, Borneo, Celebes, the Lesser Sunda Islands, the Moluccas and New Guinea are not yet fully explored, some conclusions with regard to the distribution and the affinities of the Malayan Melastomataceae may already be drawn.

Judging from the distribution of the species so far as they are now known I come to the conclusion, that most of the genera have their main area, i.e. their greatest number of species, in the Malayan region itself, for the same or at least closely allied genera and species are found in the Malay Peninsula, Sumatra, Java, Borneo and the Philippine Islands. Genera which have their main distribution on the Asiatic Continent are less well represented, and species with this kind of distribution are even rare. Genera which have their main distribution in the Papuan region are but few in number. Some of the larger genera are represented in this region by a larger number of species; allied species occurring mainly in the Philippine Islands and more rarely in the Moluccas and Celebes. Besides genera whose area extends either over a part of the Asiatic continent or to the Papuan region few are found, which are not all or but poorly represented outside the Archipelago and on whose affinities therefore the geographical distribution sheds no light (Everettia). Restricted to the Sunda Shelf and the Asiatic continent are the following genera: Plethiandra, Dalenia, Pomatostoma, Backeria, Sarcopyramis, Phyllagathis, Triuranthera, Enaulophyton, Oxyspora, Allomorphia, Krassera, Anerincleistus, Dactylocladus, Axinandra. Sarcopyramis has for a long time been considered as an exclusively continental genus, but this is not right. S. napalensis Wall. and S. lanceolata Wall. ex Bennett, it is true, occur in the Himalayan Mountains, but the other species are nearly all found in the Malay Archipelago, except one which occurs in Formosa. Of Phyllagathis many species have been described from S. E. Asia, but it is as yet not sure whether the latter really belong to this genus (see critical part). The genus in its original delimitation is mainly Malayan. Genera which belong predominantly to the Sahul Shelf are Hypenanthe, Poikilogyne and Dicerospermum. Hypenanthe setigera (Bl.) Bakh. f. is the only species belonging to the Sunda Shelf. Poikilogyne which up to a short time ago was known from New Guinea only, is represented in Borneo by P. biporosa Bakh. f. Dicerospermum is only known from New Guinea. Genera which are mainly represented in the Asiatic continent and in Malesia, but which possess a few representatives in the Papuan region are: Osbeckia, Omphalopus, Diplectria, Macrolenes (Marumia), Disso-

chaeta, Neodissochaeta, Sonerila, Ochthocharis, Pternandra, Kibessia. Osbeckia, with a predominantly continental distribution, comprises a few outlaying forms: O. papuana Cogn. (New Guinea) and O. dolichophylla Naud. (Celebes, Soembawa). Asiatic-Malayan genera with a few representatives in Celebes and the Lesser Sunda Islands are: Driessenia (Celebes) and Blastus (Flores). Genera abundantly represented both in the Malayan and in the Papuan regions are: Melastoma, Pachycentria, Medinilla, Otanthera, Astronia and Memecylon, and also the monotypic Pogonanthera. Melastoma is extraordinarily well represented in the Greater Sunda Islands and on the continent, but it also has many species in the Lesser Sunda Islands, and some in the Papuan region. Pachycentria develops in New Guinea a special subgenus, but is for the rest restricted to the region West of it. Medinilla has its principal area in Sumatra — Java — Borneo, the Philippine Islands and New Guinea, while the Lesser Sunda Islands are poor in species. Otanthera has as the main distribution the Philippine Islands, Celebes, the Moluccas and the Papuan region, but O. celebica Bl.has curiously enough been found in Celebes and in the Andamans and O. bracteata Korth. occurs in Sumatra but also in Australia, New Guinea and further there is the incompletely known O. nicobarensis T. et B. from the Nicobar Islands. Astronia has its main area in the Philippine Islands, the Moluccas and New Guinea; further it is poorly represented in the Greater and Lesser Sunda Islands, while on the continent only one species has been found.

Let us now consider the affinities of the Malayan Melastomataceae more in detail. The bulk of the genera has doubtless its main distribution in Asia, but some are almost entirely restricted to New Guinea and the Philippine Islands, without any or with very few representatives on the continent. May these genera be regarded as a typical Papuan element? That some genera e.g. Medinilla and Astronia are represented in the Papuan region by separate subgenera, cannot be denied. With LAM (Blumea [1934] p. 140) I agree that a typical Papuan element does not exist. The Papuan flora may have immigrated principally from the Asiatic continent. With regard to an eventual immigration from Australia it should be borne in mind that the scanty forms known from Australia are without exception related to Asiatic types. The Polynesian genera are apparently more isolated forms, but they appear to be confined to that region.

Let us compare the Malayan forms (53 genera with about 600 species; see table I and II.) with those of the continent; of the Malayan genera and species are found in the Malay Peninsula 23 genera and about 55 species, in British India 13 genera and about 20 species, in Siam 18 genera and about 23 species, in French Indo-China 14

Tab. I. Number of genera and species found in various parts of Asia and New Guinea (for the Netherlands East Indies the number is that of the forms examined by the present author).

	number of genera	number of species
South East Asia: (British India, Siam, French Indo-China, South China)	25	ca. 220
Malay Peninsula	26	ca. 240
Malay Archipelago: (incl. the Philippine Islands and Papua)	53	ca. 600
Netherlands East Indies.	38	ca. 300
Sumatra:	23	119
North Sumatra	6	7
Central Sumatra	19	86
South Sumatra	16	50
Island groups West of Sumatra	14	23
Riouw and Lingga Archipelago	10	17
Banka and Billiton	13	19
Java:	18	76
West Java	16	63
Central Java	7	18
East Java	7	14
Madura and Island groups in the Java Sea	3	4
Borneo: (Dutch Borneo)	22	69
Western Part	21	33
Southern and Eastern Part	22	57
British Borneo	17	ca. 100
Island groups in the South China Sea and Karimata Archipelago	8	13
The Lesser Sunda Islands	8	28
Celebes and neighbouring Islands:	13	35
Res. Manado	7	19
Gvt. Celebes and dependencies	10	16
Sangi and Talaud Islands	5	6
Moluccas	13	36
New Guinea	25	ca. 140
Dutch Part	15	44
Philippine Islands	19	ca. 220

genera and about 20 species and in South China 6 or 7 genera and about 4 species. The strongest affinity is apparently shown by the Malay Peninsula, then Siam and so on. South China has but very few forms in common with the Malay Archipelago.

Therefore it is clear that the Melastomataceae occurring in the Malay Archipelago have a distinct Malayan character. Exchange of genera and species with the continent may have taken place along the Sumatra track, while the Formosa-Luzon track at any rate was

not much used. Several genera have their main centre of distribution in the Papuan region and in the distribution of the species belonging to these genera, the New Guinea track which connects New Guinea with the Philippine Islands has doubtless been of great importance

C. Habitat.

The sociological characterization of a plant's habitat is doubtless in several respects a most convenient one. Unfortunately of the plant communities, in which the Malayan Melastomataceae occur, practically nothing is known. Some information, however, may be found in works like Junghuhn's Java, which depicts the vegetation from the physiognomic point of view, in vegetation sketches which from time to time have appeared in our periodicals, for instance, not rarely in the popular natural-history monthly „De Tropische Natuur" and further in the diaries of collectors.

Of Melastoma Boryanum Korth., KORTHALS mentions that the plant grew together with Nepenthes gracilis Korth.

Of Melastoma polyanthum Bl., a species which is very common in the whole Archipelago, our information is perhaps the most complete. CLASON l.c. "The vegetation of the Upper Badak region of Mt. Kelut (E. Java)" states that the plant commonly occurs in grass jungles, in company with Dodonaea viscosa, Breynia, Melochia and Ficus alba.

More is known of the climatological character of the habitats in which the Melastomataceae occur. Most species are found in shadowy humid sites in the primary forest; they are less abundant in the secondary forest, while but few species occur in dry sunny places as: along roads, in grass jungles, or still more rarely, in bamboo bushes, in hedges, in the neighbourhood of the sea, in swamps, in craters or near hot springs.

The Melastomataceae are found from sea-level to high in the mountains, but more abundantly between 0—1000 m. The optimum altitude however varies strongly owing to climatic differences in various parts of the Archipelago and also on account of specific differences in the composition of the flora. The highest localities from which species and genera have been recorded are found in Sumatra, Java, Bali and Lombok, the lowest in Borneo, the Moluccas and New Guinea. Although the abundance of high mountains in the South West part of the Archipelago may have something to do with this curious fact, it is probably not the only cause, for high mountains are found also in Celebes, Buru, Ceram and New Guinea. That toher causes must play a part is shown for instance by Astronia.

Tab. II. Detailed distribution of the species over South

+ means: number of species examined by the present author.
++ means: number of species given in literature of which no material has been seen by the present author.
° means: number of species not found in the Netherlands East Indies.

Genera	Sumatra		Java		Borneo			Celebes		Lesser Sunda Islands	
	+	++	+	++	+	++	°	+	++	+	++
Osbeckia	3		4		3			3		4	
Melastoma	19	8	12		5	1	2	6		11	1
Otanthera	1							1		1	
Heterocentron			1								
Clidemia	1		1			1					
Plethiandra							4				
Dalenia					1		1				
Omphalopus	1		1							1	
Boerlagea							1				
Pachycentria	2	1	2		1	3		1			
Pogonanthera	1	1	1		1	1					
Backeria	2		2		1						
Neodissochaeta	5		4		7			1			
Medinilla	23	9	13	1	4	6	4	12	2	4	
Diplectria	3		2		1			1			
Carionia											
Macrolenes	10	2	2	2	4	1					
Dissochaeta	11	4	5		3	3	6				
Hypenanthe	1				1			1			
Driessenia					1	3		1			
Sarcopyramis	3		1		1						
Sonerila	12	1	5		2	2	5	1	1		
Phyllogathis	2				3	4	3				
Triuranthera	1		1		1						
Cyanandrium							1				
Brittenia							1				
Enaulophyton					1						
Blastus	2				1					1	
Poikilogyne					1						
Dicerospermum											
Oxyspora	3	2									
Ochthocharis	2	1	1		4		1				
Allomorphia	3	3					5x				
Krassera					2						
Anerinclesitus	1				2	2	5x				
Creaghiella							2				
Astrocalyx											
Beccarianthus							1				
Creochiton			2				1				
Kibessia	6		1		8	2	7				
Pternandra	3				3			1			
Dactylocladus					1						
Axinandra					2						
Memecylon	23	1	13	3	15	2	8	5	1	3	

East Asia and the Malay Archipelago.
°° means: total number of species known.
( ) means: number of species which also occur in the Netherlands East Indies.
× means: at least the number mentioned.

Moluccas		New Guinea			Philippine Islands	Malay Peninsula	British India		Siam		French Indo-China		South China and Formosa.	
+	++	+	++	°	°°	°°	°°	( )	°°	( )	°	( )	°	( )
1		2			1	3	many	2	ca.12	1	15	2	very few	2
6		2	2	3	15	11	many	5	ca.11	4	15	6	few	1
2		4		5	5				2	1				
						1								
						1								
		1												
		3			1	2			1	1				
1		1			1	1								
		?1			1	1			1	1				
		1			2	2			2	2				
11		22	10	22	129	13	few		ca.7	?1	5	1		
2		1	1		?	2	1	1	1	1	1	1		
					2									
			1			1			3		1	?1		
2		2			2	8								
1		2			1									
					1	1	2	2	1	1			1	1
3		1			2	50	many	2	ca.25	1	13	1	few	
						6			2	1	2	1		
						2	1		1		4	1		
		3	1											
		1												
						1x	3		few		1			
1		1			2	6	2	2			1	1		
						1x	few		ca.10		8	very few		
					1	few	few				3			
					1 or 2									
				2	3									
				4	2									
				2	few	5			1					
1				1	?	3	1	1	1	1	2			
						1		1	1					
3		1	2	14	41	32	many	3	35	8	18	4	very few	

This genus is represented in Sumatra, Java and Bali by species which occur as a rule above 1000 m., while the species occurring in the Eastern part of the Archipelago mainly have been found at much lower altitudes. Although the information with regard to the altitudes in which the various genera are found is far from complete and certainly not always sufficiently exact, it seems nevertheless of enough importance to be recorded. The available data therefore have been summarized in the following table.

Tab. III. Vertical distribution of the genera in the Malayan Archipelago.

Osbeckia		0—2000 m	Phyllagathis		70—1200 m
Melastoma		0—2500 m	Triuranthera		400— 600 m
Heterocentron		700—1800 m	Cyanandrium	below	500 m
Otanthera		0—2000 m	Brittenia	below	500 m
Clidemia		5—1350 m	Enaulophyton		300 m
Plethiandra	below	500 m	Blastus		150—1800 m, mostly above 500 m
Pomatostoma	below	500 m			
Dalenia	below	500 m	Poikilogyne	below	500—1900 m, mostly above 1000 m
Omphalopus		400—1100 m			
Boerlagea	below	500 m			
Pachycentria		225—1800 m, mostly above 500 m	Dicerospermum		40— 240 m
			Oxyspora		100—1500 m, mostly above 500 m
Pogonanthera		0—1700 m			
Backeria		30— 600 m	Ochthocharis	near sea level	
Neodissochaeta		10—1500 m, mostly below 1000 m	Allomorphia		230—1900 m
			Krassera		170— 500 m
			Anerincleistus		10—1000 m
Medinilla		0—2750 m	Creaghiella	below	500 m
Diplectria		100—1000 m	Astrocalyx	below	500 m
Carionia		1000—1600 m	Astronia		50—2200 m
Macrolenes		10—1300 m, mostly below 500 m	Beccarianthus	below	500 m
			Creochiton		600—1400 m
Dissochaeta		10—2500 m	Kibessia		15—2000 m
Hypenanthe		250—1750 m, mostly above 500 m	Pternandra		20— 100 m
			Dactylocladus		20— 500 m
Driessenia		500—1400 m	Axinandra	below	500 m
Sarcopyramis		600—2400 m mostly above 1000 m	Memecylon		0—1500 m, mostly between 100— 800 m
Sonerila		300—2300 m			

What forms occur in the diverse habitats and orographic zones?

Near the sea-shore:

Melastoma polyanthum Bl. in the East part of the Archipelago on coral reefs; Otanthera rostrata Bakh. f. (a little way behind the beach,

Ceram); Pogonanthera pulverulenta (Jack) Bl. (in mangrove swamps, New Guinea); Medinilla rhodorhachis Baker f. and M. warica Mansf. (on coral reefs, New Guinea); Ochthocharis javanica Bl., O. bornensis Bl. and O. paniculata Korth. (sea shore); Pternandra coerulescens Jack var. cyanea (Bl.) Cogn. (a little way behind the beach, Ceram); Memecylon edule Roxb. var. ovatum (Smith) Clarke sea (shore); M. floribundum Bl. (rocks near the sea); M. celebicum Bakh. f. (a little way behind the sea shore); M. myrsinoides Bl. (along the sea shore, Java, ex Koorders, Syst. Verz. I Java); M. Monchyanum Back. (in a swamp a little way behind the sea shore, Java, Backer, ex Manuscr. Flor. Java (1941) p. 34).

Alang-alang and other grass-jungles:

Osbeckia zeylanica L. f. (Talaud Archipelago), O. dolichophylla Naud. (Celebes); Melastoma trachyphyllum Back. (Java); M. setigerum Bl. (Java); M. normale D. Don. (Tidore); M. polyanthum Bl. (on several islands.)

Casuarina forest:

Melastoma trachyphyllum Back. (Lombok); M. polyanthum Bl. (Java); Medinilla speciosa (Bl.) Bl. (Lombok); Astronia spectabilis Bl. (Lombok).

Craters, solfataras, old lava streams:

Osbeckia dolichophylla Naud. var. abrupta Bakh. f. (crater, Celebes); Melastoma setigerum Bl., M. setigerum Bl. var. Molkenboerii (Miq.) Back., M. lanuginosum Bl., M. sylvaticum Bl. (in craters or in the neighbourhood of craters, Java); Medinilla javanensis (Bl.) Bl. and M. verrucosa (Bl.) Bl. (a.o. near craters); Dissochaeta leprosa (Bl.) Bl. (on old lava streams, Java); Sarcopyramis napalensis Wallich var. javanica (Z. et M.) Hochr. (a.o. near craters, Java); Sonerila tenuifolia Bl. (a.o. near craters).

Sunny sites:

Osbeckia zeylanica L. f. (in dry sawahs, along roads); Heterocentron roseum A. Braun et Bouchée (on old walls); Clidemia hirta (L.) D. Don (along roads, in plantations, in the undergrowth of the forest).

Calcareous soils:

Osbeckia chinensis L. (chalk hills, Madura); Melastoma polyanthum Bl. (several localities), M. trachyphyllum Back. (Lombok); Medinilla rhodorhachis Baker f. and M. warica Mansf. (coral reefs, New Guinea), M. speciosa (Bl.) Bl. (Lombok).

Strongly varying habitat:

Osbeckia zeylanica L. f. (on sawah dikes — in primary forest); Melastoma polyanthum Bl. (sunny, dry localities — shadowy, humid forest); Pogonanthera pulverulenta (Bl.) Bl. (on the sea shore — in the mountains).

With regard to their vertical distribution most of the genera may be said to occur as well in the tropical zone (0—1000 m) as in the montane zone (1000—2400 m); a few are ever represented in the subalpine zone (2400—4000 m), but not one is restricted to that region. (see table IV).

Tab. IV.

Altitudes	number of genera	number of species
0— 500 m	34	173
500—1000 m	26	97
1000—1500 m	20	77
1500—2400 m	15	45
2400—4000 m	4	7

The following genera are restricted to the colline zone (0—500 m): Dalenia, Enaulophyton, Ochthocharis, Pternandra and Axinandra, while Backeria and Triuranthera reach an altitude of 600 m.

The following species are found at 2000 m altitude and higher: Osbeckia dolichophylla Naud. var. abrupta Bakh. f. (2000 m); Melastoma polyanthum Bl. (2000 m); M. setigerum Bl. (2200 m); M. setigerum Bl. var. Molkenboerii (Miq.) Back. (2000 m); M. sylvaticum Bl. (2000 m); M. trachyphyllum Back. (2450 m); M. lanuginosum Bl. (2000 m); Otanthera cyanoides (Smith) Triana (2000 m); Dissochaeta intermedia Bl. (2500 m); Medinilla laurifolia (Bl.) Bl. (2000 m), M. javanensis (Bl.) Bl. (2750 m); M. bisetosa Bakh. f. (2200 m); M. Clarkei King (2300 m); M. verrucosa (Bl.) Bl. (2500 m); M. hypericifolia (Bl.) Bl. (2300 m); M. speciosa (Bl.) Bl. (2200 m); M. Schumanniana Mansf. (2400 m); Sarcopyramis napalensis Wallich (2300 m); S. delicata Merr. (2700 m); Sonerila tenuifolia Bl. (2300 m); Astronia spectabilis (Bl.) D.C. (2000 m).

True stenothermous genera do not occur in the Malay Archipelago. VAN STEENIS mentioned as genera occurring in the high mountains: Sarcopyramis and Poikilogyne. As Sarcopyramis gracilis Schwartz and Poikilogyne biporosa Bakh. f. have been found far below 1000 m, these genera can not be classified as stenothermous.

D. Use.

The Melastomataceae of the Malay Archipelago have on the whole but few useful properties. Of some species some useful applications are known; the wood is used as timber and fuel, sometimes as medicine; the leaves and the young shoots serve as medicine and as an

extra dish to add flavour to rice prepared in the Javanese way; the fruits are eaten as refreshment.

In the following paragraphs our knowledge of this topic is given in a more specified form.

Melastoma L.

The leaves possess various medicinal properties, and are, especially in Java, in accordance with the disease against which they are applied, used raw. Usually they are taken boiled or roasted or in combination with other ingredients. The young shoots have an acid taste and when used as food they are mostly boiled. The mature berries with their fleshy placenta are used as refreshment.

The plant produces good fuel (BACKER). This information applies especially M. polyanthum Bl. but of other species the berries also are eaten. (M. trachyphyllum Bl., M. setigerum Bl., M. setigerum Bl. var. Molkenboerii (Miq.) Back. and M. sylvaticum Bl.).

Otanthera Bl.

O. cyanoides (Smith) Triana. The roots are used as medicine against premature delivery, while the berries are eaten as refreshment

Clidemia D. Don.

C. hirta (L.) D. Don contains according to BOORSMA medicina properties. The slightly sweet berries are edible.

Macrolenes Naud.

M. muscosa (Bl.) Bakh. f. The young shoots are eaten by the natives as relish to flavour their rice and have a slightly acid taste.

The berries are in great favour for the sweet taste, which resembles that of strawberry jam. The juice obtained from the stem is used as medicine against sore eyes and bloody stool.

Medinilla Gaud.

With regard to the few species taken up in literature, HEYNE mentions, that diverse forms have medicinal properties.

M. crassifolia (Reinw. ex Blume) Bl. var. Hasseltii (Bl.) Bakh. f: the sour leaves are consumed as side-dish, while the berries are used as a substitute for tamarind. (S. Sumatra).

M. radicans (Bl.) Bl.: the juice obtained from the bark is used to colour the bamboo strips which are employed as plainting material (Java). The leaves have medicinal properties. M. javanensis (Bl.) Bl. and M. intermedia Bl.: the berries are slightly sour. (KOORDERS). M. crispata (L.) Bl.: the leaves and the clinging roots have medicinal properties. M. crassinervia Bl.: the bark and leaves are also used as medicine.

Ochthocharis Bl.

O. bornensis Bl.: In Sumatra (Koeboelands) the leaves and fruits are eaten as a side-dish to rice.

Astronia Bl.

A. papetaria Bl.: the wood is used for poles in house-building. From the bark and leaves the natives prepare "obat papeda" for acidifying sauces. A. spectabilis Bl.: the wood is sporadically used for timber, although the quality is good.

Kibessia D.C.

K. azurea (Bl.) Bl.: the wood is used for building houses, but the quality is inferior.

Memecylon L.

M. costatum Miq.: the wood is very hard and much favoured by the natives for the construction of furniture and houses. The wood is also used as medicine. According to JUNGHUHN an extract is made in Java from the bark and wood, which is used for staining textiles in a dark colour.

M. garcinioides Bl. In Sumatra (Koeboelands) the very hard wood is used for walking sticks. M. oligoneurum Bl.: the wood is very hard and is used for making instruments.

E. List of literature belonging to the general part.

1. *Plantgeography, plant-community and habitat.*

BACKER: The problem of Krakatao as seen by a botanist (1929) p. 150; CLASON in Bull. Jard. Bot. Buitenzorg sér. III vol. XIII. livr. 3 (1935) p. 509; JUNGHUHN: Java (1853) p. 319—663; KORTHALS in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 218; KRASSER in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 141; MASSART: Un botaniste en Malaisie (1895) p. 14—131; VAN STEENIS, "On the origin of Malayan mountain Flora" in Bull. Jard. Bot. Buitenzorg sér. III vol. XIII livr. 2 (1934) p. 227.

2. *Use.*

"ERYTHRINA" in Trop. Nat. IV (1915) p. 181; BISSCHOP GREVELINK: Plant. Ned. Ind. bruikbaar voor Handel, etc. (1883) p. 163; HEYNE: De nuttige Planten van Nederlandsch-Indië II (1927) p. 1203; JUNGHUHN: Java (1853) p. 505—506; Mevr. J. KLOPPENBURG-VERSTEEGH: Indische Planten en haar geneeskracht 3e dr. (1909); KRASSER in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7. (1893) p. 142; OCHSE (in coll. with R. C. BAKHUIZEN VAN DEN BRINK): Indische Groenten (1931) p. 842 (see here also list of literature); RUMPHIUS, Herb. Amboin. (ed. J. Burman) IV (1743) p. 134.

3. *Cecidiology and teratology.*

BACKER, Manuscr. Flor. Java, Melast. (1941) p. 30; CLARKE in Hook. f., Flora Brit. India II (1879) p. 551; COSTERUS and SMITH, "Studies in Tropical Teratology" in Ann. Jard. Bot. Buitenzorg sér. II vol. XIV (1916) p. 9; DOCTERS VAN LEEUWEN-REYNVAAN and DOCTERS VAN LEEUWEN: The Zoocecidia of the Netherlands East Indies (1926); idem in Nederl. Kruidk. Arch. nr. 51 (1941) p. 201. (see also list of literature); KING in Journ. As. Soc. Bengal vol. LXIX part. II (1900) p. 68.

4. *Biology.*

BACKER: The problem of Krakatao as seen by a botanist (1929) p. 150; BECCARI, Malesia vol. II fasc. 4 (1886) p. 234; KRASSER in Engl. u. Prantl., Die Nat. Pfl. Fam. III 7 (1893) p. 139; PENZIG in Ann. Jard. Bot. Buitenzorg sér. II vol. III (1902) p. 111; SCHUMANN in Pringsheim's Jahrb. Wiss. Bot. Bd. 19 (1887) p. 133—193 and Bd. 19 (1888) p. 357.

5. *Anatomy-morphology.*

ENDERT: Geslachtstabellen Ned. Ind. boomsoorten. Veget. Kenm. (1928); KRASSER in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7. (1893) p. 133; MOLL UND JANSSONIUS: Mikrogr. Holzes Java III (1918) p. 518; VAN TIEGHEM, "La structure et les affinitées des Memecylées" in Ann. Sc. Nat. sér. 7. XIII (1891) p. 23: idem; Classific. Anat. Melast., in Bull. Soc. Bot. France sér. II XIII (1891); VÖCHTING, „Der Bau und Entwicklung des Stammes der Melastomeen" in Hanstein's Bot. Abhandl. III 1. (1875) p. 1.

6. *Vernacular names.*

DE CLERCQ: Nieuw Plantk. Woordenboek Ned. Ind. (1927) (bew. Dr. A. A. PULLE); OCHSE (in coll. with R. C. BAKHUIZEN VAN DEN BRINK): Indische Groenten (1931) p. 797; RIDLEY: List of Malay Plant names (1897).

III. CRITICAL PART.

A. General remarks on the Melastomataceae.

As I had to confine myself to the forms occurring in the Malay Archipelago, it is impossible for me to examine here fully and critically either the problem of the place which the Melastomataceae occupy in the system of the Dicotyledones or the correct delimitation

of its subfamilies and tribes. It is rather astonishing how little consistent the existing keys really are and how little attention has been paid both by COGNIAUX and KRASSER to exceptions. Before entering on a general discussion of my topic, I will give here some examples of inconsistencies found in the keys.

The subfamilies Melastomatoideae and Astronioideae are strongly contrasted with the subfamily Memecyloideae by the oppostion: Fruit manyseeded. Embryo small — Fruit bearing 1 to 5 seeds. Embryo large. Yet it is not so simple as this, for if so, the Memecyloideae would have been separated already long ago from the other subfamilies and raised to family rank. That the Memecyloideae are still considered as part of the Melastomataceae is due to the fact that transitions are found in the Melastomatoideae-Tamoneae (sensu KRASSER). Fruits with not more than five large seeds are found a.o. in Tamonea and here too the embryo is rather large, and these characters therefore cannot be regarded as sufficient to characterize the Memecyloideae. In a key these exceptions of course may not be omitted. The presence or absence of an appendage at the back of the connective has been used for the distinction of the two tribes, but as in each of them exceptions occur the appendage is said to be "mostly" present in the first and "mostly" absent in the second.

The Sonerileae have been separated from the Bertolonieae because their flowers are isomerous instead of anisomerous. This character, however, is not at all constant and is therefore completely insufficient as diagnostic (cf. Sonerila). In my opinion these two tribes could quite well be united, because the Bertolonieae are decidedly "Sonerilous forms" and there are no consistent differences between them. The Oxysporeae have been separated from the Sonerileae by the characters of the capsule, but transitions are found in Allomorphia and Sonerila. Should these two tribes be maintained, then in the construction of the key the exceptions must all be taken into account.

As the old keys to the subfamily and tribes therefore can hardly be considered as serviceable, I have made a new one, in which the essential differences which were known to me, have all been used.

The Melastomataceae belong to the order Myrtales. With regard to their habit, the flower characters and the wood structure, they show on the one hand affinities with the Myrtaceae, on the other with the Lythraceae. According to KRASSER the Melastomataceae essentially differ from the Myrtaceae by the total lack of oil-glands in the leaves and from the Lythraceae by the characteristic shape of the stamens and by the position which the latter occupy in the bud.

The anthers are mostly dehiscing with one or two terminal pores,

(the bulk of the Melastomatoideae), but in the Astronioideae and the Memecyloideae they dehisce with longitudinal slits. Terminal pores are found in the Myrtales further in some Myrtaceae only (Eucalyptus and partially in the Chamaelaucieae); in the other families one finds always longitudinal slits.

The connective is developed in various ways and is not rarely produced at the base. In the Myrtaceae too the connective varies, but not so conspicuously. At the top it is here in the same way as in Memecylon provided with glands. In the Combretaceae, the connective is often strongly developed and elongated in a short spur.

The leaves are in most of the genera curvinerved; penninerved leaves are very rare and may be derived from the curvinerved type. In all other groups of the Myrtales exclusively penninerved leaves are found. The pseudo-penninerved leaves occur especially in the Memecyloideae, which have often been considered as Myrtaceae (KORTHALS, BLUME).

The subfamilies of the Melastomataceae: Melastomatoideae, Astronioideae and Memecyloideae, show beside characteristic differences, also common features, which tend to make the separation difficult. The Astronieae (excl. Creochiton) have linear seeds, the Kibessieae on the contrary cuneate ones. Dicerospermum (Melastomatoideae) has also linear seeds. Fruits with a small number of large seeds are found not only in all Memecyloideae, but also in the Tamoneae (Melastomatoideae). A central placenta occurs in the genus Memecylon only, but on account of the characters of the flower and seed it resembles Mouriria, and the latter on its turn shows the same kind of placentation as the Tamoneae. The question whether the Memecyloideae ought to be raised to family rank, must, I think, be answered negatively, for despite the presence of large differences they are not sufficiently isolated from the rest of the Melastomataceae. A combination of the Memecyloideae with the Tamoneae must be rejected too, because only a few representatives of the Tamoneae are provided with the same small number of large seeds that characterizes the Memecyloideae; for the rest they differ in the floral characters fundamentally.

We arrive therefore at the conclusion that the Melastomataceae form a natural group of plants belonging to the Myrtales, and that they consist of three distinct subfamilies.

Fossil Melastomataceae are not certainly known. In Borneo rests have been found which GEYLER called Melastomites, but their affinity is dubious.

B. Critical survey of the Malayan genera.

Tribe Osbeckieae.

Osbeckia L.

This genus, as delimited by COGNIAUX, has been divided into 6 sections, the division resting upon the nature of the connective which is sometimes produced at the base and on the flowers being 4- or 5-merous. As but 7 of the more than 100 species and varieties occur in the Malay Archipelago, it was not possible for me to form myself an opinion with regard to the value of COGNIAUX's classification. The criterion "flowers 4- or 5-merous" however seems to me of very doubtful value. BLUME divided Osbeckia into several genera, but this is in my opinion not correct, although one must admit that there is a great diversity both in habit and in the shape of the anthers. However, as many transitional forms occur, it seemed to me advisable to maintain COGNIAUX's subdivisions as sections.

Melastoma L.

This genus is remarkable homogeneous and it is therefore difficult clearly to define its numerous species.

Its delimitation causes no difficulties, anyway solong we confine ourselves to its Asiatic allies. The distinction between Melastoma and the African genus Tristemma, which rests on the presence or absence of bracts and on differences in the indumentum covering the calyx tube, however, is of very dubious value; large bracts and bracteoles at any rate also occur in Melastoma.

To find a satisfying classification of the species is very difficult. The traditional division, which is based on the unequality of the stamens and the length of the connective, cannot be held up. As with regard to these characters every possible transition occurs.

M. polyanthum Bl. e.g. is said to differ from M. mariannum Naud. by its strongly produced connective, but the length of the projection varies from about 0 mm to 12 mm, so that a subdivision based on this feature has no value. (cf. MANSFELD in Engl. Bot. Jahrb. 60 [1926] p. 108). This does not mean that M. polyanthum Bl. and M. mariannum Naud., are either identic or mere varieties of the same species, but only that they can not be distinguished by the aid of the connective. The only features which in a study of about 400 specimens belonging to more than forty species have proved serviceable for the subdivision of the genus, are the length of the hairs inserted on the calyx tube and the size of the bracts and of the calyx teeth. Curiously enough these characters are far more constant than one would have expected. GUILLAUMIN (Not. Syst. II [1911] p. 312) and some other authors already have tried to obtain a more

satisfactory subdivision by using characters of the vegetative parts.

Otanthera Bl.

This genus is closely allied to Melastoma and was by earlier authors not distinguished from the latter. BAILLON l.c. regards it as a section of Melastoma. A detailed examination shows that it is very difficult to draw the line between the two genera. Otanthera can not, as up to now has been customary, be separated from Melastoma by the subequal anthers and not or scarcely produced connective. The only difference I can find lies in the pericarp, which in Melastoma is thick and coriaceous and in Otanthera very thin. Although I cannot find a more satisfactory criterion, I provisionally maintain Otanthera as a distinct genus, because habitually it seems to me different from Melastoma, and it may be possible that if more material becomes available a really good distinction may be found.

Tribe Dissochaeteae.

Dalenia Korth.

On account of the presence of a calyx limb converted into a calyptra this genus is easily recognizable from all its allies. With regard to its systematical position Dalenia is a rather isolated genus. It comes perhaps nearest to Dissochaeta and Backeria.

Omphalopus Naud.

NAUDIN separated this genus from Dissochaeta on account of its undulate thecae and regarded it as a "subartificial genus".

It is true that sterile specimens can hardly be distinguished from Dissochaeta species However as its stamens remain incurved during anthesis and as the connective is provided with a phylloid appendage, its generic rank is in my opinion sufficiently justified.

Pachycentria Bl.

This genus resembles in its habit Medinilla, but differs from the latter mainly in the connection between ovary and calyx, which are not united to the same extent. The presence of a distinct spur at the base of the connective is not sufficient to distinguish this genus from Medinilla, in which this feature also occurs. Some Papuan species of Medinilla were transferred by me to Pachycentria.

Pogonanthera Bl.

The presence of a tuft of hairs dorsally of the connective separates Pogonanthera from Pachycentria to which it is closely allied. By its slightly auriculate leaves this monotypic genus is already recognizable in the sterile state.

Backeria Bakh. f. n. nom.

By the combination of the characteristic anthers and the shallow

exterovarial "chambers" and also by its remarkable habit, this genus is easily recognizable from all its allies. Backeria comprehends Aplectrum Bl. (in Flora [1831] not in Mus. Bot. Lugd.-Bat. [1849]) and some of the species referred to Anplectrum A. Gray by TRIANA and others. The genus had to be renamed because Aplectrum Bl. (1831) is a later homonym of Aplectrum Nutt (1818), which is an orchid, while Anplectrum A. Gray is a genus of a dubious character. It was based on A. ovalifolium, a plant from the Viti Islands, which COGNIAUX afterwards referred to Allomorphia. No material of this species was available to me, but on account of the data contained in the authentic description and also on account of its habitat, it seems to me that Anplectrum ovalifolium A. Gray can not be regarded as congeneric with the species described by TRIANA, but at the same time I am of opinion that COGNIAUX was wrong in referring Gray's species to Allomorphia. The plant might be a representive of the Astronioideae, but it is also possible that it does not belong to the Melastomataceae at all.

The new name for this genus has been chosen in honour of the eminent investigator of the Java flora Dr. C. A. BACKER (Heemstede, Holland), for whose scientific achievements I have a great admiration and to whom I am much indebted for the paternal interest he has always taken in me.

Neodissochaeta Bakh. f. n. gen.

This genus is allied to Diplectria Reichenb. and Medinilla Gaudich. It compresses the small-flowered species of the Dissochaeta-group. The exterovarial "chambers" descend sometimes to the middle of the ovary, but as a rule they do not extend so far. Neodissochaeta shows more resemblance with Diplectria than with Medinilla.

Medinilla Gaud.

In the delimitation of Medinilla as defined by most authors I have made scarcely any alterations, although it must be considered that this genus consists of very heterogeneous elements. This is also brought out by the many sections, in which it has been divided.

BLUME already separated from Medinilla a number of species for which he created the genera Pachycentria, Pogonanthera, Dactyliota and Hypenanthe. NAUDIN agreed with him, and continued in the same way by splitting of Erpetina, while MERRILL finally segregated Cephalomedinilla.

TRIANA, COGNIAUX, KRASSER and others on the contrary took a wider view of the genus and restricted themselves to the distinction of sections.

A more detailed examination has lead me to the conclusion that Medinilla as defined by these authors varies in habit as well as in

floral characters to such an extend, that the differences between the other genera of the tribe of the Dissochaeteae seem in comparison of little importance. The usual subdivision of the Dissochaeteae based on the length of the stamens and the characters of the connective, proved to be of absolutely no value. Medinilla consists qua habit of very heterogeneous elements (cf. the description of M. alternifolia Bl., M. hypericifolia [Bl.] Bl., M. myrtiformis [Naud.] Triana, M. pterocaula Bl., M. javanensis [Bl.] Bl.), and the floral characters too prove to be very different: the stamens are either equal and isomorphous (this is the common case) or unequal and dimorphous (M. Teysmanni Miq.); the connective may be produced at the base (M. crassinervia Bl.) or sessile (common case); its base may be either slightly two-lobed (common case) or setose (M. setosa Bakh. f.) or inappendiculate (M. alternifolia Bl.); the anthers may open with 1 or with 2 pores; the ovary is at the top sometimes provided with a disc; the flowers may vary between 4-, 5- or 6-merous or between 5- and 6-merous (M. crassinervia Bl.). Inconstant characters commonly used in keys are: the terminal or axillary position of the inflorescence and the number of parts in the flower. The latter is even particularly unreliable (cf. MANSFELD in Engl. Bot. Jahrb. Bd. 60 [1926] p. 117).

Most authors distinguish Medinilla by its ventrally appendiculate connective from Pachycentria whose connective is inappendiculate, but in M. alternifolia Bl. the connective is ventrally inappendiculate, so that this criterion looses its value. Since the unequality of the stamens is the base upon which Medinilla is separated from the other genera of the Dissochaeta-group and this condition proves to be inconstant in Medinilla all the generic delimitations within the Dissochaeteae become uncertain. The most important feature to disentangle these genera is the degree of concrescence between the ovary and the calyx tube. On account of this feature these genera can be more definitely delimitated against each other, than in any other way, while the other characters can be used for the distinction of groups of minor importance.

I have tried to divide Medinilla into two or more genera, but in this I did not succeed, because I could not examine the very numerous and doubtless very interesting Philippine species. However I reestablished Hypenanthe, which most authors had united with M.

Although I did not separate Medinilla into several genera, I found within the genus two distinct groups differing from each other in the thickness of the calyx wall, the length and shape of the stamens and the length of the ovary in relation to that of the calyx tube.

Special attention must be paid here to Hederella Stapf. (in Hook. f. Icon. Plant. tab. 2415).

The type species H. multiflora Stapf and also H. quintuplinervis (Cogn.) Stapf are certainly nearly related: they show the same ivy-like habit and the same strongly produced connective provided with distinct dorsal and ventral appendages. GILG (in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 Nachtr. [1897] p. 266) referred Hederella on account of the features of the connective to Dissochaeta, while MANSFELD (in Engl. Bot. Jahrb. Bd. 60 [1926] p. 113) united them with Medinilla. As Hederella certainly does not belong to Dissochaeta or its nearest allies but is more closely related to Medinilla with any hesitation I have referred Hederella as a section to Medinilla, but on account of insufficient material I have left its characters in my diagnoses out of consideration. The species belonging to the section Hederella are found both in Netherlands and British Borneo, in Sumatra (specimens sterile) and in N.E. New Guinea.

Diplectria Reichenb.

This genus resembles in its floral characters Neodissochaeta, but of the 8 exterovarial "chambers", 4 descend far beyond the middle of the ovary, while the other 4 ones are found only in the upper part of the ovary. Diplectria comprises Dissochaeta sect. Diplectriae Bl. and some of the species of Anplectrum A. Gray emend. Triana.

The delimitation given by KRASSER is not satisfactory, as it is based on the characters of the stamens. The species which provisionally have been transferred to Diplectria by KUNTZE belong but partly to this genus.

Macrolenes Naud. ex. mig.

NAUDIN transferred Maieta annulata Vent. to a new genus: Macrolenes. Triana placed Macrolenes annulata (Vent.) Naud. under Marumia. A study of the literature revealed that Marumia Bl. (1831) is a later homonym of Marumia Reinw. (in Syll. Plant. nov. Soc. Bot. Ratisb. [1828] p. 11), a Dilleniacea identic with Saurauia Willd. (cf. KORTHALS l.c. p. 120, BLUME in Bijdr. Nat. Wet. VI (1831) p. 245 and in Rumphia I [1835] p. 17). Marumia therefore is an invalid name for this Melastomataceous genus and as besides Macrolenes, of which NAUDIN gave no description, no other name has been published, I propose to accept this name. Macrolenes is closely allied to Dissochaeta. The only general difference I can find lies in the length of the calyx teeth. The connective is as a rule in Macrolenes provided with several appendages and in Dissochaeta with two only, but Macrolenes annulata (Vent.) Naud. and M. Ruttenii Bakh.f. form in this respect transitions to Dissochaeta, while on the other handDissochaeta hirsuta Hook. f. ex Triana resembles Macrolenes in habit. The species which BLUME referred to Marumia differ slightly

from the species on which the genus Macrolenes was based by their habit, but I do not hesitate to regard them as congeneric.

Dissochaeta Bl.

Dissochaeta (incl. Anplectrum spec.) belongs to the most difficult and confusing genera of the Malayan Melastomataceae. It consists of very heterogeneous elements, but on account of the transgressive variability of the floral characters, it was up to now not possible to classify the species in well-defined groups. The principal reason for this is to my opinion that all authors based their subdivisions on the characters of the connective, which are of no value whatever for the distinction of major groups. BLUME divided Dissochaeta and its nearest allies in: Dissochaeta with the sections Dissochaetae and Diplectriae, Aplectrum and Marumia. In his time this classification gave no rise to difficulties as but few forms were known.

As the number of species increased it becomes evident however that his delimitation of the genera was insufficient. Yet his view was in so far correct, that we have to do here with essentially different, although allied, forms. After BLUME several authors have tried to solve this problem. TRIANA considered Anplectrum A. Gray to be identic with Blume's Aplectrum and as the last name is a later homonym of Aplectrum Nutt., he used for the product of this fusion the name Anplectrum, Dissochaeta sect. Diplectriae was also included in it. This was the source of great confusion. Blume's Aplectrum (in Flora [1831], not in Mus. Bot. Lugd.-Bat. [1849]) certainly was a well-defined genus, Anplectrum A. Gray. emend Triana, an artificial mixture. All subsequent authors accepted TRIANA's unnatural delimitation of Dissochaeta and Anplectrum and it remained therefore practically impossible to distingnish the two genera. BACKER, who for years had observed these genera, came to the conclusion that Dissochaeta and Anplectrum must either be regarded as identic or that the delimitation of these genera must be changed fundamentally. BACKER found in the degree of concrescence between calyx tube and ovary and in the depth of the extraovarial "chambers", criteria on which a revolutionnary but much more satisfactory delimitation of the genera might be based. As the material at his disposition was insufficient, he left the elaboration of this new arrangement to me. On this base now I have carried through the delimitation of Dissochaeta and its nearest allies: Neodissochaeta, Backeria, Diplectria and Macrolenes. Dissochaeta is in its new delimitation nearly allied to Macrolenes, from which it differs a.o. by the slightly lobed calyx.

Hypenanthe Bl.

This genus is allied to Medinilla, but differs by the large size of

the bracts by which the flowers are more or less enveloped, by the pilose ovary and by the exterovarial "chambers" descending far beyond the middle of the ovary. Dactyliota is to my opinion identic with Hypenanthe.

Tribe Sonerileae.

Driessenia Korth.

In my opinion Driessenia is satisfactorily delimitated from the other genera of the Sonerileae by the characters of the connective, ovary and capsule.

BACKER transferred D. Winkleri Cogn. to Triuranthera, because it has no disc and RIDLEY reckoned D. scorpioidea Stapf on account of its "scorpioid cymes" to Campimia. I am as yet not fully convinced that the structure of the inflorescence is a sufficient ground to maintain Campimia as a distinct genus. In its floral characters it resembles Driessenia so closely that it is perhaps better to consider it as a section of the latter. As a rule Driessenia is considered a member of the Oxysporeae, but on account of its resemblance to Phyllagathis I transferred it to the Sonerileae.

Sarcopyramis Wall.

For a long time Sarcopyramis was considered a monotypic genus with S. napalensis Wall. as the only species, but this view appeared to be incorrect. Several new species could be distinguished not only on account of the floral characters, but also on their different habit. Sarcopyramis is closely allied to Sonerila, but essentially different on account of the produced dorsally appendiculate connective and the total concrescence between the ovary and calyx tube.

Sonerila Roxb.

As a rule this genus is easily recognizable by its habit. One should be careful however not to confuse it with Sarcopyramis, from which it differs by its not produced, inappendiculate connective. It is difficult to find a feature or combination of features, by which Sonerila is satisfactorily delimitated from its allies. Sonerila itself is not such a homogeneous genus as one might expect. The flowers are mostly 3-merous, but sometimes 4-merous; the number of stamens is normally 3, but in rare cases it may be 4 or 6.

From the trimerous forms of Phyllagathis it differs by the presence of a disc. Sonerila sect. Sonerilopsis Miq. has 6 stamens. The species belonging to this section nevertheless are so widely congeneric with the others that the doubling of the number of stamens must be regarded as a feature of minor importance. The capsule of Sonerila is as a rule acutely triangular, but it may also be terete-obconical (S. heterophylla Jack, S. begoniaefolia Bl.); it normally dehisces

with 3 valves, but sometimes with 6 teeth (sect. Hexodon Stapf.).

The species with terete fruits are an obstacle for the delimitation of the allied tribes Sonerileae and Oxysporeae, which depends mainly on the characters of the fruit. STAPF in "On the Sonerileae of Asia" (Ann. Bot. VI nr. XXIII [1892] p. 291) thought the delimitation of Sonerila not difficult, but his view is certainly incorrect. VAN STEENIS (in Bull. Jard. Bot. Buitenzorg sér. III Vol. XII livr. 2 [1932] p. 194) doubted the systematic value of a classification of the Sonerileae in 3-, 4- or 5-merous forms. With regards to the 3- or 4-merous species of the Sonerileae, I agree with VAN STEENIS that this criterion has on account of the numerous exceptions no great value, but the 5-merous species have up to now proved very constant. A subdivision based upon the characters of the connective and the concrescence between the ovary and calyx tube, is only more or less constant when applied in combination with the number of parts of the flowers.

Sonerila sect. Oxycentria Miq. is an Allomorphia, as GUILLAUMIN correctly concluded from the description.

Phyllagathis Bl.

Phyllagathis in its original delimitation is with its striking habit and also on account of the floral characters very different from all other genera. Through the flowers are normally 4-merous, they may apparently also be trimerous. P. rotundifolia (Jack) Bl. has, at least, according to BLUME both 3- and 4-merous flowers. Of late many Melastomataceae from S. China have been described as Phyllagathis species, but the acceptance of these species would require a change in the definition of the genus. The first to deviate from the original conception was STAPF. In Hook. f. Icon. Plant. tab. 2279 and 2280, he described as P. elliptica and P. uniflora two species which in habit are totally different from the Phyllagathis species of BLUME. The presence of a long-spurred connective and a distinct disc for instance are unusual for Phyllagathis. STAPF in "On the Sonerileae of Asia" (see above), distinguished two groups within the genus; one with P. rotundifolia (Jack) Bl. as standard form, the other with P. tonkinensis (Cogn.) Stapf [syn. Sonerila tonkinensis Cogn.); to the latter also belong P. elliptica Stapf and P. uniflora Stapf and the Chinese species. DIELS in „Beiträge zur Kenntnis der Melastomataceen Ostasiens" (Bot. Jahrb. 65 [1933] p. 114) wrote that many Chinese species have been wrongly referred to Phyllagathis, and he reestablished the genus in its original delimitation. According to DIELS, the number of stamens in Phyllagathis is either 8 (all fertile or 4 of them staminodial) or 4 (P. tetrandra Diels); P. chinensis Dunn he transferred to Sarcopyramis. I entirely agree with DIELS

and I refer the species described by STAPF therefore to a possibly new genus in the vicinity of Sarcopyramis and Sonerila.

Triuranthera Back.

BACKER described the type species of this genus under the name T. Bakhuizenii, but he recognized its identity with Driessenia Winkleri Cogn. so that the specific epithet had to be changed. He placed Triuranthera in the vicinity of Phyllagathis, a view with which I agree on account of the absence of the disc.

Enaulophyton v. Steenis.

VAN STEENIS in Bull. Jard. Bot. Buitenzorg sér. III Vol. XII livr. 2 [1932] p. 196, gave a key to the 5-merous Sonerileae: Cyanandrium, Brittenia and Enaulophyton. The last mentioned genus is closely allied to Brittenia, from which it differs by the number of connective appendages and the diameter of the filaments. Both genera resemble each other in habit. As Brittenia is unknown to me and as the exposition of VAN STEENIS is not unsatisfactory, I have provisionally accepted his genus. Cyanandrium is a totally different genus, habitually resembling Phyllagathis, but on account of the floral characters it is rightly considered as a distinct genus.

Tribe Oxysporeae.

Blastus Lour.

By the 4 anthers and undulate thecae Blastus distinguishes itsel easily from its allies. The flat, orbicular, orange-yellow glands, occurring especially on the leaves and calyx tube are very rarely absent (B. eglandulosus Stapf (ex Spare)).

STAPF in Hook. f. Icon. Plant. tab. 2311, identified Ochthocharis parviflora Cogn. as Blastus, which he gave the name B. Cogniauxii. The diagnosis of COGNIAUX makes STAPF's supposition probable, but COGNIAUX mentioned the number of 10 stamens, which is not in agreement with the 4 that are characteristic for Blastus. All subsequent authors have accepted STAPF's identification and though I am not sure that one of them examined the type (Beccari nr. 1403 from British Borneo), I too have accepted this view. The anomalous number of stamens figuring in COGNIAUX's description, I assume, must be a mistake. On this understanding I have entered Blastus Cogniauxii Stapf in my list of species.

Poikilogyne Baker f.

This genus has been created by BAKER F. (in Gibbs, Flor. Arfak Mts. [1917] p. 157) with P. arfakensis as the type species. He placed Poikilogyne on account of the baccate fruit in the tribe of the Dissochaeteae, more precisely in the vicinity of Omphalopus and Disso-

chaeta. MANSFELD (in Engl. Bot. Jahrb. 60 [1926] p. 109) however found that the fruit of Poikilogyne is a capsule, and that Allomorphia asperifolia Mansf. and Poikilogyne arfakensis Baker f. are conspecific. MANSFELD separated Allomorphia sect. Hollrungiophyta Cogn. from the rest of the genus and placed it under Poikilogyne in the tribe of the Oxysporeae, with which I entirely agree.

Dicerospermum Bakh. f.

The type species of this genus was described by MANSFELD as Poikilogyne parviflora, but on closer examination it appeared that the plant does not at all belong to Poikilogyne. The latter has minute, cuneate seeds, while in Dicerospermum the seeds are oblong, with with very long, linear appendages at both ends. With regard to the floral characters Dicerospermum resembles Poikilogyne, but on account of the totally different seeds, which show a type up to now unknown in the Oxysporeae, I did not hesitate to refer Poikilogyne parviflora Mansf. to a new genus, which on account of its placentation and further characters must be placed in the Melastomatoideae — Oxysporeae.

Oxyspora D.C.

Owing to the lack of material for comparison and in view of the strongly divergent views of this genus and its nearest allies occurring in the literature, it is at present not well possible for me to arrive at a satisfactory delimitation. Oxyspora was originally distinguished from Allomorphia by the heteromorphous anthers and by the shape of the capsule. KING (in Journ. As. Soc. Bengal LXIX part II [1900] p. 8) thought to have found in the lax panicles and in the shape of the capsules a useful criterion, while RIDLEY (in Journ. Straits Branch. Roy. As. Soc. nr. 57 [1911] p. 32) nevertheless maintains the shape of the anthers as a characteristic. KING in l.c.p. 8. described two species of Oxyspora with the ordinary habit, but with isomorphous anthers. In order to separate the species he had to change the definition of the genus: the heteromorphism of the anthers was replaced as a criterion by the obconical shape of the capsule. RIDLEY l.c. maintained Oxyspora for forms with terminal panicles and dissimilar anthers and transferred KING's aberrant species to Allomorphia. BAILLON solved the difficulty by uniting Oxyspora and Allomorphia, but this is perhaps not correct.

Ochthocharis Bl.

Ochthocharis is allied to Allomorphia, from which it differs by the terete capsule and absence of a beak in the seeds. Habitually it more or less resembles Blastus. Ochthocharis has 8 or 10 stamens. RIDLEY (Flor. Mal. Penins. II [1923] p. 774) mentions for O. javanica

Bl. the presence of but 5 stamens, but this is probably a mistake. I found in this species as a rule 10 stamens and, rarely, 8, but never less. Ochthocharis shows also relations to Poikilogyne, the transition being formed by O. megalophylla Mansf. Both genera are nevertheless distinct, for in Poikilogyne the capsule dehisces, whereas in Ochthocharis it is remaining closed.

MANSFELD (in Engl. Bot. Jahrb. 60 [1926] p. 110) mentioned as the only difference the character of the seeds and overlooked that of the capsule.

Allomorphia Bl.

What has been said of Oxyspora, concerns also Allomorphia. The type species A. exigua (Jack) Bl. and Oxyspora paniculata D.C. are easily distinguishable. Later on however many transitions were found and the delimitation of these genera become very vague. COGNIAUX, KING and RIDLEY keep them apart, but BAILLON united them. RIDLEY referred species with terminal panicles and distinctly dissimilar anthers to Oxyspora, while Allomorphia would be characterized by similar anthers and urceolate, not dehiscing capsules.

In Flor. Mal. Penins. II [1923] p. 766, RIDLEY returned the species, which he had formerly referred to Allomorphia, to Oxyspora and leaves in Allomorphia only the herbaceous species with thin leaves, small flowers and "globose capsules". I can not agree either with KING or with RIDLEY. In my opinion Oxyspora is characterized by unequal, heteromorphous stamens and a capsule that is much longer than wide, while Allomorphia may have equal as well as unequal, isomorphous as well as heteromorphous stamens, but a capsule that is merely as long as wide. It seems that all known species will have to be examined, before a satisfactory result can be obtained. The difficulties are not restricted to Allomorphia and Oxyspora, but extend to the whole tribe of the Oxysporeae and even to the Sonerileae. A revision of both groups is urgent. A satisfactory delimitation of the Oxysporeae and the Sonerileae has not yet been found, although it looks as if the groups are natural. Detailed examination, showed that it is extraordinarily difficult to obtain a good criterion.

BAILLON's idea to refer Allomorphia as a section to Oxyspora deserves our attention. A combined genus Allomorphia-Oxyspora could more easily be delimitated from other genera than each of these genera apart. As the material at my disposal was too incomplete, I think it better provisionally to maintain both genera.

Krassera Schwartz

With some hesitation I have taken up this genus, of which I saw no material, in my key. SCHWARTZ described two species both from

Netherlands Borneo. From his extensive description and figure, I conclude that the genus is closely allied to Allomorphia, from which I can separate it only by the shape of the calyx tube.

SCHWARTZ placed Krassera in the Sonerileae, and considered it closely allied with Anerincleistus. In my opinion it is certainly not closely allied to that genus, but to Allomorphia. It may even be identic with the latter. For this reason I have placed Krassera in the Oxysporeae.

Tribe Astronieae.

Astronia Bl.

Astronia is easily distinguishable from the other genera of this tribe by the short calyx teeth and by the dolabriform anthers. So far as it is known to me, the genus is very homogeneous and its delimitation from Astrocalyx, Beccarianthus, Everettia and Naudiniella offers no difficulties.

MERRILL in Philipp. Journ. Sc. VIII nr. 5 (1913) Bot. p. 336, gave interesting information on Astronia. Most Philippine forms are polygamous-dioecious and specimens with staminate flowers have a cupshaped calyx, those with perfect flowers have an urceolate one. The two forms of flowers were never found by Merrill on the same plant. The leaf characters he regards as very important for identification of the species. BLUME in Bijdr. Nat. Wet. VI (1831) p. 267 already pointed out that in A. spectabilis Bl. the ovary is often absent, while A. macrophylla Bl. is usually hermaphrodite. Concerning the relation between the shape of the calyx tube and the sex of the flower, I agree for the greater part with MERRILL, but the characters of the calyx are nevertheless, in combination with the vegetative ones, in my opinion quite useful for the characterization of the species. So easily distinguishable as the genus is, so difficult is the distinction of the species. It is very questionable whether the many species (about 40) from the Philippine Islands, recorded in MERRILL's Enumeration are all really distinct. A cursory examination of the duplicates in Utrecht and Leyden, convinced me that besides well defined species, also many dubious ones are present. It is very difficult to separate Beccarianthus from Everettia. MERRILL in Philipp. Journ. Sc. VIII nr. 5 (1913) Bot. p. 358 considered the two genera closely allied. The only differences he gave lie in the hairs on the branchlets and in the shape and nervature of the leaves. Examination of duplicates convinced me that Everettia must be considered as a section of Beccarianthus.

Creochiton Bl.

BLUME placed this genus in the Dissochaeteae, a view with which all subsequent authors agreed. MANSFELD in Engl. Bot. Jahrb. 60

(1926) p. 124, was the first who in the nature of the placentation detected its alliance to the Astronioideae.

Examination of Javanese, Philippine and Papuan species, convinced me that MANSFELD was right. He further considered Creochiton allied to Everettia. In my opinion it does not like the latter belong to the Astroniinae, but to a new subtribe, which I call Creochitoninae (cf. MIQUEL, Flor. Ned. Ind. I [1855] p. 559) differing from the other one in the baccate fruits and the cuneate seeds.

Tribe Kibessieae.

Kibessia D.C.

The generic delimitation of Kibessia and Pternandra are since long a source of confusion. DE CANDOLLE's original delimitation was right. BLUME however described four new genera belonging to this circle of affinities to wit: Ewyckia, Rectomitra and Macroplacis, but none of these can be maintained. The type of Ewyckia, E. cyanea Bl. is a Pternandra, while the species referred to the three other genera belong to Kibessia. Rectomitra and Macroplacis were retained by COGNIAUX as sections of Kibessia, a view with which I agree.

Kibessia differs from Pternandra by the presence of a calyptra and of calyx appendages. Notwithstanding this well-marked difference, BAILLON, KING, RIDLEY and others, united it with Pternandra.

Pternandra Jack.

Some features of this genus have already been mentioned. The type species, P. coerulescens Jack is, judged from the description, certainly generically different from Kibessia. The latter is a monotypic genus, the only species comprising however two or perhaps more varieties.

Tribe Axinandreae.

Dactylocladus Oliver.

Little is known about this monotypic genus. Stapf placed it in the tribe Axinandreae. It differs from Axinandra by the number of stamens, the shape of the anthers and the frequent occurrence of unisexual flowers.

Axinandra Thw.

For a long time this genus has been considered a Lythracea. (THWAITES, BENTHAM and HOOKER, CLARKE). Even as later as 1923 RIDLEY was still of the same opinion. BAILLON (1880) was the first who referred Axinandra on account of its resemblance to Mouriria to the Melastomataceae, where he put it in the vicinity of Memecylon. He already distinguished a special section Naxiandra, based on the aestivation of the corolla and the number of ovules per ovary cel.

KRASSER raised Naxiandra to generic rank, but I agree with BAILLON and consider Naxiandra as a section only, as the habit, inflorescence, calyx tube and fruit of its species are the same as in the other representatives of this genus.

Tribe Memecyleae.

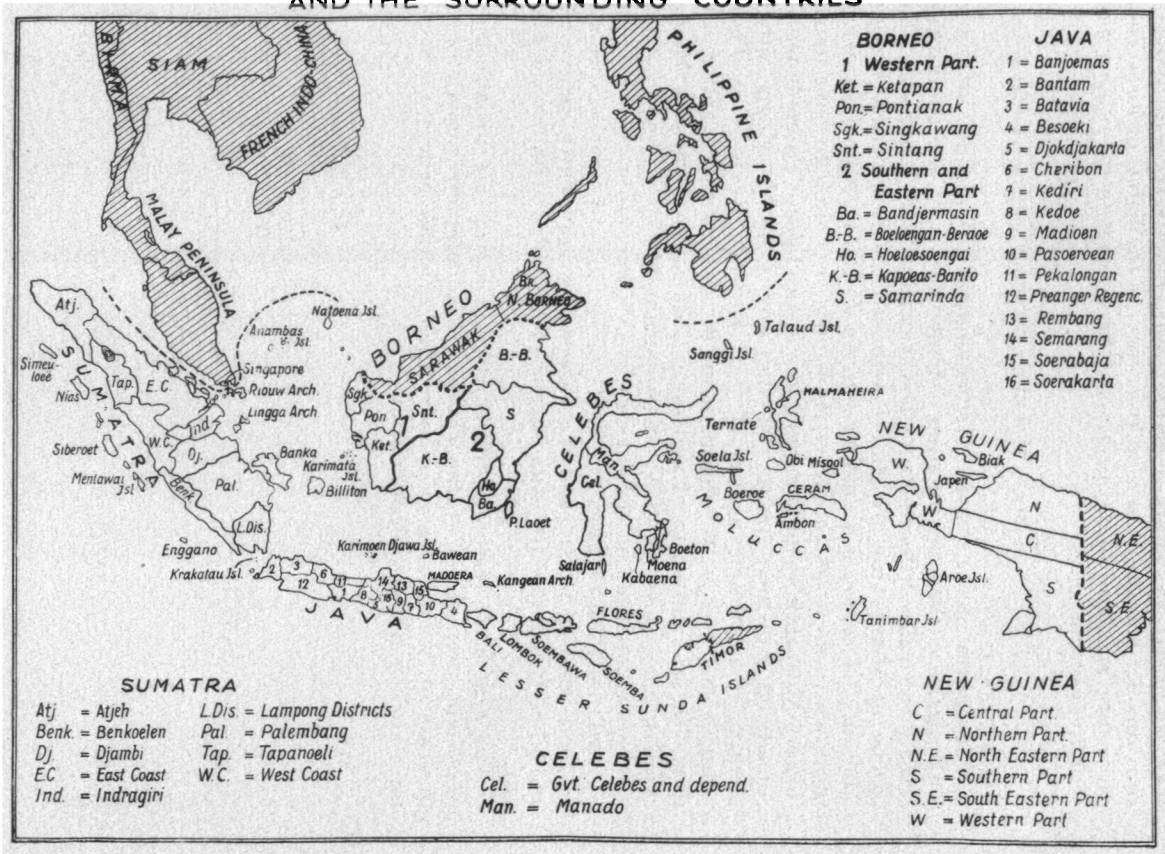
Memecylon L.

The genera of the Asiatic Memecyloideae offered no difficulties with regard to their delimitation. Memecylon is by the central placenta generically different from Dactylocladus and Axinandra. The species of Memecylon are almost without exception hermaphrodite. The only exception is Lyndenia laurina Z. et M., from Java, which is known to me from the description only. It is said to have female flowers. Most authors maintained it as a distinct genus. Some botanists consider it a distinct species: M. dioicum (Z. et M.) Cogn., others identify it as M. laevigatum Bl. (cf. KUNTZE, Revis. Gen. Plant. [1891] p. 247) or as M. oligoneurum Bl. (cf. COGNIAUX and KOORDERS). In my opinion too Lyndenia is a dioecious form of a Memecylon species, possibly of M. oligoneurum Bl.

The delimitation of the species of Memecylon is not easy (cf MERRILL in Philip. Journ. Sc. VIII nr. 4 [1913] p. 207), especially as good material is rare and the flowers are apparently easily shed and the specimens are often sterile or provided with young buds only.

The vegetative features (branchlets and leaves) are usually more important than those of the flowers, but complete material is in the case of Memecylon even more than in other genera, necessary for a correct reliable identification.

MAP OF THE MALAY ARCHIPELAGO
AND THE SURROUNDING COUNTRIES



BORNEO

1 Western Part.

Ket. = Ketapan
Pon. = Pontianak
Sgk. = Singkawang
Snt. = Sintang

2 Southern and Eastern Part

Ba. = Bandjermasin
B.-B. = Boeloengan-Beraoe
Ha. = Hoeloesoengai
K.-B. = Kapoeas-Barito
S. = Samarinda

JAVA

1 = Banjoemas
2 = Bantam
3 = Batavia
4 = Besoeki
5 = Djokdjakarta
6 = Cheribon
7 = Kediri
8 = Kedoe
9 = Madioen
10 = Pasoeroean
11 = Pekalongan
12 = Preanger Regenc.
13 = Rembang
14 = Semarang
15 = Soerabaja
16 = Soerakarta

SUMATRA

Atj = Atjeh
Benk. = Benkoelen
Dj. = Djambi
E.C. = East Coast
Ind. = Indragiri
L.Dis. = Lampong Districts
Pal. = Palembang
Tap. = Tapanoeli
W.C. = West Coast

CELEBES

Cel. = Gvt. Celebes and depend.
Man. = Manado

NEW GUINEA

C = Central Part
N = Northern Part
N.E. = North Eastern Part
S = Southern Part
S.E. = South Eastern Part
W = Western Part

IV. TAXONOMICAL PART.

Melastomataceae.

R. Brown in Tuckey Congo App. V (1818) p. 434. [ordo; *Melastomaceae*]; De Candolle, Prodr. III (1828) p. 99 [ordo]; Naudin in Ann. Sc. Nat. sér. III. XII (1849) p. 196 [ordo]; Miquel, Flor. Ned. Ind. I (1855) p. 501 [ordo]; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 725 [ordo]; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 1 [familia]; Eichler, Blüth. diagr. II (1878) p. 480 [familia]; Baillon, Hist. d. plant. VII (1880) p. 1 [familia]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 500 [familia]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 7 [ordo]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 130 [familia; *Melastomataceae*].

Herbs, half-shrubs, shrubs, trees, erect or climbing, terrestrial or epiphytic, rarely aquatic, with terete or angular, glabrous or variously pilose branches. Leaves simple, mostly opposite, rarely alternate or whorled, equal or, sometimes, unequal, those inserted at the same node similar in shape or, rarely, dissimilar, submembranaceous to thickly coriaceous, entire or subentire, glabrous or pilose, curvinerved with 3—17 nerves or, rarely, penninerved, very rarely 1-nerved; the main nerves of the curvinerved leaves often connected by numerous parallel cross veins; stipules absent; petiole present or absent. Flowers in terminal or axillary, pedunculate or sessile, bracteate or ebracteate panicles, corymbs, umbels, spikes or fascicles or solitary, pedicellate or subsessile; regular and hermaphrodite or, rarely, unisexual by abortion (Astronia). Calyx tube campanulate, ovoid or tubular, rounded or 3-, 5-or more-ribbed, glabrous or pilose; limb truncate, dentate or lobed, rarely rejected in the form of a calyptra, the lobes or teeth sometimes alternating with appendages or hair groups. Petals as many as the calyx segments, mostly 4—5, rarely 3 or several, dextrorsely contorted in the bud, equal or, rarely, unequal, inserted at the rim of the calyx limb, white, red, blue, brown or yellow. Corona sometimes present and inserted inside the calyx limb at the base of the petals and filaments, membranaceous or subcoriaceous. Stamens 3 to many (about 65), mostly 8—10 and diplostemonous, perigynous or epigynous, incurved in the bud, then stretching, very rarely again incurved after anthesis (Omphalopus); filaments always present; anthers basifixed or dorsifixed, equal,

subequal or unequal in size, similar or dissimilar in shape, mostly oblong or linear, either all fertile or half of them „staminodial", bithecous, opening with 1 or 2 terminal pores or introrsely with 2—4 slits; connective basally very often produced, sometimes thickened, ventrally and dorsally usually setose or spurred or, rarely, without appendages. Ovary usually well developed or, very rarely, abortive, wholly adnate to the calyx tube or nearly free or attached with longitudinal septs to the calyx tube, so that there arise as many "exterovarial" cells ("chambers") as there are stamens; the anthers in bud being included in them; the "chambers" extending from the top to at least $^1/_4$ of the distance between the top and the base; the ovary itself inferior, semi-inferior or superior, 1-or more-celled, at the top sometimes provided with erect scales; ovules anatropous; in the more-celled ovaries usually several in each cell on slightly protruding placentas, which are usually axillary and inserted either halfway between the top and the base of the axis (Melastomatoideae) or, less often, at the base of the axis (Astronieae) or parietal (Kibessieae), rarely 1 or 2 in each cell, inserted at the base of the axis (Axinandreae); in the one-celled ovaries a few on the top of a free central placenta (Memecyleae); style simple, filiform or columnar, glabrous or pilose; stigma hardly conspicuous or capitate. Fruit either a 1-to many-seeded berry with fleshy or coriaceous pericarp or a many-seeded, rounded or ribbed capsule, included within the calyx tube, which sometimes also splits, at the top loculicidally dehiscing with valves or, rarely, with teeth. Seeds 0.5—5 mm long; the smaller ones straight, curved, cochleate, cuneate, clavate, rod-shaped or irregularly angular and sometimes beaked; the larger ones globose or angular (Memecyloideae and some Miconieae) or, sometimes, (Axinandra) alate; testa smooth or papillaceous; endosperm absent; embryo mostly minute (Melastomatoideae, Astronieae and Kibessieae) or, rarely, rather large (Memecyloideae), cylindrical or subglobose; cotyledons minute in the forms with minute seeds, rather large and foliaceous or plan-convex in forms with large seeds.

Type genus: Melastoma L.

Distribution: According to Krasser about 148 genera with about 2800 species, chiefly in the tropical parts of America, Africa and Asia, less common in Australia and in subtropical parts.

General key to the subfamilies.

1*a*. Seeds either numerous and small or 1—5 and large, but if few and large then the ovules always on axillary placentas, inserted halfway between the top and the bottom of the ovary. . . . 2

b. Seeds 1—5, large, but the ovules never on axile placentas inserted halfway between the top and the bottom of the ovary, but either on a, sometimes very short, central placenta or from axile placentas inserted at the base of the ovary cells or directly from the base of the ovary cells. . . . . C. *Memecyloideae.*

2*a.* Seeds numerous or 1—5; placentas axile. A. *Melastomatoideae.*

b. Seeds numerous; placentas basal or parietal. B. *Astronioideae.*

Key to the Malayan tribes and genera.

A. MELASTOMATOIDEAE.

1. Key to the tribes.

1*a.* Seeds cochleate 2

b. Seeds not cochleate, straight or slightly incurved, irregularly angular. 3

2*a.* Ovary attached to the calyx tube with longitudinal septs. I. *Osbeckieae.*

b. Ovary wholly or partially free; no longitudinal septs extending between ovary and calyx. . . . . II. *Tibouchineae.*

3*a.* Fruit a berry 4

b. Fruit a capsule 5

4*a.* Stigma capitate or hardly conspicuous, but if so, then the flowers provided with a corona. . . . . III. *Miconieae.*

b. Stigma hardly conspicuous; corona always lacking. IV. *Dissochaeteae.*

5*a.* Ovary and corolla anisomerous: ovary 3-celled; petals 4—5. V. *Bertolonieae.*

b. Ovary and corolla isomerous or, very rarely, anisomerous: ovary either 3-celled and petals either 3 or 6, or ovary 4- or 5-celled and petals 4 or 5 6

6*a.* Capsule acutely 3- to 5-angular, rarely subterete or ribbed; top conspicuously widened. Ovary wholly concrescent with the calyx tube, 4- to 5-celled or 3- or 6-celled. . VI. *Sonerileae.*

b. Capsule subterete or subquadrangular, sometimes ribbed, top conical or convex, not widened. . . . . VII. *Oxysporeae.*

2. Key to the genera.

I. Osbeckieae.

1*a.* Fruit a true capsule, dehiscing at the top with valves 2

b. Fruit with a coriaceous or pulpy pericarp, dehiscing laterally in an irregular manner. 3

2*a*. Stamens equal or subequal. Connective not or scarcely produced. 1. **Osbeckia L.**

b. Stamens very unequal. Connective of the larger anthers conspicuously produced. . . . . 2. **Dissotis Benth.**

3*a*. Pericarp subcoriaceous. Wall of the calyx tube very thick. 3. **Melastoma L.**

b. Pericarp pulpy. Wall of the calyx tube very thin. 4. **Otanthera Bl.**

II. Tibouchineae.

One genus only: . . . . . 5. **Heterocentron Hook. et Arn.**

III. Miconieae.

1*a*. Ovary 15-celled. Stigma capitate, provided with radiating grooves. Cultivated trees. . . . . 6. **Bellucia Neck.**

b. Ovary 5-celled. Stigma hardly conspicuous. Naturalized shrubs of American origin. . . . . 7. **Clidemia D. Don**

IV. Dissochaeteae.

1*a*. Stamens 20—30. . . . . 8. **Plethiandra Hook. f.**

b. Stamens 4—12. 2

2*a*. Calyx limb connate into a deciduous calyptra. 9. **Dalenia Korth.**

b. Calyx limb truncate or dentate, never forming a calyptra. 3

3*a*. Stamens during anthesis incurved. Connective with phylloid appendages. . . . . 10. **Omphalopus Naud.**

b. Stamens during anthesis stretched. Connective either setose or tuberculate or without appendages 4

4*a*. Stamens 6. . . . . 11. **Boerlagea Cogn.**

b. Stamens either 4 or 8—12 5

5*a*. Exterovarial chambers absent, i.e. ovary wholly concrescent with the calyx tube 6

b. Exterovarial chambers present, i.e. ovary adnate to the calyx tube with longitudinal septs 7

6*a*. Connective dorsally 1-spurred. Ovary glabrous at the top. 12. **Pachycentria Bl.**

b. Connective dorsally provided with a tuft of hairs. Ovary hairy at the top. 13. **Pogonanthera Bl.**

7*a*. Exterovarial chambers descending to far below the middle of the ovary. 10

b. Exterovarial chambers not descending beyond the upper $^1/_4$ or at most reaching the middle of the ovary 8

8*a.* Larger anthers ovoid, very thick, between the thecae with a rectangular thickening; connective without appendages. Seeds narrowly pyramidal; beak hardly distinguishable. 14. **Backeria Bakh. f.**

b. Larger anthers rod-shaped, thin, between the thecae not thickened; connective appendiculate 9

9*a.* Connective dorsally with a flat triangular appendage. Stamens either 4, equal and isomorphous or 8 and then 4 fertile and 4 „staminodial". Seeds cuneate, conspicuously beaked. 15. **Neodissochaeta Bakh. f.**

b. Connective dorsally either with a short spur or without any appendages. Stamens 8-10-(12), none „staminodial". 16. **Medinilla Gaud.** *).

10*a.* Exterovarial chambers 8 : 4 descending to far below the middle of the ovary and 4 confined to the top part; anthers very dissimilar in shape. . . . . 17. **Diplectria Reichenb.**

b. Exterovarial chambers 4, 8, 10 or 12, all descending to far below the middle of the ovary; anthers similar in shape . . 11

11*a.* Exterovarial chambers 12. Ovary 6-celled. Trees. 18. **Carionia Naud.**

b. Exterovarial chambers 4, 8 or 10. Ovary 4- or 5-celled, climbers 12

12*a.* Calyx limb distinctly lobed; the lobes 4—13 mm long. 19. **Macrolenes Naud.**

b. Calyx limb sinuate or with short, at most 3 mm long undulate lobes 13

13*a.* Connective dorsally with a flat triangular appendage, ventrally bisetose. Calyx tube campanulate. 20. **Dissochaeta Bl.**

b. Connective dorsally with a single short spur, ventrally with 2 short appendages. Calyx tube subglobose. 21. **Hypenanthe Bl.**

V. Bertolonieae.

One genus only: . . . . . 22. **Bertolonia Raddi**

VI. Sonerileae.

1*a.* Flowers 3- or 4-merous 2

b. Flowers 5-merous 6

*) cf. the little known genus **Hederella Stapf**, with characters intermediate between Neodissochaeta and Medinilla.

2*a*. Top of the ovary with a disc. 3
b. Top of the ovary without disc. 5
3*a*. Capsule flattened at the top. Connective not produced, dorsally with one spur, ventrally bisetose. 22. **Driessenia Korth.**
b. Capsule crowned with a cup covered with scales 4
4*a*. Connective distinctly produced, dorsally 1-spurred, ventrally without appendages. Exterovarial chambers absent. 24. **Sarcopyramis Wall.**
b. Connective not produced and without appendages. Exterovarial chambers present. . . . . 25. **Sonerila Roxb.**
5*a*. Capsule obpyramidal. Thecae undulate; connective without appendages; ventrally bituberculate or without appendages. 26. **Phyllagathis Bl.**
b. Capsule nearly cubiform. Thecae smooth; connective dorsally 1-spurred, ventrally 2-setose. 27. **Triuranthera Back.**
6*a*. Anthers bilamellate at the base; connective dorsally without appendages. Calyx lobes alternating with teeth. 28. **Cyanandrium Stapf**
b. Anthers not bilamellate at the base; connective dorsally with appendages. Calyx lobes not alternating with teeth 7
7*a*. Connective ventrally with a single short appendage. Filament filiform. . . . . 29. **Brittenia Cogn. apud Boerl.**
b. Connective ventrally 2-auriculate. Filament thick. 30. **Enaulophyton v. Steenis.**

VII. Oxysporeae.

1*a*. Stamens 4. Thecae undulate. . . . . 31. **Blastus Lour.**
b. Stamens 6, 8 or 10. Thecae not undulate 2
2*a*. Top of the ovary with a disc. 8
b. Top of the ovary without a disc. 3
3*a*. Capsule laterally dehiscing at maturity 4
b. Capsule not laterally dehiscing 5
4*a*. Seeds cuneate, shortly beaked. Calyx tube broadly campanulate 32. **Poikilogyne Mansf.**
b. Seeds oblong, basally and apically gradually tapering. Calyx tube narrowly campanulate. 33. **Dicerospermum Bakh. f.**
5*a*. Anthers dissimilar in shape and size. Capsule much longer than wide, obconical. . . . . 34. **Oxyspora D.C.**
b. Anthers either similar in shape and stamens equal or anthers dissimilar in shape, but then stamens unequal. Capsule about as long as wide 6
6*a*. Seeds beaked 7
b. Seeds not beaked. . . . . 35. **Ochthocharis Bl.**

7*a*. Calyx tube tubular. 36. **Allomorphia Bl.**
b. Calyx tube campanulate. 37. **Krassera Schwartz**
8*a*. Anthers equal and isomorphous. Connective ventrally without appendages, dorsally 1-spurred. 38. **Anerincleistus Korth.**
b. Anthers unequal and subdimorphous. Connective ventrally two-lobed, dorsally gibbous. 39. **Creaghiella Stapf**

B. ASTRONIOIDEAE.

§ Placentas basal. . . . . VIII. *Astronieae*.
§§ Placentas parietal. . . . . IX. *Kibessieae*.

VIII. Astronieae.

§. Seeds rod- or club-shaped, 2—3 mm long. Bracteoles minute, not enveloping the bud. . . . . (*Astroniinae*).
1*a*. Stamens about 65. . . . . 40. **Astrocalyx Merr.**
b. Stamens 8, 10 or 12 2
2*a*. Anthers dolabriform, minute. Calyx limb subtruncate or minutely denticulate. Petals mostly minute. 41. **Astronia Bl.**
b. Anthers linear-oblong, rather large. Calyx limb usually deeply divided or, rarely, denticulate. Petals large to very large. 42. **Beccarianthus Cogn.** (incl. **Everettia Merr.**)
§§. Seeds cuneate, 1 mm long. Bracteoles fleshy, enveloping the bud. Fruit a berry (*Creochitoninae*) . . . 43. **Creochiton Bl.**

IX. Kibessieae.

1*a*. Calyx limb forming a calyptra. Calyx tube bristly or covered with narrowly triangular, patent scales. 44. **Kibessia D.C.**
b. Calyx limb not forming a calyptra. Calyx tube either with small flat scales or scales nearly lacking. 45. **Pternandra Jack**

C. MEMECYLOIDEAE.

§ Ovary more-celled. Ovules inserted at the base of the axis. X. *Axinandreae*.
§§ Ovules 1-celled. Ovules on a central placenta. XI. *Memecyleae*.

X. Axinandreae.

1*a*. Stamens 5. Anthers subglobose. 46. **Dactylocladus Oliv.**
b. Stamens 10—12. Anthers dolabriform. 47. **Axinandra Thw.**

XI. Memecyleae.

One genus only. . . . . 48. **Memecylon L.**

Subfamilia A. MELASTOMATOIDEAE.

Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 142, 144; *Melastomeae*, Seringe apud De Candolle, Prodr. III (1828) p. 100 [subordo]; Blume in Mus. Bot. Lugd.-Bat. I (1849—1851) p. 10 [subordo]; Naudin in Ann. Sc. Nat. sér. III. XII (1849) p. 202 [subordo]; Miquel, Flor. Ned. Ind. I (1855) p. 502 [subordo]; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 726 [subordo]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 502 [subfamilia]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 8 [subordo]; „*Melastomacées proprement dites*", Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 4 ["groupe"].

Herbs, half-shrubs, shrubs or trees; erect or climbing. Ovary either wholly concrescent with the calyx tube or adnate with septs, rarely free or nearly free, 2-to many-celled, in each cell mostly numerous ovules, rarely in some of the Miconieae of S. America 1—5; placentas axile, but slightly protruding, inserted about halfway between the top and the bottom of the ovary. Fruit either a berry or a capsule; seeds mostly numerous, minute or, rarely, 1—5 and large (Miconieae), cuneate, clavate or irregularly angular, straight, incurved, cochleate, rarely globose or rod-shaped.

Tribus I. Osbeckieae.

De Candolle, Prodr. III (1828) p. 127 [tribus; pr. p.; „Osbeckiae"]; Blume in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 49 [tribus]; Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 457; idem in Trans. Linn. Soc. XXVIII part I (1871) p. 53 [tribus]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 502 [tribus]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 311 [tribus]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 502 [tribus]; *Osbeckieae ser. Gerontogeae*, Bentham and Hooker, Gen. Plant. I 2 (1865) p. 729; *Lasiandrales* (pr. p.), Naudin in Ann. Sc. Nat. sér. III-XII (1849) p. 273 [tribus]; Miquel, Flor. Ned. Ind. I (1855) p. 502 [tribus]; „*Eumélastomées*" (pr. p.), Baillon, Hist. d. plant. VII (1880) p. 31 ["série"].

Herbs, half-shrubs, shrubs or, rarely, trees. Flowers mostly 4- or 5-merous or, very rarely, 6- or 7-merous, hermaphrodite. Calyx limb distinctly dentate; teeth often alternating with appendages. Stamens 8—14, equal, subequal or unequal, twice as many as the petals; anthers mostly linear, rostrate, acute or truncate, opening by a terminal pore; connective sometimes produced, dorsally

usually without appendages or, rarely, appendiculate, ventrally with two appendages. Ovary with a conical or hemispherical top, mostly pilose or, rarely, glabrous, 4- or 5- (or 6- or 7-) celled, concrescent with the calyx tube with septs; exterovarial chambers twice as many as ovary cells; ovules numerous, minute. Fruit a capsule or, rarely, a berry, seeds numerous, minute, cochleate.

Distribution: Africa, Asia and Australia.

1. Osbeckia L.

Linnaeus, Spec. Plant. I (1753) p. 345; De Candolle, Prodr. III (1828) p. 138; Naudin in Ann. Sc. Nat. sér. III. XIV (1850) p. 53; Miquel, Flor. Ned. Ind. I (1855) p. 517; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 744; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 53; Baillon, Hist. d. plant. VII (1880) p. 38; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 506; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 312; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p.155; Guillaumin in Not. Syst. II (1911) p. 305; *Asterostoma Blume* in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 50; *Melastoma* (pr. p., typo excl.), *Linnaeus*, Spec. Plant. I (1753) p. 389; *Tristemma Juss.*; Blume, Bijdr. Flor. Ned.-Ind. nr. 17 (1826) p. 1079.

Herbs, half-shrubs or shrubs. Branches distinctly or indistinctly quadrangular, strigillose or hirsute. Leaves opposite, similar in shape and size, oblong-lanceolate, ovate-oblong or ovate-lanceolate, rounded or acute at the base, acute or acuminate, entire or serrulate, subcoriaceous, strigillose, 3- to 7-nerved, petiolate or sessile. Flowers terminal, solitary or in bracteate heads or arranged in pedunculate corymbs, hermaphrodite, 4- or 5-merous. Bracts often present, large. Pedicel present or absent. Calyx tube campanulate, sometimes elongated in a "neck", rounded or, often, ribbed, mostly covered with appendages (cristate scales or stellate or simple hairs) or, rarely, glabrous, in the fruit often enlarged; limb 4- or 5-lobed; lobes ovate or oblong-lanceolate, setose at the apex, deciduous, alternating with subulate or pectinate, usually deciduous, appendages. Petals 4—5, red, violet or purple, obovate, obtuse, retuse or mucronate, often ciliate, but otherwise glabrous, veined. Stamens 8—10, equal or subequal; anthers linear or, rarely, obovate, incurved or S-shaped, acute, truncate or rostrate; thecae undulate, opening with 1 or, rarely, 2 terminal pores; connective not or but slightly produced, often widened at the base, dorsally inappendiculate or, very rarely, 1-spurred, ventrally two-lobed; pollen subglobose, with 3 longitudinal grooves. Ovary concrescent with the calyx tube with 8—10 septs; exterovarial chambers 8—10, descending below the middle; ovary

itself with a free, setose apex, 4- or 5-celled; style filiform, glabrous; stigma hardly conspicuous. Capsule ellipsoid or hemispherical, at the top with about 20 bristles, dehiscing apically with 4—5 valves; seeds cochleate.

Distribution: about 100 species in tropical Africa and Madagascar, British India, Malay Peninsula, Siam, French Indo-China, S. China, Formosa, Japan, Malay Archipelago and tropical Australia.

Key to the species.

1*a*. Anthers rostrate. Herbs 2
b. Anthers not rostrate. Shrubs 3
2*a*. Calyx tube, when mature, glabrous or covered with a few pectinate scales. Bracts ovate, longer than or as long as the calyx tube. Stem mostly sparingly branched at the base. 1. **O. zeylanica L.f.**
b. Calyx tube, when mature, densely covered with pectinate scales. Bracts lanceolate, much smaller than the calyx tube. Stem more or less strongly branched at the base. . . . 2. **O. chinensis L.**
α. Flowers with a very short pedicel; calyx tube subglobose at the base; neck throughout of the same diameter. Leaves oblong-lanceolate. . . . . 2*a*. **O. chinensis L. s.s.**
β. Flowers with a long pedicel; calyx tube attenuate at the base; "neck" upwards widened. Leaves ovate-lanceolate. 2*b*. **O. chinensis L.** var. **attenuata Bakh. f.**
3*a*. Calyx lobes not alternating with pectinate or other appendages. 3. **O. papuana Cogn.**
b. Calyx lobes alternating with pectinate appendages 4
4*a*. Ovary 4-celled 5
b. Ovary 5-celled 6
5*a*. Leaves on the upperside strigillose, sericeous below. 4. **O. melastomacea Bakh. f.**
b. Leaves on the upperside white-strigillose, rufous-strigose below. 5. **O. ericoides Bakh. f.**
6*a*. Calyx tube covered with simple hairs and with a few, small, pectinate scales. 6. **O. aspera (L.) Bl.**
b. Calyx tube covered with large pectinate scales. 7. **O. dolichophylla Naud.**
α. Leaves narrowly ovate, gradually narrowed to the apex. 7*a*. **O. dolichophylla Naud. s.s.**
β. Leaves linear-oblong, near the top abruptly narrowed. 7*b*. **O. dolichophylla Naud.** var. **abrupta Bakh. f.**

1. **Osbeckia zeylanica L.f.** Linnaeus f., Suppl. Plant. (1781) p. 215; Guillaumin in Not. Syst. II (1911) p. 306, 311; Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 221; *Osbeckia chinensis L.* in errore apud De Candolle, l.c. (1828) p. 141; eodem modo: Triana in l.c. (1871) p. 53 [pr. p.]; Cogniaux in l.c. (1891) p. 326. [pr. p.]; Merrill in Philipp. Journ. Sc. XI (1916) Bot. p. 299; Beumée in Trop. Nat. 8 (1919) p. 28, fig. 2; Ridley, Flor. Mal. Penins. I (1922) p. 762; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 109; idem in Nova Guinea VII. livr. II (1927) p. 200; Frey-Wyssling in Trop. Nat. XX (1931) p. 195; Backer, Manuscr. Fl. Java, Melast. (1941) p. 9 [pr. p.]; *Osbeckia chinensis L.* var. *typica Hochr.* in Candollea II (1925) p. 469; *Osbeckia angustifolia D. Don*; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; *Osbeckia linearis Bl.* in Flora XIV (1831) p. 473 and in Bijdr. Nat. Wet. VI (1831) p. 219; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 224; Zollinger in Nat. Gen. Arch. (1845) p. 586; idem in Flora (1847) p. 665; Blume in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 51, fig. XIX; Naudin in l.c. XIV (1850) p. 70; Miquel, l.c. (1855) p. 519; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; *Osbeckia linearis Bl.* var. *moluccana Bl.* in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 51; *Melastoma linearis Reinw. ined.*, Blume in Flora XIV (1831) p. 474 [nomen]; *Tristemma angustifolium Bl.* in Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1079.

Herb, mostly sparingly branched, up to 8 dm high. Branches distinctly or indistinctly quadrangular, sparingly or very sparingly strigillose, especially on the ribs. Leaves linear, oblong or ovate-lanceolate, acute at the base and at the top, 2—6 cm × 0.2—1.2 cm, entire, on both sides sparingly and minutely strigillose or subsericeous, 3- to 5-nerved, sessile or with an up to 2 mm long petiole. Flowers mostly about 5 together in 1 cm long heads, 4- or 5-merous. Bracts ovate or ovate-oblong, 3—10 mm × 2—5 mm, entire, ciliate, on both sides setulose, strigillose or, rarely, glabrous, 5- to 7-nerved, Calyx tube campanulate, with about 16 hardly conspicuous ribs, sometimes elongated in a short neck, either with a few scales in the middle or completely glabrous, 5—8 mm long, at the top with about 16 very small pectinate scales, 4—5 of them alternating with the sepals; at maturity enlarged; calyx lobes 4—5, broadly triangular or oblong-triangular, 6—8 mm × 3—5 mm glabrous, setulose, 2-nerved, deciduous. Petals 4—5, red or pink, broadly obovate, 0.75—20 mm × 0.5—8 mm, retuse, minutely ciliate. Stamens 8—10, 6—13 mm long; filaments violet, 4—6 mm long; anthers bright yellow, linear, 4 mm long, abruptly contracted in a 1—3 mm long beak, opening by a terminal pore; connective not or very slightly

produced. Ovary 4- or, less often, 5-celled; style glabrous, violet, 10—15 mm long; stigma viscid. Capsule 7—8 mm long.

Observ.: For the correct nomenclature see under O. chinensis L.

Distribution.

SUMATRA. West Coast: Soeka menanti, 120 m (Bünnemeyer nr. 210 [BZ], L, fl. Apr.); East Coast: Batana toea, Battaklands, 300 m (Junghuhn s.n. L, U.); Kaban djahe, Karo highlands, 1225 m (Lörzing nr. 6175 [BZ], L, fl. Jan.); Locality unknown: (Korthals s.n. L).

JAVA. Bantam: Pasaoeran (Backer nr. 7231 [BZ], L); Batavia: between Batavia and Tjikandi (Kuhl and van Hasselt s.n. L); Klapa Noenggal, N.E. of Buitenzorg, 100—125 m. (Backer nr. 23391 [BZ], L, fl. Dec.); Pasir Djajanti, Soekaradja near Buitenzorg, 400 m. (Bakhuizen van den Brink fil. nr. 368 [BZ], L, U, fl. July); Karang Tengah, E. of Buitenzorg, 300 m (Bakhuizen van den Brink nr. 6214 [BZ], L, U, fl. Dec.); G. Pantjar (Schiffner nr. 2292, L); Sitoe Pelalar near Tjibaroesa, 100 m (van Steenis nr. 5275 [BZ], L. fl. May.); Preanger Regencies: Kiara Pajoeng, N. of Tjiandjoer, 600 m (Backer nr. 2354 [BZ], L, fl. March); Locality unknown: (Blume s.n. L, sub *O. linearis Bl.*); (Zollinger nr. 186, L).

CELEBES. Gvt. Celebes and dependencies: Kp. Rappang Enrekang (Noerkas nr. 341 [BZ], L, fl. June).

TALAUD ISLANDS. P. Merampi: G. Maranggi, 170 m, alang-alang (Lam nr. 3435 [BZ], L, fl. June).

MOLUCCAS. Ambon: Ambon, along roads (Forsten s.n. L, type of *O. linearis Bl.* var. *moluccana Bl.*); idem, Soja road (Robinson nr. 2023, PNH, L); idem (Rant nr. 237 [BZ], L, fl. June); G. Haroemesen, 100—200 m (Kornassi nr. 1070 [BZ], L, U, fl. Apr.; v.n. biraroe).

NEW GUINEA. Southern Part: Merauke, forest (N. G. exp. dr. J. W. R. Koch, 1904—1905, s.n. L, fl. Aug.); Okaba (Branderhorst nr. 87 [BZ], L, fl. Sept.).

FURTHER DISTRIBUTION: On account of the confuse nomenclature uncertain: British India, Ceylon, Malay Peninsula, Philippine Islands.

2. **Osbeckia chinensis L.** Linnaeus, Spec. Plant. I (1753) p. 345; Linnaeus f., Suppl. Plant. (1781) p. 215; Boerlage, l.c. (1890) p. 507 [pr. p.]; Guillaumin in Not. Syst. II (1911) p. 306, 308; Koorders, Exkurs. Flora Java II (1912) p. 691; van Steenis in Trop. Nat. (1936) p. 121 [if true]; Backer, Manuscr. Fl. Java, Melast. (1941) p. 9 [pr. p.]; *Osbeckia chinensis L.* var. *pusilla* (*Z. et M.*) *Triana* in l.c. (1871) p. 53; Boerlage, l.c. (1890) p. 529; Cogniaux in l.c. (1891) p. 326; Guillaumin in Not. Syst. II (1911) p. 311; Backer, Manuscr. Fl. Java, Melast. (1941) p. 9; *Osbeckia pusilla Z. et M.* in Nat. en Geneesk. Arch. (1845) p. 586; Zollinger in Flora (1847) p. 665; Naudin in l.c. XIV (1850) p. 66; Miquel, l.c. (1855) p. 518; Boerlage, l.c. (1890) p. 507; *Osbeckia zeylanica L.f.*; De Candolle, l.c. (1828) p. 141; Miquel, l.c. (1855) p. 519; Zollinger in Journ. Bot. Néerl. I (1861) p. 133; *Echinophora maderaspatana Pluk.*, Phytogr. III (1696) tab. 173, fig. 4.

Herb, a little above the base strongly branched, up to 50 cm high. Branches quadrangular, sparingly strigillose or covered with incurved hairs. Leaves oblong or lanceolate, 1—3.5 cm × 0.5—1.5 cm,

rounded at the base, acute, entire, strigillose on both sides, 5-or, sometimes, 3-nerved. Petiole 0.5—2 mm long. Flowers capitate, 5—10 or more together, 4-merous. Bracts ovate-lanceolate, up to 5 mm long, entire, ciliate, with a long bristle at the top. Pedicel 1—2 mm long. Calyx tube campanulate, 5 mm long, subglobose at the base, densely covered with 3 mm long, pectinate scales, towards the apex narrowed in a cylindrical „neck", which is about as long as the campanulate basal part and without scales; lobes narrowly triangular, ciliate, ending in a bristle, about 6-nerved, deciduous, alternating with as many very small pectinate, setose scales. Petals 4, 4—6 mm × 2—3 mm, pink, obovate, retuse, sparingly ciliate. Stamens 8, 2.5—4 mm long; filaments 1—2 mm long; anthers 8, 1.5—2 mm long, linear, ending in a 0.4—0.6 mm long beak, opening by a terminal pore; connective very small, shortly two-lobed. Ovary 4-celled; style 2 mm long, glabrous. Capsule 3—4 mm long, when mature, yellowish.

Observ: Almost all authors confuse this species with O. zeylanica L.f. O.chinensis L. differs by its lanceolate bracts and its calyx tube, which at maturity is densely covered with pectinate scales. Linné's species is founded on a figure of Echinophora maderaspatana Pluk., in which the above mentioned characters are clearly shown. The statement of most authors that O. zeylanica L.f. has a calyx tube densely covered with pectinate scales is therefore incorrect.

Distribution.

JAVA. Batavia: Wanajasa, S.E. of Poerwarkarta, 550 m (Bakhuizen van den Brink nr. 4860 [BZ], L, U, fl. July); Simpang near Plèrèd, 300 m (idem nr. 4890 [BZ], L, fr. July). Cheribon: Aloeta, S. of Kadipaten (Ph. van Harreveld s.n. PAS, fl. July). Pasoeroean: G. Penanggoengan (Zollinger nr. 225, L, type of *O. pusilla Zoll.*). Locality unknown: (Plant. Jungh. Ined. nr. 193, L).

MADOERA: locality unknown, calcareous ground (Zollinger nr. 3951, L); (collector unknown, L).

BALI: Tedja goela, 75 m (van Steenis nr. 7753 [BZ], L, fl. Apr.).

TIMOR: (according to Guillaumin in l.c.).

CELEBES: (according to Cogniaux in l.c.).

MOLUCCAS. Ambon: (according to Guillaumin in l.c.).

FURTHER DISTRIBUTION: On account of the confuse nomenclature uncertain:? Siam, French Indo-China, S. China, Formosa, Philippine Islands Australia.

var. **attenuata Bakh. f.** var. nov.

Herba pauciramosa plerumque 3—4 dm alta, interdum nana, caulibus tetragonis strigillosis vel setis usque ad 3 mm longis vestitis. Folia ovato-lanceolata, 2.5—4 cm × 0.6—1.5 cm, acuta, supra dense strigosa, subtus ad nervos sparse strigosa, inter nervos saepe glabra, 5-nervia. Petiolus 1—2 mm longus. Flores capitati. Bracteae lanceo-

latae utrinque glabrae ciliatae, apice longe setosae (1)—5—6 mm × 1 mm. Calycis tubus campanulatus, basi longe attenuatus, squamis pectinatis 3—7 mm longis sparse obtectus, in parte apicali in collum supra valde dilatatum, parti basali inflatae aequilongum vel ca. longiorum, esquamatum, (2.5) — 8—9 mm longum, lobis 4 late triangularibus (1.5) — 6 mm × 0.5 — (2—3) mm setis 2—4 mm longis ciliatis, 5-nerviis deciduis. Petala 4, (2) — 10—12 mm × 1—4 mm, obovata retusa sparse ciliata rosea. Stamina 8, 2.5—9 mm longa; filamentis (1.5) — 4—5 mm longis; antheris linearibus rostratis, rostro 3—5 mm longo, rostro exempto (1) — 3—4 mm longis 1-poris, connectivo haud producto bicornuto vel bilobo. Stylus (2) — 12—14 mm longus glaber. Capsula 8—10 mm longa.

Observ: Differs from the type by the form of its calyx tube, which is narrowed towards the base and by its long-rostrate anthers. Dwarf forms, probably caused by unfavourable habitat factors have sometimes been placed under O. pusilla Zoll., which however is a synonym of O. zeylanica L.f. itself. Allied to O. capitata Benth. ex Naud. from British India, differing by its scales and glabrous bracts.

Distribution: restricted to the localities quoted below.

JAVA. Besoeki: Gending Waloe, 1450 m (Koorders nr. 43150 β and 43151 β [BZ], L, fl. July); Idjen plateau, 1200 m (Backer nr. 36724, PAS, fl. June).

LOMBOK: G. Rindjani, Tengegeah, humid forest, 900—1350 m (Elbert nr. 916, L, fl. May); idem, 1300—1450 m (idem nr. 987, L, typus, fl. May); idem, Sembaloen plateau, shrub wilderniss, 1175—1250 m (idem nr. 1458, L, fl. May); idem, 1185—1265 m (idem nr. 1561, L, fl. May); idem, 1250—1350 m (idem nr. 1419, L, fl. May).

3. **Osbeckia papuana Cogn.** Cogniaux in l.c. (1891) p. 332; idem in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 507 and 530 [nomen]; Guillaumin in Not. Syst. II (1911) p. 307; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 143.

(description according to Cogniaux). Strongly branched shrub with slender, terete, strigillose branches. Leaves oblong-lanceolate, 2—4 cm × 0.7 — 1.2 cm, acute, rigid, densely strigillose on the upperside, minutely hirsute below, 3-nerved. Petiole 3—4 mm long.

Flowers solitary or 2 together, shortly stalked.

Calyx tube 5 mm long, densely hirsute with short simple hairs; lobes 5, linear, 2—3 mm long, not alternating with pectinate scales. Petals 5, 8—9 mm long. Stamens 10; anthers linear, 2.5 mm long; connective 0.3 mm long. Ovary 5-celled; style 5—6 mm long. Capsule ovoid, 5—6 mm long.

Observ: Remarkable by the absence of appendages alternating with the calyx lobes.

Distribution: endemic.

NEW GUINEA. Western Part: (Vogelkop), Arfak Mts, 2000 m (Beccari s.n.).

4. **Osbeckia melastomacea Bakh. f.** spec. nov.

Frutex, caulibus teretiusculis vel subquadrangularibus, novellis dense ferrugineo-strigillosis. Folia lanceolata basi apiceque acuta 2—3 cm × 0.5—0.8 cm integra, supra minute strigillosa, subtus cinerea, inter nervos sericea, 3-nervia. Petiolus 3—5 mm longus. Flores ignoti, sed fructus terminales, solitarii vel bini. Pedicelli 5—6 mm longi. Calycis tubus campanulatus 8 mm longus pilis simplicibus inaequalibus obtectus; lobi decidui. Capsula 4-locularis calycis tubum non excedens.

Observ: Resembles a Melastoma, but is a true Osbeckia on account of its capsule. The systematic place remains uncertain by the absence of flowers, but the plant probably belongs to the section Asterostoma Triana and seems to approach O. aspera (L.) Bl.

Distribution: endemic.

BANKA: Soengai Liat, G. Boei, 400 m (Bünnemeyer nr. 1780, L, typus, dupl. in [BZ], fr. Oct.; v.n. kěmoenting goenoeng).

5. **Osbeckia ericoides Bakh. f.** spec. nov.

Frutex habitu ericoideo, caulibus teretiusculis rufo-strigosis. Folia lanceolata, 1—1.5 cm × 0.3 — 0.6 cm, basi apiceque acuta, integra, supra minute albido-strigillosa, subtus dense rufo-strigosa, 3-nervia. Petiolus 2 mm longus. Flores ignoti, sed fructus solitarius terminalis. Calycis tubus 10 mm longus campanulatus setis denticulatis obtectus; lobi decidui. Capsula 4-locularis calycis tubum non excedens.

Observ: differs by its ericoid habit and its white-strigillose leaves from all known species. The systematic place remains uncertain by the absence of flowers, but it probably belongs to the section Asterostoma Triana.

Distribution: endemic.

LINGGA ARCHIPELAGO. P. Lingga: G.Tanda (Teysmann s.n. L, typus, dupl. in [BZ]).

6. **Osbeckia aspera (L.) Bl.** Blume in Flora XIV (1831) p. 474 and in Bijdr. Nat. Wet. VI (1831) p. 220; Miquel, l.c. (1855) p. 520; Triana in l.c. (1871) p. 54; Cogniaux in l.c. (1891) p. 315; *Asterostoma asperum (L.) Bl.* in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 50; *Melastoma aspera L. (non Blume)*, Spec. Plant. I (1753) p. 391.

Shrub. Branches distinctly or indistinctly quadrangular, minutely strigillose. Leaves ovate-oblong or ovate-lanceolate, 3—4 cm × 1—1.5 cm, acute, entire, sparingly and minutely strigillose on both sides, 3- to 5-nerved. Petiole up to 5 mm long.

Inflorescence a short panicle, 3- to 6-flowered; peduncle sparingly strigillose. Flowers 5-merous, shortly pedicellate. Calyx tube campanulate, 7—8 mm long, covered with 0.5 mm long, appressed simple hairs and a few subulate scales near the mouth of the calyx or with scattered, stellate hairs; lobes 5, triangular, 4—5 mm long, strigillose, deciduous, alternating with 5 subulate, 1 mm long, setulose scales. Petals 5, obovate, 12—15 mm × 9 mm, retuse, glabrous or subciliate, about 9-nerved.

Stamens 10, up to 13 mm long; filaments 7 mm long; anthers linear, 7—8 mm long, abruptly attenuate, opening by a terminal pore; connective up to 0.5 mm long. Ovary 5-celled, slightly pubescent; style up to 1.5 cm long, glabrous. Capsule 6—7 mm long, strigillose, scarcely exceeding the mouth of the calyx; stalk 2 mm long.

Observ: The origin of the specimens in the Leyden Herbarium, which according to the labels have been collected in Java, is doubtful. The vernacular name „Bowithia" on Junghuhn's label makes it probable that they are Indian specimens, not Javanese ones. (cf. Blume in Bijdr. Nat. Wet. VI [1831] p. 220).

Distribution.

JAVA? locality unknown: (collector unknown, L); (Junghuhn s.n. L).
FURTHER DISTRIBUTION: British India (Deccan), Ceylon?, Hongkong.

7. **Osbeckia dolichophylla Naud.** Naudin in l.c. XIV (1850) p. 64; Miquel, l.c. (1855) p. 518; Triana in l.c. (1871) p. 55; Boerlage, l.c. (1890) p. 507; Cogniaux in l.c. (1891) p. 322.

Branched shrub. Branches slightly quadrangular, strigillose, especially on the ribs. Leaves narrowly ovate, 4—9 cm × 0.7 — 1.4 cm, obtuse or subcordate at the base; attenuate, very acute, the greatest width near the base, scabrid, entire, subsetulose or strigillose,mostly 3-nerved, sometimes indistinctly 5-nerved, subsessile. Inflorescence mostly terminal, cymose, the terminal ones often in pairs, each bearing 3 flowers. Bracts ovate, 10—12 mm × 4—6 mm, subobtuse, with a long bristle at the top, entire, ciliate, glabrous or bearded on the upperside, deciduous. Flowers 5-merous, shortly pedicellate. Calyx tube campanulate to urceolate, 5—8 mm long, imbricately covered with 1 mm long pectinate scales, bearing 3—5 mm long bristles; at the top with about 16 scales, of which the 5 larger ones are 1.5—2.5 mm long and alternate with the lobes; lobes 5, elliptic-oblong, 10 mm × 4—6 mm, obtuse, ending in a long bristle, entire, 5-nerved, deciduous. Petals 5, obovate, 11—25 mm × 6—17 mm, lilac or pink, retuse, long-ciliate at the top, glabrous, 9-nerved. Stamens 10, 13—15 mm long; filaments 7—8 mm long; anthers linear, 6—7 mm long, abruptly and shortly attenuate, opening by a terminal

pore; connective very short, slightly two-lobed. Ovary 5-celled; style 13—24 mm long, glabrous. Capsule subglobose, 7—8 mm long, exceeding the calyx mouth, densely setose.

Observ: Resembles O. nepalensis Hook. from British India.

Distribution: restricted to the localities quoted below.

CELEBES. Gvt. Celebes and dependencies: G. Galesoeng near Malino, 310 m (Bünnemeyer nr. 10818 (BZ], L, fl. Apr.); Wattan Sopeng, Walemping (Noerkas nr. 123 [BZ], L, fl. March); Bili-bili (Rachmat nr. 69 [BZ], L, fr. June; v.n. biri biri); Bonto Parang, 50 m (Bünnemeyer nr. 10598 [BZ], L, U, fl. March); Bonto Parang peda near Bonto Parang, 70 m (idem nr. 10678 [BZ], L, fl. March; v.n. berék berék tjadi); Pangkadjene (Teysmann s.n. L); Boeloe Parigi near Tanette, 560 m (Bünnemeyer nr. 12452 [BZ], L, U, fl. June; v.n. biroro);? Maros (Zollinger nr. 3302, L, typus); Loka (Weber s.n. L).

SOEMBAWA: G. Tambora, 1300 m (Zollinger s.n., according to Miquel, l.c.).

var. **abrupta Bakh. f.** var. nov.

Suffrutex. Folia oblonga vel oblongo-lanceolata, 3—6.5 cm × 0.8—2.5 cm, pro $^3/_4$ aequilata, deinde abrupte angustata, acutissima villosa vel strigillosa, 3- vel 5-nervia, sessilia.

Bracteae ovatae, 9 mm × 5 mm. Calycis tubus 6—7 mm longus, squamis appressis orbicularibus 3—4 mm longis setosis munitus; lobi 10—12 mm × 3 mm, setis 2 mm longis muniti, alternantes cum appendicibus 1 mm longis setis 3—4 mm longis obtectis. Petala 12—16 mm × 8—12 mm. Stamina filamentis 6—7 mm longis, antheris linearibus 4—6 mm longis subabrupte longe angustatis et acute vel acutissime exeuntibus. Stylus 14—17 mm longus. Capsula 7—9 mm longa.

Observ: Differs from the typical form mainly by the shape of the leaves, but also by the narrowed part of the anthers being much longer.

Distribution: restricted to the localities quoted below.

CELEBES. Gvt. Celebes and dependencies: Lombasang, 950 m (Bünnemeyer nr. 11043 [BZ], L, fl. Apr.); idem (idem nr. 11017 [BZ], L, fl. Apr.); G. Bonthain, 1400 m, crater cave (idem nr. 12640 β [BZ], L, fl. July; v.n. biroro); idem (idem nr. 11595, L, typus, dupl. in [BZ], fl. May; v.n. kajoe biroro); idem, 2000 m (idem nr. 12092 (BZ], L, fl. June); idem, 2000 m (idem nr. 12403 [BZ], L, fl. June; v.n. biroro); Boeloe balea, G. Bonthain, 1800 m (idem nr. 12287 [BZ], L, fl. June; v.n. biroro).

SOEMBA: Tanggeba, riverside (Iboet nr. 320 [BZ], L, fl. Apr.).

2. Dissotis Benth.

Bentham in Hooker's Niger Flora (1849) p. 346; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 362; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 156; *Heterotis Benth.* in Hooker's Niger Flora (1849) p. 347.

(characters of the genus according to Cogniaux). Creeping or erect herbs or, sometimes, shrubs, mostly with angular, pilose shoots or branches. Leaves ovate-oblong or lanceolate, often pilose on the upperside, 3- to 5-nerved, petiolate. Flowers solitary,in heads or in panicles, sometimes bracteate, large, 4- or 5-merous, pedicellate. Calyx tube ovoid, glabrous, pilose, stellate-pilose or covered with pectinate scales, often exceeding the ovary; teeth 4 or 5, mostly long triangular, persistent or deciduous, alternating with long, setose appendages. Petals 4 or 5, obovate, large, violet or purple. Stamens 8 or 10, unequal; filaments well developed; anthers similar in shape, linear, incurved, thecae undulate, opening by a terminal pore; connective of the larger anthers well developed, incurved, ventrally with 2 appendages; connective of the smaller ones scarcely developed or, sometimes, with 2 hardly conspicuous appendages. Ovary 4- or 5-celled, concrescent with the calyx tube with 8 or 10 septs, pilose at the top; style filiform; stigma hardly conspicuous. Fruit an ovoid capsule, dehiscing at the apex with 4 or 5 valves. Seeds cochleate.

Distribution: About 140 species in Africa. (W. and E. coast); elsewhere sometimes cultivated.

Key to the species.

1*a*. Calyx tube with simple hairs. 1. **D. decumbens (Beauv.) Triana**

b. Calyx tube with long-stalked stellate hairs. 2. **D. plumosa (D. Don) Benth.**

1. **Dissotis decumbens (Beauv.) Triana.** Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 58; Cogniaux in l.c. (1891) p. 368; Backer, Manuscr. Fl. Java, Melast. (1941) p. 9; *Melastoma decumbens Beauv.* in Flor. Owar. I (1804) p. 69, tab. 41.

Creeping or ascending herb, 0.30—0.60 m high. Branches quadrangular, sparingly and appressedly setulose. Leaves elliptic, 1.5—3.5 cm × 1.5—2 cm, acute, submembranaceous, subserrate, sparingly setulose on both sides, 3-nerved; petiole 1—2 cm long. Flowers solitary, 5-merous, at the base provided with two 3 mm long bracts, pedicellate. Calyx tube campanulate, 6—9 mm long, covered with long, patent, simple hairs; limb 5-dentate; teeth ovate, 5 mm long, with a thick midnerve. Petals 5, purple, obovate, 18—20 mm long (Cogniaux). Stamens 10; the larger anthers purple; connective 5—6 mm long; the smaller anthers yellow. Ovary 5-celled; style 2 cm long (Backer).

Observ: No material seen by me.

Distribution: Africa. (Congo).

JAVA: according to Backer in l.c. sometimes cultivated.

2. **Dissotis plumosa (D. Don) Benth.** Bentham in Oliver's Flor. of Trop. Africa II (1871) p. 452; *Dissotis rotundifolia* ((*Smith*) *Triana*; Cogniaux in l.c. (1891) p. 369; *Heterotis plumosa* (*D. Don*) *Benth.* in Hooker's Niger Flora (1849) p. 348; *Melastoma plumosa D. Don* in Mem. Wern. Soc. IV (1823) p. 291.

Creeping herb, with ascending stem. Branches subquadrangular, pilose. Leaves broadly ovate, 2—3 cm × 1.5—2 cm, acute or subacuminate, more or less fleshy, nearly entire, covered with scattered, appressed hairs on both sides; petioles unequal, 5—9 mm long, slightly pilose. Flowers terminal or axillary, solitary or in loose triads, 5-merous, at the base provided with 2 broadly ovate, 3 mm long, conspicuously veined, ciliate, persistent bracts. Pedicel 3 mm long. Calyx tube ovate, 6—8 mm long, densely covered with bright purple, long-stalked stellate hairs; limb 5-dentate, teeth broadly lanceolate, 7 mm long, attenuate to the base and the apex, stellately setose at the top, ciliate.

Petals 5, broadly obovate, 12—22 mm × 8—15 mm, purple. Stamens 10; filaments 7 mm long; the larger anthers linear, 6—8 mm long; connective 4 mm long, dorsally very shortly spurred, ventrally ending in two oblong lobes; the smaller anthers linear, 6 mm long; connective 2 mm long, dorsally and ventrally with very small appendages. Ovary 5-celled; style 2 cm long.

Capsule ovate-oblong, 7—9 mm long, dehiscing at the top with 5-valves.

Observ: Osbeckia rotundifolia Smith (Rees' Cyclop. 25) is a true Dissotis, but I doubt whether it is identic with our species. For this reason I have retained the name Dissotis plumosa (D. Don) Benth.

Distribution. Africa: W. coast and Zanzibar (according to Cogniaux in l.c.).

JAVA. Batavia: Buitenzorg, along the Tjiliwoeng. (Schiffner nr. 2298, L, fl. Febr.); idem, Botanical Garden (Dr. H. Dihm s.n. L, M); idem (Boerlage s.n. L); idem (collector unknown, U.).

3. Melastoma L.

Linnaeus, Spec. Plant. I (1753) p. 389; De Candolle, Prodr. III (1828) p. 144 [pr. p.]; Naudin in Ann. Sc. Nat. sér. III. XIII (1850) p. 273; Miquel, Flor. Ned. Ind. I (1855) p. 502; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 746; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 59; Baillon, Hist. d. plant. VII (1880) p. 37; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 508; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 343; Krasser in Engl. u.

Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 153; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1203.

Usually shrubs or small trees or, very rarely, herbs. (M. repens Desr.), with hirsute or strigillose stem or, rarely, subglabrous. Leaves opposite or ,rarely, ternate, oblong, lanceolate or ovate, equal, often subcoriaceous, entire, strigillose, hirsute or subglabrous, with 3, 5 or 7 nerves, the lateral ones arising from the base or near to it; with conspicuous parallel cross-venules; petiolate. Flowers mostly in terminal, 3- to many-flowered, often compound cymose inflorescences, with the lower branchlets often subtended by leaves or in fascicles, rarely, solitary, bracteate or ebracteate, pedicellate, 5—(6—7)-merous. Calyx tube campanulate or ovoid, strigillose, setose, penicillate or, rarely, with glandular hairs; limb 5- to 7-dentate; teeth ovate, lanceolate or linear, often ciliate, shorter or longer than the calyx tube, often alternating with an equal number of subulate appendages ("denticles"), deciduous.

Petals 5—(7), obovate, large, sometimes oblique, acute, obtuse or retuse, mostly glabrous, white, pink or purple. Stamens 10—(14), unequal or, rarely, equal; filaments well developed; anthers isomorphous or subisomorphous, mostly unequal; the larger ones purple, their connective mostly produced in a very long, arcuate appendix or, rarely, not produced, dorsally inappendiculate, ventrally bilobate, bituberculate or bisetose; the smaller ones yellow, their connective not or scarcely produced, provided with 2 ventral tubercles. Ovary 5—(7)-celled, concrescent with the calyx tube with 10—(14) septs; the exterovarial chambers descending below the middle of the ovary; top part of the ovary free, densely setose; style filiform, incurved, slightly thickened at the top, mostly glabrous, with a hardly conspicuous stigma. Fruit a campanulate or ovoid, coriaceous or fleshy berry, dehiscing irregularly or indehiscent. Seeds cochleate.

Distribution. About 70 species in Asia and Australia: British India, Malay Peninsula, Siam, French Indo-China, S. China, Formosa, Malay Archipelago, Australia (N. part), Melanesia, Carolines, Samoa Islands.

Key to the sections and subsections.

A. Calycis tubus squamis appressis apice interdum breviter patentibus (0.5) — 1—3 (— 4.5) mm longis obtectus. Denticuli aut breviter cylindrici paleolis vestiti et setis lanceolatis terminati aut lanceolati. . . . . I *Eu-Melastoma Bakh. f.* sect. nov.

a. Calycis dentes adulti setis apicalibus non adnumeratis, plerumque calycis tubo multo breviores, interdum ei aequales casu

quo nondum 7 mm longi. Calycis dentes juveniles calycis tubo multo breviores.

1. Bracteae adultae angustae, multo longiores quam latiores, latitudine minore quam 5 mm, anguste triangulares ovatae vel nullae. Calycis dentes aut teneres et lanceolati aut breviter lateque triangulares.

α. Teneridentatae Bakh. f. subsect. nov.

2. Bracteae adultae plerumque pariter longae ac latae, interdum longiores quam latiores, plus quam 5 mm latae, plerumque alabastrum totum vel partim includentes. Calycis dentes saepe robusti.

β. Robustidentatae Bakh. f. subsect. nov.

b. Calycis dentes adulti setis apicalibus non adnumeratis, calycis tubo longiores vel ei aequales et plus quam 7 mm longi. Calycis dentes juveniles calycis tubo fere aequales vel eo parumper breviores.

1. Bracteae minus quam 5 mm latae et usque ad 15 mm longae, graciles.

γ. Parvibracteatae Bakh. f. subsect. nov.

2. Bracteae plus quam 5 mm latae et 15 mm longae, robustae.

δ. Magnibracteatae Bakh. f. subsect. nov.

B. Calycis tubus pilis vel setis patentibus (2)—3—6(—10) mm longis obtectus. Denticuli plerumque subulati et apice stellato- vel penicillato-setosi, rarissime breviter cylindrici et paleolis vestiti. . . . . II *Hetero-Melastoma Bakh. f.* sect. nov.

Key to the species.

Sect. I. **Eu-Melastoma Bakh. f.**

Subsect. *α. Teneridentatae Bakh. f.*

1*a*. Scales of the calyx tube not imbricate, but separated by open spaces, rigid, less than 1 mm long. Petiole densely covered with patent, rigid scales. . . . . 1. **M. aculeolatum Bakh. f.**

b. Scales of the calyx tube imbricate or subimbricate, leaving no or but small open spaces between them 2

2*a*. The central scales of the calyx tube at most 1.5 mm long . 3

b. The central scales of the calyx tube at least 2.5 mm long . 6

3*a*. Flowers either corymbosely paniculate, mostly 10 to very many or a few together 4

b. Flowers fasciculate, less than 10 together 5

4*a*. Branches subterete, densely shaggy by rather long linear scales. Leaves on both sides strigose, asperous.
2. **M. horridum Bakh. f.**

b. Branches acutely to slightly quadrangular, not shaggy; the scales either appressed or patent, but then very small. Leaves strigose, strigillose or pubescent, smooth or scabrid or, sometimes, asperous. . . . . 3. **M. polyanthum Bl.**

I*a*. Leaves linear, 7—10 times as long as wide.
3*a*. **M. polyanthum Bl.** var. **linearifolium Bakh. f.**

b. Leaves not linear, at most 5 times as long as wide . II

II*a*. Leaves coriaceous, strigose, the 3 central nerves very prominent. 3*b*. **M. polyanthum Bl.** var. **celebicum. (Bl.) Bakh. f.**

b. Leaves not coriaceous, the 3 central nerves not more markedly prominent than the others. III

III*a*. Leaves pubescent, very thin, not rigid, when dry greyish-brown. 3*c*. **M. polyanthum Bl.** var. **mollissimum Bakh. f.**

b. Leaves slightly villous, scabrid or smooth, rather rigid, when dry pale-yellow or green.
3*d*. **M. polyanthum Bl. s.s.**

5*a*. Leaves obliquely ovate-oblong, asperous. Calyx teeth sparingly puberulous on the inside. 4. **M. magnificum Bakh. f.**

b. Leaves oblong to lanceolate, acute at the base. Calyx teeth glabrous on the inside. 5. **M. imbricatum Wall. ex Clarke**

a. Leaves scabrid on both sides, 3-nerved. Branches densely and minutely scaly, greyish.
5*a*. **M. imbricatum Wall. ex Clarke s.s.**

b. Leaves smooth on both sides, 3-plinerved. Branches sparingly and minutely scaly, pallid.
5*b*. **M. imbricatum Wall. ex Clarke** var. **laeve Bakh. f.**

6*a*. Leaves densely or slightly villose. Branches shaggy, with patent, up to 4 mm long hairs. . . . . 6. **M. lanuginosum Bl.**

b. Leaves minutely strigillose on both sides, on the upperside scabrid or scabridulous. Branches not shaggy, with short appressed or subpatent scales 7

7*a*. Leaves on the upperside minutely strigillose, smooth. . . 8

b. Leaves on the upperside minutely strigillose, scabrid. . . 9

8*a*. Branches, especially the young ones, sparingly covered with patent, rufous bristles. Calyx tube narrowly campanulate, slender; teeth puberulous on the inside. 7. **M. bancanum Bakh. f.**

b. Branches warty, the young ones with appressed or subpatent

scales. Calyx tube broadly campanulate, robust; teeth glabrous on the inside. . . . . 8. **M. suave Bakh. f.**

9*a*. Leaves lanceolate. Pedicel densely hirsute. Calyx teeth glabrous on the inside. . . . . 9. **M. balinense Bakh. f.**

b. Leaves elliptic or ovate-oblong or ovate-lanceolate. Pedicel covered with appressed scales. Calyx teeth pubescent on the inside. . . . . 10. **M. ovalifolium Bakh. f.**

Subsect. *β. Robustidentatae Bakh. f.*

1*a*. Hairs of the upperside of the leaves multipartite, inserted on tubercles. . . . . 11. **M. setigerum Bl.**

a. Branches, especially the young ones, covered with patent, linear scales, acutely quadrangular. Petiole covered with long, linear scales. . . . . 11*a*. **M. setigerum Bl. s.s.**

β. Branches, especially the young ones, covered with appressed, orbicular scales, obtusely quadrangular. Petiole covered with broad, obtuse scales.

11*b*. **M. setigerum Bl.** var. **Molkenboerii (Miq.) Back.**

b. Hairs of the upperside of the leaves simple or paucipartite, not inserted on tubercles 2

2*a*. Branches hirsute with patent hairs. Calyx teeth minutely scaly on the inside. . . . . 12. **M. Roemeri Mansf.**

b. Branches densely covered with appressed scales. Calyx teeth glabrous on the inside. . . . . 13. **M. malabathricum L.**

I *a*. Bracts and calyx teeth with a broad, glabrous edge.

13*b*. **M. malabathricum L.** var. **obvolutum (Jack) Bakh. f.**

b. Bracts and calyx teeth wholly covered with scales or, sometimes, with a very narrow glabrous edge. . . . II

II*a*. Calyx tube slender, about 5 mm wide. Pedicel slender, subterete, about 1 mm thick.

13*a*. **M. malabathricum L. s.s.**

b. Calyx tube robust, about 10 mm wide. Pedicel robust, quadrangular, 2—3 mm thick.

13*c*. **M. malabathricum L.** var. **javanum Bakh. f.**

Subsect. *γ. Parvibracteatae. Bakh. f.*

1*a*. Stamens all equal, connective not produced or the appendix less than 1 mm long. Nerves on the lower side of the leaves sparingly scaly; a few large, lanceolate scales mixed with many small ones. . . . . 14. **M. sylvaticum Bl.**

a. Flowers 5—8 together in a short umbel.
14*a*. **M. sylvaticum Bl. s.s.**
β. Flowers circa 50 together in a long-peduncled corymb.
14*b*. **M. sylvaticum Bl.** var. **permultiflorum Bakh. f.**

b. Stamens very unequal or, sometimes, subequal; connective distinctly produced, longer than 1 mm. 2

2*a*. Leaves smooth on the upperside 3
b. Leaves not smooth on the upperside 4

3*a*. Leaves on the lowerside covered with rather soft, appressed hairs, 3-nerved. Calyx tube densely covered with imbricate scales; teeth minutely scaly on the inside.
15. **M. borneense Bakh. f.**

b. Leaves on the lower side sparingly strigillose, 5-nerved. Calyx tube sparingly covered with very small scales; teeth glabrous on the inside. . . . . 16. **M. decipiens Bakh. f.**

4*a*. Leaves on the upperside villous or subvillous, strigillose or strigose, not asperous. 5
b. Leaves on the upperside strigillose, asperous.
17. **M. trachyphyllum Back.**
a. Leaves on the lowerside strigillose, very asperous.
17*a*. **M. trachyphyllum Back. s.s.**
β. Leaves on the lowerside yellowish-villous.
17*b*. **M. trachyphyllum Back.** var. **ochraceum Bakh. f.**

5*a*. Adult branches covered with appressed scales. Leaves on the upperside subvillous. . . . . 18. **M. pubescens Bakh. f.**
b. Adult branches covered with patent hairs or with scales, often shaggy. 6

6*a*. Branches densely covered with very small erect scales, grey. Calyx tube covered with grey scales; teeth on the inside minutely scaly. . . . . 19. **M. caesium Bakh. f.**
b. Branches covered with long, patent hairs or with scales. . . . 7

7*a*. Branches shaggy with long patent hairs 8
b. Branches not shaggy; scales rather short. 9

8*a*. Petiole long setose. Calyx tube covered with almost 1.5 mm long scales. Leaves narrowly rhomboid. 20. **M. vile Bakh. f.**
b. Petiole covered with more or less patent scales. Calyx tube covered with at least 2.5 mm long scales. Leaves ovate-oblong or ovate-lanceolate. . . . . 21. **M. normale D. Don**

9*a*. Leaves subvillous on the lowerside, when dry rather dark above.

Calyx teeth sparingly and minutely scaly on the inside. Branches subterete. . . . . 22. **M. atrofuscum Bakh. f.**

b. Leaves strigillose on the lowerside, when dry greenish above and greenish-yellow below. Calyx teeth glabrous on the inside. Branches quadrangular. . . . . 23. **M. Zollingeri Naud.**

Subsect. *δ. Magnibracteatae Bakh. f.*

1*a.* Bracts oblong-lanceolate, not enveloping the bud, entirely covered with scales on the outside. Leaves strigillose on the lowerside between the nerves. 24. **M. Bünnemeyeri Bakh. f.**

b. Bracts spathulate, enveloping the bud, on the outside along the margin glabrous or very sparingly and shortly scaly. Leaves sericeous on the lowerside between the nerves. 25. **M. robustum Bakh. f.**

Sect. II. **Hetero-Melastoma Bakh. f.**

1*a.* "Denticles" long subulate, with penicillate or stellate bristles at the apex 3

b. "Denticles" either shortly cylindrical, with a large, lanceolate scale at the apex or lanceolate 2

2*a.* Calyx tube covered with patent, orange hairs. Leaves either subvillous or lanate. Pedicel 5—15 mm long. 26. **M. sumatranum Bakh. f.**

α. Leaves subvillous. 26*a.* **M. sumatranum Bakh. f. s.s.**

β. Leaves lanate. 26*b.* **M. sumatranum Bakh. f.** var. **lanatum Bakh. f.**

b. Calyx tube covered with patent grey hairs. Leaves strigillose, scabrid. Pedicel 3 mm long. 27. **M. Koordersii Bakh. f.**

3*a.* Bracts enveloping the bud, large. Calyx tube covered with patent, pallid, simple bristles. 28. **M. porphyreum Zipp. ex Bl.**

b. Bracts not enveloping the bud, small 4

4*a.* Bristles on the calyx tube fasciculate 5

b. Bristles on the calyx tube single. 6

5*a.* Branches covered with scattered, long, incurved hairs. Leaves on both sides strigose, green. Bristles at the apex of the calyx tube patent. . . . . 29. **M. pulcherrimum Korth.**

b. Branches densely covered with small erect scales. Leaves on

both sides strigillose, pale-yellow below. Bristles at the apex of the calyx tube directed downwards.
30. **M. Elbertii Bakh. f.**

6*a*. Leaves on both sides villous or subvillous 7
b. Leaves on both sides strigillose or nearly smooth 8

7*a*. Branches and calyx tube covered with golden-coloured hairs, compressed quadrangular. Calyx teeth pubescent on the inside.
31. **M. aureum Bakh. f.**
b. Branches and calyx tube covered with red-brown hairs, terete. Calyx teeth glabrous on the inside.
32. **M. rufosetosum Bakh. f.**

8*a*. Branches densely covered with patent hairs or scales . . . 10
b. Branches covered with appressed scales 9

9*a*. Leaves strigillose, asperous, 5-nerved. Calyx teeth shorter than the calyx tube, glabrous on the inside.
33. **M. nitidum Korth.**
b. Leaves strigillose, scabrid, 3-nerved. Calyx teeth as long as the calyx tube or longer, pubescent on the inside.
34. **M. Boryanum Korth.**

10*a*. Branches densely covered with 2—5 mm long, patent, incurved stiff hairs. Leaves on both sides smooth or nearly smooth. Young calyx teeth erect. 35. **M. sanguineum Sims**
b. Branches covered with patent small scales or with at most 2 mm long bristles. Young calyx teeth rolled up. Leaves on both sides strigillose. 36. **M. curvisepalum Bakh. f.**
α. Calyx tube covered with 2—3 mm long bristles. Branches covered with small, pale scales.
36*a*. **M. curvisepalum Bakh. f. s.s.**
β. Calyx tube covered with 10—14 mm long bristles. Branches up to 2 mm setose.
36*b*. **M. curvisepalum Bakh. f.** var. **crinitum Bakh. f.**

Sect I. **Eu-Melastoma Bakh. f.** nr. 1—25.

1. **Melastoma aculeolatum Bakh. f.** spec. nov.

Frutex. Rami subquadrangulares, adulti saepe aculeolati aculeis patentibus vel subappressis rigidis solitariis vel 2—3 aggregatis, maxime 1.5 mm longis; novelli dense aculeolati. Folia oblonga 4.5—6 cm × 2—2.8 cm, basi rotundata apice acuta, supra minutissime strigillosa et laevia, subtus minute strigillosa et scabridula, ad nervos saepe aspera 5-nervia; petiolus 0.7—1.2 cm longus, paleolis

patentibus rigidis dense hirsutus. Flores usque ad 9 in fasciculos terminales aggregati; bracteolis late triangularibus 3 mm × 2 mm, extus paleolis rigidis vestitis. Pedicellus 5 mm longus, paleolis rigidis dense hirsutus. Calycis tubus campanulatus squamis non imbricatis, rigidis, appressis vel subpatentibus, longitudine 1 mm non attingentibus obtectus; dentes 5 late triangulares crassi extus ad nervum medianum paleolis sparsis vestiti ceterum glabri, intus glabri; denticuli lanceolati 1 mm longi, paleolis non obtecti. Petala 5 obovata 12—23 mm × 7—11 mm subciliata. Stamina 10 inaequalia, antheris subulatis breviter rostratis; majora filamentis 7—11 mm longis, antheris 4—7 mm longis, connectivo 5—7 mm longo in lobos duos 1—2 mm longos exeunte; minora filamentis 7—8 mm longis, antheris 5 mm longis, connectivo haud producto. Ovarium 5-loculare, apice pilosum. Stylus 12 mm longus. Bacca 8 mm longa, pedicello 8 mm longo munito.

Observ: Resembles M. polyanthum Bl.

Distribution: endemic.

TIMOR: „Fetin", 1800 m (unknown collector nr. 12, L, typus, dupl. in [BZ], fl. Apr.); locality unknown (Forbes nr. 3506 and 3822, L.).

2. **Melastoma horridum Bakh. f.** spec. nov.

Frutex. Rami teretiusculi, paleolis patentibus pectinatis et paleis triangularibus ciliatis usque ad 2.5 mm longis valde hirsuti; ad nodos setis usque ad 6 mm longis dense vestiti. Folia ovata vel ovato-oblonga 9—10 cm × 4—5.5 cm, breviter acuminata utrinque strigosa aspera, subtus ad nervos paleis triangularibus et linearibus minutis, nonnullis longioribus intermixtis vestita, 5-nervia; petiolus dense hirsutus 1.5—2.5 cm longus. Flores usque ad 9 in inflorescentias terminales dispositi et interdum insuper 2—3 in axillis foliorum superiorum. Pedicellus 4—5 mm longus dense hirsutus. Calycis tubus anguste campanulatus 6—8 mm longus paleis appressis linearibus ciliatis maxime 1.5 mm longis vestitus; dentes 5 lanceolati 6—8 mm × 1 mm sparse et minute setosi, intus glabri, calycis tubo breviores vel ei aequilongi; denticuli lanceolati 2 mm longi. Petala 5 obovata 8 mm × 4—5 mm ciliata. Stamina 10 inaequalia; majora filamentis 4 mm longis, antheris linearibus 4 mm longis breviter rostratis, connectivo 2.5 mm longo; minora filamentis 4 mm longis, antheris 3 mm longis. Ovarium 5-loculare, apice pilosum. Stylus 8 mm longus. Bacca ignota.

Observ: A rather isolated species.

Distribution: endemic.

CELEBES. Gvt. Celebes and dependencies: G. Bonthain 1350 m (Bünnemeyer nr. 11596, L, typus, dupl. in [BZ]).

3. **Melastoma polyanthum Bl.** Blume in Flora XIV (1831) p. 481 and in Bijdr. Nat. Wet. VI (1831) p. 224; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 225; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 257; Blume in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 52; Miquel, l.c. (1855) p. 507; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121; Naudin in l.c. XIII (1850) p. 287; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; Junghuhn, Java (1853) p. 319, 424; Triana in l.c. (1871) p. 59; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 353; Penzig in Ann. Jard. Bot. Buitenzorg XVIII (1902) p. 107; Ernst in Viertel Jahrschr. Naturf. Gesch. Zürich 52 (1907) p. 329; Guillaumin in Not. Syst. II (1911) p. 321; Merrill, An interpretation Rumph. Herb. Amb. (1917) p. 403; Docters van Leeuwen in Ann. Jard. Bot. Buitenzorg XXXI (1921) p. 129; Hochreutiner in Candollea II (1925) p. 468; Bartlett in Papers Michigan Ac., etc. VI (1926) p. 32; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 108; idem in Nova Guinea XIV. livr. II (1927) p. 200; Heyne, l.c. (1926) p. 1203; Ochse (in coll. with Bakhuizen van den Brink), Indische Groenten (1931) p. 484, tab. 301; Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 220; *Melastoma polyanthum Korth.*; Blume in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 54 [nomen.]; *Melastoma polyanthum Bl.* var. *albiflorum T. et B.*, Cat. Plant Hort. Bot. Bog. (1866) p. 241 [nomen]; *Melastoma polyanthum Bl.* var. *albo-strigosum T. et B.*, Cat. Plant. Hort. Bot. Bog. (1866) p. 241 [nomen]; *Melastoma polyanthum Bl.* var. *angustifolium Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 53; Miquel, l.c. (1855) p. 508; *Melastoma polyanthum Bl.* var. *collinum Bl.* in Mus Bot. Lugd.-Bat. I. nr. 4 (1849) p. 53; Miquel, l.c. (1855) p. 508; Triana in l.c. (1871) p. 60; *Melastoma polyanthum Bl.* var. *contractum Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4. (1849) p. 53; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; *Melastoma polyanthum Bl.* var. *ellipticum Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4. (1849) p. 53; Miquel, l.c. (1855) p. 508; *Melastoma polyanthum Bl.* var. *erosulum Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4. (1849) p. 53; Miquel, l.c. (1855) p. 508; *Melastoma polyanthum Bl.* var. *Korthalsii Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 53; Miquel, l.c. (1855) p. 508; *Melastoma polyanthum Bl.* var. *micranthum T. et B.*, Cat. Plant. Hort. Bot. Bog. (1866) p. 241 [nomen]; *Melastoma polyanthum Bl.* var. *molle Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 52; Miquel, l.c. (1855) p. 508; *Melastoma polyanthum Bl.* var. *β.pallens Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 52; *Melastoma polyanthum Bl.* var. *Pulleana Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 109; idem in Nova Guinea XIV livr. II (1927) p. 200; *Melastoma polyanthum Bl.* var. *riparium Bl.*

in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 53; Miquel, l.c. (1855) p. 508; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; *Melastoma polyanthum Bl.* var. *Royeni* (*Bl.*) *Miq.*, l.c. (1855) p. 508; *Melastoma polyanthum Bl.* var. *ternifolia Miq.*, l.c. (1855) p. 508; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; *Melastoma polyanthum Bl.* var. *tondanensis* (*Bl.*) *Miq.*, l.c. (1855) p. 508; *Melastoma polyanthum Bl.* var. *velutinosum Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 52; Naudin in l.c. XIII (1850) p. 287; Triana in l.c. (1871) p. 60; *Melastoma polyanthum Bl.* var. *β and* var. *γ*; Blume in Flora XIV (1831) p. 482 and in Bijdr. Nat. Wet. VI (1831) p. 225; *Melastoma adpressum Wall. ex Triana* in l.c. (1871) p. 60; *Melastoma asperum Bl.*; Miquel in Ann. Mus. Lugd.-Bat. I (1863) p. 216; *Melastoma Baumianum* Naud. in l.c. XIII (1850) p. 289; *Melastoma brachyodon Naud.* in l.c. XIII (1850) p. 292; Miquel, l.c. (1855) p. 510 and tab. VIII fig. A; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; *Melastoma brachyodon Naud.* var. *rubescens T. et B., Cat.* Plant. Hort. Bot. Bog. (1866) p. 241 (nomen); *Melastoma malabathricum L.*; in errore apud Blume, Cat. Buitenzorg (1823) p. 70; eodem modo: Jack in Trans. Linn. Soc. XIV (1825) p. 6; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1076; Jack in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 315; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 10; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; Koorders, Exkurs. Flora Java II (1912) p. 690; Boldingh, Zakflora Landb.streken Java (1916) p. 133; Docters van Leeuwen in Ann. Jard. Bot. Buitenzorg XXXII (1923) p. 174; Backer, Geïllustr. Handb. Jav. Thee-onkruiden (1924) p. 182, fig. 182; Geerts-Ronner, Vacantie in de bergen (1926) p. 85, fig. on p. 86; Docters van Leeuwen in Ann. Jard. Bot. Buitenzorg XLVI—XLVII (1930) p. 393; Ochse (in coll. with Bakhuizen van den Brink), The vegetables of the Dutch East Indies (1931) p. 485, fig. 301 and in the Dutch translation p. 484, fig. 301; Frey-Wyssling in Trop. Nat. XX (1931) p. 197, fig. 4; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. Vol. XII. livr. 2 (1932) p. 166; Docters van Leeuwen in Trop. Nat. XXI (1932) p. 142; Backer, Handl. Suikerriet Cult. etc. VII (1934) p. 467; Docters van Leeuwen in Blumea II nr. 40 (1937) p. 259; Dunselman in Trop. Nat. 27 (1938) p. 103; de Voogd in Trop. Nat. 27 (1938) p. 121; Steup in Trop. Nat. 27 (1938) p. 142; *Melastoma malabathricum L.* var. *polyanthum* (*Bl.*) *Benth.* in Flor. Austral. III (1866) p. 292; King in Journ. As. Soc. Beng. LXIX. part II (1900) p. 7; Backer, Manuscr. Fl. Java, Melast. (1941) p. 8; *Melastoma oliganthum Naud.* in l.c. XIII (1850) p. 292; *Melastoma polyanthemum* [Bl.], G. Don, Gen. Hist. dichl. plants II (1832) p. 762; *Melastoma pusillum Bl.*

in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 54; Miquel, l.c. (1855) p. 508; Triana in l.c. (1871) p. 59; Cogniaux in l.c. (1891) p. 353; *Melastoma Royeni Bl.* in Flora XIV (1831) p. 483 and in Bijdr. Nat. Wet. VI (1831) p. 226; Triana in l.c. (1871) p. 60; *Melastoma setigerum Bl.*; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; *Melastoma tondanense Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 54; Naudin in l.c. XIII (1850) p. 288; *Osbeckia Royeni (Bl.) Miq.*, Comm. Phytogr. II (1840) p. 69.

Shrub, often much branched, 0.50—1.50 m, rarely up to 3 m high. Branches acutely to slightly quadrangular or, rarely, terete, with appressed or slightly patent, triangular, fimbriate, up to 2 mm long scales, on the nodes covered with up to 2 mm long bristles. Leaves very variable in shape and hairiness, opposite or, rarely, ternate, oblong-lanceolate, ovate-oblong, elliptic or subrhomboid, 2—19 cm × 0.8—8.5 cm, rounded to acute at the base, acute, acuminate, obtuse or cuspidate, mucronate, entire, strigillose or subvillous on both sides, scabrid, more or less smooth or velvety, on the lowerside between the nerves covered with very short scales, on the nerves with linear ones, either 5-nerved or 3-nerved with 2 thin marginal ones; petiole 7—35 mm long, covered with minute appressed linear scales. Flowers more than 10 together in a 2—3 cm long corymbose panicle. Bracts long triangular, 6 mm × 2 mm, scaly on both sides. Pedicel 8 mm long, quadrangular, slender or, sometimes, robust. Calyx tube campanulate, 7 mm long, covered with 1—2 mm long, imbricate, sometimes ciliate, soft or rigidulous scales; teeth 5, triangular, 3—7 mm × 1—4 mm, minutely scaly on the outside, glabrous or slightly scaly on the inside; denticles lanceolate, 1 mm long. Petals 5, narrowly to broadly obovate, 10—24 mm × 5—20 mm, purple, pink or white. Stamens 10, unequal; the larger ones with 4—8 mm long filaments and linear, rostrate, 6—9 mm long anthers, provided with a 6—12 mm long connective; the smaller ones with 3—7 mm long filaments and linear, rostrate, 3—8 mm long anthers provided with a 2—7 mm long connective. Ovary (4)-5-celled; style 7—23 mm long. Berry widened at the top, 4—9 mm long; stalk 5—20 mm long.

Observ: A very variable species with many transgressive characters. Constant characters are: leaves 5-nerved, though either all or the 3 central ones only prominent and the nerves originating all from the same basal point, leaf-top mucronate, bracts small, not enveloping the bud and calyx teeth shorter than the calyx tube. Rather variable characters are: the kind of dumentum covering the branches and leaves, the shape of the scales on the calyx tube and

the shape of the calyx teeth, the bracts and the leaves. M. polyanthum Bl. is not closer related to M. malabathricum L. than other species. Many authors confuse these 2 species, but they are quite distinct.

Distribution.

SUMATRA. Tapanoeli: Bahal batoe near Siborong siborong, 900 m. (Huitema nr. 23 [BZ], L, fl. Sept.; v.n. sandoedoek). West Coast: G. Singgalang (Beccari nr. 164, L); Baso, 800 m (Bünnemeyer nr. 1239 [BZ], L); Poear Datar, 800 m (idem nr. 3297 [BZ], L, fl. June); G. Malintang, 750 m (idem nr. 4461 [BZ], L; v.n. sikadoedoek); idem, 1050 m (idem nr. 3502 [BZ], L; v.n. sikadoedoek). East Coast: P. Tebingtingi: Sělatpandjang (Beguin nr. 460 [BZ], L, fl. Nov.; v.n. kěnoedoe); idem, Sebaoek, 1 m (idem nr. 427, L, fl. Oct.; v.n. kěnoedoe); P. Berhala: locality unknown (van der Meer Mohr s.n. [BZ], L, fr. Aug.). Djambi: Bangko, 60 m (Posthumus nr. 513 [BZ], L, fl. July; v.n. kadoedoe). Palembang: Palembang (Praetorius s.n. L; v.n. daoen sětodok). Benkoelen: Soerabaja, N. of lake Ranau, 500 m. (van Steenis nr. 3325 [BZ], L, fl. Oct.). Lampong Districts: Estate Wai Lima, 200 m (Iboet nr. 452 [BZ], L, fl. Dec.; v.n. dedoegoe); locality unknown (Junghuhn s.n. L).

P. ENGGANO: (Lütjeharms nr. 3762 [BZ], L, fl. May; v.n. doeroe).

RIOUW ARCHIPELAGO. P. Bintang: G. Bintang, 20 m (Bünnemeyer nr. 6117 [BZ], L, fl. June; v.n. sinoedoek); idem, 350 m (idem nr. 6165 [BZ], L, fl. June; v.n. sinoedoek); idem, Ampelain, 10 m. (idem nr. 6211 [BZ], L, fl. June; v.n. sinoedoek); P. Papan: 15 m (idem nr. 7789 [BZ], L, fl. Sept.; v.n. sinoedoek); P. Los: 5 m (idem nr. 6390 [BZ], L, fl. June; v.n. sinoedoek); P. Soegi bawah: 5 m (idem nr. 7710 [BZ], L, fl. Sept.; v.n. sinoedoek); without exact locality: Bt. Bělobang, 2 m (idem nr. 7691 [BZ], L; v.n. sinoedoek); (Herb. Kolon. Instit. s.n. L; v.n. plawan.).

LINGGA ARCHIPELAGO. P. Lingga: 60 m (Bünnemeyer nr. 6774 [BZ], L; fl. July); idem, Pasir Pandjang, 50 m (idem nr. 6956 [BZ], L, fl. July; v.n. sinoedoek); idem, S. sěmarong, 10 m (idem nr. 7557 [BZ], L, fl. Aug.; v.n. sinoedoek); P. Sělajar; 30 m (idem nr. 7425 [BZ], L, fl. Aug.; v.n. sidoedoek); P. Sěbangka: 5 m (idem nr. 7493 [BZ], L, fl. Aug.; v.n. akar pojang).

BANKA: Muntok, 30 m (Bünnemeyer nr. 1516 [BZ], L, fl. Oct.); G. Maros, Soengailiat (idem nr. 1820 [BZ], L; v.n. kěmoenting goenoeng); Bakem, Soengailiat, 70 m (idem nr. 1591 [BZ], L, fl. Oct.; v.n. kajoe kěděbie); Pangkal pinang, camp Běroeas (idem nr. 2121 [BZ], L, fl. Nov.; v.n. kěmoenting).

P. LEPAR: 50 m (idem nr. 2456 [BZ], L, fl. Dec.; v.n. kletta).

LOCALITY UNKNOWN. (in the vicinity of Bangka): (collector unknown, L; v.n. pohon bělalang).

KRAKATAU ISLANDS. Verlaten Eiland: (Backer s.n. [BZ], L, fr. May); Lang Eiland: (idem s.n. [BZ], L).

JAVA. Bantam: locality unknown. (Blume s.n. L, sub M. polyanthum Bl. var. β.pallens Bl.) Batavia: Leuwiliang along the Tjianten. (Backer nr. 25680 [BZ], L, fl. Aug.); P. Honjè, near Leuwiliang, 350 m (Bakhuizen van den Brink nr. 6548 [BZ], L, fl. Oct.; v.n.harèndong); Batavia,8 m (W. A. Visser nr. A 23101, L, fl. Sept.); idem (Piepers s.n. L; v.n. harèndong); Depok (Went s.n. L); Buitenzorg. (van Hasselt s.n. L, sub M. polyanthum Bl. var riparium Bl.); idem, 250 m (Bakhuizen van den Brink nr. 5332 [BZ], L, fl. Sept.); idem (Boerlage s.n. L, fl. Dec.); idem (Bakhuizen van den Brink fil. nr. 912, U, fl. Sept.); idem, Tjikeumeuh, 250 m (Schiffner nr. 2295, L, fl. July); idem (Ploem s.n. L; v.n. harèndong); idem, Dessa Babakan, 230 m

(Schiffner nr. 2301, L, fl. Apr.); Batoetoelis near Buitenzorg (Raap nr. 6, G, L, fl. May); G. Boeboet near Buitenzorg, 270 m (K. J. Bakhuizen van den Brink nr. 24 [BZ], L, fl. Apr.); G. „Probakti" [G. Pĕrbakti, G. Salak] (Blume s.n. L); Poerwarkarta, 200 m (Backer nr. 13832 [BZ], L, fl. June); Wanajasa, S. of Poerwarkarta, 600 m (Bakhuizen van den Brink nr. 4788 [BZ], L fl. July). Preanger Regencies: Baros near Soekaboemi (Boerlage s.n. L, fl. July); Pĕlaboean Ratoe (Boerlage s.n. L); Pangentjongan (Koorders nr. 26593 β [BZ], L, fl. Jan.; v.n. harèndong). Cheribon: Bantar djati (Raap nr. 556, G, L, fl. June). Banjoemas: Noesa Kambangan (de Vriese s.n. L). Kedoe: G. Dieng (Karsten nr. 53, L, fl. July); Mĕdinie, G. Oengaran, 1000—1700 m (Junghuhn s.n. L; v.n. sĕnggani). Soerakarta: G. Merapi (Junghuhn s.n. U); Soerakarta (collector unknown, PAS). Madioen: Ngĕbĕl. (Koorders nr. 23226 β [BZ], L, fl. May; v.n. sĕnggani); G. Wilis, estate Toengloer (Wind nr. 2517 [BZ], L, fl. Apr.). Pasoeroean: G. Ardjoeno, 1400 m (Backer nr. 36232, PAS, fl. Oct.); G. Widodaren, 2000 m (Zollinger nr. 951, L, fl. Oct.); Nongkodjadjar, G. Tengger, 1230 m (Buysman nr. 3042, U, fl. Apr.); Poerbolinggo (Denker nr. 903 [BZ], L, fl. June; v.n. sĕnggani). Besoeki: Tjoeroemanis. (Koorders nr. 20881β [BZ], L, fl. Nov.); Locality unknown: (Blume s.n. L, typus); (idem s.n. L, sub M. polyanthum Bl. var. molle Bl.); (idem s.n. L, sub M. polyanthum Bl. var. velutinum Bl.); (Zollinger nr. 5, L, type specimen of *M. brachyodon Naud.*); (Sonnerat s.n. L); (? Korthals s.n. L); (collector unknown, L). exact locality unknown: Tjibogo (Junghuhn s.n. L); Kaloempit, G. Badak (idem s.n. L); „Rodjowinangan" (Junghuhn s.n. L, U.); „B-(R)atar" (idem s.n. L, sub M. polyanthum Bl. var. collinum Bl.).

MADOERA: calcareous hills. (Zollinger s.n. L, fl. Nov.).

KARIMOENDJAWA ISLANDS: (Karta nr. 181 [BZ], L; v.n. sĕnggani).

BALI: Boelolong (Zollinger nr. 2125, in herb.?); „Umbul", 250 m (idem nr. 3936, L, fl. May).

SOEMBAWA: Batoe Lanteh Mts., 800—1400 m, monsoonforest. (Elbert nr. 4184, L, fl. Jan.).

WETAR: Iliwati, 150—450 m, Eucalyptus-forest. (Elbert nr. 4392, L, fl. Febr.).

BORNEO. WESTERN PART. Pontianak: Sei. Raja (Mondi nr. 52 [BZ], L, fl. March; v.n. tjĕngkodo). SOUTHERN AND EASTERN PART. Bandjermasin: G. Pamatton (Korthals s.n. L, type of *M. pusillum Bl.*); idem (idem s.n. L, sub M. polyanthum Bl. var. Korthalsii Bl.); idem (idem s.n. L, sub M. porphyratum Korth.); Bandjermasin (idem s.n. L, sub M. polyanthum Bl. var. angustifolium Bl.); Tabahanan, Pelaihari (Boschwezen nr. 1950 [BZ], L, U, fl. Sept.; v.n. krimoenting); Samarinda: L. Toejoeh, Mahakam river, 150 m (Boschwezen nr. 65 [BZ], L, fl. Febr.); Balik papan (Rutten nr. 33, U, fl. Apr.); Sei. Boengaloen (idem nr. 561, U, fl. Nov.). Kapoeas-Barito: Doessoenlands. (Korthals s.n. L). Boeloengan-Beraoe: Sei. Boeloengan, near Sadjan. (Rutten nr. 127, U). Exact locality unknown: Hajoep (Winkler nr. 3384, L). Locality unknown: (Korthals s.n. L, sub M. polyanthum Bl. var. contractum Bl.); (idem s.n. L, sub M. polyanthum Bl. var. ellipticum Bl.); (idem s.n. L, sub M. polyanthum Bl. var. erosulum Bl.); (van Heutz Jr. nr. 803, U, fl. June; v.n. karamoenting).

BRITISH BORNEO: various parts.

ANAMBAS ISLANDS. P. Siantan: N.E. of Terempa, 150—200 m (van Steenis nr. 680 [BZ], L, fl. March; v.n. kĕdoedoe).

CELEBES. Manado: Mamoedjoe (Rachmat nr. 150 [BZ], L, fl. July; v.n. goela goela); Goeroepahi, 600 m (Kaudern nr. 22, L, fl. March); idem (idem nr. 263, L, fl. June); Boalemo, 600 m (Boschwezen nr. b.b. 18080 [BZ],

L, fl. Dec.); Bwool (Kaudern nr. 213, L, fl. Sept.); Manado, 0 m. (Koorders nr. 17867 β [BZ], L, fl. Dec.); Tondano (Forsten s.n. L, type of *M. tondanense Bl.*, fl. May.); exact locality unknown (collector unknown, U). Gvt. Celebes and dependencies: Pinapoean, 600 m (Kaudern nr. 422, L, fl. Dec.); Lombasang, 950 m (Bünnemeyer nr. 11044 [BZ], L, fl. Apr.); Bonto parang, 50 m (idem nr. 10564 [BZ], L, fl. March; v.n. beri beri); Sipanoengan, 250—320 m (Elbert nr. 2761, L, fl. Aug.); „Rumpia" (=? Roembia), 250—755 m (idem nr. 3146, L, fl. Sept.); locality unknown: 310 m (Bünnemeyer nr. 10817 [BZ], L, fr. Apr.). Locality unknown: (de Vriese s.n. L).

P. MOENA: Raha, 12 m (Boschwezen nr. b.b. 4999 [BZ], L, U, fl. Febr.; v.n. kirilimbé), idem, 0—125 m (Elbert nr. 2856, L, fl. July).

P. SALAJAR: (Docters van Leeuwen nr. 1730 [BZ], L, fl. May).

TALAUD ISLANDS. P. Karakelong: 100 m (Lam nr. 2551, L, fl. Apr.); P. Salebaboe: G. Ajambana, 220 m (idem nr. 3100, L, fl. May; v.n. tengtáramiseán èsaka).

MOLUCCAS. Ceram: Wai noea, 300—400 m (Rutten nr. 1953 [BZ], L, U, fl. Jan.); Kiring, 600—700 m (idem nr. 1729 [BZ], L, U, fl. Sept.); Oeloe Wai koea, 100 m (Kornassi nr. 47 [BZ], L, U, fr. Aug.); Loemoeli-Lohia Tala, 500—800 m (idem nr. 1578 [BZ], L, U, fr. Aug.). Ambon: Ambon (Robinson nr. 508 and 2027, L, PNH); idem, 0—200 m (Kornassi nr. 1174 [BZ], L, U, fl. Apr.).

NEW GUINEA. Northern Part: Jabi Mts. (Janowsky nr. 386 [BZ], L, fl. June); locality unknown (Atasrip nr. 128, L). Southern Part: Alkmaar bivak, Lorentz river, 150 m. (Versteeg nr. 1602 [BZ], L, U, fl. Aug.); Hellwig Mts. (von Römer nr. 799 [BZ], L, fl. July); idem, 750 m (idem nr. 909 [BZ], L, fl. Nov.); Perameles Mts., 1000 m (Pulle nr. 554 [BZ], L, fl. Dec., type of *M. polyanthum Bl.* var. *Pulleana Mansf.*); Merauke. (Koch s.n. L, fl. Aug.); idem (Versteeg nr. 1923 [BZ], L, U, fl. July).

P. BIAK: coral soil (Feuilletau de Bruyn nr. 380, L, fl. Sept.).

NO LOCALITY KNOWN: (Reinwardt's.n. L); (Teysmann s.n. L).

FURTHER DISTRIBUTION: British India, Andamans, Malay Peninsula, Siam, French Indo-China, S. China, Philippine Islands, S. E. Australia, Bismarck Archipelago.

var. **linearifolium Bakh. f.** nom. nov.

Melastoma polyanthum Bl. var. *angustifolium Ridley* (*non Blume*), Flora Mal. Penins. I (1922) p. 765.

Shrub. Branches covered with minute, appressed, rigid scales. Leaves linear, 7.5 cm × 0.8—1 cm, obtuse, terminated by a bristle, smooth on both sides, scabrid on the nerves on the lowerside; petiole covered with minute, appressed scales, 7—10 mm lang.

Calyx tube campanulate, 7—9 mm long, covered with very short, appressed, broad scales; teeth 5, broadly triangular, 5—8 mm long, minutely scaly on the outside. Petals obovate, 13 mm × 9 mm, ciliate. Larger stamens with 6 mm long filaments and 12 mm long anthers, provided with a 4 mm long connective; smaller ones with 7 mm long filaments and 7 mm long anthers, provided with a 2 mm long connective. Style 14 mm long.

Observ: differs from the type by its linear leaves.
Distribution.

SUMATRA. East Coast: Estate Haboko, 150 m (Docters van Leeuwen nr. 3273 [BZ], L, fl. Febr.).
BORNEO. Exact locality unknown: G. Narik, Sei. Kělan (Molengraaff s.n. [BZ], L, fl. May).
FURTHER DISTRIBUTION: Malay Peninsula.

var. **celebicum (Bl.) Bakh. f.** comb. nov.

Melastoma celebicum Bl. in Flora XIV (1831) p. 487 and in Bijdr. Nat. Wet. VI (1831) p. 230; Miquel, l.c. (1855) p. 514; Triana in l.c. (1871) p. 60; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 353;

Shrub. Branches densely covered with long, linear scales. Leaves ovate-oblong or ovate-lanceolate, 4—10 cm × 2—4.5 cm, acute or shortly acuminate, densely and long villous, 5-nerved, the 3 central ones very thick, covered with broadly lanceolate scales, the 2 marginal ones thin, covered with very thin, linear scales, mostly very thick; petiole 2.5 mm long, covered with linear scales. Calyx tube campanulate, 6—8 mm long, covered with appressed scales; teeth triangular, 3—6 mm × 1 mm, scaly on the outside. Petals obovate, 7—25 mm × 7—15 mm, ciliate. Larger stamens with 3 mm long filaments and 5—6 mm long anthers, provided with a 2—3 mm long connective; smaller ones with 2.5 mm long filaments and 3—4 mm long anthers, provided with a 1—2 mm long connective.
Observ: differs from the type by its very densely and long villous, coriaceous leaves.
Distribution.

SUMATRA. West Coast: G. Talang, Laras Talang, 1400 m (Bünnemeyer nr. 5650 [BZ], L, fl. Nov.; v.n. sikadoedoek); G. Singgalang, 1100—2000 m (idem nr. 2791 and 2961 [BZ], L, fl. May and June); locality unknown (idem nr. 2512 [BZ], L). East Coast: Delang Koetoe, Karolands, 1425 m. (Lörzing nr. 4296 [BZ], L, fl. March).
CELEBES. Manado: Minahassa (Koorders nr. 17869β, 17872β, 17875β and 17880β [BZ], L, type of *M. Minahassae Kds.*, fl. May). Exact locality unknown: G. Sempa (Reinwardt s.n. L, typus).

var. **mollissimum Bakh. f.** var. nov.

Frutex. Folia oblonga 8—12 cm × 4—6 cm, basi apiceque acuta, utrinque mollissima (in sicco fusco-cinerea). Petiolus 16—22 mm longus, squamulis erectis linearibus mollibus vestitus. Bacca 5-locularis apice dilatata 9 mm longa, squamulis basi tuberculatis apice fimbriatis vestita, squamulis calycis dentes oppositis quam ceteribus multo longioribus persistentibus; pedicellus 6 mm longus.

Observ: The material is incomplete; the flowers lacking, but even so it cannot be doubted, that it represents a distinct variety or possibly a distinct species.

Distribution: endemic.

MOLUCCAS. Boeroe: Nal 'Besie, 950 m (Toxopeus nr. 217, L, typus, dupl. in [BZ], fl. June).

4. **Melastoma magnificum Bakh. f.** spec. nov.

Frutex. Rami adulti subquadrangulares; juveniles valde compressi, asperi, squamis longis pectinatis intermixtis cum squamis linearibus dense vestiti, ad nodos squamis linearibus usque ad 3 mm longis obtecti. Folia subaequalia et subobliqua ovato-oblonga, 12—17 cm × 7.5—9 cm, breviter acuminata aspera utrinque minutissime strigillosa 5-nervia interdum insuper cum 2 nervis marginalibus, nervis subtus squamis triangularibus minutissimis vestitis. Petioli eodem modo quam rami squamati, inaequales 15—25 mm longi. Flores plerumque 5—6 terminales fasciculati. Bracteae longe triangulares 5 mm longae extus dense paleolis vestitae, intus glabrae. Calycis tubus late campanulatus 8 mm longus, ad apicem attenuatus, dense squamis imbricatis triangularibus apice fimbriatis 1 mm non attingentibus vestitus; dentes 5 lanceolati 7 mm × 1 mm, extus ab medio ad marginem paleis paucioribus minoribusque vestiti, intus sparse piloselli; denticuli 5 longe triangulares plano-convexi 2 mm longi. Petala 5 obovata 10 mm × 8 mm. Stamina 10 inaequalia; maiora filamentis 3 mm longis, antheris linearibus 4 mm longis breve rostratis, connectivo 2 mm longo in lobos duos 1 mm longos exeunte; minora filamentis 2.5 mm longis, antheris 3.5 mm longis, connectivo haud producto. Ovarium 5-loculare; stylus 7 mm longus. Bacca apice dilatata 9—11 mm longa; pedicellus 5—9 mm longus.

Observ: Resembles M. imbricatum Wall. ex Clarke.

Distribution.

MOLUCCAS. Soela Islands: P. Soelabesi: Teg. Batoepan (Atjè nr. 228, L, typus, dupl. in [BZ]).

5. **Melastoma imbricatum Wall. ex Clarke.** Clarke in Hook. f., Flor. of Brit. India II (1879) p. 524; Triana in l.c. (1871) p. 60 [nomen]; Cogniaux in l.c. (1891) p. 355; Ridley, Flor. Mal. Penins. I (1922) p. 765; *Melastoma obovatum* var. *oblongum Bl. ex Triana* in l.c. (1871) p. 60 (nomen].

Shrub. Branches compressed quadrangular, densely covered with appressed, small, triangular and pectinate scales, asperous, on the nodes covered with up to 3 mm long, linear scales. Leaves unequal, oblong-lanceolate, 9.5—15 cm × 4.5—6 cm, acute at the base,

very acute or shortly acuminate, on the upperside strigillose, with large and smaller hairs mixed together, very asperous, on the lower side strigillose, asperous, the nerves covered with scattered linear scales. Petioles dissimilar in length, 15—35 mm long, slender, covered with minute, but narrowly triangular scales. Flowers less than 10 together, fasciculate. Bracts triangular, 3 mm × 1.5 mm, densely and minutely scaly on the outside, glabrous on the inside. Pedicel 2 mm long, minutely scaly. Calyx tube campanulate, 4—5 mm long, densely covered with imbricate, triangular, fimbriate, less than 1 mm long scales, asperous; teeth 5, narrowly triangular, 5 mm × 1.5 mm, minutely scaly on the outside, glabrous on the inside; denticles lanceolate, 1.5 mm long. Petals 5, obovate, 9 mm × 4 mm, ciliate. Stamens 10, subequal; larger ones with 3—4 mm long filaments and linear, 2.5—3 mm long, linear, acute anthers, provided with a 1—1.5 mm long connective; smaller ones with 2—3 mm long filaments and linear, 2.5 mm long anthers, provided with a not produced connective. Ovary 5-celled; style 6—8 mm long. Berry widened at the top, 6—7 mm long, covered with very short scales; stalk 3—4 mm long.

Observ: Sometimes regarded as a variety of M. polyanthum Bl. It belongs however to another though closely allied group of species, distinguishable by its fasciculate flowers.

Distribution.

SUMATRA. East Coast: Masihi Forest Reserve. (Krukoff nr. 4040 [BZ], L, fr. Oct.-Nov.).

LINGGA ARCHIPELAGO. P. Lingga: Dabo, 30 m (Bünnemeyer nr. 7260 [BZ], L, buds July; v.n. sinoedoek oetan.).

FURTHER DISTRIBUTION: Khasia Mts., Assam, Malay Peninsula, French Indo-China.

var. **laeve Bakh. f.** var. nov.

Frutex. Rami pallidi, sparse et minute paleacei. Folia subinaequalia oblongo-lanceolata 9—20 cm × 4—9 cm, breviter acuminata utrinque laevia subtus punctata quintuplinervia. Petiolus 15—35 mm longus, paleolis linearibus sparsis vestitus. Flores fasciculati typo similes. Bracteae late triangulares 5 mm × 4 mm. Calycis tubus 4 mm longus. Petala obovata 8—12 mm × 5—7 mm rosei vel purpurei. Stamina subaequalia; maiora filamentis 2.5—3 mm longis, antheris 3 mm longis, connectivo 0.5 mm longo; minora filamentis 2 mm longis, antheris 2.5 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 6—9 mm longus. Bacca apice dilatata 6 mm longa; pedicellus 4 mm longus.

Observ: differs from the type by its smooth, 5-plinerved leaves and larger, broader bracts.

Distribution: restricted to the localities quoted below.

MENTAWAI ISLANDS. P. Siberoet: Siberoet, forest. (Iboet nr. 40, L, typus, dupl. in [BZ], fl. Sept.).

P. ENGGANO: Boea boea, 100 m (Lütjeharms nr. 4041 and 4350 [BZ], L, fl. June; v.n. doerô, boerô).

6. **Melastoma lanuginosum Bl.** Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1077; De Candolle, l.c. (1828) p. 146; Blume in Flora XIV (1831) p. 486 and in Bijdr. Nat. Wet. VI (1831) p. 229; Junghuhn, Java (1853) p. 627; Miquel, l.c. (1855) p. 514; Triana in l.c. (1871) p. 60; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 351; Hochreutiner in Candollea II (1925) p. 468; *Melastoma malabathricum L.* var. *normale (D. Don) King*; Backer, Manuscr. Fl. Java, Melast. (1941) p. 8; *Melastoma malabathricum L.* var. *perakensis King*; Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 39.

Shrub. Branches slightly to acutely quadrangular, densely shaggy with patent, 1—5 mm long, linear, ciliate, ferrugineous scales, mixed with very small pectinate ones, on the nodes densely setose. Leaves oblong-lanceolate or ovate-oblong, 5.5—14.5 cm × 4—6 cm, more or less rounded at the base, acute, densely villous on both sides, on the lowerside covered with longer hairs, 5- to 7-nerved, on the nerves with 3—5 mm long scales. Petiole 5—20 mm long, densely shaggy. Flowers less than 10 together, terminal. Bracts triangular, 4 mm × 2 mm, densely villous on both sides. Calyx tube campanulate, 6—8 mm long, shaggy with patent, linear, ciliate, ferrugineous, 2—5 mm long scales; teeth 5, broadly triangular, 3—7 mm × 2—3 mm, villous on the outside, sparsely and slightly pilose on the inside; denticles lanceolate, 2 mm long, ciliate. Petals 5, obovate, 10—18 mm × 7—8 mm, at the top minutely setose. Stamens 10, unequal; larger ones with 8—10 mm long filaments and 5—6 mm long, shortly rostrate anthers, provided with a 5 mm long connective, ending in two 1 mm long lobes; smaller ones with 8 mm long filaments and similar but 5 mm long anthers, whose connective is not produced. Ovary 5-celled; style 13—17 mm long. Berry widened at the top, 7—9 mm long; stalk 8—10 mm long.

Observ: On account of its villous habit, often confused with M. normale D. Don and with softly-haired forms of M.polyanthum Bl., but differring from the first by its short calyx teeth and from the latter by its much longer calyx scales.

Distribution: endemic.

JAVA. Preanger Regencies: Tjibidoj near Tjiandjoer (Blume s.n. L, typus); G. Papandajan (idem s.n. L), Tjisoeroeli (Forbes nr. 1142 [BZ], L.); Tjadas Malang near Tjidadap, 1000 m (Winckel nr. 1394β [BZ], L, fl.

June; v.n. harèndong); Tjidadap (idem s.n. [BZ], L, fl. July; v.n. harèndong); idem, 900 m (Bakhuizen van den Brink nr. 60a [BZ], L; v.n. harèndong); locality unknown (? Kuhl s.n. L).

7. **Melastoma bancanum Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, novelli compresso-quadrangulares, paleis linearibus rigidis saepe 2—3 aggregatis sparse hirsuti, ad nodos setis usque ad 4 mm longis vestiti. Folia lanceolata 7—9 cm × 2—2.5 cm, basi apiceque acutissima, apice etiam penicillata, supraminute strigillosa laevia subnitida, subtus pallida laevia, minutissime strigillosa inter nervos, ad nervos paleolis linearibus adpresse strigosa, 5-nervia. Petiolus 7—12 mm longus, sparse setis usque ad 2 mm longis rufo-hirsutus. Flores terminales pauci. Pedicellus dense squamis linearibus 3—4 mm longis vestitus. Calycis tubus anguste campanulatus 7—8 mm longus dense squamis imbricatis linearibus vix ciliatis 2.5—3.5 mm longis vestitus; dentes 5, anguste triangulares 4 mm × 1 mm, extus dense squamis linearibus obtecti, intus sparse puberuli; denticuli anguste triangulares 1.5 mm longi. Petala 5 obovata 13mm × 9 mm, ciliata. Stamina 10 inaequalia; maiora filamentis 6 mm longis, antheris linearibus 7—8 mm longis breviter rostratis, connectivo 8 mm longo in lobos duos 1—1.5 mm longos exeunte; minora filamentis 5 mm longis, antheris 6 mm longis, connectivo haud producto. Ovarium 5-loculare; stylus 18 mm longus. Bacca ignota.

Observ: Allied to M. polyanthum Bl., but by no means very near.

Distribution: endemic.

BANKA: Pankal pinang, Teroe, 80 m (Bünnemeyer nr. 1986, L, typus, dupl. in [BZ], fl. Nov.; v.n. kĕmoenting).

8. **Melastoma suave Bakh. f.** spec. nov.

Frutex. Rami compresso-quadrangulares squamis minutissimis suberectis triangularibus vel linearibus obtecti, ad nodos setis 3 mm longis sparsi. Folia saepe inaequalia, lanceolata 7—11 cm × 2.5—4.5 cm, basi acuta, acutissima, utrinque minutissime strigillosa, supra laevia obscura, subtus scabridula pallida 5-nervia. Petiolus 10—15mm longus setosus. Flores terminales usque ad 9. Bracteae triangulares, 3 mm × 1.5 mm, acuminatissimae ciliatae, extus dense paleolis margine glabris vestitae, intus glabrae. Calycis tubus campanulatus 9—12 mm longus robustus dense squamis linearibus 3 mm longis vestitus; dentes anguste triangulares 6—8 mm longi, extus dense paleolis linearibus vestiti, intus glabri; denticuli subulati 3—4 mm longi paleolis vestiti. Petala 5 obovata 26—30 mm × 18—24 mm eciliata. Stamina 10 inaequalia; maiora filamentis 6—7 mm longis, antheris linearibus 9—12 mm longis breviter rostratis, connectivo 6 mm

longo in lobos duos 1—2 mm longos exeunte; minora filamentis 4—5 mm longis, antheris linearibus 7 mm longis, connectivo haud producto. Ovarium 5-loculare; stylus 22—28 mm longus. Bacca apice dilatata 9—12 mm longa; pedicellus 9—10 mm longus.

Observ: A well-defined species, with the leaf characters of M. sanguineum Sims and the calyx tube of M. polyanthum Bl.

Distribution: endemic.

JAVA. Batavia: Botanical Garden, Buitenzorg [? from Sumatra] (Teysmann s.n. L, typus, sub M. Teysmanni Miq.).

9. **Melastoma balinense Bakh. f.** spec. nov.

Frutex. Rami quadrangulares squamis appressis minutissimis et squamis linearibus usque ad 4 mm longis patentibus dense vestiti, ad nodos setis usque ad 8 mm longis dense hirsuti. Folia lanceolata 5—6 cm × 2—2.5 cm, acuta supra strigillosa scabridula, subtus inter nervos sparsissime minute strigillosa, ad nervos paleolis linearibus vel setis hirsuta 5-nervia. Petiolus 12—14 mm longus setis patentibus usque ad 3.5 mm longis obtectus, setis multo minoribus appressis intermixtis. Flores terminales 3—5 vel in axillis superioribus solitarii. Bracteae lanceolatae 13 mm × 2 mm, extus dense sed minute setosae, intus subglabrae. Bracteolae lanceolatae 6—8 mm × 1—2 mm, utrinque dense et minute setosae. Calycis tubus campanulatus 8—10 mm longus robustus paleis linearibus ciliatis 2—2.5 mm longis dense vestitus; dentes 6 anguste triangulares, 4—7 mm × 2 mm, extus sparse et minute setosi, intus glabri; denticuli lanceolati 3 mm longi paleolis vestiti. Petala 6 obovata 14 mm × 7 mm unguiculata eciliata apice minute setosa. Stamina 12 inaequalia; maiora filamentis 7 mm longis, antheris linearibus 8.5—9 mm longis breviter rostratis, connectivo 8 mm longo; minora filamentis 6 mm longis, antheris linearibus 7.5 mm longis, connectivo haud producto. Ovarium 6-loculare; stylus 15—17 mm longus. Bacca apice dilatata 11 mm longa, calycis tubum excedens; pedicellus 8 mm longus.

Observ: A rather isolated species.

Distribution: endemic.

BALI: G. Batoe, 1650 m (Sarip nr. 409, L, typus, dupl. in [BZ], fl. Oct.; v.n. bědoedoek); locality unknown (de Voogd nr. 1839 [BZ], L, fl. Sept.)

10. **Melastoma ovalifolium Bakh. f.** spec. nov.

Frutex. Rami subquadrangulares paleis triangularibus appressis sparse vestiti, ad nodos paleolis vel setis 1—3 mm longis sparsi. Folia elliptica 3.5—4.5 cm × 2—2.8 cm, mucronata coriacea, supra pilis basi valde incrassatis breviter strigillosa, subtus pilis tenuissimis strigosa et ad nervos paleis linearibus cum minoribus pectinatis

mixtis vestita, 5-nervia. Petiolus 5—8 mm longus paleolis linearibus vestitus. Flores terminales 3—4. Bracteae lanceolatae 6 mm longae dense paleaceae. Pedicellus 6—9 mm longus paleis patentibus triangularibus ciliatis 1—1.5 mm longis dense vestitus. Calycis tubus campanulatus 6—8 mm longus, paleis imbricatis linearibus subciliatis 2—2.5 mm longis dense vestitus; dentes 5 lanceolati 6 mm × 1 mm, extus dense et minute paleacei, intus sparse puberuli; denticuli lanceolati 2 mm longi. Petala 5 obovato-oblonga 15 mm × 6 mm apice minute setosa. Stamina 10 inaequalia; maiora filamentis 6 mm longis, antheris linearibus 5—7 mm longis breviter rostratis, connectivo 4—6 mm longo in lobos duos 1—2 mm longos exeunte; minora filamentis 5 mm longis, antheris linearibus 4—5 mm longis, connectivo haud producto. Ovarium 5-loculare; stylus 12—18 mm longus. Bacca apice dilatata 7—9 mm longa; pedicellus 8—10 mm longus.

Observ: Allied to M. trachyphyllum Back.

Distribution: endemic.

SUMATRA. West Coast: G. Koerintji, 1800 m (Bünnemeyer nr. 10476, L, typus, dupl. in [BZ], fl. May).

11. **Melastoma setigerum Bl.** Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1077; De Candolle, l.c. (1828) p. 141; Blume in Flora XIV (1831) p. 485 and in Bijdr. Nat. Wet. VI (1831) p. 228; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 257; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Naudin in l.c. XIII (1850) p. 284; Junghuhn, Java (1853) p. 627; Miquel, l.c. (1855)p. 512; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; Triana in l.c. (1871) p. 59; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 351; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 11 [Bijdr. nr. 5, Boomsoorten Java]; Koorders, Exkurs. Flora Java II (1912) p. 690 [pr. p.]; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912) [pr. p.]; Koorders in Engl. Bot. Jahrb. 50, Suppl. (1914) p. 301; Jochems in Trop. Nat. XV (1926) p. 67 [if true!); Backer, Manuscr. Fl. Java, Melast. (1941) p. 7; *Melastoma setigerum Bl.* var. *angusto-bracteatum Bl.* in Flora XIV (1831) p. 486 and in Bijdr. Nat. Wet. VI (1831) p. 229; Miquel, l.c. (1855) p. 512; *Melastoma setigerum Bl.* var. *lato-bracteatum Bl.* in Flora XIV (1831) p. 486 and in Bijdr. Nat. Wet. VI (1831) p. 229; Miquel, l.c. (1855) p. 512; *Melastoma setigerum Bl.* var. *typica Back.*, Manuscr. Fl. Java, Melast. (1941) p. 7.

Shrub. Branches acutely quadrangular, densely covered with patent, linear, up to 4 mm long, ferrugineous, slightly ciliate scales, mixed with very small, triangular, fimbriate ones, the nodes sparsely covered with 2—3 mm long bristles. Leaves lanceolate or ovate-

oblong, 4.5—15 cm × 2—6.5 cm, rounded at the base, acute, on both sides covered with patent, 1—2 mm long hairs; hairs of the upper side inserted on tubercles, asperous on both sides, often ferrugineous below. Petiole 7—28 mm long, covered with patent, linear, up to 4 mm long, scarcely ciliate scales. Flowers at most 15 together. Bracts lanceolate, ovate, spathulate or, sometimes, foliaceous, 10—20 mm × 5—8 mm, enveloping the bud, densely but minutely paleaceous on the outside; in the centre, near the margin often provided with smaller scales, glabrous on the inside. Pedicel 7—9 mm long, covered with small scales. Calyx tube campanulate, 5—9 mm long, densely covered with imbricate, less than 1.5 mm long scales; teeth 5, broadly or narrowly triangular, 5—10 mm × 3—4 mm, outside in the centre densely covered with scales, near the margin sparsely scaly, inside slightly puberulous; denticles lanceolate 2—3 mm long, covered with small scales. Petals 5, obovate, 11—21 mm × 5—15 mm, violet, unguiculate, ciliate, veined. Stamens 10, unequal; larger ones with 6—8 mm long filaments and linear, 4—10 mm long, rostrate anthers, provided with a 7—9 mm long connective, ending in two 1—1.5 mm long lobes; smaller ones with 6—8 mm long filaments and linear, 3—6 mm long anthers, whose connective is not produced. Ovary 5-celled; style 20—25 mm long. Berry widened at the top, 7—11 mm long; stalk 6—10 mm long.

Observ: This species and its variety differ from all their allies by the warts on the upperside of the leaves on which the hairs are inserted. It is remotely allied to M. trachyphyllum Back.

Distribution: endemic.

JAVA. Batavia: G. Salak (collector unknown, L, typus); G. Gadjah, G. Salak, 2200 m (Bakhuizen van den Brink nr. 4156 [BZ], L, fl. Nov.); G. Salak II (van Steenis nr. 2978 [BZ], L, fl. Aug.); G. Perbakti, G. Salak, 1750 m (Bakhuizen van den Brink nr. 7313 [BZ], L, fl. Jan.). Preanger Regencies: G. Gede (Houtsoorten v. d. Gede nr. 305, L; v.n. harèndong gede); Tjibodas (Sapiin nr. 69 [BZ], L); idem (Koorders nr. 13284 β [BZ], L); idem (Boerlage s.n. L); Pasir Loetoeng, Tjadas Malang near Tjidadap, 1000 m (Winckel s.n. [BZ], L, fl. Dec.; v.n. harèndong); Pengalengan, 1400 m (W. A. Visser nr. A 23102, L, fl. June); Takoka, 1200 m (Koorders nr. 15293 β [BZ], L, fl. Nov.); Telaga Warna (? Kuhl and van Hasselt s.n. L, type of *M. setigerum Bl.* var. *lato-bracteatum Bl.*). Locality unknown: (Blume s.n. L, type of *M. setigerum Bl.* var. *angusto-bracteatum Bl.*); (Junghuhn s.n. L; v.n. harèndong); (Teysmann nr. 5711, U; on label „Kay kapal."); (collector unknown, L).

var. **Molkenboerii (Miq.) Back.** nov. comb. Backer, Manuscr. Fl. Java, Melast. (1941) p. 7; *Melastoma Molkenboerii Miq.*, l.c. (1855) p. 513; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; Triana in l.c. (1871) p. 61; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 350; Massart, Un botaniste en Malaisie

(1895) p. 131; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 183 [Bijdr. nr. 5, Boomsoorten Java]; *Melastoma setigerum Bl.*; Koorders, Exkurs. Flora Java II (1912) p. 690 [pr. p.]; Baker f. in Journ. Bot. LXII, Suppl. I (1924) p. 39.

Shrub. Branches obtusely quadrangular, the young ones usually covered with appressed, broad, trapezoid to suborbicular scales, the latter however often more or less like those of M. setigerum Bl., mixed with narrowly triangular scales; the nodes covered with linear paleoles. Leaves ovate-oblong or lanceolate, 8—14 cm × 6 cm, acute at the base and at the top, on both sides strigillose or on the lower side strigose, very asperous, on the upperside covered with pluripartite hairs, which are inserted on tubercles, 5-nerved; nerves on the lowerside covered with linear scales. Petiole 7—20 mm long, provided with similar hairs as the branches. Flowers at most 15 together. Bracts foliaceous or triangular, 10 mm × 6 mm, broad at the base. Pedicel 7—12 mm long, covered with minute but broad paleoles. Calyx tube campanulate, 7—10 mm long, densely covered with appressed, triangular scales, which are sometimes ciliate; teeth 5, triangular, acuminate or lanceolate, 5—10 mm × 2—4 mm, minutely but broadly paleaceous on the outside, slightly puberulous on the inside; denticles shortly cylindric, densely covered with small, subglobose scales. Petals 5, narrowly obovate, 13—25 mm × 8—11 mm, violet, unguiculate, veined, ciliate. Stamens 10, unequal; larger ones with 6—8 mm long filaments and linear, 6—8 mm long, shortly rostrate anthers, provided with a 7—10 mm long connective, ending in two 1—2 mm long lobes; smaller ones with 6 mm long filaments and linear, 5—6 mm long, rostrate anthers, whose connective is not produced. Ovary 5-celled; style 17—20 mm long. Berry widened at the top, 7—12 mm long; stalk 4—8 mm long.

Distribution: restricted to the localities quoted below.

JAVA. Preanger Regencies: Tjinjiroean (Schouten s.n. [BZ], L); G. Wajang (Junghuhn s.n. L); G. Malabar, Poentjak gede. (Monterie nr. 54 [BZ], L; v.n. harèndong); G. Malabar (Forbes nr. 988, L); G. Papandajan (Blume s.n. L); idem, 1800 m (van Steenis nr. 4163 [BZ], L, fl. March); idem (Boerlage s.n. L); Kawah Manoek, 1860 m (Schiffner nr. 2308, L, fl. Febr.); Telaga Bodas (Boerlage s.n. L, fl. July); idem, 1600 m. (Koorders nr. 26467β [BZ], L, fl. Oct.). Cheribon: G. Tjerimai, 1000 m (Junghuhn s.n. U, typus). Locality unknown: (Blume s.n. L).

CELEBES. Manado: Minahassa, 700 m (Koorders nr. 17883β [BZ], L, fl. Apr.); idem, 1200 m (idem nr. 17879β [BZ], L, fl. Apr.).

MOLUCCAS. Ambon: (Robinson nr. 2021, L, PNH.).

12. **Melastoma Roemeri Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 107 and 108; idem in Nova Guinea XIV. livr. II (1927) p. 200.

Shrub, up to 1.5 mm high. Branches subquadrangular, brown hirsute with patent, linear, up to 6 mm long scales, mixed with much smaller, pectinate ones; the nodes covered with 5 mm long bristles. Leaves ovate-oblong or ovate-lanceolate, 8.5—12.5 cm × 2.5—5.5 cm, very acute, on both sides villous or on the upperside minutely strigillose, scabrid, 5-nerved; the nerves covered with linear scales. Petiole 10—22 mm long, densely hirsute or, sometimes, provided with small appressed scales. Bracts ovate or lanceolate, 12—16 mm × 6—9 mm, on the outside entirely but minutely paleaceous, glabrous on the inside. Flowers less than 10 together. Pedicel 5 mm long, covered with appressed, linear scales. Calyx tube campanulate, 7—8 mm long, densely covered with linear, ciliate, 2—3 mm long scales; teeth 5, lanceolate, 7 mm × 1 mm, on the outside entirely paleaceous, on the inside minutely paleaceous; denticles linear, 3 mm long. Petals 5, narrowly obovate, 12—13 mm × 5—6 mm, pink, red or white, unguiculate. Stamens 10, unequal; larger ones with 3.5—6 mm long filaments and linear, 2.5—6 mm long anthers, provided with a 1.5—3 mm long connective; smaller ones with 3.5—5 mm long filaments and with 2—5 mm long anthers, whose connective is not produced. Ovary 5-celled; style 8 mm long. Berry widened at the top, 7 mm long; stalk 3 mm long.

Observ: Allied to M. polyanthum Bl. and M. malabathricum L.

Distribution: endemic.

NEW GUINEA. Southern Part: Siriwo river, forest. (Janowsky nr. 190 and 190*a* [BZ], L); Lorentz river (von Römer nr. 390, typus, dupl. in [BZ], L, fl. Oct.); idem, Alkmaar bivak. (Versteeg nr. 1598 [BZ], L, U); Hellwig Mts., 1350—1600 m (von Römer nr. 1123 [BZ], L, fl. July). Territory of Papua: Sogeri and Boridi (Carr).

13. **Melastoma malabathricum L.** Linnaeus, Spec. Plant. I (1753) p. 390; Miquel, Comment. Phytogr. II (1840) p. 66; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11 [if true!]; Naudin in l.c. XIII (1850) p. 284; Miquel, l.c. (1855) p. 507; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121; Triana in l.c. (1871) p. 59; Clarke in Hook. f., Flor. Brit. India II (1879) p. 523; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 349; Guillaumin in Not. Syst. II (1911) p. 314; Koorders, Exkurs. Flora Java II (1912) p. 690 [pr. p.]; Ridley in Trans. Linn. Soc. IX. I (1916) p. 50; Merrill in Contr. Arnold Arbor. VIII (1934) p. 114 [if true!]. Shrub. Branches subquadrangular, the young ones compressed, densely covered with appressed scales, the latter partly small and pectinate and partly narrowly triangular, ciliate, the nodes covered with few, 2—3 mm long, linear scales. Leaves ovate or ovate-oblong, 5—8 cm × 2.5—

4 cm, acute, submucronate, on both sides minutely strigillose, scabrid, pale-yellow below when dry, 5-nerved; the nerves covered with small, pectinate and longer, lanceolate scales. Petiole 6—8 mm long, covered with linear scales. Flowers terminal, 5—10 together. Bracts 7—18 mm × 6—8 mm, enveloping the bud, broadly ovate, narrowed at the base into a kind of petiole, the outside densely scaly, in the centre covered with longer scales than at the margin, or, sometimes with a very narrow subglabrous edge. Calyx tube campanulate, slender, 6—7 mm long, densely covered with imbricate, narrowly triangular, ciliate, 0.5 mm long scales; teeth 5, broadly ovate, 5 mm × 4 mm, narrowed at the top, acute, with the same hairs as the bracts, glabrous on the inside; denticles cylindrical, 2—3 mm long, covered with small scales and with lanceolate paleoles at the top. Petals 5, broadly obovate, 25 mm × 15 mm, unequal, unguiculate, distinctly veined, ciliate at the apex. Stamens 10, unequal; larger ones with 6—8 mm long filaments and linear, 5—7 mm long anthers, provided with a 5—6 mm long connective, ending in two 1—2 mm long lobes; smaller ones with 6 mm long filaments and with linear, 5—6 mm long anthers, whose connective is not or scarcely produced. Ovary 5-celled; style 20 mm long or more. Berry widened at the top, 6—7 mm long; stalk 8—12 mm long.

Observ: Very often confused with M. polyanthum Bl., but differs by its large bracts and different habit. In the Malay Archipelago this species appears to be very rare.

Distribution.

SUMATRA: (Beccari, according to Cogniaux in l.c.).
JAVA: Locality unknown: (Junghuhn s.n. [BZ], L); (Zollinger, according to Cogniaux in l.c.).
TIMOR. (Forbes, according to Cogniaux in l.c.).
MOLUCCAS. Banda: (Motley, according to Cogniaux in l.c.).
NEW GUINEA: (Forbes, according to Cogniaux in l.c.).
FURTHER DISTRIBUTION: British India, Siam, French Indo-China, Philippine Islands,? Australia and surrounding isles. (Cogniaux).

var. **obvolutum (Jack) Bakh. f.** comb. nov.

Melastoma obvoluta Jack in Trans. Linn. Soc. XIV (1825) p. 3; De Candolle, l.c. (1828) p. 141; Blume in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 53; Naudin in l.c. XIII (1850) p. 285; Miquel, l.c. (1855) p. 508; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121; Triana in l.c. (1871) p. 59; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 348; *Melastoma obvolutum Jack* var. *elongatum Bl.* in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 54; Miquel, l.c. (1855) p. 509; *Melastoma obvolutum Jack* var. *gymnanthum (Korth.) Bl.* in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 54; Miquel, l.c. (1855)p. 509;

Melastoma obvolutum Jack var. *oblongum Bl.* in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 54; Miquel, l.c. (1855) p. 509; *Melastoma Jackianum Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 230; *Melastoma Jackianum Korth.* var. *gymnanthum Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 230; *Melastoma trachycaulon Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 316 and 121; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 60; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 350;

Shrub. Branches subquadrangular, sparsely or densely covered with minute, appressed scales. Leaves elliptic, oblong, ovate-oblong or lanceolate, 4.5—13 cm × 3—4.5 cm, acute at the base, acute, mucronate, on both sides minutely strigillose, scabrid or strigose below, on the nerves often asperous, 5-nerved. Petiole 9—15 mm long, minutely paleaceous. Flowers less than 10 together. Bracts ovate, acute or obtuse at the top or suborbicular, 8—20 mm × 7—9 mm, ciliate, on the outside in the centre densely but minutely paleaceous, with a wide glabrous strip near the margin or, sometimes, sparsely puberulous at the edge. Pedicel 5 mm long, minutely paleaceous. Calyx tube campanulate, 5—11 mm long, densely covered with imbricate, narrowly triangular, 1—3 mm long, ciliate, straw-coloured scales; teeth 5, triangular, to the base much widened or lanceolate, 5—8 mm × 2.5 mm, on the outside with the same kind of hair as the bracts, glabrous on the inside, denticles either very small, with 2 or more lanceolate scales at the top or lanceolate and densely covered with small scales. Petals 5, unequal, obovate, 10—30 mm × 6—18 mm, ciliate, unguiculate. Stamens 10, unequal; larger ones with 7—10 mm long filaments and with linear, rostrate, 5—11 mm long anthers, provided with a 7—10 mm long connective, ending in two 1 mm long lobes; smaller ones with 6—10 mm long filaments and with linear, 5—8 mm long anthers, whose connective is not produced. Ovary 5-celled; style 15—25 mm long. Berry widened at the top, 6—11 mm long; stalk 5—10 mm long.

Observ: This variety is confined to Sumatra and is distinguishable by the characters of its bracts and by its straw-coloured calyx scales.

Distribution: endemic.

SUMATRA. Atjeh: Kota belang, Gajoe Loeas. (Pringo Atmodjo nr. 338 and 388, L, fl. May). Tapanoeli: Bay of Tapanoeli (Junghuhn s.n. L, U, on label „tontjang kĕtjil"); Prapat, Taroetoeng (J. J. Swart s.n. U, fl. Aug.); „Tapanoeli". (Jack in l.c.) West Coast: Loeboek Sikaping,450 m (Bünnemeijer nr. 1195 [BZ], L,fl. June); Padang pandjang (collector unknown, L); Ajer mantjoer near Padang (Beccari nr. 690, L, fl. Aug.); Padang bĕsie

(Korthals s.n. L, type of *M. obvolutum Jack* var. *oblongum Bl.*); Padang highlands (Korthals s.n. L, type of *M. Jackianum Korth.*); P. Pisang near Padang (Teysmann s.n. U, type of *M. trachycaulon Miq.*); idem (Boerlage s.n. L, fl. Aug.); G. Pantjartjermin (Docters van Leeuwen nr. 3130 [BZ], L, fl. Febr.). East Coast: Serdang near Rantau pandjang, Sibaulangit, 1 m (Lörzing nr. 9121 [BZ], L, fl. Aug.); Masihi Forest Reserve, Asahan (Krukoff nr. 4000, L, fl. Oct.-Nov.); Soengai boenoet, Asahan (Bartlett and la Rue nr. 4, L, fl. Apr.; v.n. sëndoedoek); Silo Maradjah, Asahan (idem nr. 359, L, fl. Oct.; v.n. sëndoedoek). Locality unknown: (Korthals s.n. L, type of *M. Jackianum Korth.* var. *gymnanthum Korth.*); (de Vriese s.n. L). P. Simeuloeë. (Achmad nr. 859 [BZ], L, fl. Jan.; v.n. doeloeg-doeloeg).

var. **javanum Bakh. f.** var. nov.

Melastoma malabathricum L.; Hallier in Meded. Rijks Herb. Leiden nr. 12 (1912) p. 28.

Frutex. Rami subquadrangulares, paleis minutis lineari-triangularibus et pectinatis dense vestiti. Folia lanceolata basi subrotundata, acutissima, utrinque subvillosa 5-nervia. Flores terminales usque ad 9, ante anthesin solum vidi. Bracteae lanceolatae 14—17 mm × 6 mm, robustae extus dense paleaceae. Pedicellus 14—18 mm longus quadrangularis ad apicem dilatatus robustus paleolis dense imbricatus. Calycis tubus late campanulatus 12 mm longus, robustus paleis imbricatis linearibus 1—5 mm longis ciliatis dense vestitus; dentes 5 late ovati 14 mm × 6 mm, acuminati ciliati extus omnino dense paleacei intus glabri; denticuli cylindrici 2.5 mm longi paleolis dense vestiti. Petala 5 inaequalia late obovata unguiculata ciliata 3 mm longis, antheris lanceolatis breviter rostratis 10 mm longis, connectivo bilobo haud producto. Ovarium 5-loculare; stylus 9 mm longus. Bacca apice dilatata, 10 mm longa; pedicellus 10—18 mm longus.

Observ: Differs from the type species by its subvillous leaves, long pedicel and robust calyx tube.

Distribution: endemic.

Java. Kediri: G. Lawoe, 1200—1400 m (Elbert nr. 192, L, typus, fl. Sept.).

14. **Melastoma sylvaticum Bl.** Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1077; De Candolle, l.c. (1828) p. 141; Blume in Flora XIV (1831) p. 484 and in Bijdr. Nat. Wet. VI (1831) p. 227; Naudin in l.c. XIII (1850) p. 283; Miquel, l.c. (1855) p. 512 and tab. IXa; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 59; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 357; Massart, Un botaniste en Malaisie (1895) p. 114; Backer, Manuscr. Fl. Java, Melast. (1941) p. 6; *Melastoma silvaticum*

Bl. var. *uniflorum Bl.* in Flora XIV (1831) p. 485 and in Bijdr. Nat. Wet. VI (1831) p. 228; *Melastoma imbricatum Wall. ex Clarke*; Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 39; *Melastoma normale D. Don* (pr. p.); Koorders, Exkurs. Flora Java II (1912) p. 690.

Shrub. Adult branches subquadrangular, bright-coloured, densely covered with appressed, triangular and pectinate, very small scales, mixed with subpatent, lanceolate, up to 2 mm long, ciliate ones; young branches densely covered with lanceolate, 1—2.5 mm long scales, on the nodes sparsely hirsute with up to 4 mm long bristles. Leaves often unequal, oblong-lanceolate, 8—12 cm × 3.5—8 cm, subacute at the base, shortly acuminate, on the upperside more or less smooth or scabridulous, on the lower side on the nerves densely covered with appressed, very small, pectinate or broadly triangular scales, mixed with some linear, 1—2 mm long, scarcely ciliate ones, 5-nerved (sometimes also with 2 marginal nerves). Petiole 15—38 mm long, densely covered with very small, appressed, pectinate scales and with 1—3 mm long, patent, linear ones. Flowers terminal, 5—8 together. Pedicel quadrangular, 7—16 mm long, with the same kind of hairs as the calyx tube. Calyx tube campanulate, 7—10 mm long, densely covered with imbricate, 1—2 mm long, ciliate, brown-yellow scales; teeth 5, triangular, 10—14 mm × 2—3 mm, on both sides sparsely covered with minute linear paleoles, from the centre to the margin more sparsely scaly; denticles lanceolate, 3 mm long, covered with small scales. Petals 5, obovate, 17—27 mm × 13—20 mm, purple, unguiculate, minutely setose at the apex. Stamens 10, equal; filaments 5—6 mm long; anthers linear, 3—6 mm long; connective at most 0.5 mm long, ending in two very short lobes. Ovary 5-celled; style 10 mm long. Berry widened at the top, 9—13 mm long; stalk 6—15 mm long.

Observ: Differs from M. trachyphyllum Back. by its very short or not produced connective and the often completely smooth upperside of the leaves.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: G. Koerintji, 1500 m (Bünnemeyer nr. 9091 [BZ], L, fl. March; v.n. sikadoedoek badak); idem, 1600 m (idem nr. 8698 [BZ], L, fl. March; v.n. sikadoedoek); idem, 2000 m (idem nr. 9329 [BZ], L, fl. Apr.; v.n. sikadoedoek); G. Malintang, 1250 m (idem nr. 3763 [BZ], L, U, fl. July; v.n. sikadoedoek rimboe); Tanang Taloe, 1100 m (idem nr. 1066 [BZ], L, fl. June). East Coast: G. Sibajak, 1100 m (Lörzing nr. 8444 [BZ], L, fl. July). Benkoelen: G. Besagi, Krohe (Forbes nr. 2470, L).

JAVA. Bantam: Artja (Kuhl and van Hasselt s.n. L; v.n. harèndong betoel.); G. Poeloesari (idem s.n. L, type of *M. silvaticum Bl.* var. *uniflorum Bl.*, fl. June). Batavia: G. Salak, 1100 m (Lam nr. 2210 [BZ], L, U, fl.

May); G. Perbakti, G. Salak (Bakhuizen van den Brink nr. 5657 [BZ], L, fl. Sept.; v.n. harèndong); Pasir Dalem, G. Salak, 1200 m (Bakhuizen van den Brink fil. nr. 1272 [BZ], L, U, fl. June; v.n. harèndong). Preanger Regencies: G. Gedogan (Kuhl and van Hasselt s.n. L); G. Gede (idem s.n. L); G. Kěndĕng (Junghuhn s.n. L, U.). Locality unknown (in Java): (Blume s.n. L, typus; v.n. harèndong goenoeng); (Junghuhn s.n. L). Locality unknown (? Java): (de Vriese et Teysmann s.n. [herb. itin. ins. Molucc.] L).

var. **permultiflorum Bakh. f.** var. nov.

Frutex. Rami acute quadrangulares, paleis minutissimis appressis dense vestiti. Folia inaequalia oblonga basi acutiuscula, acuminata subtus ad nervos sparse minutissime paleacea 5- vel 7-nervia. Petiolus 4—5 cm longus paleis anguste triangularibus et minutissimis vestitus. Inflorescentia corymbiformis permultiflora (floribus usque ad 50). Flores ante anthesin solum vidi. Bacca ovoidea 10 mm longa, dentibus calycis persistentibus coronata; pedicellus 10—15 mm longus.

Observ: Differs from the type species by its very numerous flowers. Possibly belonging to a new species, but the material is too incomplete to allow a decision.

Distribution: endemic.

SUMATRA. East Coast: G. Sibajak, 1450 m (Lörzing nr. ?, L, typus, dupl. in [BZ]).

15. **Melastoma borneense Bakh. f.** nom. nov. *Melastoma pusillum Bl.* var. *longifolium Cogn.* in l.c. (1891) p. 345; idem in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 530 [nomen].

Shrub. Branches subterete, densely covered with appressed, very small, triangular, ciliate, brown scales, on the nodes with up to 3 mm long bristles. Leaves lanceolate, 5.5—7 cm × 1.5—2 cm, acute at the base and at the top, entire, margin slightly recurved, minutely strigillose, subscabrid, covered with rather soft, appressed, bright-brown hairs on the lowerside, the nerves provided with up to 2 mm long, linear scales, 3-nerved (with 2 marginal ones). Petiole 6—10 mm long, covered with appressed, linear scales. Flowers 3—7 together. Bracts lanceolate, 4 mm × 1 mm, on both sides pilose. Pedicel 5—9 mm long, covered with linear paleoles. Calyx tube campanulate, 5—7 mm long, densely covered with imbricate, narrowly triangular, flat, ciliate, brown, 1—1.5 mm long scales; teeth 5, narrowly triangular, 7—9 mm × 1 mm, minutely paleaceous on both sides; denticles lanceolate, 3 mm long, long setose. Petals 5, obovate, 18—20 mm × 9 mm, unguiculate, ciliate, veined. Stamens 10, unequal; larger ones with 8 mm long filaments and with linear, 5—6 mm long, shortly rostrate anthers, provided with a 3 mm long connective;

smaller ones with 4 mm long filaments and with linear, 5 mm long anthers, whose connective is not produced. Ovary 5-celled; style 15 mm long. Berry widened at the top, 6 mm long; stalk 5 mm long.

Observ: Resembles M. polyanthum Bl., but differs a.o. by its long calyx teeth.

Distribution: endemic.

BORNEO. Locality unknown: (de Vriese nr. 168, L, typus, sub *M. pusillum Bl.* var. *longifolium Cogn.*).

16. **Melastoma decipiens Bakh. f.** spec. nov.

Frutex. Rami adulti teretiusculi, novelli compressi pallidi paleis appressis triangularibus subtuberculatis sparse vestiti. Folia oblongo-lanceolata 7—11 cm × 2.5—4 cm, basi acuta vel attenuata, breviter acuminata supra minute strigillosa laeviuscula subnitida, subtus sparse strigillosa scabra virescentia, 5-nervia, nervis distinctis sulcatis sparse paleaceis. Petiolus 10—18 mm longus, supra canaliculatus setis minutis sparse obtectus. Flores terminales, usque ad 4 aggregati. Bracteae anguste triangulares 3 mm × 2 mm, extus minute paleaceae intus glabrae. Pedicellus 12 mm longus paleolis minutis sparse vestitus. Calycis tubus late campanulatus 8—9 mm longus, paleis non imbricatis triangularibus minus quam 1 mm longis ciliatis dense obtectus; dentes 6 late triangulares 7—8 mm × 2—4 mm, extus sparse minute paleacei intus glabri; denticuli lanceolati 3 mm longi paleolis vestiti. Petala 6 obovato-oblonga 25—28 mm × 12—14 mm ciliata. Stamina 12 inaequalia; maiora filamentis 8 mm longis, antheris linearibus breviter rostratis 8—10 mm longis, connectivo 6—7 mm longo in lobos duos 1 mm longos exeunte; minora filamentis 4 mm longis, antheris linearibus 6 mm longis, connectivo non producto. Ovarium 6-loculare; stylus 18 mm longus. Bacca apice dilatata 9—10 mm longa; pedicellus 6—8 mm longus.

Observ: Resembles M. sanguineum Sims. The plant however belongs to the group of M. polyanthum Bl. because of the characters of its calyx tube.

Distribution: restricted to the localities quoted below.

BALI: G. Kelatakan, 585 m (Sarip nr. 51, L, typus, dupl. in [BZ], fl. July).
SOEMBA: Kananggar, secondary forest. (Iboet nr. 558 [BZ], L, fr. May).

17. **Melastoma trachyphyllum Back.** nom. nov. Backer, Manuscr. Fl. Java, Melast (1941) p. 6; *Melastoma asperum L.*; Blume, Bijdr. Flor. Ned.-Ind. nr. 17 (1826) p. 1076; idem in Flora XIV (1831) p. 484 and in Bijdr. Nat. Wet. VI (1831) p. 227; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 230; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Blume in Mus. Bot.

Lugd.-Bat. I nr. 4 (1849) p. 54; Naudin in l.c. XIII (1850) p. 283; Junghuhn, Java (1853) p. 324; Miquel, l.c. (1855) p. 511 and tab. IXb; Triana in l.c. (1871) p. 59; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 353; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 185 [Bijdr. nr. 5, Boomsoorten Java]; Koorders-Schumacher, Syst. Verz. I Java, Melast (1912); Koorders, Flora Tjibodas (1918) p. 210; Hochreutiner in Candollea II (1925) p. 468; *Melastoma malabathricum L. flore albo Reinw. ined*; Blume in Flora XIV (1831) p. 484 [nomen]; *Melastoma punctatum Korth. (non aliorum)* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 229.

Shrub. Branches subterete to subquadrangular, densely covered with appressed, small, pectinate scales, on the nodes with 1 mm long paleoles. Leaves oblong to lanceolate, ovate-oblong or elliptic, 4.5—14 cm × 2—6 cm, rounded at the base, shortly acuminate, on both sides strigillose, very asperous, on the lower side sparsely strigillose, on the nerves with small, triangular or pectinate scales, 5-nerved, (also with 2 marginal ones). Petiole 17—20 mm long, covered with appressed, minute scales. Flowers either 3—6 in a terminal cluster or in a many-flowered corymbiform panicle. Bracts foliaceous. Bracteoles narrowly triangular, 5—11 mm × 1—2 mm, on the outside covered with appressed, minute scales, inside glabrous. Pedicel quadrangular, 5—18 mm long, robust, densely covered with imbricate, narrowly triangular, 1 mm long, flat, ciliate, brown scales. Calyx tube campanulate, 7—8 mm long, densely covered with imbricate, linear, 1 mm long, pale-brown or straw-coloured scales; teeth 5, lanceolate, 8—15 mm × 2—3 mm, on both sides covered with minute, linear scales; denticles lanceolate, 3—4 mm long, covered with small scales. Petals 5, obovate, 14—22 mm × 8—15 mm, sparsely ciliate, minutely setose at the apex, purple. Stamens 10, unequal; larger ones with 3—6 (—12) mm long filaments and with linear, shortly rostrate, 3—7.5 mm long anthers, provided with a 2—4(—10) mm long connective, ending in two 1—3 mm long lobes; smaller ones with 2—5(—9) mm long filaments and with linear, 3—6 mm long anthers, whose connective is not produced. Ovary 5-celled; style 10—16 (—25) mm long. Berry widened at the top, 7—9 mm long; stalk 11—22 mm long.

Observ: Transitions are known between this species and M. sylvaticum Bl. (connective short) and between this species and M. polyanthum Bl. (connective very long, flowers purple, leaves strigose, not asperous on the upperside, subvillous below).

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: G. Talakmau, 2050 m (Bünnemeyer nr. 802 and 802a [BZ], L, fl. May); G. Koerintji, 2220 m (idem nr. 9798 [BZ], L, fl. Apr.; v.n. sikadoedoek); idem, 2400 m (idem nr. 9675 [BZ], L, fl. Apr.; v.n. sikadoedoek): idem, 2500 m (idem nr. 9818 [BZ], L, fl. Apr.; v.n. sikadoedoek poetih); Padang Highlands, 2450 m (idem nr. 5513 [BZ], L, fl. Nov.).

JAVA. Bantam: Padang lawas (Korner s.n. L). Batavia: Pondok Tengah, above Buitenzorg (Reinwardt s.n. L, typus). Preanger Regencies: G. Gede (Ploem s.n. L); Tjibodas, 2000 m (Koorders nr. 25976β [BZ], L, fl. Sept.); Tjibeureum, G. Pangerango, 1800 m (Schiffner nr. 2296, L, fl. May); G. Boerangrang, 1100 m (Korthals s.n. L, type of *M. punctatum Korth.*). Kedoe: Gadja moentoer, G. Dieng (Junghuhn s.n. L; v.n. sĕnggani); G. Dieng, 2000—2300 m (idem s.n. L, U; v.n. senggani). Pasoeroean: G. Ardjoeno, 1400 m (Backer nr. 36232, PAS, fl. Oct.). Besoeki: G. Idjen, grass-vegetation, 2000 m (Zollinger nr. 1938, L, fl. Oct.). Exact locality unknown: Ngabab (Groenhart nr. 164, U, fl. Apr.; transitional form to M. polyanthum Bl.).

LOMBOK: Sankareang, G. Rindjani, 2000—2500 m, Casuarina forest. (Elbert nr. 2316, 2326, L, fl. June); Kembang Kerang, G. Rindjani, 1650—1900 m, rain forest (idem nr. 2151, L, fl. June); Plambi, 200—400 m, calcareous monsoon forest (idem nr. 2432, L, fl. July).

LOCALITY UNKNOWN: (de Vriese et Teysmann s.n. [herb. itin. ins. molucc.] L).

var. **ochraceum Bakh. f.** var. nov.

Frutex. Rami quadrangulares paleolis appressis minutis vestiti asperi brunnei. Folia oblonga vel lanceolata 5—8 cm × 1.5—3 cm, supra strigillosa asperrima obscura, subtus densissime ochraceo-strigillosa, ad nervos paleolis appressis minutis vestita, 5-nervia. Petiolus 8—12 mm longus paleaceus. Flores 3—4 aggregati, characteribus typo similibus. Petala 5 obovata 11 mm × 7 mm. Stamina 10 inaequalia; maiora filamentis 6—10 mm longis, antheris 6—7 mm longis, connectivo 7 mm longo in lobos duos 1—2 mm longos exeunte; minora filamentis 4—5 mm longis, antheris 6 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 15 mm longus. Bacca apice dilatata 9—10 mm longa, calycis tubum multo excedens; pedicellus 13 mm longus.

Observ: Differs from the type species by its ochraceous, strigillose leaves.

Distribution: endemic.

SUMATRA. East Coast: Sibaulangit, S.E. of G. Sibajak, 1700—2000 m (Lörzing nr. 5995, L, typus, dupl. in [BZ], U, fl. Aug.); idem, 2100 m (idem nr. 6125 [BZ], L, fr. Sept.). Benkoelen: Belirang Mts., 1450 m (Rappard nr. 70 [BZ], L, fl. Aug.).

18. **Melastoma pubescens Bakh. f.** spec. nov.

Frutex. Rami adulti teretiusculi, juveniles subquadrangulares paleis linearibus appressis 2—3 mm longis basi tuberculatis dense vestiti, ad nodos setis 3—5 mm longis. Folia saepe inaequalia, ellip-

tica, 3—5.5 cm × 1.5—3 cm, basi subrotundata, apiculata supra villosiuscula, subtus densissime sericeo-flavescentia 5-nervia, ad nervos paleis linearibus vestita. Flores terminales 3—4 aggregati, ante anthesin solum vidi. Pedicellus 3—5 mm longus robustus paleis lanceolatis ciliatis flavescentibus vestiti. Calycis tubus campanulatus 7 mm longus paleis imbricatis linearibus 1—2 mm longis ciliatis flavescentibus dense obtecti; dentes 5 ovato-oblongi 9 mm × 5 mm, extus medio dense paleacei, ad marginem paleis paucioribus vestiti, intus puberuli; denticuli 3 mm longi setosi paleolis dense obtecti. Petala 5 ovata ciliata apice dense setosa. Stamina ignota. Ovarium probabiliter 5-loculare.

Observ: A rather isolated species.

Distribution: ? Malay Archipelago.

LOCALITY UNKNOWN: (herb. Hasskarl, L, typus, sub M. sylvaticum Bl.).

19. **Melastoma caesium Bakh. f.** spec. nov.

Frutex. Rami subquadrangulares paleis erectis pectinatis et triangularibus 0.5 mm longis fimbriatis brunneo-griseis dense vestiti, ad nodos sparse setis 3—4 mm longis. Folia oblonga vel lanceolata 7—12 cm × 2.5 — 4 cm, basi apiceque acuta utrinque strigillosa, supra scabrida, subtus scabridiuscula pallida 5-nervia. Petiolus 13—25 mm longus, paleis quam ramorum longioribus vestitus. Flores corymboso-paniculati. Bracteae late triangulares 3—4 mm × 2 mm, utrinque paleaceae. Pedicellus 5—10 mm longus paleis erectis griseis obtectus. Calycis tubus anguste campanulatus 6 mm longus, paleis imbricatis late triangularibus 1—1.5 mm longis fimbriatis griseis dense vestitus; dentes 5 triangulares 8—10 mm × 1.5—2 mm, extus et intus sparse et minute paleacei; denticuli lanceolati 1.5—2 mm longi paleolis vestitit. Petala 5 obovata 10—12 mm × 7—10 mm ciliata venosa. Stamina 10 inaequalia; maiora filamentis 5—7 mm longis, antheris linearibus 5 mm longis, connectivo 2.5—5 mm longo, in lobos duos 1—2 mm longos exeunte ; minora filamentis 4—7 mm longis, antheris 4—5 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 10—12 mm longus. Bacca apice dilatata 5—8 mm longa; pedicellus 9 mm longus.

Observ: A rather isolated species.

Distribution: endemic.

SOEMBAWA: G. Batoe Lanteh, monsoon forest, 1500—1700 m (Elbert nr. 4187, L, typus, fl. Jan.).

20. **Melastoma vile Bakh. f.** spec. nov.

Frutex. Rami teretiusculi paleis triangularibus parvis ferrugineis patentibus dense vestiti, cum aliis lineari-triangularibus 2—3 mm

longis ciliatis apice inflexis mixtis, ad nodos setis 2—4 mm longis dense hirsuti. Folia elongato-rhomboidea 9—13 cm × 3.5—5 cm, margine erosula, utrinque strigosa strigis paucipartitis scabrida, subtus in nervis paleis minutissimis et aliis linearibus 1—2 mm longis vestita, 5-nervia. Petiolus 1—2 cm longus dense hirsutus. Flores corymboso-paniculati. Pedicellus 5—10 mm longus hirsutus. Calycis tubus anguste campanulatus 5—6 mm longus paleis imbricatis linearibus 1.5 mm longis brunneis dense vestitus; dentes 5 triangulares 8—9 mm × 1—2 mm extus sparse et minute paleacei intus glabri; denticuli lanceolati 2 mm longi paleolis vestiti. Petala 5 obovata 14 mm × 8 mm ciliata venosa. Stamina 10 inaequalia; maiora filamentis 7 mm longis, antheris linearibus 5 mm longis acutis, connectivo 3 mm longo in lobos duos exeunte; minora filamentis 6 mm longis, antheris linearibus 5 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 11 mm longus. Bacca apice dilatata 8—9 mm longa; pedicellus 7—8 mm longus.

Distribution: endemic.

CELEBES. Gvt. Celebes and dependencies: locality unknown, 1200 m (Bünnemeyer nr. 11765, L, typus, fl. May).

21. **Melastoma normale D. Don.** D. Don, Prodr. Flor. Nep. (1825) p. 220; Naudin in l.c. XIII (1850) p. 289; Triana in l.c. (1871) p. 60; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 352; *Melastoma malabathricum Reinw. ined*; Blume in Flora XIV (1831) p. 482 [nomen]; *Melastoma malabathricum L.* var. *normalis* (*D. Don*) *King* in Journ. As. Soc. Bengal LXIX part II (1900) p. 7; *Melastoma Tidorense Bl.* in Flora XIV (1831) p. 482 and in Bijdr. Nat. Wet. VI (1831) p. 482; Miquel, l.c. (1855) p. 514; Triana in l.c. (1871) p. 60.

Shrub, up to 1.5 m high. Branches subquadrangular, densely covered with patent or appressed, at the top inflexed, lanceolate, narrowly triangular and pectinate, up to 2 mm long, bright red scales; the young branches densely shaggy, on the nodes sparsely covered with 3—6 mm long bristles. Leaves ovate-oblong or ovate-lanceolate, 6—9 cm × 3—4.5 cm, acute, strigillose, scabrid above, below between the nerves densely covered with appressed, rather soft, yellowish hairs, on the nerves roughly pilose, 5-nerved, also with 2 marginal nerves. Petiole 6—15 mm long, densely shaggy with 1—2 mm long linear scales. Flowers only seen by me before anthesis. Pedicel 5—8 mm long, covered with appressed, brown scales. Calyx tube campanulate, 6—8 mm long, densely covered with imbricate, linear, 2.5—4 mm long, yellowish scales; teeth 5, narrowly triangular, 8—10 mm × 3—4 mm, on the outside densely scaly on the midrib,

with fewer and smaller scales towards the margin, on the inside slightly puberulous; denticles linear, 2—3 mm long, flat, scarcely covered with scales. Petals 5, obovate, 16 mm × 9 mm, lilac, ciliate, setose at the top. Stamens 10, unequal; larger ones with 6 mm long filaments and with elongate, shortly rostrate, 7 mm long anthers, provided with a 6—7 mm long connective, ending in two 1—2 mm long lobes; smaller ones with 4 mm long filaments and with linear, 5 mm long anthers, whose connective is not produced. Ovary 5-celled; style 12 mm long. Berry widened at the top, 6 mm long, much exceeding the mouth of the calyx tube; stalk 5 mm long.

Observ: Often confused with villose forms of M. polyanthum Bl., differing however a.o. by its long, robust calyx teeth. M. normale D. Don is apparently a species confined to the high mountains. It is common in British India, but in the Malay Archipelago it is a very rare species.

Distribution.

MOLUCCAS. Tidore: summit of G. Tidore (Reinwardt s.n. L, type of *M. Tidorense Bl.*, fl. Aug.); Kiëmatoehoe, grass-plain, 1560 m (Lam nr. 3729 [BZ], L, fl. July; v.n. ligoerô).

FURTHER DISTRIBUTION: British India (Khasia Mts.), Nepal, Boetan, Malay Peninsula (Ridley), Siam, French Indo-China, S. China, Philippine Islands, New Caledonia, ? Solomon Islands (Cogniaux),? Pacific region.

22. **Melastoma atrofuscum Bakh. f.** spec. nov.

Frutex. Rami teretiusculi, in sicco atrofusci, setis patentibus linearibus 1—2 mm longis basi tuberculatis brunneis vestiti, ad nodos setis 3—5 mm longis obtecti. Folia oblonga vel lanceolata basi acutiuscula, acuta, supra strigillosa scabridiuscula, subtus subvillosa, in nervis paleolis linearibus vestita, 5-nervia. Petiolus setis 2 mm longis sparse strigosus. Flores incompleti. Pedicellus 7 mm longus minute paleaceus. Calycis tubus late campanulatus 11 mm longus paleis imbricatis linearibus 4—5 mm longis basi tuberculatis dense vestitus; dentes 6 late triangulares vel ovato-oblongi 11 mm × 4—5 mm robusti extus medio paleolis minutis vestiti margine glabri, intus glabri apice puberuli; denticuli lanceolati 5 mm longi paleolis vestiti longissime setosi. Petala 6 obovata 12 mm × 10 mm glabra. Stamina destructa, probabiliter 12. Ovarium 6-loculare. Bacca ignota.

Observ: Owing to the imperfect material the exact position remains uncertain.

Distribution: ? Malay Archipelago.

LOCALITY UNKNOWN: (Hasskarl s.n. L, typus, sub M. sylvaticum Bl.).

23. **Melastoma Zollingeri Naud.** Naudin in l.c. XIII 1850) p. 277; *Melastoma asperum Bl.*; Triana in l.c. (1871) p. 59 [pr. p.]);

Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 185. [Bijdr. nr. 5, Boomsoorten Java]; *Melastoma Francavilleanum Cogn.* in l.c. (1891) p. 358; idem in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 530 [nomen]; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 185 [Bijdr. nr. 5, Boomsoorten Java]; *Melastoma malabathricum L.* var. *nitidum (Zoll.) Back.*, Manuscr. Fl. Java, Melast. (1941) p. 8; *Melastoma nitidum Zoll.* (non Korthals) in Nat. en Geneesk. Arch. II (1845) p. 586; idem in Flora XXX (1847) p. 665; Miquel, l.c. (1855) p. 503; Triana in l.c. (1871) p. 60; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 355; *Melastoma normale D. Don*; Koorders, Exkurs Flora Java II (1912) p. 690 [pr. p.]; Koorders-Schumacher, Syst. Verz. I. Java, Melast. (1912).

Shrub. Branches quadrangular, densely covered with patent to slightly appressed, lanceolate, brown-yellow scales, the nodes covered with linear scales. Leaves oblong-lanceolate, 14—15.5 cm × 1.5—6cm, subobtuse at the base, acute, on the upperside sparsely strigillose, scabrid, on the lowerside greenish-yellow, strigillose, minutely scaly on the nerves, 5-nerved. Petiole 12—22 mm long, covered with minute linear scales. Flowers less than 10 together, a terminal corymbiform panicle. Bracts lanceolate, 6 mm × 2 mm, on the outside densely scaly, glabrous on the inside. Pedicel subquadrangular, 10—15 mm long, shaggy with linear, ciliate scales. Calyx tube broadly campanulate, 6—8 mm long, densely covered with imbricate, linear, up to 2 mm long, ciliate, bright yellow scales; teeth 5—6, narrowly triangular, 7—12 mm × 1.5 — 3.5 mm, on the outside centre densely scaly, towards the margin with fewer scales, inside glabrous; denticles lanceolate, 2 mm long, densely covered with small scales. Petals 5—6, obovate, 17—22 mm × 10—14 mm, pink, unguiculate, ciliate. Stamens 10—12, subequal; filaments 6—8 mm long; anthers linear, 8—9 mm long, subrostrate; connective 0—2.5 mm long. Ovary 5- or 6-celled; style 18—27 mm long. Berry widened at the top, 9—10 mm long; stalk 8—13 mm long.

Observ: Sometimes confused with M. normale D. Don.

Distribution: endemic.

JAVA. Pasoeroean: Gebok Klakka, G. Tengger, 1500 m (Zollinger nr. 2495, L, typus, also type of m. nitidum Zoll.); Ngadisari, G. Tengger, 2000 m (Koorders nr. 37678β, 37679β, 37681β and 37685β [BZ], L, fl. Oct.); Tosari, G. Tengger (van Dillewijn s.n. PAS, fl. Jan.).

24. **Melastoma Bünnemeyeri Bakh. f.** spec. nov.

Frutex. Rami paleis triangularibus appressis dense vestiti scabri, ad nodos setis usque ad 5 mm longis sparse hirsuti. Folia lanceolata

8.5—14 cm (vel longior) × 5—7 cm, basi acuta vel subrotundata, breviter acuminata, utrinque strigillosa aspera, subtus in nervis minute paleacea 5-nervia. Petiolus 1—2 cm longus, paleis triangularibus appressis minutissimis et aliis lanceolatis longioribus dense vestitus, apicem versus dense pilosus. Flores 2—4, terminales. Bracteae oblongo-lanceolatae 14—18 mm × 6 mm alabastrum non includentes, extus minutissime paleaceae intus glabrae. Pedicellus quadrangularis 10 mm longus robustus minutissime paleaceus. Calycis tubus campanulatus 10—12 mm longus apice attenuatus robustus paleis linearibus minutissimis dense vestitus; dentes 5 subspathulati 8—12 mm × 3—5 mm extus medio minutissime paleacei ad marginem paleis paucioribus vestiti intus glabri; denticuli triangulares 3 mm longi paleolis vestiti et longe setosi. Petala 5 obovata 16 mm × 10 mm. Stamina (specimina incompleta) 10 inaequalia; maiora antheris linearibus breviter rostratis, connectivo distincte producto. Ovarium 5-loculare. Bacca ignota.

Observ: I have named this species in honour of mr. E. Bünnemeyer to whose extensive collecting the Buitenzorg collections owe many new additions.

Distribution: endemic.

SUMATRA. West Coast: G. Talakmau, 1900 m (Bünnemeyer nr. 881, L, typus, dupl. in [BZ], fl. May).

25. **Melastoma robustum Bakh. f.** spec. nov.

Frutex. Rami teretiusculi vel compresse quadrangulares, paleis linearibus appressis 2—3 mm longis ciliatis dense vestiti, ad nodos paleolis longis cum setis nonnullis usque ad 7 mm longis mixtis dense obtecti. Folia lanceolata 11—19 cm × 4—5 cm basi acuta, breviter acuminata, supra strigillosa aspera subtus inter nervos sericea et pilis tenuibus inflexis longioribus subvillosa, in nervis paleis linearibus 3 mm longis dense vestita 3—5-nervia. Petiolus 2.5—3 cm longus dense setosus praesertim apicem versus. Flores 3 terminales (ante anthesin solum vidi) magni. Bracteae late spathulatae 22—24 mm × 14—18 mm acutae extus medio dense sed minute paleaceae, ad marginem paleis minutissimis et paucioribus vestitae, intus glabrae, alabastrum includentes. Pedicellus 7 mm longus paleolis linearibus dense vestitus. Calycis tubus campanulatus 12 mm longus paleis imbricatis linearibus 3 mm longis eciliatis dense obtectus; dentes 5 longe triangulares 15 mm × 6 mm extus ad nervum medianum paleolis linearibus dense vestiti, ad marginem minutissime puberuli; denticuli cylindrici 3—6 mm longi longe setosi et paleolis obtecti. Petala 5 obovata. Stamina 10 inaequalia; maiora antheris linearibus

breviter rostratis, connectivo distincte producto. Ovarium 5-loculare. Bacca ignota.

Distribution: endemic.

LINGGA ARCHIPELAGO. P. Lingga: G. Daik,300 m (Bünnemeyer nr. 6585, L, typus, dupl. in [BZ], fl. July).

Sect. II **Hetero-Melastoma Bakh. f.** nr. 26—36.

26. **Melastoma sumatranum Bakh. f.** spec. nov.

Frutex. Rami teretiusculi pilis aureis usque ad 1 mm longis cum pilis aliquibus 1—2 mm longis mixtis vestiti, ad nodos sparse setis 2—4 mm longis hirsuti. Folia inaequalia oblonga 14.5—16 cm × 5.8—6.4 cm basi acuta longe acuminata utrinque pilis appressis brevibus et mollis basi minute tuberculatis vestita, subtus in nervis setis aureis minutis obtecta 7-nervia. Petiolus 5—35 mm longus eodem modo quam rami pilosus. Flores 3—4 terminales vel solitari subterminales in axillis foliorum. Bracteae foliaceae. Bracteolae longe triangulares 6—7 mm × 2 mm acuminatae, extus minute setosae intus glabrae. Pedicellus 5—7 mm longus pilosus. Calycis tubus campanulatus 8—10 mm longus pilis simplicibus 2—3 mm longis aureis patentibus apice reflexis dense vestitus; dentes 5 lanceolati 6—8 mm × 1.5 mm, extus setis minutis griseis obtecti, intus parte basali excepto puberuli; denticuli cylindrici 0.5 mm longi, apice in setam longam exeuntes. Petala 5 obovata 15—17 mm × 9 mm dense ciliata apice minute setosa. Stamina 10 inaequalia; maiora filamentis 4 mm longis, antheris linearibus 5—6 mm longis, connectivo 3 mm longo in lobos duos 1 mm longos exeunte; minora filamentis 4.5 mm longis, antheris linearibus 5 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 7 mm longus. Bacca apice dilatata 8—12 mm longa calycem excedens; pedicellus 8—13 mm longus.

Observ: With M. aureum Bakh. f. belonging to a group, which strikes as by its long golden hairs and large long-stalked berries.

Distribution: endemic.

SUMATRA. West Coast: Brani, Agam, 850 m (Bünnemeyer nr. 3201 [BZ], L, fl. June). Djambi: Sei Karing, 180 m (Posthumus nr. 826, L, typus, dupl. in [BZ], fl. Aug.).

var. **lanatum Bakh. f.** var. nov.

Frutex. Rami subquadrangulares pilis patentibus usque ad 4 mm longis rufis apice inflexis cum pilis appressis minutissimis mixtis dense vestiti. Folia lanceolata 8—13 cm × 3—5 cm, acuminata utrinque dense sed longe lanata. Petiolus 10 mm longus dense sed

longe hirsutus. Flores fere 5 terminales, ante anthesin solum vidi. Bracteae foliaceae angustae. Pedicellus 8—15 mm longus dense hirsutus. Calycis tubus campanulatus 7 mm longus pili patentibus 3 mm longis vestitus; dentes 5 lanceolati 7—9 mm × 1 mm, extus et intus dense sed minute puberuli. Petala 5 obovata. Stamina 10 inaequalia; connectivo distincto. Ovarium 5-loculare. Bacca apice dilatata 12 mm longa; pedicellus 22—25 mm longus.

Observ: Differs from the type species by its longer, lanate leaves and shaggy branches.

Distribution endemic.

SUMATRA. West Coast: G. Koerintji, 2020 m (Bünnem eyer nr. 9468, L, typus, dupl. in [BZ], U, fr. Apr.; v.n. sikadoedoek ajoen).

27. **Melastoma Koordersii Bakh. f.** spec. nov. *Melastoma decemfidum Roxb.*; Koorders-Schumacher, Syst. Verz. I. Java, Melast. (1912).

Frutex. Rami compresse quadrangulares, paleis linearibus subpatentibus 2—3 mm longis vestiti, ad nodos dense et longe setosi. Folia elliptica 7.5—8 cm × 4.5 cm, subacuta supra strigillosa scabrida, subtus molliter strigosa 7-nervia Petiolus 7—10 mm longus. Flores plus quam 10 aggregati terminales dense fasciculati, ante anthesin solum vidi. Pedicellus 3 mm longus. Calycis tubus campanulatus 6—8 mm longus setis simplicibus patentibus 2—3 mm longis vestitus; dentes 5 anguste triangulares 5—6 mm × 2—3 mm extus dense paleacei, intus glabri; denticuli cylindrici 2—3 mm longi paleolis dense vestiti. Petala 5 anguste obovata 16 mm × 5 mm. Stamina 10 inaequalia; maiora filamentis 8 mm longis, antheris linearibus 6—7 mm longis breviter rostratis, connectivo 5 mm longo in lobos duos 1 mm longos exeunte; minora filamentis 5 mm longis, antheris linearibus 4 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 14 mm longus. Bacca ignota.

Observ: With regard to the characters of the calyx tube, this species is allied to M. sanguineum Sims, but the leaves are entirely different. I have named this species in honour of the well-known forester dr. S. H. Koorders.

Distribution: endemic.

JAVA. Besoeki: Idjen plateau, 1200 m (Koorders nr. 19865β, L, typus, dupl. in [BZ], fl. Sept.).

28. **Melastoma porphyreum Zipp. ex Bl.** Blume in Flora XIV (1831) p. 478 and in Bijdr. Nat. Wet. VI (1831) p. 230; Miquel, l.c. (1855) p. 514.

Shrub. Branches subquadrangular, bright-coloured, sparsely

covered with up to 1 mm long scales. Leaves lanceolate, 5—13 cm × 1.5—4 cm, subacute or subglobose at the base, acuminate, minutely strigillose on both sides, smooth on the upperside, scabrid-strigillose below on the nerves, 5-nerved. Petiole 10—15 mm long, covered with small, appressed scales. Flowers solitary and terminal or in terminal triads. Bracts ovate or ovate-oblong, 13—17 mm × 7—14 mm, enveloping the bud, on the outside in the centre covered with small, scattered scales, towards the margin often glabrous, asperous, on the inside glabrous. Calyx tube campanulate, 8—10 mm long, densely covered with 3—5 mm long, flat, ciliate, straw-coloured bristles; teeth 6—7, narrowly triangular, 9 mm × 7 mm, with the same hair as the bracts; denticles subulate, 3 mm long, setose, at the top provided with penicillate bristles. Petals 6—7, obovate, 25—30 mm × 12—14 mm, unequal, retuse. Stamens 12—14, unequal; larger ones with 8 mm long filaments and with linear, shortly rostrate, 5—6 mm long anthers, provided with a 9 mm long connective; smaller ones with 6—7 mm long filaments and with linear, 4—5 mm long anthers, whose connective is not produced. Ovary 6- to 7-celled; style 14 mm long. Berry widened at the top, 9—12 mm long; stalk 4 mm long.

Observ: Resembling to M. sanguineum Sims, but differing in the bracts, which envelop the bud, the straw-coloured calyx bristles and the more compact habit.

Distribution: restricted to the localities quoted below.

FLORES: Doeria, Endeh, 200—500 m, monsoon forest (Elbert nr. 4300, L, fl. Febr.).

MOLUCCAS. ? Ambon: (Zippelius [73/b], L, typus).

29. **Melastoma pulcherrimum Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 231 and fig. 49; Miquel, l.c. (1855) p. 505; Triana in l.c. (1871) p. 60; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 345; *Melastoma decemfidum Roxb.* var. *pulcherrimum* (*Korth.*) *Guill.* in Not. Syst. II (1911) p. 317; *Melastoma sanguineum D. Don*; Blume in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 55; *Melastoma Teysmanni Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 316 and 121 [nomen].

Shrub, 1—2 mm high. Branches subterete to compressed quadrangular, densely covered with scattered, narrowly triangular, tuberculate scales or with patent, 4—9 mm long, flat, ciliate, towards the top filiform, incurved, reddish bristles, on the nodes densely covered with 3—6 mm long bristles. Leaves oblong or lanceolate, 7—11 cm × 1.5—4 cm, acute or subrotundate at the base, acuminate, strigillose or strigose on the upperside, strigose or very sparsely strigillose on the underside, 3- to 5-nerved, and moreover with 2 marginal nerves,

sparsely setose on the nerves. Petiole 5—20 mm long, covered with up to 5 mm long bristles. Flowers solitary, terminal or in terminal triads. Bracts broadly triangular, 5—12 mm × 5 mm, acuminate, on the outside covered with small, scattered bristles, on the inside glabrous. Calyx tube broadly campanulate, 10—20 mm long, densely bearded; bristles fasciculate, bi-or-trifid, 3—10 mm long, ciliate, at the top filiform, straw-coloured; teeth 5, narrowly triangular, 10—18 mm × 2—5 mm, on the outside covered with long bristles, on the inside glabrous; denticles subulate, 3 mm long, setose, at the top provided with stellate bristles. Petals 5, obovate, 15—17 mm × 7 mm, red. Stamens 10, unequal; larger ones with 7—9 mm long filaments and with linear, shortly rostrate, 13 mm long anthers, provided with a 7 mm long connective, ending in two 1 mm long lobes; smaller ones with 7 mm long filaments and with linear, 9 mm long anthers, whose connective is not produced. Ovary 5-celled; style 22 mm long. Berry widened at the top, 12—13 mm × 14 mm, much exceeding the calyx mouth, at the base broadly rounded; stalk 6 mm long.

Observ: Often confused with M. sanguineum Sims, by its remarkable habit however easily recognizable.

Distribution.

BORNEO. SOUTHERN AND EASTERN PART. Kapoeas-Barito: G. Bahai, along the Doessoen river. (Korthals s.n. L, typus). Locality unknown: (de Vriese s.n. L).

FURTHER DISTRIBUTION: French Indo-China (Guillaumin).

30 **Melastoma Elbertii Bakh. f.** spec. nov.

Frutex. Rami adulti teretiusculi, juveniles compresse quadrangulares, paleis lanceolatis appressis minus quam 1 mm longis ferrugineis ciliatis cum paleis aliis late triangularibus erectis vel pectinatis mixtis dense vestiti, ad nodos setis 1—3 mm longis obtecti. Folia elliptica oblonga vel lanceolata 7—11 cm × 2—5 cm supra minute strigillosa scabrida, subtus molliter strigillosa flavescentia, 5-nervia. Petiolus 10—18 mm longus canaliculatus setis fasciculatis usque ad 2 mm longis brunneis dense vestitus. Flores 3 vel 4 aggregati in fasciculos terminales. Bracteae late triangulares 7 mm × 4 mm acuminatae extus minute setosae intus glabrae. Pedicellus 1—4 mm longus setis usque ad 3 mm longis obtectus. Calycis tubus campanulatus 3—5 mm longus setis fasciculatis linearibus 3—5 mm longis stramineis hirsutus, setis in parte apicali calycis insertis retrospectantibus; dentes 5 anguste lineares extus minute setosi intus glabri; denticuli subulati 2 mm longi setosi, apice penicillato-setosi. Petala 5 obovata 25 mm × 13 mm. Stamina 10 inaequalia; maiora filamentis 7 mm longis,

antheris linearibus acutis 10 mm longis, connectivo 7—15 mm longo in lobos duos 1—2 mm longos exeunte; minora filamentis 5 mm longis, antheris 9 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 22 mm longus. Bacca apice dilatata 9 mm longa; pedicellus 5 mm longus.

Observ: I have named this species in honour of Dr. J. Elbert, leader of an expedition to the Lesser Sunda Islands and S. E. Celebes during 1909—1910 in charge of the „Frankfurter Verein für Geographie und Statistik."

Distribution: endemic.

LOMBOK: Tengegeah, G. Rindjani (Elbert nr. 984, L, typus, fl. May); Sembaloenggoer, G. Rindjani, 1175—1250 m (idem nr. 1460, L, fl. May).

31. **Melastoma aureum Bakh. f.** spec. nov.

Frutex. Rami teretiusculi pilis subpatentibus 2—5 mm longis apice inflexis aureis cum pilis aliis lanuginosis minutissimis mixtis dense obtecti, ad nodos setis usque ad 6 mm longis dense hirsuti. Folia inaequalia obliqua lanceolata 6—13 cm × 2—4.5 cm basi acutiuscula, breviter acuminata utrinque dense aureo-velutina, subtus in nervis dense setosa 5-nervia. Petiolus setis 3—5 mm longis aureis hirsutus. Flores 3—6, in fasciculos terminales. Bracteae ovato-lanceolatae 8—11 mm × 3—5 mm extus dense minute setosae intus glabrae. Pedicellus 3—7 mm longus setis aureis 3—4 mm longis dense obtectus. Calycis tubus campanulatus 10—14 mm longus, pilis 4—5 mm longis aureis ciliatis dense obtectus; dentes 5 lanceolati 9—12 mm × 1 mm, utrinque dense minute setosi; denticuli subulati 4 mm longi aurei longe setosi apice penicillato-setosi. Petala 5 obovata 15 mm × 9 mm apice setosa. Stamina 10 inaequalia; maiora filamentis 8 mm longis, antheris linearibus 7 mm longis, connectivo 4—6 mm longo in lobos duos 1 mm longos exeunte; minora filamentis 5 mm longis, antheris linearibus 6 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 15 mm longus. Bacca apice dilatata 12 mm longa calycem multo excedens; pedicellus 7 mm longus.

Observ: Resembles M. sumatranum Bakh. f. with regard to its hairs, but is specifically different from that species a.o. by its subulate denticles.

Distribution: endemic.

SUMATRA. West Coast: Mangani, Bt. Tinggi, 950—1150 m (Bünnemeyer nr. 3026, L, typus, dupl. in [BZ], fl. June; v.n. sikadoedoek); S. A. Ramboetan, 950 m (idem nr. 3400 [BZ], L, U, fl. June; v.n. sikadoedoek).

32. **Melastoma rufosetosum Bakh. f.** spec. nov.

Frutex. Rami compresse quadrangulares setis linearibus 2—7 mm

longis sparsis cum paleis erectis minutissimis pectinatis mixtis dense obtecti ad nodos setis 2—7 mm longis hirsuti. Folia ovato-oblonga 12—14 cm × 4.5—7 cm acuminata utrinque subvillosa subtus pallide-flavescentia 7-nervia. Petiolus 30—35 mm longus indumento ei ramorum simili vestitus. Flores 3—5 aggregati in fasciculos terminales vel subterminales. Bracteae lanceolatae setis minutis dense obtectae. Bracteolae anguste triangulares 6—8 mm × 2 mm acuminatae extus minute setosae intus glabrae. Pedicellus 5—7 mm longus dense hirsutus. Calycis tubus campanulatus 6—8 mm longus pilis simplicibus linearibus 4—6 mm longis planis rufis apice filiformibus ciliatis; dentes 5 anguste triangulares 5 mm × 1 mm extus dense sed minute rufosetosi intus glabri; denticuli subulati 2.5 mm longi setosi, apice setis penicillatis obtecti. Petala 5 obovata 12—17 mm × 6 mm. Stamina 10 inaequalia; maiora filamentis 8—9 mm longis, antheris linearibus acutis 5 mm longis, connectivo 6—9 mm longo in lobos duos 1 mm longos exeunte; minora filamentis 7 mm longis antheris linearibus 4 mm longis, connectivo non producto. Ovarium 5-loculare. Bacca ignota.

Distribution: endemic.

LOMBOK: locality unknown (Zollinger nr. 3223, L, typus, fl. Aug.).

33. **Melastoma nitidum Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1841) p. 234.

Shrub. Branches subquadrangular, scattered with appressed, triangular, less than 1 mm long, basally swollen scales, on the nodes covered with up to 3 mm long bristles. Leaves oblong or lanceolate, 7—12 cm × 2—4 cm, subacute at the base, acute, rigid, on both sides strigillose, very asperous, on the underside minutely and sparsely strigillose, greenish, 5-nerved. Petiole 10—12 mm long, scattered with lanceolate scales mixed with minute, triangular ones. Flowers either solitary, terminal or 3 to 4 in terminal groups. Bracts lanceolate-triangular, 11 mm × 4 mm, on the outside densely covered with rigid scales. Bracteoles lanceolate, 5 mm long, acuminate, setose. Pedicel 4—7 mm long, thick, densely covered with appressed, pallid scales. Calyx tube campanulate, 8—11 mm long, hirsute with not imbricate, patent, lanceolate, 3—5 mm long, at the top curved, eciliate, pallid scales; teeth 5, lanceolate-triangular, 6—7 mm × 2 mm, on the outside densely covered with minute bristles, on the inside glabrous; denticles cylindric, 0.5—2 mm long, setose, with a long bristle at the top. Petals 5, obovate, 17—24 mm × 9 mm. Stamens 10, unequal; larger ones with 8—10 mm long filaments and with linear, acute, 6—8 mm long anthers, provided with

a 6—8 mm long connective, ending in two 1 mm long lobes; smaller ones with 6—7 mm long filaments and with 6—7 mm long anthers, whose connective is not produced. Ovary 5-celled; style 17 mm long. Berry widened at the top, 9—14 mm long; stalk 6—9 mm long.

Observ: Resembling with regard to the characters of the calyx scales, M. porphyreum Zipp. ex Bl.

Distribution: restricted to the localities quoted below.

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang (Korthals s.n. L, typus).

P. KABAËNA (S. of Celebes): G. Sangia wita, 700-900 m. (Elbert nr. 3482, L, fr. Oct.).

34. **Melastoma Boryanum Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 232; Triana in l.c. (1871) p. 60; Boerlage, l.c. (1890) p. 53; Cogniaux in l.c. (1891) p. 344; *Melastoma decemfidum Roxb.*; Miquel, l.c. (1855) p. 505; *Melastoma decemfidum Roxb.* var. *Boryanum (Korth.) Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 55; Naudin in l.c. XIII (1850) p. 283; Guillaumin in Not. Syst. II (1911) p. 316; *Melastoma porphyratum Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 233 [nomen].

Shrubby, only a few dm high. Branches subterete to subquadrangular, rather densely covered with lanceolate, brown scales, mixed with smaller triangular ones, on the nodes covered with 2—6 mm long bristles. Leaves elliptic, oblong or lanceolate, 3.5—5 cm × 1—2.5 cm, acute at the base, acute, on the upperside strigillose, scabrid, on the underside subvillose or strigillose and scabrid, 3-nerved, with a few scales on the nerves. Petiole 5—8 mm long, densely hirsute with 3—4 mm long bristles. Flowers solitary and terminal. Bracteoles absent. Pedicel 2—7 mm long, robust, densely hirsute with about 2 mm long bristles. Calyx tube campanulate, 7—12 mm long, hirsute with 2.5—3 mm long hairs; teeth 5, lanceolate, 10—15 mm × 1.5—3.5 mm, on the outside densely covered with bristles, on the inside with fewer and smaller ones; denticles subulate, about 4 mm long, setose, with a long penicillate bristle at the top. Petals 5, obovate, unequal, 22—34 mm × 15—18 mm, finely veined. Stamens 10, unequal; larger ones with 7—9 mm long filaments and with linear, acute, 10—12 mm long anthers, provided with a 7—10 mm long connective, ending in two 1—2 mm long lobes; smaller ones with 8—9 mm long filaments and with linear, 9—11 mm long anthers, whose connective is not produced. Ovary 5-celled; style 18 mm long. Berry widened at the top, 7—10 mm long, much exceeding the calyx mouth; stalk 3 mm long.

Observ: Resembles the species of the sanguineum group by the characters of its calyx tube, but shows the habit of M. polyanthum Bl.
Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Pamatton (Korthals s.n. L, typus); locality unknown (idem s.n. L).

35. **Melastoma sanguineum Sims** Sims in Curtis' Bot. Mag. (1820) tab. 2241; *Melastoma sanguinea D. Don* in Mem. Wern. Soc. IV (1822) p. 289; Blume in Flora XIV (1831) p. 488 and in Bijdr. Nat. Wet. VI (1831) p. 230; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Miquel, l.c. (1855) p. 504; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121 and 316; Triana in l.c. (1871) p. 60; *Melastoma decemfidum Roxb. ex Jack* in Trans. Linn. Soc. XIV (1825) p. 6; *Melastoma decemfidum Roxb.*, Cat. Hort. Beng. (1814) p. 90 (nomen); idem, Flor. Indica ed. Carey (1832) p. 405; Blume in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 55; Miquel, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121; Boerlage, l.c. (1890) p. 503; Cogniaux in l.c. (1891) p. 345; Guillaumin in Not. Syst. II (1911) p. 315 (excl. syn.); Backer, Manuscr. Fl. Jav. Melast. (1941) p. 7; *Melastoma macrocarpa D. Don* in Mem. Wern. Soc. IV (1822) p. 289; *Melastoma muricatum Hunter ex Ridley* in Journ. As. Soc. Straits LIII (1909) p. 91; *Melastoma pulcherrimum Korth.*; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; *Melastoma Teysmanni Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 316 and 121 [nomen]; Triana in l.c. (1871) p. 61; Boerlage, l.c. (1890) p. 530; Cogniaux in l.c. (1891) p. 344.

Shrub or little tree, up to 8 m high. Branches subquadrangular, densely covered with patent, 2—5 mm long, curved, reddish hairs, mixed with small, patent, triangular scales, on the nodes densely covered with up to 10 mm long hairs. Leaves lanceolate, 10—20 cm × 2.5—4.5 cm, subacute at the base, subacuminate, on the upperside smooth, somewhat shining, on the underside more or less smooth or minutely strigillose, 5-nerved, scattered with small scales on the nerves on the underside of the leaves. Petiole 12—20 mm long, hirsute. Flowers 3—7 in terminal umbels. Bracts lanceolate or broadly triangular, 7—12 mm × 3—7 mm, on the outside minutely and sparsely setose, on the inside glabrous. Pedicel 5—8 mm long, covered with short bristles. Calyx tube campanulate, 10—15 mm long, densely or sparsely bearded; bristles 3—10 mm long, simple, at the top curved and filiform, reddish, sometimes ciliate, flat, at the base sometimes inflate; teeth 5, narrowly triangular, 6—10 mm × 2—4 mm, on the outside densely covered with bristles, on the inside glabrous; denticles subulate, setose, with a stellate bristle at the top.

Petals 5, obovate, 20—45 mm × 12—37 mm, obtuse or truncate. Stamens 10, unequal; larger ones with 13—15 mm long filaments and with linear, acute, 12—15 mm long anthers, whose thecae are undulate, provided with a 16—18 mm long connective, ending in two 1—2 mm long lobes; smaller ones with 11—13 mm long filaments and with linear, 11 mm long anthers, whose connective is not produced. Ovary 5-celled; style 34—39 mm long. Berry widened at the top, 13—16 mm long, much exceeding the calyx mouth; stalk 7 mm long.

Observ: An increase in the length of the hairs covering the calyx goes parallel with one of the leaf dimensions. Allied to M. pulcherrimum Korth. and M. porphyreum Zipp. ex Bl. and forming with them a well-defined group.

Distribution.

SUMATRA. Tapanoeli: Sipirok, 900 m (Junghuhn s.n. L, fl. Nov.); Tapanoeli (idem s.n. U.). West Coast: Brani, Agam, 950 m (Bünnemeyer nr. 3092 [BZ], L, U, fl. June), „Kota Nopan". (Teysmann s.n. L, type of *M. Teysmanni Miq.*; v.n. sandoedoe). East Coast: Bandar baroe, 850 m (Lörzing nr. 4314, L, fl. June); Habinsaran, lake Toba, 1200—1300 m (idem nr. 6571 (BZ], L, fl. May). Palembang: Toeboean Ogan oeloe. (Junghuhn s.n. U; v.n. loehoe loehoe gadjah). Lampong Districts: Rebang. (Junghuhn s.n. U; v.n. doedoero badak). Exact locality unknown: „Siboeal boali", 1000—1300 m (Junghuhn s.n. [BZ], L).

RIOUW ARCHIPELAGO. P. Bintang: 350 m (Bünnemeyer nr. 6163 [BZ], L, U, fl. June; v.n. sinoedoek gadjah).

JAVA. ? Preanger Regencies: (Ploem s.n. L, sub M. decemfidum Roxb. var. javanicum Back.). Locality unknown: (Junghuhn s.n. L); (Zollinger s.n. [BZ], L).

LOCALITY UNKNOWN: (de Vriese s.n. L); (collector unknown, U).

36 **Melastoma curvisepalum Bakh. f.** spec. nov.

Frutex. Rami adulti tereti, juveniles compressiusculi, paleis erectis lanceolatis vel late triangularibus minus quam 1 mm longis sparse obtecti, ad nodos setis usque ad 3 mm longis sparsi. Folia oblonga 5—7.5 cm × 2—3.5 cm, basi rotundata, acuta, supra minute strigillosa scabrida, subtus inter nervos minutissime strigillosa, in nervis paleis lanceolatis et aliis minutis vestita 5-nervia. Petiolus 10—15 mm longus setis usque ad 3 mm longis obtectus. Flores 3 vel 4 in fasciculos terminales vel solitarii in axillis foliorum superiorum. Bracteae lanceolatae 2—5 mm × 1—1.5 mm vel foliosae. Bracteolae triangulares usque ad 5 mm longae, longe acuminatae, extus dense paleaceae. Pedicellus 4—13 mm longus teres paleis patentibus lanceolatis usque ad 1.5 mm longis vestitus. Calycis tubus campanulatus 6—10 mm longus setis lanceolatis 2—3 mm longis planis sparse ciliatis in sicco brunneo-flavis dense obtectus; dentes 5 anguste triangulares 3—7 mm longi apice curvati extus sparse setosi intus glabri; denticuli subulati

1.5 mm longi setosi apice setis penicillatis vestiti. Petala 5 anguste obovata 20—22 mm × 10 mm. Stamina 10 inaequalia; maiora filamentis 6—7 mm longis, antheris linearibus 9—11 mm longis, connectivo 8 mm longo in lobos duos 1 mm longos exeunte; minora filamentis 5 mm longis, antheris linearibus 6—7 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 14—16 mm longus. Bacca apice dilatata 8 mm longa; pedicellus 5 mm longus.

Distribution: endemic.

LOMBOK: Sadjang, G. Rindjani, monsoon forest, 750—900 m (Elbert nr. 859, L, typus, fl. May).

var. **crinitum Bakh. f.** var. nov.

Frutex. Rami adulti quadrangulares, juveniles valde compresso-quadrangulares, pilis patentibus usque ad 2 mm longis sparsi. Folia oblonga, ovato-oblonga vel lanceolata 7—12 cm × 2.5—5 cm acutissima vel breviter acuminata utrinque sed praecipue subtus strigosa 5- vel 7-nervia. Petiolus 18—22 mm longus setis patentibus longis obtectus. Bracteolae anguste triangulares 5—7 mm longae extus et intus glabrae. Pedicellus 8—18 mm longus setosus. Calycis tubus anguste campanulatus 10—14 mm longus setis patentibus retroflexis linearibus usque ad 6 mm longis dense barbatus; dentes 5 lanceolati 7—8 mm × 1 mm extus setis patentibus obtecti intus glabri. Petala 5 obovata 18 mm × 8 mm. Stamina 10 inaequalia; maiora filamentis 9 mm longis, antheris 3.5—4 mm longis, connectivo 6 mm longo in lobos duos 1—2 mm longos exeunte; minora filamentis 6 mm longis, antheris 5 mm longis, connectivo non producto. Ovarium 5-loculare; stylus 12—20 mm longus. Bacca anguste cylindrica apice dilatata 8—11 mm longa basi attenuata calycem excedens; pedicellus 13—17 mm longus.

Observ: Differs from the type species by the greater length of the hairs covering the branches and the calyx tube, the strigose leaves and petioles and the narrowly cylindrical berry.

Distribution: endemic.

LOMBOK: Sadjang, G. Rindjani, 300—500 m (Elbert nr. 858, L, typus, fl. May).

Species unknown to me, not mentioned in the key.

1. *M. affinis D. Don* in Mem. Wern. Soc. IV (1822) p. 288. — Sunda Strait. = ? M. polyanthum Bl.
2. *M. Barbeyanum Cogn.* in l.c. (1891) p. 347. — E. Java.
3. *M. candida D. Don* in Mem. Wern. Soc. IV (1822) p. 288 — Sunda Strait. = ? M. polyanthum Bl.
4. *M. ceramense Naud.* in l.c. XIII (1850) p. 276. — Ceram.

5. *M. dodecandra Roxb.*, Flor. Indica II (1832) p. 405 — Moluccas.
6. *M. erecta Jack* in Trans. Linn. Soc. XIV (1825) p. 5. — Sumatra. = ? villose form of M. polyanthum Bl.
7. *M. furcata Roxb.*, Flor. Indica II (1832) p. 405. — Moluccas.
8. *M. grandifolium Schwartz* in Mitt. Inst. Bot. Hamburg. Bd. 7. Heft 3 (1931) p. 237 — W. Borneo.
9. *M. impuber Roxb.*, Flor. Indica II (1832) p. 405 — Moluccas. Perhaps a species of Ochthocharis.
10. *M. malabathricum L.* var. *adpressum Clarke*; Gibbs in Contr. Flor. Arfak Mts. (1917) p. 157 — New Guinea.
11. *M. malabathricum L.* var. *subcordata Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 108 — New Guinea.
12. *M. molle* (*Wall. ex Clarke*) *Ridley* in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 60 — Sumatra.
13. *M. perakense* (*King*) *Ridley* in Flor. Mal. Penins. I (1922) p. 764 — Java, Lingga Archipelago.
14. *M. velutinosum Ridley* in Kew Bull. (1925) p. 81 — Sumatra.
15. *M. vulcanicum Ridley* in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 60 — Sumatra.

4. Otanthera Bl.

Blume in Flora XIV (1831) p. 488 and in Bijdr. Nat. Wet. VI (1831) p. 231; Naudin in Ann. Sc. Nat. sér. III. XIII (1850) p. 352; Miquel, Flor. Ned. Ind. I (1855) p. 515; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 730; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 55; Boerlage, Handl. Flor. Ned.-Ind. I (1890) p. 507; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 339; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 153; *Clidemia L.*; Kuntze, Revis. Gen. Plant. (1891) p. 246; *Lachnopodium* Bl. in Flora XIV (1831) p. 477 and in Bijdr. Nat. Wet. VI (1831) p. 222; idem in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 50; *Melastoma L.*; Smith in Rees' Cyclop. Vol. 23 (1822) [pr. p.]; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1067 [pr. p.]; De Candolle, Prodr. III (1828) p. 144 [pr. p.]; Baillon, Hist. d. plant. VIII (1880) p. 4. [pr. p.].

Shrub up to 3 m high. Branches subquadrangular, scattered with appressed scales or with patent hairs, especially on the ribs. Leaves opposite, equal, oblong or lanceolate, at the base rounded, subacute or, sometimes, cuneate, at the top sometimes cuneate, shortly acuminate, entire, mostly strigillose and scabrid or more or less smooth or subvillose, 5- or 7-nerved, petiolate. Inflorescence a terminal or axillary, mostly many-flowered panicle. Flowers hermaphrodite,

pedicellate. Bracts obovate or lanceolate, often subamplexicaul, often strongly appressed to the calyx tube and mostly much smaller than it. Calyx tube campanulate, often covered with simple, appressed or patent scales or with hairs or penicillate, pluri-partite ("fasciculate") bristles, often with both kinds of appendages mixed; teeth 5, subulate, shorter than the calyx tube, covered with patent bristles; true denticles absent. Petals 5, suborbicular or obovate, acute or rounded. Stamens 10, subequal; filaments filiform; anthers linear, acute or shortly rostrate, opening with a single terminal pore; connective basally not or hardly produced, bituberculate or bicalcarate. Ovary 5-celled, in the upper half concrescent with the calyx tube with 10 radial septs, so that there are 10 exterovarial chambers; top bristly; style filiform, glabrous, ending in a hardly conspicuous stigma. Fruit a berry, which dehisces irregularly. Seeds cochleate.

Distribution: About 15 species in Asia and Australia: Andamans, Nicobars, Lower Burma (Mergui), Siam, Malay Archipelago (incl. the Philippine Islands) and tropical Australia.

Key to the species.

1*a*. Bracts large, 6—7 mm × 6—7 mm. Calyx tube densely covered with robust, penicillate bristles. 1. **O. macrochiton Bakh. f.**

b. Bracts small, 2—8 mm × 2—3 mm 2

2*a*. Calyx tube covered with long, patent, single or fasciculate hairs, which are curved at the top 3

b. Calyx tube either covered with penicillate bristles or with short, appressed, single scales 4

3*a*. Branches covered with long, patent, single or fasciculate hairs. Anthers acute . . . . . 2. **O. Lamii Mansf.**

b. Branches minutely strigillose. Anthers shortly rostrate. 3. **O. subrostrata Bakh. f.**

4*a*. Calyx tube covered with penicillate scales or bristles, sometimes mixed with a few single ones 5

b. Calyx tube covered with single scales or, rarely, with a few pauci-partite ones 6

5*a*. Calyx tube covered with small penicillate scales or, rarely, with a few single ones. Leaves on the underside minutely strigillose. 4. **O. cyanoides (Smith) Triana**

b. Calyx tube covered with long, fasciculate bristles. Leaves on the underside villose or subvillose. 5. **O. bracteata Korth.**

6*a*. Leaves (when dry) on the upperside dark, often provided with

white spots, on the underside pale-yellow, scabrid, often subcoriaceous. . . . . 6. **O. celebica Bl.**

b. Leaves (when dry) on both sides green or pale yellow, more or less smooth, herbaceous. 7. **O. novoguinensis Baker f.**

1. **Otanthera macrochiton Bakh. f.** spec. nov. *Otanthera bracteata Korth.*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 106; idem in Nova Guinea XIV livr. II (1927) p. 199.

Frutex. Rami quadrangulares minute strigosa. Folia oblonga basi subcuneata vel rotundata, apice acuta supra minute strigillosa scabrida, subtus inter nervos subglabra, in nervis scabrida 7-nervia. Petiolus 7—16 mm longus setis parvis sparsus. Inflorescentia axillaris contracta e floribus minus quam 10 composita. Flores ante anthesin solum vidi. Bracteae late obovatae 6—7 mm × 6—7 mm breviter acuminatae margine erosulae extus medio dense pilosae intus glabrae semiamplexicaulae in sicco glaucae Pedicellus 1—2 mm longus. Calycis tubus late campanulatus 7—8 mm longus setis cylindricis penicillatis 3—4 mm longis dense obtectus; dentes 5 subulati pilosi; denticuli absentes. Petala 5 obovata. Antherae lineares non rostratae. Bacca ovoidea 7—8 mm longa; pedicellus 1 mm longus.

Distribution: endemic.

NEW GUINEA. Northern Part: Armoppa, Bonggo Mts. (Janowsky nr. 617, L, typus, dupl. in [BZ], fl. Jan.).

2. **Otanthera Lamii Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 106, 107; idem in Nova Guinea XIV livr. II (1927) p. 200.

Shrub. Branches subquadrangular, sparsely covered with patent, 2—4 mm long bristles. Leaves oblong or lanceolate, 5—10 cm × 2—4.5 cm, cuneate at the base, at the top cuneate, shortly acuminate, on both sides minutely strigillose, subscabrid. Petiole 5—17 mm long, covered with subpatent bristles. Inflorescence a compact panicle, less than 10-flowered, at most 2 cm long. Bracts broadly obovate, 2—3 mm × 2—3 mm, acute, on the outside subpilose, ciliate, when dry glaucous. Pedicel 1—2 mm long. Calyx tube campanulate, about 3 mm long, covered with patent, single, at the top recurved, about 2 mm long hairs, at the mouth sometimes but rarely covered with bifid or trifid ones; teeth 5, subulate, 2—3.5 mm long, subpilose; "denticles" lanceolate, minute. Petals 5, oblong, 4 mm × 2 mm, acute, ciliate. Filaments 3 mm long; anthers linear, 3 mm long, at the base provided with two tubercles; connective not produced. Style 6 mm long. Berry ovoid, 6—7 mm long; stalk 2 mm long.

Distribution: endemic.

NEW GUINEA. Northern Part: Prauwen bivak, Mamberamo river, 120 m (Lam nr. 856 [BZ], L, fl. Aug.); idem, 150 m (idem nr. 1004, typus, dupl. in [BZ], L, U, fl. Sept.).

3. **Otanthera subrostrata Bakh. f.** spec. nov.

Frutex. Rami subquadrangulares minute strigillosi. Folia oblonga 10—11.5 cm × 4.5—5 cm, basi apiceque cuneata, breviter acuminata, supra minute strigillosa scabrida, subtus sublaevia. Petiolus 8—10 mm longus setis appressis minutis obtectus. Inflorescentia paniculata laxa usque ad 9 cm longa e floribus minus quam 10 composita; pedunculus quadrangularis usque ad 5 cm longus. Bracteae lanceolatae 3—4 mm × 2 mm. Pedicellus 1—2 mm longus. Calycis tubus campanulatus 3—4 mm longus pilis simplicibus 2 mm longis apice reflexis obtectus; dentes 5 subulati 2—3 mm longi setosi; "denticuli" absentes. Petala 5 obovata 5—6 mm × 3—4 mm subacuta glabra. Filamenta 2—2.5 mm longa; antherae subulatae 3 mm longae basi bituberculatae rostratae; connectivum non productum. Stylus 5 mm longus. Bacca anguste cylindrica apice dilatata 6—7 mm longa; pedicellus 3 mm longus.

Distribution: endemic.

MOLUCCAS. Ceram: Kwaos, 0 m (Kornassi nr. 955, L, typus, dupl. in [BZ], U, fl. Febr.).

4. **Otanthera cyanoides (Smith) Triana.** Triana in l.c. (1871) p. 55; Boerlage, l.c. (1890) p. 508, 530; Cogniaux in l.c. (1891) p. 341; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 106, 107; idem in Nova Guinea XIV livr. II (1927) p. 200; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1203; *Otanthera gracilis Naud.* in l.c XIII (1850) p. 353; Miquel, l.c. (1855) p. 516; Triana in l.c. (1871) p. 56; Boerlage, l.c. (1890) p. 508; Cogniaux in l.c. (1891) p. 341; *Otanthera moluccana (Bl.) Bl.* in Flora XIV (1831) p. 489 and in Bijdr. Nat. Wet. VI (1831) p. 231; idem in Mus. Bot. Lugd.-Bat. I. nr. 4 (1849) p. 56, fig. XX; Naudin in l.c. XIII (1850) p. 353; Miquel, l.c. (1855) p. 515; Boerlage, l.c. (1890) p. 508; *Melastoma cyanoides Smith* in Rees' Cyclop. 23 (1822) nr. 56, 57; *Melastoma moluccanum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1078; De Candolle, l.c. (1828) p. 146.

Shrub, up to 1 m high. Branches subterete or subquadrangular sparsely covered with minute scales. Leaves oblong or lanceolate, 4—7.5 cm × 2.5—6 cm, at the base subacute or rounded, at the top acute or shortly acuminate, on both sides minutely strigillose, more or less smooth or subscabrid, greenish when dry, 5-nerved, the nerves shortly pilose. Petioles sometimes, but not often, unequal, 5—28 mm long, covered with minute hairs. Inflorescence a terminal or axillary loose, up to 10 cm long panicle; peduncle slender, quadrangular,

12—65 mm long, sparsely covered with minute hairs. Bracts obovate or lanceolate, 4—6 mm × 2 mm, not appressed to the calyx tube or, sometimes, semiamplexicaul, on both sides pilose, ciliate 5-nerved, with a distinct mid-nerve. Pedicel 2—4 mm long. Calyx tube campanulate, 4—5 mm long, covered with thick, more or less cylindrical, 1—2 mm long, pluri-partite, at the top penicillate bristles, sometimes mixed with a few single or pauci-partite ones; teeth 5, subulate, 3—4 mm long, setose; "denticles" cylindrical, 1 mm long, at the top provided with a penicillate bristle. Petals 5, broadly obovate, 4—10 mm × 2—8 mm, obtuse, ciliate. Filaments 2—3 mm long; anthers linear, acute, 3 mm long, at the base provided with two spurs; connective not produced. Style 3—5 mm long. Berry ovoid, 3—7 mm long; stalk 6—9 mm long.

Distribution.

SOEMBAWA: G. Tambora, 1100—1300 m (Elbert nr. 4025, L); idem, Casuarina forest, 1300—2000 m (idem nr. 4047, L).

MOLUCCAS. Boeroe: Makatita river, 10 m (Toxopeus nr. 545 [BZ], L, fl. Sept.). Ceram: Kaniki, 600 m (Kornassi nr. 537 [BZ], L, U, fl. Nov.; v.n. kemoetoela); Oeloe wai koea (idem nr. 49 [BZ], L, U, fl. Aug.; v.n. kemoetoela); Maneo, 500—600 m (Rutten nr. 278 [BZ], L, fl. Oct.); Loemoli-Lohia Tala, 500—800 m. (idem nr. 1579 [BZ], L, fl. Aug.); Sawai, 150 m (Stresemann nr. 17a, L, fl. May); locality unknown (de Vriese and Teysmann s.n. L); idem (Teysmann s.n. U). Ambon: Hila (Teysmann s.n. [BZ], L, U); Ema (Teysmann s.n. [BZ], L, fl. June; v.n. biroro poetih); Soja (Treub nr. 567 [BZ], L); locality unknown. (Zippel sn. L); idem (Reinwardt s.n. L, type of *O. moluccana* (*Bl.*) *Bl.*); idem (Robinson nr. 511 and 512, L, PNH); idem (collector unknown, L). Ternate: (de Vriese and Teysmann s.n. L).

FURTHER DISTRIBUTION: New Guinea (N.E. and S.E. parts.), ? Mergui (Cogniaux).

5. **Otanthera bracteata Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 235, fig. 51; Naudin in l.c. XIII (1850) p. 354; Miquel, l.c. (1855) p. 516; Triana in l.c. (1871) p. 53; Boerlage, l.c. (1890) p. 508, 530; Cogniaux in l.c. (1891) p. 340, 1195; *Lachnopodium bracteatum* (*Korth.*) *Bl.* in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 56.

Shrub. Adult branches compressed quadrangular, pale, covered with appressed, linear, up to 2 mm long, rather soft, reddish or grey hairs, the young ones often densely ferrugineous pilose. Leaves unequal, oblong or ovate-oblong, 8—15 cm × 3.5—7.5 cm, at the base rounded or, rarely, acute, shortly acuminate, on the upperside minutely strigillose or strigose, subscabrid or asperous, on the underside villose or subvillose, often pallid, 7-plinerved. Petioles unequal, 10—35 mm long, covered with linear, 1—2 mm long hairs. Inflorescence a terminal or axillary compact, 3—4 cm long panicle, consisting

of much more than 9 flowers; peduncle compressed, robust, 8—12mm long, sparsely pilose. Bracts 4 or 5, either ovate and acute or reniform, 2—3 mm × 2—3 mm, innate, strongly appressed to the base of the calyx, ciliate, glaucous when dry, on the outside sparsely pilose, on the inside subglabrous. Pedicel 1—2 mm long. Calyx tube campanulate, 4—9 mm long, covered with subpatent, single or, rarely, fasciculate, 2—3 mm long hairs; teeth 5, subulate, 2—3 mm long, densely covered with patent hairs; "denticles" subulate, 0.5 mm long, at the top provided with a penicillate bristle. Petals 5, obovate, 5 mm × 3 mm, obtuse, ciliate, (according to Carr) white. Filaments 2.5—3 mm long; anthers linear, obtuse, 2.5—3 mm long, basally provided with two tubercles; connective very shortly produced. Style 5 mm long. Berry ovoid, 6—7 mm long; stalk 2—3 mm long.

Distribution.

SUMATRA. West Coast: G. Singgalang (Korthals s.n. L, typus, dupl. in U); idem (Burck nr. 8 [BZ], L); Pariaman (? Korthals s.n. U). East Coast: Tobing, Battaklands, grass wilderniss (Junghuhn s.n. L, fr. Oct.); Sibaulangit, 500 m (Lörzing nr. 4648 [BZ], L, fr. Jan.). Benkoelen: Kroë, 700 m (de Voogd nr. 1483 [BZ], L, fr. July). Locality unknown: (Junghuhn s.n. U); idem (collector unknown, L, sub Lachnopodium rubro-limbatum Bl.).

P. SIMEULOEË: (Achmad nr. 1075 [BZ], L, U, fl. Apr.; v.n. doeloeng doeloeng oeding).

FURTHER DISTRIBUTION: New Guinea (S. E. part), ? Siam.

6. **Otanthera celebica Bl.** Blume in Mus. Bot. Lugd.-Bat. I nr. 4 (1849) p. 56; Naudin in l.c. XIII (1850) p. 353; Miquel, l.c. (1855) p. 516; Triana in l.c. (1871) p. 56; Boerlage, l.c. (1890) p. 508, 530; Cogniaux in l.c. (1891) p. 342.

Shrub. Branches subterete or subquadrangular, minutely strigillose. Leaves oblong, ovate-oblong or lanceolate, 7—11 cm × 2—4.5 cm, at the base often cuneate, at the top cuneate, shortly acuminate, on both sides strigillose, scabrid or subscabrid, on the upperside dark, often provided with white spots, on the underside often yellowish, 7-nerved. Petiole 7—9 mm long, appressed strigillose. Inflorencence a slightly compact, 5—9 cm long, panicle; peduncle quadrangular, 2—4.5 cm long, strigillose. Bracts narrowly obovate, 4—8 mm × 2—3 mm, subpilose on the outside, with hardly conspicuous venules. Pedicel 2—3 mm long. Calyx tube campanulate, 3—4 mm long, sparsely covered with appressed, single or paucipartite, linear, at most 1.5 mm long scales; teeth 5, subulate, 2—3 mm long, subpilose; "denticles" lanceolate, 0.5—1 mm long. Petals 5, obovate, 4—8 mm × 3—5 mm, ciliate, at the top provided with a single bristle. Filaments 2—2.5 mm long; anthers linear, obtuse,

2 mm long, basally provided with two wide auricles; connective not produced. Style 3—6 mm long. Berry ovoid, 3.5—5 mm long; stalk 2—4 mm long.

Distribution.

CELEBES. Manado: Amoerang, shrub wilderniss (Forsten s.n. L, typus, fl. Dec.); Minahassa, 20 m (Koorders nr. 17868β and 17882β [BZ], L, fl. Jan.); Goeroepahi, 600 m (Kaudern nr. 9, L, fl. March); G. Manimporok, 500 m (Lam nr. 2405 [BZ], L, fl. Apr.); Pinapoean, 600 m (Kaudern nr. 423, L, fl. Dec.); Manado (de Vriese s.n. L, U); idem (Teysmann s.n. L); locality unknown (de Vriese and Teysmann s.n. L, U); idem (de la Savinière nr. 96, according to Cogniaux in l.c.).

FURTHER DISTRIBUTION: Andamans.

7. **Otanthera novoguinensis Baker f.** Baker f. in Trans. Linn. Soc. 2 sér. Bot. IX. 1 (1914) p. 50 and pl. 2, fig. 34—39; Baker f. in Gibbs, Contr. Flor. Arfak Mts. (1917) p. 216; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 106, 107; idem in Nova Guinea XIV livr. II (1927) p. 200; *Otanthera adpressa Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 106, 107; idem in Nova Guinea XIV livr. II (1927) p. 200; *Otanthera cyanoides* (*Smith*) *Triana*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 106 107; idem in Nova Guinea XIV livr. II (1927) p. 200.

Shrub. Branches compressed quadrangular, minutely strigillose. Leaves oblong or lanceolate, 6—15 cm × 2—6.5 cm, at the base cuneate, at the top mostly cuneate, acute or shortly acuminate, on both sides smooth or subscabrid, 5- or 7-plinerved. Petiole 10—27 mm long. Inflorescence a slightly compact panicle, consisting mostly of many flowers or, rarely, less than 9-flowered; peduncle 10—47 mm long. Bracts obovate or lanceolate, semiamplexicaul, 2—3 mm × 2—3 mm, acute, ciliate. Pedicel 3 mm long. Calyx tube campanulate 4—5 mm long, sparsely covered with single or pauci-partite, at most 1.5 mm long hairs; teeth 5, subulate, 2—3 mm long; "denticles" lanceolate, sometimes at the top bifid, 1 mm long. Petals 5, narrowly obovate, 3—5 mm × 2—3 mm, ciliate. Filaments 1—2.5 mm long; anthers linear, acute or subrostrate, 2 mm long, basally provided with two tubercles. Style 5 mm long. Berry ovoid, 4—6 mm long; stalk 5 mm long.

Distribution: endemic.

NEW GUINEA. Western Part: (Vogelkop), Andai (Teysmann s.n. [BZ], L). P. Roon (Geelvink Bay): (C. B. Kloss nr. 6238, L). Northern Part: Siriwo river (Janowsky nr. 128 [BZ], L, fl. July); Jabi Mts (idem nr. 374 [BZ], L, fl. Sept.). Southern Part: Lorentz river (von Römer nr. 515 and 516 [BZ], L, fl. Oct.); idem (idem nr. 562, type of *O. adpressa Mansf.*, dupl. in [BZ], L, fl. Oct.); Alkmaar bivak, Lorentz river (Versteeg nr. 1583 [BZ], L, U, fl. Aug.); van der Sande river (Pulle nr. 275, L, U, fl. Nov.); Setakwa river, Camp I—III, 230 m. (C. B. Kloss, according to Ridley, Wollaston Exp. l.c., type, fl. Nov.).

Species unknown to me, not mentioned in the key.

1. **O. crinita Naud.** var. **major Cogn.** in l.c. (1891) p. 340. — Aroe Islands. (Moluccas).

Tribus II. Tibouchineae.

Baillon, Hist. d. plant. VII (1880) p. 31 ["Tibouchinées", sér. b.]; Cogniaux in Martius, Flor. Bras. XIV 3. (1885) p. 205; idem in De Candolle, Monogr. Phanerog. VII (1891) p. 122 [tribus]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7. (1893) p. 144 [tribus].

Observ: All natives of America, especially of S. America. In the Malay Archipelago only cultivated or naturalized.

5. Heterocentron Hook. et Arn.

Hooker et Arnott in Bot. Beech. Voy. (1840) p. 249; *Heeria* Schlecht.; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 135; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 150.

(Characters of the genus according to Cogniaux).

Erect herbs or shrubs, with quadrangular, mostly pilose branches. Leaves opposite, equal, oblong or lanceolate, submembranaceous, mostly pinni-nerved, petiolate. Flowers in terminal or axillary panicles or, rarely, solitary, hermaphrodite, 4-merous. Pedicel present. Calyx tube campanulate or, rarely, subglobose or ovoid, mostly setose; limb consisting of 4 long teeth, which are pilose, subglabrous or, sometimes, glandular. Stamens 8, unequal and subisomorphous; filaments present; anthers subulate or linear, unequal, curved, with undulate thecae, opening by a single terminal pore; the larger ones provided with a basally distinctly produced connective, ending in two linear appendages; the smaller ones provided with a hardly produced connective, ending in two tubercles. Ovary hardly concrescent with the calyx tube; exterovarial chambers absent; the ovary itself with a glabrous, setose or, rarely, 4-toothed top, 4-celled; style filiform, glabrous; stigma hardly conspicuous. Capsule campanulate, glabrous, dehiscing apically with 4 valves. Seeds many, cochleate.

Distribution: About 11 species in Mexico and Central America. Elsewhere cultivated or naturalized.

1. **Heterocentron roseum A. Braun et Bouché.** Braun et Bouché in Linnaea 25 (1852) p. 299; idem, Index Sem. Hort. Berol. (1851) p. 14 [nomen]; Backer, Manuscr. Fl. Java, Melast. (1941) p. 5; *Heeria rosea* (*A. Braun et Bouché*) *Triana* in Trans. Linn. Soc. XXVIII part I (1871) p. 34; Cogniaux in l.c. (1891) p. 137.

Herb or shrub, 0.5—2.5 m high. Branches acutely quadrangular, subglabrous or pilose; the young ones covered with appressed hairs. Leaves oblong, 3—5 cm × 1—2 cm, at the base narrowed into the petiole, acute, entire, on both sides subsetose, 9- or 11-plinerved, cross-venules distinct on the underside. Petiole up to 15 mm long, subpilose. Inflorescence terminal, 5—12 cm long, many-flowered, subdivaricate, foliaceous. Bracts linear, small. Pedicel 5 mm long. Calyx tube ovoid, 3—4 mm long, slightly grooved, minutely setose, eglandular; teeth 4, broadly triangular, 3—4 mm long, acuminate, glabrous. Petals 4, orbicular-obovate, 8—10 mm × 6—7 mm, ciliate, pink or white. Stamens 8, unequal; the larger ones with 4—5 mm long filaments and with narrowly oblong, truncate, 3.5—4.5 mm long anthers, whose connective is 2.5 mm long and nodded at the top, ending ventrally in two 1.5 mm long appendages; the smaller ones with 3—4 mm long filaments and with narrowly oblong, 2—3 mm long anthers, whose connective is not produced. Ovary at the top provided with 4 thin scales, each bearing two small bristles; style 6—8 mm long, glabrous, at the top curved. Capsule widened at the top, 4—5 mm long.

Distribution: Mexico and Central America; in the localities quoted below only cultivated or naturalized.

JAVA. Preanger Regencies: Tjidadap, S. of Tjibĕbĕr (Bakhuizen van den Brink nr. 2904 [BZ], L, fl. March); idem (Bakhuizen van den Brink fil. nr. 157, U). Kedoe: Wonosobo (Brinkman nr. 603 [BZ], L, fl. Apr.). Madioen: Sarangan, G. Lawoe (Karsten nr. 49, L, fl. July). Pasoeroean: Nongkodjadjar, 1200 m (Backer nr. 37221, PAS, fl. March).

Tribus III. **Miconieae.**

De Candolle, Prodr. III (1828) p. 152 [tribus]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 505 [tribus]; Cogniaux in De Candolle, Monogr. Phanerog VII (1891) p. 612 [tribus]; *Tamoneae*, Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 182 [tribus].

Observ: All natives of America, especially of S. America. In the Malay Archipelago either only cultivated (Bellucia) or naturalized. (Clidemia).

6. **Bellucia Neck.** (non Adanson [1763] = nomen nudum).

Necker, Elem. Bot. II (1790) p. 143; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1026; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 190.

(Characters of the genus according to Cogniaux).

Shrubs or trees. Branches terete or compressed, glabrous, furfuraceous or, rarely, pubescent. Leaves opposite, equal, elliptic, ovate or

ovate-oblong, entire, glabrous or furfuraceous, 3- or 5-nerved, cross-venules distinct and prominent; petiole long and thick. Flowers in axillary, dichotomous, few-flowered panicles or flowers solitary or in diads, hermaphrodite, 5- to 8-merous. Pedicel present. Calyx tube hemispherical or turbinate, mostly glabrous or furfuraceous, thick; limb consisting of 5- to 8 teeth; teeth triangular, large and thick. Petals obovate or oblong, glabrous, thick. Stamens twice as many as petals, equal and isomorphous; filaments wide; anthers dolabriform, laterally compressed, obtuse, opening by two terminal pores; connective thick, basally not produced, inappendiculate. Ovary wholly concrescent with the calyx tube, with sunken top, 8- to 15-celled; style columnar, terete; stigma very wide, provided with many grooves. Fruit a berry with fleshy pericarp. Seeds minute, many.

Distribution: About 15 species, all in America: Mexico, Central- and South America.

1. **Bellucia Axinanthera Triana.** Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 142; Cogniaux in l.c. (1891) p. 1029; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1205; Backer, Manuscr. Fl. Java, Melast. (1941) p. 29.

Tree, 3—5 m high. Branches quadrangular, glabrous or furfuraceous. Leaves elliptic or oblong, 20—35 cm × 12—15 cm, acute at the base, acute, on the upperside glabrous, on the underside, especially on the nerves, covered with very small, rough, brown hairs, 3- or 5-plinerved; cross-venules very distinct and prominent. Petiole 25—55 mm long, very thick, verruculose, striate. Inflorescence an axillary, up to 5 cm long, 3- to 12-flowered cyme; peduncle quadrangular, 5 mm long, furfuraceous, at the top dichotomously branched; branches short, bearing but few flowers. Bud mammiform, slightly obtuse. Pedicel terete, 12—15 mm long, thick, furfuraceous. Calyx tube campanulate, wide, subterete, 15 mm long (limb included), very thick, brown furfuraceous, slightly venulate; teeth 5, triangular, 6—7 mm long, acute, robust, separated by wide curves. Petals 5, widely obovate, subobtuse, glabrous, at the top on the inside strongly thickened, pink on the outside, on the inside at first white, later on becoming brown (according to Backer, l.c.). Stamens 10; filaments 6 mm long, flat and wide; anthers dolabriform, 8 mm long, laterally compressed, truncate at the top; connective not produced, thick, inappendiculate. Ovary with sunken, glabrous top, 15-celled; style 25—30 mm long, glabrous; stigma capitate, 4 m × 4 m, provided with 15—20 radiating grooves. Berry widened at the top, rounded at the base, 25 mm × 35—40 mm provided with the persistent calyx limb, yellowish; stalk 20—30 mm long.

Distribution: America (Brazil). Elsewhere cultivated.

JAVA. Batavia: Tjiomas near Buitenzorg. (collector unknown, PAS.).

7. Clidemia L.

D. Don in Mem. Wern. Soc. IV (1823) p. 306; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 523; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 984; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 190.

(Characters of the genus according to Cogniaux).

Shrubs. Branches terete or acutely quadrangular, glabrous or covered with various kinds of hairs. Leaves opposite, often subequal, ovate, oblong or lanceolate, mostly crenate, on both sides pilose, 3- to 7-nerved, with distinct cross-venules, petiolate .Flowers many, either in axillary or, rarely, in terminal panicles, in which latter case the lower branchlets are always subtended by leaves or in fascicles; peduncle and ramifications mostly pilose or, rarely, glabrous; the flowers themselves hermaphrodite, 4-, 5- or 6-merous. Pedicel present. Calyx tube campanulate, urceolate or oblong, covered with various kinds of hairs or, rarely, glabrous; limb truncate or consisting of lobes; lobes at the top provided with a single bristle. Petals obovate, oblong or, rarely, linear, often glabrous. Sometimes a corona, consisting of hairs is present, inserted inside the calyx limb at the base of the petals and stamens. Stamens equal or subequal, isomorphic; filaments glabrous; anthers linear, acute, straight or curved, opening with a single terminal pore; connective basally not or only shortly produced, ending sometimes in a spur or a tubercle. Ovary slightly concrescent with the calyx tube, with swollen, often setose top, 3- tot 5-(rarely 6-to 9-)celled; style glabrous; stigma capitate or truncate. Berry subglobose, often hirsute. Seeds many, ovoid or pyramidal, smooth or tubercular.

Distribution: About 145 species in America: Central and Southern part and also in Cuba. Naturalized in the Malay Archipelago and in the Fiji Islands.

1. **Clidemia hirta (L.) D. Don.** D. Don in Mem. Wern. Soc. IV (1823) p. 306; Boerlage, l.c. (1890) p. 523, 526; Cogniaux in l.c. (1891) p. 987; Massart, Un botaniste en Malaisie (1895) p. 14, 47; Koorders in Nat. Tijdschr. Ned. Ind. LXIII afl. I (1903) p. 47; idem, Exkurs. Flora Java II (1912) p. 699; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Bolding, Zakflora Landbouwstreken Java (1916) p. 133; Koorders, Flora von Tjibodas (1918) p. 216; Backer en van Slooten, Geill. Handboek Jav. Theeonkruiden

(1924) p. 183, fig. 183; Hochreutiner in Candollea II (1925) p. 477; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1205; Docters van Leeuwen in Ann. Jard. Bot. Buitenzorg XLVI—XLVII (1930) p. 392; idem in Trop. Nat. XXI (1932) p. 142; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III vol. XII livr. 2 (1932) p. 166; Backer, Manuscr. Fl. Java, Melast. (1941) p. 28; *Melastoma hirta L.*, Spec. Plant. I (1753) p. 390.

Branched shrub, 0.80—2 m high. Branches terete, often hirsute with rufous hairs. Leaves subequal, ovate-oblong or orbicular-ovate, 5—12 cm × 4—7.5 cm, at the base rounded or, rarely, subcordate, long acuminate, crenulate, on both sides sparsely hirsute, the upperside with vaulted surface, 5- or 7-nerved, cross-venules distinct. Petiole 5—15 mm long, hirsute. Panicle up to 1.5 cm long, bearing at most 20 flowers; peduncle 2—6 mm long, hirsute. Flowers 5-merous. Pedicel 3 mm long. Calyx tube widely campanulate, 3—4 mm long, rounded at the base, sparsely hirsute; limb 0.5—1 mm long, submembranaceous, pale, provided with 5, 2—3.5 mm long, hirsute, green teeth. Petals 5, obovate and widened towards the base or oblong, 4—5 mm × 3—4 mm, pink or white. Corona consisting of 10 fimbriate scales. Stamens 10, equal; filaments 1.5 mm long; anthers linear, 4 mm long, yellowish; connective not produced, dorsally provided with minute tubercles. Ovary 5-celled; top part conical, glabrous; style subterete, 4 mm long; stigma hardly conspicuous. Berry urceolate, 4—5 mm long, hirsute, when mature black-blue, edible.

Distribution: Native of South America; elsewhere naturalized.

BANKA: Bt. Beban, Sei. liat. (Bünnemeyer nr. 1635 [BZ], L).

JAVA. Batavia: Buitenzorg (Hallier nr. 103 b [BZ], L, U); idem (Backer nr. 36258, PAS, fl. June); idem (Bakhuizen van den Brink fil. nr. 1, U); idem (idem nr. 1756 [BZ], L, U, fl. Sept.); Kota batoe near Buitenzorg, 250 m (Hochreutiner nr. 1102, fl. May; according to Hochreutiner in l.c.); Tjiomas near Buitenzorg (Boerlage s.n. L, fl. Sept.); Mantarena near Buitenzorg (Schiffner nr. 2302, L, fl. Nov.). Preanger Regencies: Tjikopo (Boerlage s.n. L); Goalpara near Soebaboemi (Bakhuizen van den Brink nr. 2798 [BZ], L, fl. Sept.); Soekaboemi (idem nr. 2790 [BZ], U). Cheribon: Bantar djati. (Raap nr. 550, G, L, fl. June; v.n. harèndong boeloe). Locality unknown: (de Vriese s.n. L); (Zollinger nr. II, 3699; according to Cogniaux in l.c.); (Ploem s.n. L).

ANAMBAS ISLANDS. P. Siantan: (according to van Steenis in l.c.).

FURTHER DISTRIBUTION: Malay Peninsula, Singapore (Kehding), British North Borneo and the Fiji Islands. (Ridley).

var. elegans (Aubl.) Griseb.

Grisebach, Flor. Brit. West Ind. Isl. (1864) p. 247; Cogniaux in

l.c. (1891) p. 988; *Melastoma elegans Aubl.*, Plant. Guian. I (1775) p. 427 and tab. 167.

Shrub. Leaves at the same node unequal in length, ovate, 9—13 cm × 5—7 cm, cordate at the base, densely crenate, on both sides smooth, the upperside, when dry, brown-green and shining.

Distribution: Native of South America.

JAVA. Batavia: Buitenzorg, along the Tjisadane (Dr. H. Dihm s.n. L, M, fl. Sept.).

Tribus IV. **Dissochaeteae.**

Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 67 [subtribus]; Miquel, Flor. Ned. Ind. I (1855) p. 520 [subtribus]; Triana in Bull. Congr. bot. d'Amsterdam (1865) p. 457 [tribus]; idem in Trans. Linn. Soc. XXVIII (1871) p. 81 [tribus]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 504 [tribus]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 544 [tribus]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 143, 177 [tribus]; *Medinilleae*, Bentham and Hooker, Gen. Plant. I 2 (1865) p. 727 [tribus]; Baillon, Hist. d. plant. VII (1880) p. 31 ["série"]; *Miconieae* [pr. p.], De Candolle, Prodr. III (1828) p. 152; Blume in Flora XIV (1831) p. 489 and in Bijdr. Nat. Wet. VI (1831) p. 232.

Mostly epiphytic shrubs or climbers or, rarely, terrestrial shrubs or small trees. Flowers hermaphrodite, 4-, 5- or, rarely, 6-merous. Calyx limb often undulate or absent or, rarely, distinctly developed, not alternating with appendages. Stamens 4—30, equal, subequal or unequal; filaments always present; anthers mostly isomorphous, as a rule twice as many as there are petals or, rarely, equal in number, mostly elongate, acute or, rarely, rostrate or obtuse, opening with 1 or 2 terminal pores or, rarely, introrsely with 2 slits; connective at the base mostly produced, dorsally calcarate and densely pilose or inappendiculate, ventrally setose or inappendiculate. Ovary mostly concrescent with the calyx tube with septs or, rarely, wholly adnate to it; exterovarial chambers present or absent; top part of the ovary often swollen and sometimes provided with a short disc, glabrous or hairy; the ovary itself 4-, 5-or 6-celled; ovules many, minute. Berry mostly cylindrical. Seeds many, of different shape, straight or slightly curved, cuneate, obovoid or irregular, sometimes beaked.

Distribution: Africa and Asia.

8. **Plethiandra Hook. f.**

Hooker f. in Bentham and Hooker, Gen. Plant. I 2 (1865) p. 772;

Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 527; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1111; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 196; idem in idem, Nachtr. II (1900) p. 49; Schwartz in Mitt. Inst. Bot. Hamburg 7. Heft 3 (1931) p. 255; *Medinillopsis Cogn.* in De Candolle, Monogr. Phanerog. VII (1891) p. 603; Krasser in Engl.u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 180; idem in idem, Nachtr. II (1900) p. 49.

O b s e r v: I have no material seen. According to Schwartz, there occur 2 species in West Borneo: *P. Beccariana* (*Cogn.*) *Merr.* and *P. Mottleyi Hook. f.*

D i s t r i b u t i o n: About 5 species in Singapore and Borneo.

9. Dalenia Korth.

Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 243; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 276; Miquel, Flor. Ned. Ind. I (1855) p. 530; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 758; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 82; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 516; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 547; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 179; *Dissochaeta Bl.*; Baillon, Hist. d. plant. VII (1880) p. 15, 51.

Climbers. Branches terete or subquadrangular; the nodes very strongly pulvinate. Leaves opposite, equal, ovate or ovate-oblong, entire, 7-nerved, petiolate. Inflorescence terminal, paniculiform, many-flowered; peduncle quadrangular; branchlets strongly thickened at the base, trichotomously branched. Flowers hermaphrodite, 4-merous. Bracts and pedicel present. Calyx tube tubular; limb conical, forming a calyptra, at first entirely closed, later on falling off. Petals ovate, pink or white. Stamens 8, unequal; the larger ones with linear, rostrate, curved anthers, opening with a single terminal pore; connective very shortly produced at the base, dorsally calcarate, ventrally bisetose; the smaller ones with subulate, rostrate, S-shaped anthers; their connective having just the same characters as those of the larger stamens; filaments always present. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending to far below the middle of the ovary; the ovary itself about half as long as the calyx tube, 4-celled; style filiform; stigma hardly conspicuous. Berry ovoid. Seeds many, pyramidal, reticulate, provided with unilateral wings.

D i s t r i b u t i o n: 2 species, only known from Borneo.

1. **Dalenia speciosa Korth.** Korthals in l.c. (1839—1842) p. 245 and tab. 58 (sub *D. pulchra Korth.*); Naudin in l.c. XV (1851) p. 277; Miquel, l.c. (1855) p. 531; Triana in l.c. (1871) p. 82 and tab. VII, fig. 87; *Dalenia Korthalsii Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 3 (1849) p. 39; *Dalenia pulchra Korth.* in l.c. (1839—1842) tab. 58; Boerlage, l.c. (1890) p 532; Cogniaux in l.c. (1891) p. 548; Krasser in l.c. (1893) p. 178 and fig. 77.F.

Climber. Branches terete or subquadrangular, the young ones compressed quadrangular, glabrous; the nodes very strongly pulvinate; the leaf axils glabrous. Leaves ovate or ovate-oblong, 13—18 cm × 7—11 cm, at the base cordate or subcordate, acuminate, glabrous, 7-nerved, cross-venules, especially on the underside, very distinct. Petiole 20—25 mm long, glabrous. Inflorescence 11—13 cm long; peduncle acutely quadrangular, 4.5—5 cm long, furfuraceous. Bracts foliaceous, lanceolate, 25—40 mm × 6—8 mm, furfuraceous, 5-nerved. Bracteoles linear 1—1.5 mm long. Pedicel 5—6 mm long. Calyx tube tubular, 5—6 mm long, glabrous, furfuraceous or glabrescent, punctate; calyptra 7—9 mm long, subfurfuraceous. Petals widely ovate, 8 mm × 6 mm (according to Cogniaux 10—12 mm long), acute, mucronate, venulate, pink (Korthals) or white (Rutten). The larger stamens with 6—7 mm long filaments and with 8—10 mm long, yellow anthers, whose connective is dorsally provided with a 1 mm long spur and ventrally with two up to 2.5 mm long appendages; the smaller stamens with 6—7 mm long filaments and with 6—7 mm long anthers, whose connective is dorsally provided with a minute spur and ventrally with two very short and obtuse appendages. Top part of the ovary glabrous; style terete, 12—14 mm long glabrous. Berry ovoid, 9—10 mm × 6 mm, glabrous, provided with the persistent rest of the calyx limb; stalk 10—14 mm long. Seeds 0.5 mm long.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Kapoeas-Barito: Tewe river (Korthals s.n. L, typus). Samarinda: above Pamaloean (Rutten nr. 103, U).

10. Omphalopus Naud.

Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 277; Miquel, Flor. Ned. Ind. I (1853) p. 531; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 759; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 85; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 504; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 570; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 179; *Dissochaeta*

Bl. (pr. p.; typo excl.); Blume in Flora XIV (1831) p. 493 and in Bijdr. Nat. Wet. VI (1831) p. 234; Baillon, Hist. d. plant. VII (1880) p. 14 and 51; *Melastoma L.* (pr. p.); Jack in Trans. Linn. Soc. XIV (1825) p. 13; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1068; *Omphalodes* [*Naud.*]; Boerlage (sphalm), Handl. Flor. Ned. Ind. I (1880) p. 518.

Climbers. Branches terete or subquadrangular, laterally thickened on the nodes. Leaves opposite, equal, ovate-oblong or ovate-lanceolate, entire, subtomentose on the underside, 5- or 7-nerved, petiolate. Inflorescence terminal, paniculiform, in the lower parts subtended by leaves, many-flowered; peduncle quadrangular; ramifications of the first order opposite, those of the second order trichotomous. Flowers hermaphrodite, 4-merous. Bracts and pedicel present. Calyx tube campanulate and quadrangular; limb consisting of 4 undulate lobes. Petals 4, obovate. Stamens 4, equal; filaments mostly medifix; anthers equal and isomorphous, narrowly triangular, rostrate, with reticulate, bullate thecae, opening with a single terminal pore; connective basally not produced, lamellate on the insertion with the filament, dorsally shortly spurred. Ovary fully concrescent with the calyx tube; septs absent; the ovary itself about as long as the calyx tube, 4-celled; its toppart flat, glabrous; style filiform; stigma hardly conspicuous. Berry subglobose. Seeds many, cuneate, straight, not beaked.

Distribution: Only 1 species with 1 variety: Sumatra, Java and New Guinea (Mansfeld).

1. **Omphalopus fallax (Jack) Naud.** Naudin in l.c. XV (1851) p. 277 and tab. IV, fig. 5; Miquel, l.c. (1855) p. 531; idem, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 122; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 570; Krasser in l.c. (1893) p. 137, tab. 67E; Koorders, Exkurs. Flora Java II (1912) p. 693; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); *Omphalopus leprosus* (*Bl.*) *Naud.* in l.c. XV (1851) p. 278; Miquel, l.c. (1855) p. 532; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 571; Koorders, Exkurs. Flora Java II (1912) p. 693; *Dissochaeta anceps Bl. fl. rosaceis T. et B.*, Cat. Plant. Hort. Bot. Bog. (1866) p. 242 [nomen]; *Dissochaeta Diepenhorstii Miq.*, Flor. Ned. Ind. Suppl. I (1860) p. 317 and 121 [nomen]; *Dissochaeta fallax* (*Jack*) *Bl.* in Flora XIV (1831) p. 493 and in Bijdr. Nat. Wet. VI (1831) p. 236; *Dissochaeta Reinwardtiana* (*Bl.*) *Hochr.* in Candollea II (1925) p. 472; *Melastoma diffusa Reinw.*, Miquel, l.c. (1855) p. 13 [nomen]; *Melastoma fallax Jack* in Trans. Linn. Soc. XIV (1825) p. 13; idem in Calcutta Journ. Nat. Hist. V. nr. XV (1843) p. 323; *Melastoma leprosum Bl.* (pr. p.; typo excl.),

Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1068. De Candolle, l.c. (1818) p. 151; *Melastoma Reinwardtianum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1069; De Candolle, l.c. (1828) p. 151.

Climber, up to 20 m high. (Koorders!) Branches brown furfuraceous. Leaves ovate-oblong or ovate-lanceolate, 9—16.5 cm × 4—9 cm, at the base subcordate, narrowly acuminate, on the upperside glabrous, on the underside ferrugineously subtomentose, 5- or 7-plinerved, cross-venules distinct, subreticulate. Petiole 17—32 mm long, furfuraceous. Inflorescence 15—30 cm long; main axis quadrangular, densely brown furfuraceous; the nodes laterally thickened. Bracts small, linear. Pedicel 2—5 mm long. Calyx tube campanulate, 2—3.5 mm long, acute at the base, furfuraceous; limb broadly 4-undulate, 1—1.5 mm high. Petals narrowly obovate, 6—9 mm × 3—4 mm, subacute, glabrous, veined. Filaments medifix or, rarely, almost basifix, 4.5—6 mm long; anthers 4—6 mm long, with reticulate and bullate or, rarely, with subreticulate and hardly bullate thecae, dorsally very shortly spurred; connective on the insertion with the filament, provided with a broadly triangular or, rarely, with an oblong appendage. Style 11—14 mm long, glabrous. Berry subglobose, 8—9 mm long, furfuraceous, provided with the persistent calyx limb; stalk 3—5 mm long. Seeds 1 mm long.

Distribution.

SUMATRA. West Coast: Lkoto, S. Koeriman, 980 m (Bünnemeyer nr. 3468 [BZ], L, fl. June); G. Malintang, 1100 m (idem nr. 4225 [BZ], L, fl. Aug.); idem (idem nr. 4263 [BZ], L, fl. Aug.); G. Merapi, 1250 m (idem nr. 4514 [BZ], L, U, fl. Sept.); Pariaman (Diepenhorst s.n. U, type of *D. Diepenhorstii Miq.*; v.n. akar gameh, areuj gameh); G. Singgalang (Burck s.n. L). East Coast: above Bandar baroe, 1100 m (Lörzing nr. 4607 [BZ], L, fr. Dec.). Benkoelen: Ajer Angat, G. Kaba, 1000 m. (Forbes nr. 2882a L). Locality unknown: (Jack, in l.c.); (Korthals s.n. L).

JAVA. Batavia: Bolang, 600 m (Docters van Leeuwen nr. 7904 [BZ], L, fr. May); Pasir Sireungit, W. of Leuwiliang, 600 m (Dakkus nr. 234 [BZ], L); G. Salak (Blume s.n. L, sub Dissochaeta leprosa [Bl.] Bl.); idem, 700 m (Koorders nr. 24270 β [BZ], L, fl. Sept.); G. Paniisan, 600 m (van Steenis nr. 2300 [BZ], L, fl. Oct.; v.n. harèndong). Preanger Regencies: G. Tjisalak (G. Tjisalak nr. 249 L; v.n. harèndong ojod). Pasoeroean: Moedjoer (Admin. of Moedjoer s.n. [BZ], L, fr. March). Locality unknown: (Junghuhn s.n. L); (Kuhl and van Hasselt s.n. L, type of *Melastoma Reinwardtianum Bl.*); (de Vriese s.n. L); (collector unknown L).

BALI: G. Pala, 495 m (Sarip nr. 219 [BZ], L, fl. Sept.; v.n. pridjati).

FURTHER DISTRIBUTION: New Guinea (N.E. part; *O. fallax* [*Jack*] *Naud.* var. *novoguinensis Mansf.* in l.c.).

11. Boerlagea Cogn.

Cogniaux in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 522; idem in De Candolle, Monogr. Phanerog. VII (1891) p. 611.

Observ: I have no material seen. This plant has up to now not been found in the Netherlands East Indies.

Distribution: Only one species in Borneo (Sarawak).

12. Pachycentria Bl.

Blume in Flora XIV (1831) p. 519 and in Bijdr. Nat. Wet. VI (1831) p. 259; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 299; Miquel, Flor. Ned. Ind. I (1855) p. 550; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 760; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 89; Baillon, Hist. d. plant. VII (1880) p. 49; Beccari, Malesia II (1884) p. 236; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 521; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 605; Krasser in Engl. u. Prantl, Die Nat. Pfl Fam. III 7 (1893) p. 182; *Medinilla Gaud.*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 115; idem in Nova Guinea XIV livr. II (1927) p. 203; *Melastoma L.*: Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1067; De Candolle, Prodr. III (1828) p. 144.

Epiphytic shrubs with tuberous roots. Branches terete or subquadrangular, glabrous, furfuraceous or minutely pilose, on the nodes mostly thickened; the leaf axils mostly glabrous. Leaves opposite, equal or, rarely, subequal, oblong, lanceolate or obovate, at the base obtuse, acute, cuneate or subcordate, at the top acute or acuminate, mostly entire, glabrous, 3- or 5-nerved or 3-, 5- or 9-plinerved, petiolate or sessile. Inflorescences terminal or axillary, mostly many-flowered, pedunculate panicles or, rarely, cymes branchlets opposite or quater nate. Flowers hermaphrodite, 4- or 5-merous. Bracts small, subulate. Pedicel present. Calyx tube campanulate and either round or quadrangular or globose-tubular or globose-crateriform, constricted above the ovary, often furfuraceous; limb entire or consisting of 4 or 5 lobes or teeth. Petals 4 or 5, oblong or lanceolate, acute or acuminate, mostly glabrous, pink or white Stamens 8 or 10, equal; filaments always present; anthers equal and isomorphous, oblong, linear or narrowly triangular, at the base obtuse, provided with two small lobes or lobes absent, at the top obtuse, acute or shortly rostrate, opening with a single terminal pore; connective basally not or only very shortly produced, dorsally provided with a short, straight spur, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; top part of the ovary glabrous, often provided with a tubular disc; the ovary itself 4- or 5-celled; style glabrous; stigma hardly conspicuous or capitate. Berry globose or subglobose, provided with the persistent calyx limb. Seeds many, semiovate, punctate, 0.4—2.0 mm long.

Distribution: About 8 species in Asia: Burma, Malay Peninsula and Malay Archipelago.

Key to the species.

1*a*. Leaves 9-plinerved, minutely auriculate at the base, sessile or subsessile. Ramifications of the first order quaternate.
1. **P. rubrivenia (Baker f.) Bakh. f.**

b. Leaves 3- or 5-plinerved or 3- to 5-nerved, at the base not auriculate, petiolate. 2

2*a*. Leaves 3- or 5-plinerved. Calyx tube campanulate, not constricted above the ovary; limb entire.
2. **P. Versteegii (Mansf.) Bakh. f.**

b. Leaves 3 or, rarely, 5-nerved. Calyx tube subglobose or campanulate, constricted above the ovary; limb 4-dentate . . . 3

3*a*. Calyx tube at the base subglobose, the upper part, above the ovary, tubular or funnel-shaped. Young branches and inflorescences glabrous or subfurfuraceous. Inflorescences with opposite ramifications of the first order 4

b. Calyx tube campanulate. Young branches and inflorescences minutely pilose. Inflorescences with quaternate ramifications of the first order. 3. **P. Hellwigii (Mansf.) Bakh. f.**

4*a*. Upper part of the calyx tube, above the ovary, funnel-shaped after anthesis, subquadrangular. Spur of the connective entire. 5

b. Upper part of the calyx tube, above the ovary, tubular after anthesis, terete. Spur of the connective fimbriate.
4. **P. microsperma Becc.**

5*a*. Pedicel before and after anthesis having throughout the same diameter, 1—3 mm long. Inflorescence many-flowered.
5. **P. constricta (Bl.) Bl.**

b. Pedicel before and after anthesis, gradually widened towards the top, 10—13 mm long. Flowers in triads.
6. **P. varingiaefolia (Bl.) Bl.**

1. **Pachycentria rubrivenia (Baker f.) Bakh. f.** comb. nov. *Medinilla rubrovenia Baker f.* in Trans. Linn. Soc. sér. II. IX. 1 (1916) p. 54 and pl. 2, fig. 40—42; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 126; idem in Nova Guinea XIV livr. II (1927) p. 205.

Epiphytic shrub. Branches subterete, glabrous, smooth, pallid; the nodes pulvinate; the leaf-axils glabrous or provided with a thin cushion of small hairs. Leaves oblong or lanceolate, 12—18 cm × 4.5—6.5 cm, at the base acute and decurrent, provided with small

auricles, at the top acuminate, entire or, rarely, undulate, on the upperside glabrous, on the underside on the nerves furfuraceous, 9-plinerved; nerves red; cross-venules on the upperside of the leaves hardly conspicuous, on the underside slightly prominent, sessile or subsessile. Inflorescence many-flowered, up to 10 cm long; peduncle subquadrangular, 3—5.5 cm long, subfurfuraceous; ramifications of the first order quaternate. Flowers 5-merous. Bracts and bracteoles lanceolate, up to 1 mm long. Pedicel 6—9 mm long. Calyx tube subglobose, 2—3 mm long, furfuraceous; limb cupuliform, consisting of 5 small lobes. Petals 5, oblong or lanceolate, 7—8 mm × 3 mm, acute, venulate, white. Stamens 10; filaments 4 mm long; anthers linear, 3 mm long, obtuse. Ovary 5-celled; style filiform, 5—6 mm long.

Distribution: endemic.

NEW GUINEA. Central Part: Carstens Mts., Camp VII, 1200 m. (Wollaston Exped., according to Baker f. in l.c., type). Southern Part: Hellwig Mts. (von Römer nr. 760 [BZ], L, fl. Oct.); idem (idem nr. 833 [BZ], L, fl. Nov.); idem, 750 m (von Römer nr. 901 [BZ], L, fl. Oct.); Resi Mts., 800 m (Versteeg nr. 1636 [BZ], L, U, fl. Aug.).

2. **Pachycentria Versteegii (Mansf.) Bakh. f.** comb. nov. *Medinilla Maidenii F. v. Muell.*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 125; idem in Nova Guinea XIV livr. II (1927) p. 204; *Medinilla Versteegii Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 117, 125; idem in Nova Guinea XIV livr. II (1927) p. 204; *Medinilla Versteegii Mansf.* var. *tetragona Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 125; idem in Nova Guinea XIV livr. II (1927) p. 204.

Epiphytic shrub. Branches terete or subquadrangular, smooth or sparsely verruculose; the nodes pulvinate; the leaf axils glabrous. Leaves elliptic or broadly obovate, 7.5—16 cm × 4—8.5 cm, acute, 3- or 5-plinerved; cross-venules hardly conspicuous. Petiole 10—20mm long, compressed, glabrous. Inflorescence terminal, up to 6 cm long; peduncle terete, 1.5—3 cm long, glabrous; ramifications of the first order opposite. Flowers 4- or 5-merous. Bracts very small, subulate. Pedicel 3 mm long. Calyx tube campanulate, 2—3 mm long, glabrous; limb truncate. Petals 4 or 5, oblong, 2—3 mm long, acute; veins absent. Stamens 8 or 10; filaments 1.5—2 mm long; anthers narrowly triangular, 2 mm long; connective dorsally provided with a 1 mm long spur. Ovary 4- or 5-celled; style 3.5 mm long.

Distribution: restricted to the localities quoted below.

NEW GUINEA. Southern Part: „Bivak Sabang" (Branderhorst nr. 331 [BZ], L, fl. Apr.); Lorentz river (Versteeg nr. 1110, typus, sub *Medinilla Versteegii Mansf.*, dupl. in [BZ], L, fl. May); idem (von Römer nr. 57 [BZ], L, fl. Sept.); idem (idem nr. 439 [BZ], L, fl. Oct.); idem, „Alkmaarbivak."

(Versteeg nr. 1563 [BZ], L, U, type of *Medinilla Versteegii Mansf.* var. *tetragona Mansf.*, fl. Aug.); idem (idem nr. 1004 [BZ], L,fr.May). North Eastern Part: (according to Mansfeld in l.c.).

3. **Pachycentria Hellwigii (Mansf.) Bakh. f.** comb. nov. *Medinilla Hellwigiana Mansf.* in Nova Guinea XIV livr. II (1927) p. 204; *Medinilla Hellwigii Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 117, 125.

Epiphytic shrub. Branches subterete or subquadrangular, especially the young ones covered with minute hairs or furfuraceous; leaf axils provided with a cushion of small hairs. Leaves oblong or lanceolate, 4.5—9 cm × 1.5—3.5 cm, at the base acute, long acuminate, on both sides glabrous subpunctate, 5-plinerved; the nerves on the underside of the leaves furfuraceous; cross-venules mostly hardly conspicuous. Petiole 5—10 mm long, on the underside often covered with few hairs. Inflorescence a terminal cyme, up to 2.5 cm long and bearing less than 10 flowers; peduncle subquadrangular, 5—10 mm long, densely but minutely pilose; ramifications of the first order quaternate. Flowers 5-merous. Bracts narrowly triangular, 1 mm long. Pedicel 1—2 mm long. Calyx tube subglobose, 1—1.5 mm long, furfuraceous or pilose; limb cupuliform, provided with wide but small lobes. Petals 5, oblong, 6—7 mm × 3 mm, obtuse, veined. Stamens 10; filaments 3 mm long; anthers narrowly triangular, 3—3.5 mm long. Ovary 5-celled; style 3 mm long. Young berry subglobose, 2.5 mm long; stalk 7 mm long.

Distribution: endemic.

NEW GUINEA. Southern Part: Hellwig Mts. (von Römer nr. 759, typus, sub *Medinilla Hellwigii Mansf.*, dupl. in L, fl. Oct.); idem (idem nr. 761 L, fl. Oct.); idem, 1350—1600 m (idem nr. 1148, L, fl. Nov.).

4. **Pachycentria microsperma Becc.** Beccari, Malesia II (1884) p. 238 and tab. LVIII, fig. 1—9; Cogniaux in l.c. (1891) p. 609.

Adult branches terete, glabrous, the young ones compressed, brown furfuraceous; leaf axil glabrous. Leaves oblong or lanceolate, 7—17.5 cm × 4—6.5 cm, at the base acute, with the lamina decurrent into the petiole, at the top acuminate, 3-plinerved; cross-venules hardly conspicuous. Petiole 15—25 mm long, furfuraceous. Flowers many, in terminal, 4.5—6 cm long, panicles or flowers in axillary triads; peduncle 7—20 mm long, slightly compressed, furfuraceous; ramifications of the first order opposite; the flowers themselves 4-merous. Bracts subulate, 1 mm long. Pedicel 3 mm long. Calyx tube quadrangular, 4 mm long, its basal part ovoid, separated

from the funnel-shaped upper part by a constriction; after anthesis the basal part of the calyx tube swelling up, becoming rounded, the funnel-shaped upper part converting into a short, straight tube; limb consisting of 4, narrowly triangular, 0.8 mm long teeth. Petals 4, lanceolate, 4 mm × 1 mm, acuminate, ciliate. Stamens 8; filaments 2 mm long; anthers oblong, 2 mm long, shortly rostrate, whose connective is basally hardly produced, provided dorsally with a short, fimbriate spur. Ovary 4-celled; style 5 mm long. Berry globose-ovate, minutely papillate, provided with the persistent, incurved calyx teeth. Seeds 0.4 mm long.

Distribution.

SUMATRA. East Coast: N.E. of Sibaulangit, Betimoesriver, 300 m (Lörzing nr. 5627 [BZ], L, fl. Aug.).
FURTHER DISTRIBUTION: Borneo (Sarawak).

5. **Pachycentria constricta (Bl.) Bl.** Blume in Flora XIV (1831) p. 519 and in Bijdr. Nat. Wet. VI (1831) p. 260; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 22; Naudin in l.c. XV (1851) p. 300; Miquel, l.c. (1835) p. 550; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 89 and tab. VII, fig. 95b; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 608; Koorders, Exkurs. Flora Java II (1912) p. 698; Koorders-Schumacher, Syst. Verz. I. Java, Melast. (1912); Backer, Manuscr. Fl. Java, Melast. (1941) p; 28. *Pachycentria cordata Herb. Korth.*; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 24 [nomen]; *Pachycentria elliptica Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 2 (1849) p. 23; Naudin in l.c. XV (1851) p. 301; Miquel, l.c. (1855) p. 551; Triana in l.c. (1871) p. 89; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 607; Winkler in Engl. Bot. Jahrb. 50, Suppl. (1914) p. 191; Diels und Hackenberg in Engl. Bot. Jahrb. 60 (1926) p. 299; *Pachycentria javanensis Hochr.* in Candollea II (1925) p. 475; *Pachycentria elliptica Bl.* var. *subcordata Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 23; Miquel, l.c. (1855) p. 551; *Pachycentria Junghuhniana Miq.*, l.c. (1855) p. 552; Triana in l.c. (1871) p. 89; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 607; Koorders, Exkurs. Flora Java II (1912) p. 699; *Pachycentria laxiflora Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 2 (1849) p. 23; Naudin in l.c. XV (1851) p. 302; Miquel, l.c. (1855) p. 551; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 123; Triana in l.c. (1871) p. 89; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 608; *Pachycentria rigida Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 2 (1849) p. 23; Naudin in l.c. XV (1851) p. 302; Miquel, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 123; Triana in l.c. (1871) p. 89;

Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 608; *Pachycentria tuberculata Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 246, tab. 63; Blume in Mus. Bot. Lugd.-Bat. I. nr. 2 (1849) p. 23; Naudin in l.c. XV (1851) p. 302; Miquel, l.c. (1855) p. 552; Triana in l.c. (1871) p. 89 and tab. VII, fig. 95*a*; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 606; *Pachycentria tuberculata Korth.* var. *obtusifolia Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 24; Miquel, l.c. (1835) p. 552; Triana in l.c. (1871) p. 89; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 606; *Pachycentria varingiaefolia (Bl.) Bl.*; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. tab. 63, fig. 2; *Pachycentria Zollingeriana Naud.* in l.c. XV (1851) p. 301; Miquel, l.c. (1855) p. 551; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 89; Beccari, Malesia II (1884) p. 239, tab. LVIII, fig. 10—11; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 606; Koorders, Exkurs. Flora Java II (1912) p. 699; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7 Heft 3 (1931) p. 256; *Pogonanthera pulverulenta (Jack) Bl.* var. *lanceolata Baker f.* in Journ. of Bot. LXII. Suppl. I (1924) p. 41; *Melastoma constrictum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1049; De Candolle, l.c. (1828) p. 150.

Epiphytic shrub with tuberous roots. Adult branches terete, glabrous, smooth or striate, the young ones often compressed, brown furfuraceous; the leaf axils glabrous. Leaves equal or, rarely, unequal, very variable, elliptic, oblong, lanceolate, broadly ovate or obovate-oblong, 5.5—22 cm × 2—8.5 cm, at the base acute, cuneate, obtuse or subcordate, at the top acute, acuminate or obtuse, glabrous, 3-or, rarely, 5-nerved, mid-nerve thick, cross-venules on the upperside distinct, on the underside hardly conspicuous. Petiole 5-20 mm long, compressed, furfuraceous. Flowers either in terminal or axillary, up to 8 cm long panicles or in axillary triads or solitary; peduncle quadrangular, 2.5—5 cm long, furfuraceous, orange; ramifications of the first order opposite. Flowers hermaphrodite, 4-merous. Bracts narrowly triangular, 1.5 mm × 0.8 mm, furfuraceous. Pedicel about 1 mm long, orange. Calyx tube 2.5—3 mm long; the basal part subglobose, separated from the funnel-shaped upper part by a constriction; the funnel-shaped part itself 4-ribbed, furfuraceous; after anthesis the basal part of the calyx tube swelling up at the cost of the funnel-shaped upper part, the latter becoming strongly constricted; limb consisting of 4 minute, acute teeth. Petals lanceolate and apiculate or ovate and acuminate, 3—4 mm × 1.5 mm, orange.

Stamens 8; filaments 2—3 mm long; anthers oblong, 2 mm long, at the base obtuse, its top gradually narrowed, ending in a rather long rostrum, purple; connective very shortly produced, dorsally ending in a 0.5 mm long spur style 4—8 mm. Berry 5—7 mm long; stalk 1—3 mm long.

Observ: A very variable species, especially with regard to the characters of the leaves. I reduced almost all species described by earlier authors to P. constricta (Bl.) Bl., excepted P. varingiaefolia (Bl.) Bl., which is a remarkable form.

Distribution.

SUMATRA. West Coast: G. Malintang (Korthals nr. 1230, L, type of *P. rigida Bl.*); idem, 1150 m (Bünnemeyer nr. 3561 [BZ],L,fl. July); G. Merapi, 1150 m (idem nr. 4879 [BZ], L, fl. Sept.); Sei Koeriman,Lkoto, 850 m (idem nr. 3299 [BZ], L, U, fl. June); Brani, Agam, 900 m (idem nr. 3144 [BZ], L, U, fl. June); Batang Paloepoeh, Fort de Kock (Docters van Leeuwen nr. 3943 [BZ], L, fl. Jan.); Bt. Kaboeng, Loeboek sikaping, 750 m (Bünnemeyer nr. 1210 [BZ], L, fl. June); Tanang Taloe, 1100 m (idem nr. 1088 [BZ], L, fl. June). Benkoelen: Ajer angat, G. Kaba, 1600—1700 m (Forbes nr. 2868a, type of *Pogonanthera pulverulenta (Jack) Bl.* var. *lanceolata Baker f.*, dupl. in L.). Locality unknown: (Korthals s.n. L, type of *P. laxiflora Bl.*).

P. SIMEULOEË: (Achmad nr. 527 [BZ], L, U, fl. July; v.n. bindaloe silarai).

JAVA. Batavia: G. Kendeng, along the Tjianten, W. of Buitenzorg, 1000 m (Backer nr. 25863 [BZ], L, fr. Sept.). Preanger Regencies: Pasir Pogor, G. Salak (Bakhuizen van den Brink fil. nr. 1262, U, fl. June); Tjigentjah near Tjisalak (idem nr. 680, U, fl. March); G. Bèsèr, 1000 m (Smith nr. 732 [BZ], L, fl. June); Tjadas Malang, 1000 m (Winckel nr. 2310β [BZ], L,f l. May; v.n. harèndong bokor). Kedoe: Bodja, G. Prahoe (Junghuhn s.n. U, type of *P. Junghuhniana Miq.*, dupl. in L; v.n. mangandoek). Exact locality unknown: „Tjihanjawar" (Kuhl and van Hasselt s.n. L); „Tjimandawal" (idem s.n. L, fl. Sept.); „Pardana" (Zollinger nr. 1361, U, type of *P. Zollingeriana Naud.*). Locality unknown: (Blume s.n. L, typus, sub *Melastoma constrictum Bl.*); (Zollinger nr. 1008, L); (de Vriese s.n. L); (collector unknown, L; v.n. harèndong); (idem, L, sub Anplectrum rostratum [Bl.] Triana); (idem, L; v.n. harèndong kadakka).

BORNEO. SOUTHERN AND EASTERN PART: Bandjermasin: Lake Kalahien, near Martapoera (Korthals s.n. L, type of *P. elliptica Bl.*); Martapoera (idem s.n. L, type of *P. elliptica Bl.* var. *subcordata Bl.*); idem (idem s.n. L, sub P. constricta Bl.); G. Pamatton (idem s.n. L, type of *P. tuberculata Korth.*). Exact locality unknown: „Hajoep" (Winkler nr. 2619, L, fl. June); idem (idem nr. 2287, L); „Moeara kasra" (Korthals s.n. L); „Martalet" (idem s.n. L); „G. Bahai" (idem s.n. L). Locality unknown: (Korthals s.n. L, type of *P. tuberculata Korth.* var. *obtusifolia Bl.*); (Jaheri s.n. L).

ANAMBAS ISLANDS. P. Siantan: E. of Terimpa, 225 m (van Steenis nr. 945 [BZ], L, fl. Apr.).

CELEBES. Manado: Tondano (Forsten s.n. L, fl. July); exact locality unknown. (Kaudern nr. 172, L).

FURTHER DISTRIBUTION: Burma, Penang, Malay, Peninsula, Singapore.

6. Pachycentria varingiaefolia (Bl.) Bl. Blume in Flora XIV (1831) p. 520 and in Bijdr. Nat. Wet. VI (1831) p. 260; Naudin in l.c. XV

(1851) p. 300; Miquel, l.c. (1855) p. 551; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 89; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 608; Koorders, Exkurs. Flora Java II (1912) p. 698; *Melastoma varingiaefolium Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1071; De Candolle, l.c. (1828) p. 149.

Epiphytic shrub. Adult branches terete, the young ones compressed, striate, glabrous; the leaf axils glabrous. Leaves lanceolate, 3—8.5 cm × 1.5—3.5 cm, at the base acute, long acuminate, glabrous, 3-nerved; cross-venules on both sides hardly conspicuous. Petiole 5—10 mm long, glabrous. Inflorescence terminal, up to 3 cm long, 3-flowered; peduncle terete, 5—7 mm long, glabrous. Flowers unknown. Bracts subulate, 1.5 mm long. Pedicel 4—5 mm long, terete, gradually widened towards the top Calyx tube (after anthesis) 4—5 mm long, at the base subglobose, near the top constricted, glabrous, rugose; limb consisting of 4 short teeth. Ovary 4-celled. Young berry globose, 6 mm long, provided with the persistent calyx limb; stalk 10—13 mm long.

Distribution: endemic.

JAVA. Preanger Regencies: G. Megamendoeng, about 1800 m (Kuhl and van Hasselt s.n. L, typus, sub *Melastoma varingiaefolium Bl.*).

Species unknown to me, not mentioned in the key.

1. **P. glauca Triana** in l.c. (1871) p. 89. — Borneo.
2. **P. lanceolata Schwartz** in Mitt. Inst. Bot. Hamburg. Bd. 7 Heft 3 (1931) p. 255. — Borneo,
3. **P. oligosperma Schwartz** in Mitt. Inst Bot. Hamburg. Bd. 7 Heft 3 (1931) p. 256. — Borneo.
4. **P. scandens Ridley** in Journ. Mal. Branch Roy. As. Soc. 1 (1923) p. 61. — Sumatra.

13. Pogonanthera Bl.

Blume in Flora XIV (1831) p. 520 and in Bijdr. Nat. Wet. VI (1831) p. 261; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 302; Miquel, Flor. Ned. Ind. I (1855) p. 552; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 760; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 89; Baillon, Hist. d. plant. VII (1880) p. 50; Boerlage, Handl. Flor. Ned. Ind. I (1890) p 522; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 609; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 180; *Medinilla Gaud.* (pr. p.; typo excl.); Triana in Bull. Congr. bot. d'Amsterdam (1865) p. 459; *Melastoma L.* (pr. p.); De Candolle, Prodr. III (1828) p. 144.

Epiphytic shrub with tuberous roots. Branches terete, glabrous, the young ones often furfuraceous; the leaf axils often glabrous. Leaves opposite, equal or, rarely, subequal, elliptic, oblong or lanceolate, at the base obtuse, cuneate or gradually narrowed, minutely biauriculate, at the top acute or acuminate, entire, glabrous, petiolate. Flowers either many and in terminal or axillary panicles or, rarely, in triads or solitary. Flowers hermaphrodite, 4-merous. Bracts linear, small. Pedicel always present. Calyx tube campanulate or cyathiform, quadrangular, pulverulent; limb consisting of 4 short teeth. Petals 4, ovate, at the base auriculate, acuminate, on both sides densely scaly, red, yellowish or yellow. Stamens 8, equal; filaments always present; anthers oblong, subrostrate, straight, opening with a single terminal pore; connective not produced at the base, dorsally provided with a tuft of small hairs, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs absent; its top part pilose, provided with 8 very shallow depressions, in which the anthers remain in bud; the ovary itself 4-celled; style filiform, at the base pilose, upwards glabrous; stigma hardly conspicuous. Berry globose, often provided with the persistent calyx limb. Seeds semiovate, punctate.

Distribution: A few species are described, but in my opinion there exists only one polymorphic species, Asiatic: Malay Peninsula and Malay Archipelago.

1. **Pogonanthera pulverulenta (Jack) Bl.** Blume in Flora XIV (1831) p. 521 and in Bijdr. Nat. Wet. VI (1831) p. 262; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 247; tab. 65; Naudin in l.c. XV (1851) p. 303; Miquel, l.c. (1855) p. 553; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 123; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 89, tab. VII, fig. 96a; Beccari, Malesia II (1884) p. 241; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 610;Ridley in Journ. Fed. Mal. States Mus. VII. IV (1917) p. 36; Baker f. in Journ. of Bot. LXII. Suppl. I (1924) p. 41; Docters van Leeuwen in Bull. Jard. Bot. Buitenzorg sér. III. 1. Suppl. (1930) p. 237; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. XII. livr. 2 (1932) p. 174; Merrill in Contr. Arnold Arbor. Harvard Univ. VII (1934) p. 114; Backer, Manuscr. Fl. Java, Melast. (1941) p. 27; *Pogonanthera pulverulenta (Jack) Bl.* var. *grandifolia Miq.*, l.c. (1855) p. 553; *Pogonanthera reflexa Bl.* in Flora XIV (1831) p. 521 and in Bijdr. Nat. Wet. VI (1831) p. 262; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 24; Naudin in l.c. XV (1851) p. 303; Triana in l.c. (1871) p. 89 and tab. VII, fig. 96b;

Beccari, Malesia II (1884) p. 241 and tab. LIX, fig. 4—5; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 610; Krasser in l.c. (1893) p. 181, tab. 67b; Koorders, Exkurs. Flora Java II (1912) p. 695; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 115; idem in Nova Guinea XIV livr. II (1927) p. 202; Docters van Leeuwen in Bull. Jard. Bot. Buitenzorg sér. III. Suppl. Vol. I (1930) p. 237; *Pogonanthera reflexa Bl.* var. *squamulata Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 24; *Pogonanthera squamulata Herb. Korth.*, Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 24 [nomen]; *Melastoma pulverulenta Jack* in Trans. Linn. Soc. XIV (1825) p. 19; idem in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 329; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1072; De Candolle, l.c. (1828) p. 149; *Melastoma reflexa Reinw. Ined.*, Blume in Flora XIV (1831) p. 521 [nomen].

Mostly epiphytic shrub, 1—2 m high. Adult branches glabrous, often verruculose or striate; the younger ones brown furfuraceous. Leaves 6.5—16 cm × 3—8 cm, on the underside punctate, 3- or 5-nerved or 5-plinerved, the midnerve often thickened near the base, cross-venules distinct or hardly conspicuous. Petiole 8—20 mm long, terete, often brown furfuraceous. Flowers either many, in terminal or axillary up to 11 cm long panicles or, rarely, in triads or solitary; peduncle 2—3 cm long, terete, brown furfuraceous; ramifications of the first order opposite. Bracts linear, at most 1 mm long. Pedicel 2 mm long, furfuraceous. Calyx tube 2—2.5 mm long; teeth up to 1 mm long. Petals 2—3.5 mm × 1.5 mm, entire or laterally provided with a single tooth, red, orange (Kuhl and van Hasselt), yellow-white with an orange spot in the centre (Rutten) or yellow (Iboet). Filaments 1—1.5 mm long; anthers oblong, 1—1.5 mm long, at the base obtuse, subrostrate. Style 4—6 mm long, annulate at the base. Berry 4—6 mm long; stalk 4 mm long. Seeds 0.5—0.75 mm long.

Observ: I fully agree with Naudin, that P. pulverulenta (Jack) Bl. and P. reflexa (Bl.) Bl. are identic. The presence or absence of a single tooth at the margin of the petals is in this case of no specific value (see King in Journ. As. Soc. Bengal LXIX part II [1900] p. 66).

Distribution.

SUMATRA. Djambi: Batang Soengai, 200 m (Posthumus nr. 958 [BZ], L, fl. Sept.; v.n. asĕm loengko). Palembang: G. Pakiwang, 550 m (van Steenis nr. 3467 [BZ], L, fl. Oct.); Serilo, 600 m (de Voogd nr. 1519 [BZ], L, fl. Jan.). Benkoelen: G. Seminoeng, lake Ranau, 1600—1700 m (Forbes nr. 212 [BZ], L). Locality unknown: (Jack in l.c.); (Korthals s.n. L).

P. SIMEULOEË: (Achmad nr. 356 [BZ], L, fr. Apr.; v.n. sikoembang).

MENTAWAI ISLANDS. P. Siberoet: near Siberoet (Iboet nr. 305 [BZ], L, fl. Sept.).

RIOUW ARCHIPELAGO. P. Bintang: Ampelai, 5 m. (Bünnemeyer nr. 6210 [BZ], L, fl. June).

JAVA. Bantam: Leuwi boengoer (Kuhl and van Hasselt. s.n. L, fl. Sept.); Lontar (Reinwardt s.n. L). Batavia: Tjiampea (Backer nr. 21038 [BZ], L); along the Tjianten, S. of Leuwiliang, 600 m (idem nr. 25947 [BZ], L, fl. Sept.); Pasir Tjarèwed, Bolang (Bakhuizen van den Brink fil. nr. 3284 (3286), U, fr. June); Buitenzorg (Boerlage s.n. L, fl. Febr.); G. Salak, 550 m (Schiffner nr. 2294, L, fl. Dec.); G. Pantjar (Blume s.n. L, type of *P. reflexa* [*Bl.*] *Bl.*, fl. July; v.n. harèndong tapok). Preanger Regencies: Tjiandjoer (Horsfield s.n. U, type of *P. pulverulenta* (*Jack*) *Bl.* var. *grandifolia Miq.*). Locality unknown: (Blume s.n. L); (Zollinger nr. 1591, L); (collector unknown, L).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: (Korthals s.n. L, type of *P. reflexa* (*Bl.*) *Bl.* var. *squamulata Bl.*, sub *P. squamulata Korth.*). Samarinda: Bay of Balikpapan, in mangroves (Rutten nr. 51, U, fl. Apr.); Sg. Wair (idem nr. 155, U, fl. June). Boeloengan-Beraoe: Sg. Njerakat, near Boeloeng (Rutten nr. 477, U, fl. Apr.).

NATOENA ISLANDS. P. Boengoeran: G. Ranai, 200 m (van Steenis nr. 1339 [BZ], L, fr. Apr.).

MOLUCCAS. Soela Islands. P. Taliaboe: Tg. Kaboeta (Atjè nr. 360 [BZ], L); idem: Waë pangoe (idem nr. 86 [BZ], L); idem: Tg. Koebe (idem nr. 120 [BZ], L). Ceram: Haroemesen, 0 m (Kornassi nr. 821 [BZ], L, U, fl. Jan.). Ambon: (Zippel s.n. L).

NEW GUINEA. Northern Part: Casuaris nest Mts., Prauwenbivak, 250 m (Lam nr. 1221 [BZ], L, fl. Sept.); Mamberamo river (Feuilletau de Bruyn nr. 143 [BZ], L). Southern Part: Merauke, in mangroves (Koch nr. 88, L). P. Biak: (Feuilletau de Bruyn nr. 367 [BZ], L); idem (idem nr. 400 [BZ], L, fl. Sept.).

FURTHER DISTRIBUTION: Malay Peninsula, Singapore and the Philippine Islands.

Species unknown to me, not mentioned in the key.

1. **P. hexamera Baker f.** in Gibbs, Contr. Arfak Mts (1917) p. 158. — New Guinea.
2. **P. latifolia Schwartz** in Mitt. Inst. Bot. Hamburg Bd. VII Heft III (1931) p. 252. — Borneo.
3. **P. pauciflora Becc.** in Malesia II (1884) p. 241, tab. LVIII, fig. 12—13. — Sumatra.
4. **P. pulverulenta (Jack) Bl.** var. *β* **grandiflora T. et B.**, Cat. Plant. Hort. Bot. Bog. (1866) p. 242 [nomen]. — origin unknown
5. **P. spec.**; Docters van Leeuwen in Bull. Jard. Bot. Buitenzorg sér. III Suppl. Vol. I (1930) p. 237. — Java.

14. **Backeria Bakh. f.** genus novum.

Anplectrum A. Gray (pr. p.; typo excl.); Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 84; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 518; Cogniaux in De Candolle, Monogr. Phanerog. VII

(1891) p. 563; *Aplectrum Bl.* in Flora XIV (1831) p. 502 and in Bijdr. Nat. Wet. VI (1831) p. 243; idem in Mus. Bot. Lugd.-Bat. I nr. 3 (1849) p. 37 [pr. p.]; Miquel, Flor. Ned. Ind. I (1855) p. 553; *Diplectria Reich.* (pr. p.; typo excl.); Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 179; *Melastoma L.* (pr. p.; typo excl.); Jack in Trans. Linn. Soc. XIV (1825) p. 1; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1067; De Candolle, Prodr. III (1828) p. 144.

Frutices scandentes, ramis teretiusculis glabris vel hirsutis, ad nodos annulato-incrassatis. Folia opposita aequilateralia ovato-oblonga vel ovato-lanceolata, basi rotundata vel subcordata, apice acuminata integra utrinque glabra 3- vel 5-nervia petiolata. Inflorescentia terminalis paniculiformis pauciflora vel submultiflora, in parte inferiori foliosa; axis principalis quadrangularis glaber vel furfuraceus; rami oppositi; ramuli trichotomi. Flores hermaphroditi tetrameri pedicellati. Bracteae lineares vel ovato-oblongae furfuraceae non mox deciduae. Calycis tubus urceolatus vel campanulatus glaber vel furfuraceus, limbo subtruncato vel 4-lobato. Petala 4 ovata longe acuminata glabra avenia alba. Stamina 8 valde inaequalia et dimorpha, filamentis brevibus; maiora antheris ellipticis basi abrupte angustatis apice obtusis crassis 1-poris, connectivo basi non producto, dorso inappendiculato, in parte ventrali appendiculato, inter thecas quadrangulariter incrassato; stamina minora antheris lanceolatis vel breviter triangularibus rostratis, connectivo non producto, dorso in appendices quadrangulares vel triangulares planos exeunte, in parte ventrali biappendiculato. Ovarium pro dimidio calycis tubum totum adnatum, loculi 8 in parte superiori tantum quorum 4 longiores et 4 minores; ovarium ipse 4-loculare dimidio minus quam calycis tubus, in parte apicali tumidum glabrum, stylus columnaris glaber. Bacca urceolata vel ovoidea, limbo calycis persistente munita. Semina anguste triangularia haud rostrata minuta numerosa.

Observ: I have named this genus in honour of Dr. C. A. Backer, formerly Botanist in charge of the Java collections, Buitenzorg, at present Heemstede (Holland).

Distribution: Up to now there are known 2 species with one variety, occurring in Asia: Malay Peninsula, Siam and Malay Archipelago.

Key to the species.

1*a*. Calyx tube obovate. Leaves subcordate at the base, 9—15 cm × 3—7 cm. Petiole callous, covered with rather long bristles.
1. **B. stipularis (Bl.) Bakh. f.**

b. Calyx tube campanulate or urceolate. Leaves rounded at the base, 5—13 cm × 2—4.5 cm. Petiole not callous, subpilose or covered with very small bristles.
2. B. viminalis (Jack) Bakh. f.

α. Berry widened at the top, provided with 4 short teeth.
2*a*. B. viminalis (Jack) Bakh. f. s.s.

β. Berry contracted at the top; teeth absent.
2*b* B. viminalis (Jack) Bakh. f. var. rostrata (Bl.) Bakh. f.

1. **Backeria stipularis (Bl.) Bakh. f.** comb. nov. *Anplectrum stipulare (Bl.) Triana* in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 465; *Aplectrum stipulare (Bl.) Bl.* in Flora XIV (1831) p. 503 and in Bijdr. Nat. Wet. VI (1831) p. 244; Naudin in l.c. XV (1851) p. 305; Miquel, l.c. (1855) p. 555; *Diplectria stipularis (Bl.) O.K.*, Revis. Gen. Plant. (1891) p. 246; *Dissochaeta stipularis Back.*, Manuscr. Fl. Java, Melast. (1941) p 21; *Melastoma stipulare Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1073.

Climber. Branches terete, adult ones glabrous, young ones covered with 1—2 mm long, rigid, dark hairs, with strongly thickened nodes; the leaf axils provided with a cushion of very small, brown hairs mixed with scattered bristles. ("stipulaceous"). Leaves oblong or ovate-lanceolate, 9—15 cm × 3—7 cm, at the base subcordate, obtusely acuminate; the adult ones on both sides glabrous, the young ones on the underside sparsely brown furfuraceous; on the upperside, when dry, dark, on the underside yellowish-brown, 5-nerved; cross-venules distinct and reticulate. Petiole 3—10 mm long, densely hirsute, mixed with brown stellate hairs, which later on disappear. Inflorescence about 10 cm long; main axis densely covered with small, brown hairs. Mature flowers unknown to me. Bracts linear, 5—8 mm × 1 mm, on both sides densely covered with small, brown hairs, mixed with scattered, dark bristles. Pedicel 1—2 mm long. Calyx tube obovate, 4 mm long, covered with small, brown, stellate hairs; limb consisting of triangular, small teeth. Petals (in bud) broadly ovate. The larger stamens with long filaments and lanceolate, rostrate anthers, whose connective is dorsally provided with a quadrangular appendage and ventrally with a subsagittate one. Top part of the ovary provided with 4 small teeth; style filiform, 3 mm long, glabrous. Young berry subglobose at the base, widened at the top, 4—5 mm long, glabrous, provided with the persistent calyx limb; stalk 5—7 mm long.

Observ: Sterile specimens resemble Diplectria cyanocarpa (Bl.) O.K.

Distribution: endemic.

JAVA. Bantam: G. Seriboe. (Blume s.n. L, typus, sub *Aplectrum stipulare Bl.*).

2. **Backeria viminalis (Jack) Bakh. f.** comb. nov. *Anplectrum pallens (Bl.) Triana* in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 564; *Anplectrum viminale (Jack) Triana* in l.c. (1871) p. 84 and tab. VII, fig. 90a; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 564; Koorders, Exkurs. Flora Java II (1912) p. 694; *Aplectrum pallens Bl.* in Mus. Bot. Lugd.-Bat. I nr. 3 (1849) p. 38; Naudin in l.c. XV (1851) p. 304; *Aplectrum pallens Bl.* var. *β lata Miq.*, l.c. (1855) p. 554; *Aplectrum viminale (Jack) Bl.* in Flora XIV (1831) p. 502 and in Bijdr. Nat. Wet. VI (1831) p. 244; Miquel, l.c. (1855) p. 553; *Diplectria viminalis (Jack) O.K.*, Revis. Gen. Plant. (1891) p. 246; *Melastoma viminalis Jack* in l.c. (1825) p. 16; De Candolle, l.c. (1828) p. 150; Jack in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 327.

Climber. Branches terete, glabrous. Leaves oblong or ovate-lanceolate, 9—10.5 cm × 2.5—4 cm, at the base subcordate, obtusely acuminate, subcoriaceous, glabrous, 5-nerved, subreticulate. Petiole 4—5 mm long, sparsely setose and furfuraceous. Inflorescence 20 cm long, mostly few-flowered; main axis quadrangular, glabrous. Bracts lanceolate, 7 mm × 2 mm, furfuraceous. Pedicel 3—3.5 mm long. Calyx tube campanulate, 4—5 mm long, subfurfuraceous; limb consisting of 4 broadly triangular teeth. Flowers only seen in the bud. Petals ovate, 2.5 mm long, long acuminate, glabrous, veinless, white. Larger stamens with short filaments and 2 mm long anthers; the smaller ones with long filaments and broadly triangular, long rostrate anthers, its connective dorsally ending in a triangular appendage and ventrally in two short appendages. Top part of the ovary without teeth; style 2.5 mm long. Berry widened at the top, 5 mm long, provided with 4 short teeth; stalk 2—3 mm long. Seeds 1 mm long.

Observ: The species Anplectrum confine (Bl.) Triana, A. rostratum (Bl.) Triana and A. viminale (Jack) Triana are not well-defined forms. The differences are principally restricted to the kinds of hairs; many transitions have been found. It is for that reason that I consider all those forms as one polymorphic species: Backeria viminalis (Jack) Bakh. f.

Distribution.

SUMATRA. West Coast: G. Malintang (Korthals s.n. L, sub Aplectrum pallens Bl. var. *β*.). Djambi: Soengai Lesing, 30 m (Posthumus nr. 987 [BZ], L, fr. Oct. ; v.n. kadoedoe besar). Exact locality unknown: „Soengai boeloe". (Beccari nr. 913 and 934, L). Locality unknown: (Jack in l.c.); (Korthals s.n. L, type of *Aplectrum pallens Bl.*).

BILLITON: Manggai. (Teysmann s.n. [BZ], L; v.n. karamoenting akar).
FURTHER DISTRIBUTION: ? Siam.

var. **rostrata (Bl.) Bakh. f.** comb. nov.

Anplectrum confine (*Bl.*) *Triana* in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1881) p. 565; *Anplectrum rostratum* (*Bl.*) *Triana* in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 564; *Aplectrum confine Bl.* in Mus. Bot. Lugd.-Bat. I. nr. 3 (1849) p. 38; Naudin in l.c. XV (1851) p. 304; *Aplectrum pallens Bl.* var. *confinis* (Bl.) Miq., l.c. (1855) p. 554; *Aplectrum rostratum* (*Bl.*) *Bl.* in Flora XIV (1831) p. 502 and in Bijdr. Nat. Wet. VI (1831) p. 244; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Miquel, l.c. (1855) p. 554; Koorders, Exkurs. Flora Java II (1912) p. 694; *Diplectria confinis* (*Bl.*) *O.K.*, Revis. Gen. Plant. (1891) p. 246; *Diplectria rostrata* (*Bl.*) *O.K.*, Revis. Gen. Plant. (1891) p. 246; *Melastoma rostratum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1074; De Candolle, l.c. (1828) p. 150.

Climber. Branches subterete, the young ones compressed. Leaves 5—13 cm × 2—4.5 cm, at the base subtruncate, submembranceous, 3- or 5-nerved. Petiole 5—7 mm long, glabrous, minutely setose or with a cushion of minute, brown hairs. Inflorescence up to 15 cm long; main axis glabrous. Bracts ovate-oblong or elliptic-oblong, 5—8 mm × 2—3.5 mm, submembranaceous, covered with minute, brown stellate hairs, 3-nerved, cross-venules subreticulate. Flowers only seen before anthesis, just the same as those of the type species. Calyx urceolate, 3 mm long. Berry contracted at the top, without teeth, 4 mm long, pale-yellow (Iboet); stalk 2—3 mm long. Seeds 1—1.5 mm long.

Distribution.

SUMATRA. Locality unknown: (Korthals s.n. L, type of *Aplectrum confine Bl.*).
MENTAWAI ISLANDS. P. Siberoet: near Siberoet. (Iboet nr. 276 [BZ], L, fl. Sept.).
JAVA. Bantam: G. Seriboe (Kuhl und van Hasselt s.n. L, typus, sub *Melastoma rostratum Bl.*) . Batavia: Pasir Sidjahè, W. of Leuwiliang, 600 m (Bakhuizen van den Brink nr. 6401 [BZ], L, U, fr. June; v.n. harèndong); G. Tjipoetih, 550 m (idem nr. 5229 [BZ], L, fr. June); idem (Bakhuizen van den Brink fil. nr. 853, U, fl. June). Locality unknown: (Blume s.n., L, sub Aplectrum viminale [Jack] Bl.).
BORNEO. SOUTHERN AND EASTERN PART. Kapoeas-Barito: Boentok (Winkler nr. 3272, L, fl. Aug.).
FURTHER DISTRIBUTION: Malay Peninsula.

15. **Neodissochaeta Bakh. f.** genus novum.

Anplectrum A. Gray (pr. p.; typo excl.); Triana in Trans. Linn.

Soc. XXVIII part I (1871) p. 84; *Dissochaeta Bl.* (pr. p.; typo excl.) in Flora XIV (1831) p. 493 and in Bijdr. Nat. Wet. VI (1831) p. 234; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 69; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 504; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 554; *Melastoma L.* (pr. p.; typo excl.); Jack in Trans. Linn. Soc. XIV (1825) p. 1; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1067; De Candolle, Prodr. III (1828) p. 144.

Frutices scandentes, ramis teretiusculis vel quadrangularibus furfuraceis vel glabris annulato-incrassatis. Folia opposita aequilateralia ovato-oblonga vel ovato-lanceolata, basi rotundata vel subcordata, apice acuminata integra supra glabra subtus stellato-furfuracea petiolata. Inflorescentia paniculata terminalis multiflora gracilis, in parte inferiori foliosa; axis principalis quadrangularis glaber, furfuraceus vel pubescens, ad nodos incrassatus; rami oppositi; ramuli trichotomi, floribus terminalibus ramulorum longe pedicellatis. Flores hermaphroditi tetrameri pedicellati; pedicello florum ramulorum ultimorum incrassato. Bracteae et bracteolae lineares parvae saepe deciduae. Calycis tubus campanulatus teres vel subquadrangularis stellato-furfuraceus vel glaber, in parte apicali subconstrictus; limbo truncato vel 4-undulato rarissime 4-lobato. Petala oblonga vel ovato-oblonga obtusa vel acutiuscula avenia rosea vel alba. Stamina 4 vel 8, aut valde inaequalia et diplostemona aut aequalia et isostemona, antheris aut 4 aequalibus et isomorphis aut 8 inaequalibus et dimorphis; antherae maiores ovato-lanceolatae clavatae vel falcatae, apice obtusae 1-porae rarissime subbiporae, connectivo interdum basi breviter producto, dorso in appendices triangulares planos exeunte, in parte ventrali inappendiculato vel in appendices duos lineares exeunte. Ovarium interdum plus quam dimidium calycis tubum totum adnatum, in parte superiori 4 vel 8 loculi quorum saepe 4 maiores descendentes plus quam $^1/_4$ ovarii et 4 minores in quarto supremo tantum; ovarium ipse 4-loculare, in parte apicali planum vel subtumidum glabrum vel furfuraceum; stylus filiformis apice saepe incurvatus teres laevis vel sulcatus glaber vel furfuraceus. Bacca globosa glabra vel furfuracea saepe calycis limbo persistente minuta. Semina cuneata rostrata recta minuta numerosa.

Distribution: To this new-founded genus belong at least the 10 species quoted below, all Asiatic: Malay Peninsula, Siam and Malay Archipelago.

Key to the species.

1*a*. Connective at the base distinctly produced. Anthers clavate or falcate. 2

b. Connective at the base not produced. Anthers narrowly triangular, ovate, ovate-lanceolate or rod-shaped 6
2*a.* Anthers falcate. Ovary for a little more than the half way fully concrescent with the calyx tube; in the upper half first 4 large exterovarial chambers and than in the uppermost $^1/_4$, moreover 4 small ones. Stamens 8. . . . . 1. **N. fusca (Bl.) Bakh. f.**
b. Anthers clavate. Ovary either almost fully concrescent with the calyx tube and stamens 8 or ovary up to a little above the middle concrescent with the calyx tube and stamens 4 3
3*a.* Stamens 8 4
b. Stamens 4 5
4*a.* Leaves on the underside glabrous. Calyx limb truncate. 2. **N. gracilis (Jack) Bakh. f.**
b. Leaves on the underside brown puberulous Calyx limb consisting of short, acute teeth. 3. **N. puberula Bakh. f.**
5*a.* Connective ventrally ending in two long, rod-shaped appendages. Calyx limb consisting of 4 undulate lobes. Anthers opening with 2 terminal pores. . . . 4. **N. biligulata (Korth.) Bakh. f.**
b. Connective ventrally ending in two linear appendages. Calyx limb consisting of 4 distinct, short lobes. Anthers opening with a single terminal pore. . . 5. **N. celebica (Bl.) Bakh. f.**
6*a.* Bracts linear, small 7
b. Bracts ovate or ovate-oblong, large. 6. **N. magnibracteata Bakh. f.**
7*a.* Calyx limb consisting of 4 distinct lobes; lobes 2—2.5 mm long. Anthers rod-shaped. . . . . 7. **N. Lamiana Bakh. f.**
b. Calyx limb consisting of 4 undulate, 0.5 mm long lobes. Anthers ovate or ovate-lanceolate 8
8*a.* Connective ventrally almost inappendiculate. Leaves on the underside covered with small, ferrugineous, stellate hairs. 8. **N. reticulata (Bl.) Bakh. f.**
b. Connective ventrally ending in two linear appendages. Leaves on the underside subglabrous or furfuraceous 9
9*a.* Calyx limb undulate. Petals subobtuse. Anthers ovate-lanceolate. 9. **N. vacillans (Bl.) Bakh. f.**
b. Calyx limb consisting of distinct, 0.5 mm long lobes. Petals apiculate. Anthers lanceolate, narrowed at the base. 10. **N. compressa Bakh. f.**

1. **Neodissochaeta fusca (Bl.) Bakh. f.** comb. nov. *Dissochaeta fusca Bl.* in Flora XIV (1831) p. 497 and in Bijdr. Nat. Wet. VI (1831) p. 238; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Naudin in l.c. XV (1851) p. 74; Triana in l.c. (1871) p. 84; *Disso-*

chaeta fusca Bl. var. *ferruginea Bl.* (pr. p.; typo excl.) in Flora XIV (1831) p. 497 and in Bijdr. Nat. Wet. VI (1831) p. 239; *Dissochaeta fusca Bl.* var. *obtuso-acuminata Bl.* in Flora XIV (1831) p. 497 and in Bijdr. Nat. Wet. VI (1831) p. 239; *Dissochaeta inappendiculata Bl.* var. *fusca (Bl.) Miq.*, l.c. (1855) p. 525; *Melastoma vacillans Bl.* var. *C*; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1074; De Candolle, l.c. (1828) p. 150.

Climber. Branches subquadrangular, covered with minute, brown, stellate hairs. Leaves oblong or lanceolate, 9—14 cm × 3.5—5 cm, at the base rounded or subtruncate, at the top obtusely acuminate, on the upperside glabrous, on the underside sparsely stellate-furfuraceous, 5-nerved; cross-venules distinct on the underside. Petiole 7—14 mm long, sparsely furfuraceous. Inflorescence 16—32 cm long; main axis quadrangular, furfuraceous. Bracts linear, 5 mm × 0.5 mm, furfuraceous. Bracteoles linear, 2—3 mm × 0.3 mm. Pedicel 4—5 mm long. Calyx tube campanulate, 3—4 mm long, subterete, furfuraceous; limb truncate, nearly entire. Petals ovate-oblong, 3.5—4 mm × 2 mm. Stamens 8; larger ones with 4—4.5 mm long filaments and with falcate, 4 mm long, basally decurrent, apically obtuse anthers, opening with a single pore, whose connective is 1—1.5 mm long, dorsally ending in a 1 mm long spur, ventrally ending in two linear 3 mm long, appendages; smaller ones with 2 mm long filaments and with linear, 1.5 mm long anthers, whose connective is not produced, dorsally ending in a spur, ventrally ending in two linear, 1.5 mm long appendages. Ovary with 8 exterovarial chambers, 4 of which descending to about half way the ovary and the 4 others only restricted to the uppermost $^1/_4$; top part of the ovary swollen, sparsely furfuraceous; style 7 mm long, glabrous. Berry subglobose, 7 mm × 6 mm, rugose, provided with the persistent calyx limb; stalk 6—9 mm long.

Observ: Resembles N. gracilis (Jack) Bakh. f.

Distribution: endemic.

JAVA. Bantam: exact locality unknown. (van Hasselt s.n. L, type of *Dissochaeta fusca Bl.* var. *ferruginea Bl.*). Batavia: Tjiampea (Blume s.n. L, type of *Dissochaeta fusca Bl.* var. *obtuso-acuminata Bl.*). Locality unknown (prob. West Java): (Blume s.n. L, typus, sub *Melastoma vacillans Bl.* var. *C.*); (de Vriese s.n. L).

2. **Neodissochaeta gracilis (Jack) Bakh. f.** comb. nov. *Dissochaeta gracilis (Jack) Bl.* in Flora XIV (1831) p. 498 and in Bijdr. Nat. Wet. VI (1831) p. 239; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 237; Naudin in l.c. XV (1851) p. 75; Miquel, l.c. (1855) p. 526; idem, Flor. Ned. Ind. Suppl. I Sumatra

(1860) p. 121; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 83; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 559; Koorders, Exkurs. Flora Java II (1912) p. 695; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Ridley in Journ. Fed. Mal. States Mus. VII (1917) p. 35; Hochreutiner in Candollea II (1925) p. 471; Bartlett in Papers Michigan Acad. Sc. and so on VI (1926) p. 32; Backer, Manuscr. Fl. Java, Melast (1941) p. 21; *Melastoma alba Reinw. ined.*; Blume, Cat. Buitenzorg (1823) p. 70 [nomen]; idem in Flora XIV (1831) p. 498. [nomen]; *Melastoma gracilis Jack* in l.c. (1825) p. 14; De Candolle, l.c. (1828) p. 149; idem in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 324; *Melastoma vacillans Bl.* var. *d. pallens Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1074; De Candolle, l.c. (1828) p. 150.

Climber. Branches terete, glabrous. Leaves oblong, 7—14 cm × 3—6.5 cm, at the base rounded, acuminate, glabrous, 3- or 5-nerved; cross-venules distinct. Petiole 6—15 mm long, glabrous. Inflorescence 10—30 cm long; main axis subquadrangular, glabrous. Bracts obovate-lanceolate, 3—6 mm × 1—1.5 mm, obtuse, furfuraceous, slightly veined. Bracteoles minute. Pedicel 1—4 mm long. Calyx tube campanulate, 2—3 mm long, terete, glabrous or subfurfuraceous; limb subtruncate or consisting of undulate lobes. Petals ovate-oblong, 3 mm × 1.5—2 mm, acute, glabrous, veinless, white. Stamens 8; larger ones with 2.5—3 mm long filaments and with clavate, 2—2.5 mm long, basally decurrent, apically obtuse anthers, opening with a single terminal pore, whose connective is 1 mm long, dorsally ending in a narrowly triangular, 1 mm long appendage, ventrally ending in two linear, 2 mm long appendages; smaller ones with 3 mm long filaments and with linear, 1—1.5 mm long anthers, whose connective is hardly produced, dorsally ending in a short spur, ventrally ending in two linear, 1.5—2 mm appendages. Ovary with 8 very shallow exterovarial chambers, consisting of 4 larger and 4 smaller ones; top part of the ovary swollen, glabrous; style 4—5 mm long, glabrous. Berry globose, 4 mm long, glabrous, scarcely provided with the rests of the calyx limb, black-purple when mature; stalk 5 mm long. Seeds 0.5 mm long.

Observ: Resembles N. vacillans (Bl.) Bakh. f. and N. fusca (Bl.) Bakh. f.; differs by the characters of its anthers. Sterile specimens not always easily recognizable, differing from N. vacillans (Bl.) Bakh. f. by its fully glabrous branches and leaves, while N. fusca (Bl.) Bakh. f. has more coriaceous leaves and a stronger pronounced nervation.

Distribution.

SUMATRA. West Coast: Brani, Agam, 850 m (Bünnemeyer nr. 3199 [BZ], L, fl. June); S. Koeriman, Lkoto, 950 m (idem nr. 3467 [BZ], L, fl. June); Boekit Tinggi near Mangani, 1100 m (idem nr. 3015 [BZ], L, fr. June). East Coast: Silo Maradja (Bartlett and la Rue nr. 435 = Bidin nr. 105, L, fl. Nov.; v.n. sipitoe aroes); exact locality unknown: (Yates nr. 1271, L). Benkoelen: G. Raja, 1300 m (van Steenis nr. 3538 [BZ], L, fl. Nov.). Lampong Districts: Kota Agoeng, G. Oeloe oeloe (Cramer s.n. [BZ], L, fr. Aug.). Locality unknown: (Jack in l.c.); (? Korthals s.n. L).

JAVA. Bantam: G. Poeloesari. (Kuhl and van Hasselt s.n. L); Sadjira, near Lebak (idem s.n. L, fl. Aug.); G. Malang near G. Halimoen, 600 m (Bakhuizen van den Brink nr. 3156 [BZ], L, U, fl. Jan.). Batavia: Buitenzorg [Tjikeumeuh] (Boerlage s.n. L); Kampoeng baroe near Buitenzorg (idem s.n. L, fl. Nov.); Moeara Tjiomas near Buitenzorg (idem s.n. L, fl. Sept.); Tjiomas near Buitenzorg. (Went s.n. L, fr. May); G. Salak (Kuhl and van Hasselt s.n. L; v.n. katjambang areuj.); Poeraseda, above Leuwiliang, 450 m (Bakhuizen van den Brink nr. 7641 [BZ], L, U, fl. Dec.). Preanger Regencies: G. Tjisalak (G. Tjisalak nr. 20, L); idem, 500 m (Bakhuizen van den Brink nr. 2731 [BZ], L, fl. Oct.); Tjiastana, above Paroeng koeda, 500 m (Bakhuizen van den Brink fil. nr. 129 [BZ], U, fl. Jan.); Tjidadap, 1000 m (Bakhuizen van den Brink nr. 3839 [BZ], L, fl. June); idem (idem nr. 3922 [BZ], L, fl. May); G. Kendeng (Junghuhn s.n. L); G. Tjiboerajoet (unknown collector nr. 54, L; v.n. harèndong areuj.). Semarang: G. Prahoe or G. Oengarang. (Junghuhn s.n. U; v.n. harèndong [„harundang"]). Exact locality unknown: „Tjihanjawar" (Kuhl and van Hasselt s.n. L, sub Dissochaeta velutina Bl.). Locality unknown: (Blume s.n. L, type of *Melastoma vacillans Bl.* var. *d. pallens Bl.*); (de Vriese s.n. L); (Reinwardt s.n. L); (Kuhl and van Hasselt s.n. L); (Ploem s.n. L); (collector unknown, L).

BORNEO. SOUTHERN AND EASTERN PART. Kapoeas-Barito: Soengei Tewe (Korthals s.n. L). Samarinda: Soengei Boengaloen, 10—100 m (Rutten nr. 547, U, fl. Nov.). SARAWAK AND BRITISH NORTH BORNEO: on several places.

FURTHER DISTRIBUTION: Malay Peninsula, Penang, Singapore, Siam and the Philippine Islands.

3. **Neodissochaeta puberula Bakh. f.** spec. nov.

Frutex scandens. Rami subquadrangulares sparse furfuracei. Folia oblonga vel lanceolata 7.5—10 cm × 2.5—3.5 cm, basi rotundata apice angustata acuto-acuminata, subtus fusco-stellato-pubescentia, 3-nervia (cum 2 nervis marginalibus), venulis transversis supra haud conspicuis, subtus distinctis. Petiolus 5—7 mm longus fusco-stellato-pubescens. Inflorescentia ad 20 cm longa; axis principalis quadrangularis fusco-furfuraceus. Bracteolae lineares usque ad 3 mm longae furfuraceae. Pedicellus 4 mm longus. Calycis tubus 2 mm longus dense puberulus; dentes minuti acuti separati sinubus latis. Petala ovoidea 2 m × 1.5 mm obtusa alba. Stamina 8; maiora filamentis 3 mm longis, antheris cylindricis 2 mm longis basi cuneatis apice obtuso-truncatis 1-poris, connectivo 1 mm longo, in parte ventrali in appendices duos lineares 1—1.5 mm longos exeunte; minora

filamentis 2 mm longis, antheris 1.5 mm longis, connectivo basi non producto, dorso in appendices duos lineares 1 mm longos exeunte. Ovarium pro $^3/_4$ calycis tubum totum adnatum; loculi 8 in quarto supremo tantum; stylus 4 mm longus glaber. Bacca immatura ovoidea; pedicellus 8 mm longus.

Observ: Allied to N. gracilis (Bl.) Bakh. f.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Samarinda: Soengai Wair, in ladangs (Rutten nr. 86, U, typus).

4. **Neodissochaeta biligulata (Korth.) Bakh. f.** comb. nov. *Anplectrum biligulatum* (*Korth.*) *Triana* in l.c. (1871) p. 85; *Diplectria biligulata* (*Korth.*) *O.K.*, Revis. Gen. Plant. (1891) p. 246; *Dissochaeta biligulata Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. 240; Blume in Mus. Bot. Lugd.-Bat. I nr. 3 (1849) p. 35; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 529; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 561.

Climber. Branches subterete, especially the young ones brown stellate- furfuraceous. Leaves ovate-oblong, 6.5—10 cm × 2.5—4cm, at the base rounded, obtusely acuminate, on the underside brown stellate-furfuraceous, 5-nerved; cross-venules distinct. Inflorescence 10—16 cm long; main axis quadrangular, densely brown stellate-furfuraceous. Bracts and bracteoles linear, 3—5 mm long, brown furfuraceous. Pedicel 2—3 mm long. Calyx tube 3 mm long, subquadrangular, furfuraceous; limb consisting of 4 undulate lobes. Petals ovate-oblong, 4—5 mm × 2—3 mm, subobtuse, glabrous, veinless, white (Rutten). Stamens 4, with 1.5 mm long filaments and with oblong-lanceolate, 2 mm long, obtuse, red anthers, opening with 2 terminal pores, whose connective is not produced, dorsally ending in a very short, triangular appendage, ventrally ending in two long, broadly rod-shaped, flat, brown appendages, which are grey when dry. Ovary for more than half way fully concrescent with the calyx tube; in the upper part 4 exterovarial chambers; top part of the ovary swollen and glabrous; style 6—7 mm long, glabrous, white. Berry subglobose, 5 mm long, subglabrous, at the top provided with the persistent calyx limb; stalk 3—5 mm long.

Observ: Allied to N. celebica (Bl.) Bakh. f. differing by the characters of its flowers. N. biligulata (Korth.) Bakh. f., has 4 stamens and not 8, as Blume in l.c. stated. Not flowering specimens are not distinguishable from N. celebica (Bl.) Bakh. f.

Distribution: restricted to the localities quoted below.

SUMATRA. Exact locality unknown: „G. Paauw". (Korthals s.n. L, typus). BORNEO. SOUTHERN AND EASTERN PART. Samarinda: Soengai Wair (Rutten nr. 170, U, fl. June).

5. **Neodissochaeta celebica (Bl.) Bakh. f.** comb. nov. *Dissochaeta bancana Miq.*, l.c. (1855) p. 529; idem, Flor. Ned. Ind. Suppl. I, Sumatra (1860) p. 121; Scheffer in Observ. Phytogr. II (1868—1869) p. 43; idem in Bijdr. Flor. Ind. Arch. (1874) p. 74; *Dissochaeta celebica Bl.* in Mus. Bot. Lugd.-Bat. I nr. 3 (1849) p. 36; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 530; Triana in l.c. (1871) p. 83; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 561; Krasser in l.c. (1893) p. 180; *Dissochaeta subviridis* Elmer in Leaflets Philipp. Bot. IV (1911) p. 1193.

Climber. Branches terete, densely but ferrugineously stellate-pubescent, the younger ones compressed. Leaves ovate-oblong, 8—12.5 cm × 3—6.5 cm, at the base subcordate, acuminate, on the underside densely but ferrugineously stellate-pubescent, 5-nerved, cross-venules distinct on the underside. Petiole 8—11 mm long, densely but ferrugineously stellate-pubescent. Inflorescence 16 cm long; main axis quadrangular, densely but ferrugineously stellate-pubescent. Bracts unknown. Pedicel 1.5—2.5 mm long. Calyx tube narrowly campanulate, 3—3.5 mm long, subquadrangular, densely but ferrugineously stellate-pubescent; limb consisting of 4 teeth, which are 0.5—1 mm long. Petals oblong, 2.5—3 mm × 1—1.5 mm, obtuse, glabrous, (according to Rutten) white. Stamens 4, equal, with 3 mm long filaments and with clavate, 2—3 mm long, basally decurrent, apically obtuse anthers, opening by a single terminal pore, whose connective is 1—1.5 mm long, dorsally ending in a triangular appendage, ventrally ending in two 1 mm long, at the top bidentate, delicate appendages. Ovary with 4 exterovarial chambers, not descending to the middle of the ovary; its top part flat and furfuraceous; style 3—4.5 mm long, glabrous. Berry globose, 3—4 mm long, 8-sulcate, subfurfuraceous; stalk 2—3 mm long. Seeds 0.5 mm long.

Observ: Allied to N. biligulata (Korth.) Bakh. f.

Distribution.

SUMATRA. West Coast: Pankalan Koto baharoe, near Pajakoemboeh, 100 m (Jacobson nr. 2426 [BZ], L, fr. Apr.); G. Malintang, 1100 m (Bünnemeyer nr. 3587 [BZ], L, fl. July). Djambi: Bangko, 160 m (Posthumus nr. 687 [BZ], L, fl. Aug.; v.n. seroeboe).

RIOUW ARCHIPELAGO. P. Bintang: 40 m (Bünnemeyer nr. 6114 [BZ], L, fl. June; v.n. akar kemoenting).

BANKA: Minoembing. (Teysmann s.n. U, type of *Dissochaeta bancana Miq.*; v.n. kemoenting akar.).

BORNEO. SOUTHERN AND EASTERN PART. Exact locality un-

known: Hajoep. (Winkler nr. 2627, L, fl. June). Samarinda: Sei. Boengaloen, 10—100 m (Rutten nr. 580, U, fl. Nov.).

CELEBES. Manado: G. Maawa, near Tomohon. (Forsten nr. 305, L, typus, sub *Dissochaeta celebica Bl.*, fl. Febr.). Gvt. Celebes and dependencies: G. Papandangan. (Rachmat nr. 397, [BZ;, L, fl. Aug.).

FURTHER DISTRIBUTION: Malay Peninsula, Perak, Penang, Singapore, Siam and the Philippine Islands.

6. **Neodissochaeta magnibracteata Bakh. f.** spec. nov.

Frutex scandens. Rami teretiusculi vel quadrangulares glabri, ad nodos valde incrassati. Folia ovato-cordata vel cordato-oblonga 7—10 cm × 4.5—6 cm acuta utrinque glabra supra fusca nitida 5-nervia venulis transversis distinctis. Petiolus 8 mm longus glaber. Inflorescentia fere 30 cm longa; axis principalis compresso-quadrangularis glaber, ramis 7-floris subfurfuraceis. Bracteae ovatae vel ovato-oblongae 14—16 mm × 11—12 mm breviter acuminatae submembranaceae glabrae 5-nerviae. Pedicellus 2—4 mm longus. Calycis tubus 4—6 mm longus teres supra medium subconstrictus deinde dilatatus, limbo truncato. Flores ante anthesin solum vidi. Petala ovato-oblonga 4 mm × 2.5 mm. Stamina 8 subaequalia, filamentis 2 mm longis, antheris anguste triangularibus 3—4 mm longis obtusis 1-poris, connectivo non producto, dorso in appendicem triangularem exeunte, in parte ventrali in appendices duos lineares antheras aequales exeunte. Ovarium calycis tubum septis 4 adnatum; loculi usque ad medium eius non descendentes; ovarium ipse dimidio minus quam calycis tubus, in parte apicali glabrum subcristatum. Bacca immatura apice dilatata 6 mm longa, in parte superiore in tubum brevem elongata; pedicellus 8—9 mm longus.

Observ: Allied to Dissochaeta Beccariana Cogn. from British Borneo, differing a.o. by its fully glabrous bracts.

Distribution: endemic.

BORNEO. WESTERN PART. Exact locality unknown: Soengai Kenepai (Hallier nr. 2013, L, typus, dupl. in [BZ].

7. **Neodissochaeta Lamiana Bakh. f.** spec. nov. *Dissochaeta Schumannii Cogn.*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 114; idem in Nova Guinea XIV livr. II (1927) p. 202.

Frutex scandens. Rami teretiusculi vel quadrangulares cinerei stellato-furfuracei. Folia ovato-oblonga 9—11.5 cm × 4—5.5 cm basi subcordata acutissima vel acuminata subtus cinerea stellato-furfuracea 5- vel 7-nervia, venulis transversis distinctis. Petiolus 7—10 mm longus cinereus stellato-furfuraceus. Inflorescentia 20—30 cm longa; axis principalis quadrangularis cinereus dense stellato-furfuraceus. Bracteae lanceolatae vel lineares 3—6 mm ×

1—1.5 mm cinereae stellato-furfuraceae. Pedicellus usque ad 1 mm longus. Calycis tubus 2—3 mm longus teretiusculus cinereus dense stellato-furfuraceus, limbo 4 lobato lobis anguste triangularibus 2—2.5 mm × 1—1.5 mm. Stamina 4, filamentis 3 mm longis, antheris longe rectangularibus 2—2.5 mm longis basi apiceque cuneatis 1-poris, connectivo basi non producto dorso in calcari 0.5 mm longo exeunte, in parte ventrali in appendices duos lineares 1 mm longos exeunte. Ovarium pro $^3/_4$ calycis tubum septis 4 adnatum; loculi non descendentes usque ad medium ovarii; ovarium ipse in parte apicali pubescens; stylus 5—6 mm longus glaber. Bacca globosa 5 mm longa cinereo-farinosa 8-sulcata.

Observ: Allied to Dissochaeta Schumanniana Cogn., differing a.o. by the eglandulose bristles of its calyx tube. I have named this species in honour of Prof. Dr. H. J. Lam, Director of the Rijks Herbarium, Leyden (Holland).

Distribution: endemic.

NEW GUINEA. Northern Part: Prauwenbivak, Mamberamo river, 140 m (Lam nr. 935, L, typus, dupl. in [BZ], U, fl. Aug.).

8. **Neodissochaeta reticulata (Bl.) Bakh. f.** comb. nov. *Anplectrum ligulatum* (*Bl.*) *Triana* in l.c. (1871) p. 567; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 567; Koorders, Exkurs. Flora Java II (1912) p. 693; *Diplectria ligulata* (*Bl.*) *O.K.*, Revis. Gen. Plant. (1891) p. 246; *Dissochaeta cinnamomea Bl.* in Mus. Bot. Lugd.-Bat. I nr. 3 (1849) p. 36; Naudin in l.c. XV (1851) p. 79; *Dissochaeta inappendiculata Bl.* var. *purpurascens Bl.* in Flora XIV (1831) p. 499 and in Bijdr. Nat. Wet. VI (1831) p. 241; *Dissochaeta ligulata Bl.* in Mus Bot. Lugd.-Bat. I nr. 3 (1849) p 35; Miquel, l.c. (1855) p. 523; Backer, Manuscr. Fl. Java, Melast. (1941) p. 22; *Dissochaeta reticulata Bl.* in Flora XIV (1831) p. 499 and in Bijdr. Nat. Wet. VI (1831) p. 241; *Dissochaeta Reinwardtiana* (*Bl.*) *Hochr.* in Candollea II (1925) p. 472.

Climber. Branches subterete, the young ones compressed, densely furfuraceous. Leaves ovate-oblong, 8—17 cm × 4—6 cm, at the base rounded or subcordate, at the top cuspidate, obtusely acuminate, on the underside densely ferrugineous stellate-pubescent, 7-nerved, cross-venules distinct and green or purple. Petiole 15—20 mm long, ferrugineous, densely stellate-pubescent. Inflorescence 15—35 cm long; main axis quadrangular, densely ferrugineously stellate-pubescent. Bracts lanceolate, 3—5 mm long, pubescent. Bracteoles lanceolate, 2 mm long. Pedicel 5—7 mm long. Calyx tube subglobose, widened at the top, 3.5—4 mm long, terete or subquadrangular, densely stellate-furfuraceous; limb consisting of 4 wide, undulate

lobes. Petals oblong, 6—7 mm × 2.5—3 mm, obtuse, veinless, violet. Stamens 8; larger ones with 4 mm long filaments and with ovate-lanceolate, 3—3.5 mm long, acute, yellow anthers, opening by a single terminal pore, whose connective is not produced at the base, dorsally ending in a broadly triangular, 1—2 mm long, flat, (according to Kuhl and van Hasselt) white appendage, ventrally inappendiculate; smaller ones with 2.5 mm long filaments and with ovate-oblong or narrowly triangular, 2 mm long anthers, tapering to the apex, whose connective is not produced, dorsally ending in a 0.5mm long, wide spur, ventrally ending in two linear appendages. Ovary for $^3/_4$ fully concrescent with the calyx tube, in the upper most $^1/_4$ with 8 exterovarial chambers, consisting of 4 larger and 4 smaller ones; top part of the ovary swollen, subfurfuraceous; style 10—12 mm long, at the base sparsely furfuraceous, sulcate. Berry subglobose, 5 mm long, sparsely stellate-furfuraceous, provided with the persistent calyx limb; stalk 5—7 mm long. Seeds 0.5 mm long.

Observ: Allied to N. vacillans (Bl.) Bakh. f., differing a.o. by the different kind of hairs covering the leaves.

Distribution: restricted to the localities quoted below.

MENTAWAI ISLANDS. P. Siberoet: near Siberoet (Iboet nr. 46 [BZ], L, fl. Sept.).

JAVA. Bantam: Lontar. (Reinwardt s.n. L, sub Melastoma denudata Reinw.). Batavia: Pasir Tjarèwèd, Bolang (Bakhuizen van den Brink fil. nr. 3287 (3289) U, fl. June). Preanger Regencies: G. Tjisalak (Bakhuizen van den Brink fil. nr. 2591, U, fl. Apr.); Tjidadap, 900 m (Backer nr. 22891 [BZ], L, fl. Sept.); G. Megamendoeng (Kuhl and van Hasselt s.n. L, type of *Dissochaeta inappendiculata Bl.* var. *purpurascens Bl.*); idem (Junghuhn s.n. L); Tjikopo (Boerlage s.n. L); G. Djaja, 1460 m (Lam nr. 141 [BZ], L, fl. March); G. Kendeng (Junghuhn s.n. L, sub Dissochaeta intermedia Bl.); G. Papandajan (Korthals s.n. L). Exact Locality unknown: „Lumut". (Junghuhn s.n. L, fl. Oct.). Locality unknown: (Blume s.n. L, type of *Dissochaeta cinnamomea Bl.*); (idem s.n. L, sub Dissochaeta inappendiculata Bl.); (idem s.n. L, typus, sub *Dissochaeta reticulata Bl.* and Melastoma fallax Jack; v.n. harèndong areuj); (Reinwardt s.n. L, sub Melastoma mollis Reinw.); (Junghuhn s.n. L, type of *Dissochaeta ligulata Bl.*), (Plant. Jungh. Ined. nr. 210, L); (de Vriese s.n. L); (collector unknown, L; sub Anplectrum glaucum [Jack] Triana).

9. **Neodissochaeta vacillans (Bl.) Bakh. f.** comb. nov. *Dissochaeta fusca Bl.* var. *ferruginea Bl.* (pr. p.; typo excl.) in Flora XIV (1831) p. 497 and in Bijdr. Nat. Wet. VI (1831) p. 239; *Dissochaeta inappendiculata Bl.* in Flora XIV (1831) p. 499 and in Bijdr. Nat. Wet. VI (1831) p. 240; Naudin in l.c. XV (1851) p. 73; Miquel, l.c. (1855) p. 525; Triana in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 560; Koorders, Exkurs. Flora Java II (1912) p. 695; Ridley in Journ. Fed. Mal. States Mus. VII (1917)

p. 35; idem in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 60; Backer, Manuscr. Fl. Java, Melast. (1941) p. 22; *Dissochaeta vacillans (Bl.) Bl.* in Flora XIV (1831) p. 495 and in Bijdr. Nat. Wet. VI (1831) p. 238; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 526; Triana in l.c. (1871) p. 83; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 559; Koorders, Exkurs. Flora Java II (1912) p. 695; Backer, Manuscr. Fl. Java, Melast. (1941) p. 21; *Dissochaeta vacillans (Bl.) Bl.* var. *b*; Blume in Flora XIV (1831) p. 496 and in Bijdr. Nat. Wet. VI (1831) p. 238; Miquel, l.c. (1855) p. 527; *Dissochaeta velutina Bl.* in Flora XIV (1831) p. 497 and in Bijdr. Nat. Wet. VI (1831) p. 239; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 527; Triana in l.c. (1871) p. 83; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 560; Koorders, Exkurs. Flora Java II (1912) p. 695; *Melastoma vacillans Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1074; De Candolle, l.c. (1828) p. 150; *Melastoma vacillans Bl.* var. *a*; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1074; De Candolle, l.c. (1828) p. 150; *Melastoma vacillans Bl.* var. *b*; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1074; De Candolle, l.c. (1828) p. 150.

Climber. Branches subterete or subquadrangular, subglabrous or furfuraceous (not stellately!), the young ones densely brown furfuraceous. Leaves ovate-oblong or ovate-lanceolate, 8.5—17 cm × 3—9 cm, at the base rounded or subcordate, at the top cuspidate, obtusely acuminate, on the underside minutely brown stellate-furfuraceous, or subglabrous, 5-nerved; cross-venules distinct, concolorous. Petiole 8—15 mm long, subfurfuraceous, glabrescent. Inflorescence 11—30 cm long; main axis quadrangular, furfuraceous. Bracts lanceolate, 6—7 mm × 1.5—2 mm, subobtuse, veined, stellate-furfuraceous. Bracteoles linear 3 mm long. Pedicel 4—6 mm long. Calyx tube 3.5—4 mm long, at the base inflate, subquadrangular, sparsely stellate-furfuraceous; limb consisting of 4 undulate lobes. Petals oblong, 5 mm × 2.5 mm, subobtuse, veinless. Stamens 8; larger ones with 3—4 mm long filaments and with ovate-lanceolate, 4 mm long, towards the top often tapering anthers, opening by a single, terminal pore, whose connective is not produced at the base, dorsally ending in a broadly triangular, 1 mm long, appendage, ventrally ending in two linear, 1—1.5 mm long appendages; smaller ones with 2 mm long filaments and with narrowly triangular, 1.5—2 mm long, curved anthers, whose connective is not produced, dorsally ending in a narrow spur, ventrally ending in two very short linear appendages. Ovary fully concrescent with the calyx tube; in the upper $^1/_4$ with 8 exterovarial chambers, consisting of 4 larger and 4 smaller ones; the ovary itself swollen at the top, subglabrous; style

9 mm long, sulcate, glabrous. Berry subglobose, 5—6 mm long, rugose, subglabrous; stalk 6—10 mm long.

Observ: Allied to N. reticulata (Bl.) Bakh. f., differing a.o. by the short appendages of its connective and by the glabrous or furfuraceous leaves.

Distribution: restricted to the localities quoted below.

P. SIMEULOEË: Tapah [Dèfajan] (Achmad nr. 1757 [BZ], L, fl. March; v.n. olor sitabing dotan).

JAVA. Bantam: Leuwi boengoer (Kuhl and van Hasselt s.n. L, type of *Dissochaeta velutina Bl.*, fl. Sept.). Batavia: Pasir Saninten, W. of Leuwiliang, 600 m ((Dakkus nr. 193 [BZ], L, buds June); G. Boender, near G. Salak, 1000 m (Lam nr. 2205 [BZ], L, fl. May);G. Salak, 1000 m (Schiffner nr. 2293, L, fl. Dec.). Preanger Regencies: Tjadas Malang, near Tjidadap, 1000 m (Winckel nr. 1176β [BZ], L, fl. March; v.n. harèndong bokor areuj); Tjidadap, S. of Tjiběběr, 1000 m (Bakhuizen van den Brink nr. 3892 [BZ], L, fl. June; v.n. harèndong); Tjampaka near G. Karang, S. of Tjiběběr, 1000 m (Smith nr. 822 [BZ], L, fl. June); Tjiawi. (Reinwardt s.n. L, typus, sub *Dissochaeta vacillans* [Bl]. *Bl.* and *Melastoma vacillans Bl.*). Locality unknown: (de Vriese s.n. L); (Blume s.n. L); (idem s.n. L, type of *Dissochaeta inappendiculata Bl.*, sub *Melastoma vacillans Bl.* var. *a*); (Kuhl and van Haselt s.n. L, fl. June).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang. (Korthals s.n. L). Exact locality unknown: „G. Prarawin". (Korthals s.n. L); (de Vriese s.n. L).

10. **Neodissochaeta compressa Bakh. f.** spec. nov.

Frutex scandens. Rami compresso-quadrangulares, sparse furfuracei, ad nodos valde compresso-incrassati. Folia ovato-oblonga vel elliptico-oblonga 8—9 cm × 4—4.5 cm, basi rotundata apice acute acuminata subtus sparsissime furfuracea 5-plinervia; nervi centrales enascentes 2—3 mm supra basin foliorum, venulis transversis distinctis. Petiolus 9—14 mm longus furfuraceus. Inflorescentia incompleta, certe multiflora. Pedicellus 2 mm longus. Calycis tubus anguste campanulatus 2 mm longus furfuraceus; limbo 4 lobato, lobis latissime triangularibus 0.5 mm longis. Stamina 8; maiora filamentis 2 mm longis, antheris lanceolatis 2.5 mm longis basi attenuatis apice truncatis 1-poris, connectivo non producto, dorso in appendicem brevem truncatum exeunte, in parte ventrali in appendices duos lineares 2 mm longos exeunte; minora filamentis 1.2 mm longis, antheris 1.7 mm longis ceterum maioribus similibus. Ovarium plus quam $^3/_4$ calycis tubum adnatum, in quarto supremo loculis 4 magnis tenuibus; stylus 4.5 mm longus. Bacca immatura ovoidea furfuracea limbo calycis persistente munita; pedicellus 11—12 mm longus.

Observ: Allied to N. vacillans (Bl.) Bakh. f.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unknown: „Batoe babi". (Winkler nr. 2809, L, typus, fl. July).

16. Medinilla Gaud.

Gaudichaud in Freycinet, Voy. Bot. (1826) p. 484; De Candolle, Prodr. III (1828) p. 167; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 285; Miquel, Flor. Ned. Ind. I (1855) p. 538;Bentham and Hooker, Gen. Plant. I 2 (1865) p. 759; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 95; Baillon, Hist. d. plant. VII (1880) p. 49; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 520; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 572; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 181; *Cephalomedinilla Merr.* in Philipp. Journ. Sci. (1910) Bot. p. 205.

Epiphytic or terrestrial shrubs, treelets or creeping climbers. Branches terete or quadrangular alate or undulate-alate, consisting of 4 or more wings, glabrous or sparsely furfuraceous, smooth or verrucose; the nodes often pulvinate; the leafaxils glabrous, setose or provided with a cushion of minute, plumose hairs. Leaves opposite, ternate, quaternate or verticillate or, rarely, alternate, equal or, sometimes, unequal, oblong or lanceolate, at the base acute, obtuse or amplexicaul, at the top acute, acuminate or obtuse, entire or dentate, glabrous or furfuraceous, 3- to many-plinerved or, rarely, 1-nerved, sessile or petiolate. Inflorescences terminal or (and) axillary panicles or cymes or, rarely, in fascicles, glabrous or furfuraceous; peduncle present; ramifications of the first order mostly quaternate or verticillate or, rarely, opposite. Bracts and bracteoles mostly present and small. Flowers hermaphrodite, 4-, 5- or 6-merous. Pedicel always present. Calyx tube campanulate or cylindrical and widened at the top, glabrous, furfuraceous or pilose, either twice as long as the ovary or about as long as it; the wall of the calyx tube either thin and at most 0.5 mm in diameter or fleshy and 1—2 mm in diameter; limb entire, minutely dentate or consisting of irregular, very small lobes. Petals equal or, rarely, unequal, ovate, obovate, lanceolate, acute or obtuse, mostly veined, white or red. Stamens 8 to 12, equal, subequal or unequal; filaments mostly unequal and filiform; anthers subequal or unequal, linear or narrowly triangular, acute or rostrate, opening by a single or, rarely, by two terminal pores; connective not or but hardly produced at the base, dorsally ending in a subulate or subulate-clavate spur, ventrally ending in two lobes or two linear appendages or inappendiculate. Ovary concrescent with the calyx tube with 8, 10 or 12 septs; exterovarial chambers 8, 10 or 12, not descending beyond the middle of the ovary; the ovary itself 4-, 5- or 6-celled, at least about half as long as the calyx tube; its top part sometimes provided with a small cup-like disc, glabrous; style filiform, glabrous; stigma hardly conspicuous or, rarely, capitate. Berry

subglobose or globose-cylindrical, half as long as the calyx tube or similar in length, often provided with the rests of the calyx limb, red or purple. Seeds many, semi ovate, smooth or punctate, 0.3—1 mm long.

Distribution: About 400 species, occurring in Africa and Asia: Fernando-Po (West Coast of Africa), Madagascar, Mascaren Islands, British India (incl. the Himalaya), Ceylon, Malay Peninsula, Siam, French Indo-China, S. China, Formosa, Hainan, Malay Archipelago, Palau Islands, Marianne Islands, Admiralty Islands, Solomon Islands and Fiji Islands.

Key to the sections.

1*a*. Calycis tubus carnosus pericarpu 1—2 mm crasso. Antherae valde inaequales, rarissime aequales, (vide M. hexamera Baker f.) dissimiles **I Eu-Medinilla Bakh. f.** sect. nov.

b. Calycis tubus tenuis pericarpu maxime 0.5 mm crasso. Antherae aequales vel subaequales, rarissime inaequales (vide M. Teysmanni Miq.), similes **II Hetero-Medinilla Bakh. f.** sect. nov.

Key to the species.

1*a*. Eu-Medinilla 2
b. Hetero-Medinilla 10

2*a*. Inflorescences in fascicles 3
b. Inflorescences not in fascicles 4

3*a*. Peduncle 1-flowered. Leaves obovate-oblong, 4—7 cm × 2.5—3.5 cm . . . . . 1. **M. rosea Gaud.**
b. Peduncle bearing few flowers, but always more than one. Leaves oblong-lanceolate, 6—11 cm × 2.5—4 cm. **2. M. musofo Schum. et Lautb.**

4*a*. Leaves sessile 5
b. Leaves long petiolate 6

5*a*. Branches provided with 8 ribs. Leaves quaternate, 13—20 cm × 5—8 cm. Petals furfuraceous, reticulate. **3. M. crispata (L.) Bl.**
b. Branches subquadrangular. Leaves opposite, 5.5—9.5 cm × 2—3.5 cm. Petals glabrous. **4. M. hexamera Baker f.**

6*a*. Branches not alate 7
b. Branches, especially the young ones, undulate-alate. Leaves obovate-oblong or obovate-lanceolate, 5- or 7-plinerved. Calyx tube broadly campanulate, about as long as wide. **5. M. pterocaula Bl.**

7*a*. Peduncle 2—3 mm long. Anthers opening by 2 pores. Leaves oblong or lanceolate, acuminate, 13.2—22 cm × 4—7.5 cm. **6. M. quintuplinervis Cogn.**

b. Peduncle at least 10 mm long. Anthers opening by a single pore 8

8*a*. Calyx limb consisting of 3 to 6 lobes; lobes broadly triangular. Berry very large. Leaves 3-plinerved, 5—16 cm × 3—9 cm. **7. M. crassinervia Bl.**

b. Calyx limb entire, truncate. Berry small 9

9*a*. Petals lanceolate, reticulate; the reticulation consisting of rows of glands. Calyx tube broadly campanulate. Leaves obovate-oblong, 3- or 5-plinerved. Flowers 5-merous. **8. M. mucronata Kds.**

b. Petals ovate, glabrous. Calyx tube narrowly campanulate. Leaves obovate-oblong or obovate-lanceolate, slightly 3- or 5-plinerved, or, rarely, 1-nerved. Flowers 4-merous. **9. M. radicans (Bl.) Bl.**

α. Leaves 1-nerved 9*a*. **M. radicans (Bl.) Bl. s.s.**

β. Leaves 3- or 5- plinerved 9*b*. **M. radicans (Bl.) Bl. var. quadrifolia (Bl.) Bakh. f.**

10*a*. Leaf axils provided with bristles 11

b. Leaf axils glabrous or provided with a cushion of minute, plumose hairs 28

11*a*. Leaves in 3 or more whorls or, rarely, on the same branches also opposite. 12

b. Leaves always opposite 14

12*a*. Branches terete or subquadrangular. Leaves 5-plinerved . 13

b. Branches, especially the young ones, acutely quadrangular, alate or undulate-alate. Leaves 7- to 11-plinerved, oblong or lanceolate. Inflorescence many-flowered, 15—32 cm long; peduncle 8—15 cm long. . . . . 10. **M. speciosa Bl.**

13*a*. Leaves obovate, 13.5—22 cm × 6.5—9.5 cm. Inflorescence many-flowered, 11 cm long. Flowers 5-merous. **11. M. engganensis Bakh. f.**

b. Leaves oblong or lanceolate, 8—11 cm × 2.5—5 cm. Inflorescence few-flowered, 6 cm long. Flowers 4-merous. **12. M. ternatensis Miq.**

14*a*. Leaves of the same pair equal 15

b. Leaves of the same pair very unequal 26

15*a*. Branches subterete 16

b. Branches subquadrangular, alate or undulate-alate . . . 19

16*a*. Leaves at the base subcordate, cordate-oblong, very long and narrowly acuminate, 7- or 9-plinerved. 13. **M. muricata Bl.**

b. Leaves at the base decurrent, and acute or near the petiole obtuse or truncate 17

17*a*. Peduncle, ramifications, pedicel and calyx tube stellate-furfuraceous. Leaves lanceolate, petiolate. 14. **M. warica Mansf.**

b. Peduncle, ramifications, pedicel and calyx tube glabrous . 18

18*a*. Calyx tube subglobose-cyathiform; limb consisting of 4 undulate lobes. Leaves long and narrowly acuminate. Flowers 5-merous. . . . . 15. **M. angusto-acuminata Bakh. f.**

b. Calyx tube campanulate; limb truncate. Leaves acute or shortly acuminate. Flowers 4-merous. 16. **M. intermedia Bl.**

α. Leaves at the base obtuse-truncate, elliptic to lanceolate, sessile or provided with a short, robust petiole. 16*a*. **M. intermedia Bl. s.s.**

β. Leaves at the base acute, obovate, obovate-oblong or obovate-lanceolate; petiole slender. 16*b*. **M. intermedia Bl.** var. **Sieboldiana (Planch.) Bakh. f.**

19*a*. Inflorescences in axillary fascicles, 3 cm long; peduncle at most 1 cm long. Leaves oblong, 5-plinerved. 17. **M. aggregata Bakh. f.**

b. Inflorescences terminal, not in fascicles 20

20*a*. Leaves 5- or 7-plinerved 21

b. Leaves mostly 11- to 17-plinerved or, rarely, 9-plinerved . 23

21*a*. Leaves lanceolate, acute or very acute, 5-plinerved, 20—35 cm × 4.5—9.5 cm. Flowers 4-merous. 18. **M. longifolia Cogn.**

b. Leaves elliptic-oblong or ovate-oblong or ovate-lanceolate. 22

22*a*. Leaves ovate-oblong or ovate-lanceolate, at the base acute, long acuminate, on the underside stellate-furfuraceous, 5—9 cm × 2—3.5 cm, petiolate. 19. **M. schraderbergensis Mansf.**

b. Leaves elliptic-oblong, at the base subcordate, shortly acuminate, on the underside glabrous, 23—28 cm × 8.5—13 cm, sessile. . . . . 20. **M. rhodorhachis Baker f.**

23*a*. Anthers 3—4 mm long. Bracts lanceolate, small. Stamens always equal. Style 5—8 mm long 24

b. Anthers 6—9 mm long. Bracts absent. Stamens often unequal. Style 10—15 mm long. Leaves obovate, at the base broadly auriculate, 9- to 13-plinerved. 21. **M. Teysmanni Miq.**

24*a*. Leaves towards the base rounded, at the base subcordate, 9-plinerved. Flowers 4-merous. 22. **M. Lorentziana Mansf.**

b. Leaves towards the base contracted, at the base acute or subauriculate. Flowers 5-merous 25

25*a*. Calyx limb undulate. Leaves 9-plinerved. 23. **M. napiformis Bakh. f.**

b. Calyx limb truncate. Leaves 11- to 17-plinerved. 24. **M. ceramensis Bakh. f.**

26*a*. Branches, especially the young ones, covered with plumose hairs. The larger leaves oblong or lanceolate, on the underside densely pilose, 7- or 9-plinerved; the smaller leaves cordate, 5-nerved. 25. **M. auriculata Lauterb.**

b. Branches glabrous 27

27*a*. Branches terete. Petiole of the larger leaves 2—2.5 cm long. Peduncle slender, 3.5 cm long, subquadrangular. Pedicel 12 mm long. . . . . 26. **M. Mansfeldii Bakh. f.**

b. Branches quadrangular, undulate-alate. Petiole of the larger leaves about 1 cm long. Peduncle robust, 1 cm long, ribbed. Pedicel 2—3 mm long. 27. **M. Lauterbachiana Mansf.**

28*a*. Leaves alternate. Anthers reticulate. Creeping plants. . . 29

b. Leaves opposite or verticillate. Anthers not reticulate. Epiphytic or terrestrial shrubs 31

29*a*. Leaves on the underside glabrous. Berry glabrous 30

b. Leaves on the underside ferrugineously subpilose, 35—39 cm × 10—11.5 cm. Berry setose. . . . 28. **M. barbata Bakh. f.**

30*a*. Leaves ovate-oblong, 5- or 7-nerved, 18—23 cm × 6—13 cm; petiole 7—15 cm long. Anthers ventrally inappendiculate. 29. **M. alternifolia Bl.**

b. Leaves oblong or lanceolate, at the base acute, 7-plinerved, 8—11.5 cm × 4—5 cm; petiole 3—7 cm long. Anthers ventrally biappendiculate. . . . . 30. **M. bisetosa Bakh. f.**

31*a*. Leaves ternate or verticillate 32

b. Leaves opposite 33

32*a*. Leaves quaternate, obovate or elliptic, 4.5—10.5 cm × 2.5—5cm; petiole 1.5—2.5 cm long. Peduncle 2—5.5 cm long. 31. **M. Clarkei King**

b. Leaves ternate, lanceolate, 3—7 cm × 1—1.5 cm; petiole 0.3—0.6 cm long. Peduncle 0.5—2.5 cm long. 32. **M. varingoidea Bakh. f.**

33*a*. Leaf axils provided with a cushion of minute hairs 34

b. Leaf axils glabrous 37

34*a*. Leaves ovate-oblong or ovate-lanceolate, towards the top attenuate, often unequal on the same node, 3-plinerved. Inflorescence umbelliform, axillary, few-flowered, up to 3 cm long. Flowers 4-merous. . . . . 33. **M. hypericifolia (Bl.) Bl.**

b. Leaves elliptic, oblong or lanceolate, at the top acuminate, always equal on the same node, 5- or 7-plinerved. . . 35

35*a.* Inflorescence umbelliform, axillary, 2—3 cm long. Young branches densely covered with brown, erect hairs.
34. **M. macrophylla Bl.**

b. Inflorescences terminal or axillary, 6—30 cm long panicles 36

36*a.* Young branches terete, brown leprose. Inflorescence axillary; ramifications of the first order densely but brown leprose; in the lower parts in whorls of 6 or 8. 35. **M. verrucosa (Bl.) Bl.**

b. Young branches acutely quadrangular, glabrous, pallid. Inflorescences terminal or terminal and axillary; ramifications of the first order glabrous; in the lower parts ternate, quaternate or opposite. . . . . 36. **M. javanensis (Bl.) Bl.**

37*a.* Leaves sessile or subsessile 44

b. Leaves distinctly petiolate 38

38*a.* Inflorescence a terminal panicle. 37. **M. malaboensis Bakh.f.**

b. Inflorescences axillary cymes or fascicles 39

39*a.* Inflorescence a fascicle; peduncle absent.
38. **M. compacta Bakh. f.**

b. Inflorescence a cyme; peduncle distinct 40

40*a.* Lamina gradually passing into the petiole. Leaves oblong or lanceolate, 5- or 7-plinerved, 15—30 cm × 5.5—10 cm.
39. **M. rubrifolia Mansf.**

b. Lamina distinctly separated from the petiole. Leaves 3- or 5-nerved or 3- or 5-plinerved 41

41*a.* Branches towards the nodes 6-ribbed. Leaves oblong, shortly acuminate, thin, 3-plinerved. 40. **M. celebica Bl.**

b. Branches terete 42

42*a.* Leaves submembranaceous. Petiole 40—80 mm long.
41. **M. driessenioides Bakh. f.**

b. Leaves coriaceous. Petiole 4—10 mm long 43

43*a.* Habit compact. Leaves erect-patent. Petals 18—21 mm × 9 mm. Filaments 6—7 mm long. Anthers 5—6 mm long. Style 10—15 mm long. Berry 8—12 mm long; stalk 12—15 mm long.
42. **M. laurifolia (Bl.) Bl.**

b. Habit lax. Leaves patent. Petals 5—7 mm × 2—4 mm. Filaments 2—3 mm long. Anthers 1—4 mm long. Style 4—6 mm long. Berry 5—7 mm long; stalk 6 mm long.
43. **M. crassifolia (Reinw. ex Bl.) Bl.**

a. Anthers 1 mm long. Calyx limb consisting of 5 short, broadly triangular teeth. Petals obovate, equal. Flowers 5-merous. 43*a.* **M. crassifolia (Reinw. ex Bl.) Bl. s.s.**

β. Anthers 3—4 mm long. Calyx limb entire. Petals obovate, unequal. Flowers 4-merous.
43*b*. **M. crassifolia (Reinw. ex Bl.) Bl.** var. **Hasseltii (Bl.) Bakh. f.**

44*a*. Calyx limb truncate 45
b. Calyx limb dentate or undulate 48

45*a*. Inflorescence terminal. 46
b. Inflorescence axillary 47

46*a*. Leaves 3-nerved, oblong or lanceolate.
44. **M. Curtisii Hook. f.**
b. Leaves 5- or 7-plinerved, ovate-oblong.
45. **M. amplexicaulis Bl.**

47*a*. Branches acutely quadrangular. Leaves ovate-oblong, 18—20 cm long. 46. **M. robusticaulis Bakh. f.**
b. Branches terete. Leaves ovate, 8—11.5 cm long.
47. **M. Bünnemeyeri Bakh. f.**

48*a*. Calyx limb undulate, consisting of 4 small lobes. Inflorescences in rich fascicles. Leaves subcordate-oblong, 5-plinerved.
48. **M. Schumanniana Mansf.**
b. Calyx limb dentate. 49

49*a*. Anthers equal. Petals oblong, obtuse. Leaves lanceolate, cuspidate and acuminate, 3-plinerved. Inflorescences few together, up to 2 cm long. . . . . 49. **M. succulenta (Bl.) Bl.**
b. Anthers subequal. Petals ovate-lanceolate, very acute or acuminate, never cuspidate 50

50*a*. Peduncle with more than one flower. Shrubs 51
b. Peduncle with a single flower. Herbs. Leaves rhomboid, remote-serrate, on the underside densely furfuraceous, 3—4.3 cm × 0.9—1.4 cm. 50. **M. monantha Merr.** var. **papuana (Baker f.) Mansf.**

51*a*. Inflorescences few together, up to 1 cm long; peduncle 2—3mm long. Calyx tube sulcate, furfuraceous. Leaves oblong-lanceolate, 3-plinerved. 51. **M. ramiflora Merr.**
b. Inflorescence solitary, 1—3 cm long; peduncle 4 cm long. Calyx tube not sulcate, glabrous. Leaves subrhomboid or elliptic, 3- or 5-plinerved.
52. **M. myrtiformis (Naud.) Triana**

Sect. I. **Eu-Medinilla Bakh. f.** nr. 1—3.

1. **Medinilla rosea Gaud.** Gaudichaud in Freycin. Voyage (1826) p. 484, tab. 106; Cogniaux in l.c. (1891) p. 573.

Shrub. Branches subterete, minutely 8-alate, glabrous; the leaf-axils glabrous. Leaves quaternate, obovate-oblong, at the base contracted, acute, at the top obtusely acuminate, 4—7 cm × 2.5—3.5cm, entire, 3- or 5-plinerved; cross-venules absent. Petiole 6—12 mm long. Inflorescences 5 to 10 together in axillary fascicles, 2—3 cm long; peduncle about 1 cm long, bearing a single flower. Flowers 4-merous. Bracts deciduous. Pedicel 3—4 mm long. Calyx tube cylindrical, widened at the top, 4—5 mm long, glabrous; limb entire. Petals narrowly obovate, 6—12 mm × 3—5 mm, obtuse, veined. Stamens unequal; larger ones with 4.5 mm long filaments and with linear, 5 mm long, curved anthers, opening by a single pore, whose connective is not produced, dorsally ending in a long spur, ventrally ending in two linear appendages; smaller ones with 2—3 mm long filaments and with narrowly triangular, 2.5—3 mm long, curved anthers, opening by a single pore, whose connective is not produced, dorsally ending in a spur, ventrally ending in two linear appendages.

Style 8—13 mm long, glabrous. Berry 5 mm long.

Observ: Differs from allied species a.o. by its inflorescences, which are 5 together, by its 1-flowered peduncle and much smaller berries.

Distribution.

CELEBES. Manado: Pinamorangan Mts., Minahassa, 700 m (Koorders nr. 17860β [BZ], L, fr. Apr.); idem 900 m (idem nr. 17861β [BZ], L, fr. Apr.).
FURTHER DISTRIBUTION: Marianne Archipelago.

2. **Medinilla musofo Schum. et Lauterb.** Schumann und Lauterbach in Flora Deutsch Südsee Geb. (1900) p. 480; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 120; idem in Nova Guinea XIV livr. II (1927) p. 203; *Medinilla crassinervis Bl.*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 119 [pr. p].

Adult branches subterete or subquadrangular, the young ones compressed, glabrous; the leaf axils glabrous. Leaves quaternate, oblong-lanceolate, 6—11 cm × 2.5—4 cm, acute or shortly acuminate, coriaceous, entire, glabrous, 3- or 5-plinerved, cross-venules absent. Petiole 1—2 cm long, glabrous. Inflorescence and flowers not seen by me. Pedicel 8 mm long. Calyx tube cylindrical, widened at the top, 8 mm long, glabrous; limb entire. Berry subglobose, about 1 cm long; stalk 8 mm long.

Distribution: endemic.

NEW GUINEA. Northern Part: Tami river, 80 m (Gjellerup nr. 5 [BZ], L, fr. March). Southern Part: Oroh river, 1300 m (Pulle nr. 1125, L, fr. Febr.). North Eastern Part: (according to Mansfeld in l.c.).

3. **Medinilla crispata (L.) Bl.** Blume in Flora XIV (1831) p. 517 and in Bijdr. Nat. Wet. VI (1831) p. 257; idem in Rumphia I (1835) p. 11; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 547; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 575; Koorders in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 468; Heyne, Nutt. Plant. Ned. Ind. II (1927) p. 1204; *Melastoma crispatum L.*, Spec. Plant. ed. II (1762—1763) p. 560; De Candolle, l.c. (1828) p. 147.

Creeping plant. Branches subterete, 8-alate, glabrous; the leaf-axils glabrous. Leaves quaternate, oblong-lanceolate, 13—20 cm × 5—8 cm, at the base subacute and subauriculate, acuminate, submembranaceous, entire, glabrous, 5- or 7-plinerved, sessile or subsessile. Inflorescence an axillary, few-flowered, up to 4.5 cm long cyme; peduncle 1.5—2 cm long, subquadrangular, sparsely furfuraceous; ramifications of the first order quaternate or verticillate. Flowers 5-merous. Bracts lanceolate, small, deciduous. Pedicel 8—10 mm long, sparsely furfuraceous. Calyx tube narrowly campanulate, 7—11 mm long, sparsely furfuraceous; limb undulate. Petals obovate, 22—25 mm × 12—16 mm obtuse, reticulate; its reticulation consisting of rows of glands. Stamens unequal; larger ones with 11—15 mm long filaments and with linear, 15—19 mm long anthers, opening by a single pore, whose connective is up to 2 mm long and dorsally ending in a 2 mm long, peltate appendage, ventrally ending in two 1.5 mm long, obtuse spurs; smaller ones with 8—10 mm long filaments and with narrowly triangular, 10 mm long anthers, opening by a single pore, whose connective is not produced, dorsally ending in a 3 mm long spur, ventrally ending in two 1.5—2 mm long lobes. Ovary half as long as the calyx tube; its top part swollen, provided with an annulate cup-shaped disc. Style 16—18 mm long.

Observ: Resembles M. pterocaula Bl. by its strongly undulate-alate branches, but differing by its submembranceous and subsessile leaves, its furfuraceous calyx and large, glandular petals.

Distribution: restricted to the localities quoted below.

CELEBES. Locality unknown: (de Vriese s.n. L).

MOLUCCAS. Ambon: G. Nona (Rant nr. 774 [BZ], L, fl. Nov.); Locality unknown. (Robinson nr. 510, L, PNH.).

4. **Medinilla hexamera Baker f.** Baker f. in Trans. Linn. Soc. sér. II. IX. 1 (1916) p. 53; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 123; idem in Nova Guinea XIV livr. II (1927) p. 204.

? Treelet. (according to Baker f. in l.c.). Branches subquadrangular, sparsely verrucose, pulvinate; the leaf axils glabrous. Leaves opposite, lanceolate, 5.5—9.5 × 2—3.5 cm, at the base acute, at the top obtusely acuminate, entire, glabrous, punctate, 5-plinerved, cross-venules on the upperside hardly conspicuous, on the underside absent, sessile. Flowers in axillary diads, 5- or 6-merous. Pedicel 6—8 mm long, minutely verrucose, bibracteolate. Calyx tube cylindrical, widened at the top, 3—3.5 mm long, glabrous; limb entire, truncate. Petals lanceolate, 6—7mm × 2 mm, acute, fleshy, veinless. Stamens equal, with 3—4 mm long filaments and with narrowly triangular, 2—3 mm long, obtuse anthers, opening by a single pore, whose connective is not produced, dorsally ending in a spur, ventrally inappendiculate. Ovary half as long as the calyx tube. Berry globose, 8 mm long; stalk 8 mm long.

Distribution: endemic.

NEW GUINEA. Central Part: Carstens Mts. (Wollaston Exp., according to Baker f. in l.c., type). Southern Part: Kloofbivak, Lorentz river (Pulle nr. 247, L, U, fl. Oct.).

5. **Medinilla pterocaula Bl.** Blume in Flora XIV (1831) p. 509 and in Bijdr. Nat. Wet. VI (1831) p. 251; idem in Rumphia I (1835) p. 12 and tab. 1; Naudin in l.c. XV (1851) p. 293; Junghuhn, Java (1853) p. 512; Miquel, l.c. (1855) p. 547; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 123; idem in Ann. Mus. Bot. Lugd. Bat. I (1863) p. 217; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 575; Koorders, Exkurs. Flora Java II (1912) p. 696; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 40; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 118; idem in Nova Guinea XIV livr. II (1927) p. 203; Docters van Leeuwen in Ann. Jard. Bot. Buitenzorg XLVI—XLVII (1930) p. 393; Backer, Manuscr. Fl. Java, Melast. (1941) p. 26; Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 220; *Medinilla pterocaula Bl.* var.; Miquel, l.c. (1855) p. 547.

Epiphytic shrub, up to 1 m high. Branches quadrangular, mostly provided with 8 undulate wings, glabrous; leaf axils glabrous. Leaves quaternate or verticillate, obovate-oblong or obovate-lanceolate, 7—15 cm × 3—7.5 cm, at the base contracted and acute, at the top

shortly acuminate, entire, glabrous, slightly 5- or 7-plinerved, cross-venules hardly conspicuous. Petiole 5—15 mm long, on the upperside grooved. Inflorescence umbelliform, few-flowered, up to 4 cm long; peduncle 8—20 mm long. Flowers 5-merous. Bracts and bracteoles up to 2 mm long, deciduous. Pedicel 3—5 mm long. Calyx tube broadly ovate, 5—8 mm long, terete, glabrous; limb entire or, rarely, undulate. Petals ovoid, 10—12 mm × 4—5 mm, glabrous, veinless, white. Stamens unequal; larger ones with 5—7 mm long filaments and with linear, 9—10 mm long, rostrate anthers, opening by a single pore, whose connective is 2 mm long, dorsally ending in a spur, ventrally ending in two short, linear appendages; smaller ones with 3—4 mm long filaments and with linear, 3—4 mm long, rostrate, anthers, whose connective is hardly produced, dorsally ending in a 2 mm long spur, ventrally ending in two rather long appendages. Ovary half as long as the calyx tube, without annulate disc at the top; style 9—10 mm long, thick. Berry ovoid, 9—10 mm long; stalk 10 mm long. Seeds smooth.

Observ: Resembles somewhat M. crassinervia Bl.

Distribution: restricted to the localities quoted below.

SUMATRA. Benkoelen: Hoedjoeng, Kroë, 1000 m (Forbes nr. 1988, L). Locality unknown: (Korthals s.n. L); (idem s.n. L, sub Medinilla umbellata Korth.).

JAVA. Batavia: G. Salak (Blume s.n. L, typus, fl. June); idem, along the Tjihideung. (Bakhuizen van den Brink nr. 3664 [BZ], L, fr. May). Preanger Regencies: G. Bèsèr, S. of Tjibèbèr, 1200 m (Backer nr. 22617 [BZ], L). Locality unknown: (de Vriese s.n. L); (Reinwardt s.n. L); (Blume s.n. L); (collector unknown, L).

TALAUD ISLANDS. P. Karakelong: 60 m (Lam nr. 2755, L, fr. May; v.n. bindoe'a); G. Malap, E. of Lobo, 20 m (idem nr. 3011, L, fr. May; v.n. dandila); idem, E. of Beo, 100 m (Lam nr. 2666, L, fl. Sept.).

NEW GUINEA. Southern Part: Lorentz river (von Römer nr. 545 and 677 [BZ], L, fl. Oct.); idem (Versteeg nr. 1060 [BZ], L, fl. May); (idem nr. 1807 [BZ], L, fl. May); van der Sande river, 80 m (Pulle nr. 301, L, U, fl. Nov.); idem (idem nr. 357, L, fl. Nov.).

6. **Medinilla quintuplinervis Cogn.** Cogniaux in Engl. Bot. Jahrb. XIII (1891) p. 393 and in l.c. (1891) p. 574 and p. 1185; idem in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 534 [nomen]; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 119; idem in Nova Guinea XIV livr. II (1927) p. 203.

? Shrub. Adult branches terete, the younger ones compressed, minutely verrucose; the leafaxils glabrous. Leaves quaternate, oblong-lanceolate, 13.5—22 cm × 4—7.5 cm, mostly unequal, at the base contracted and acute, at the top acuminate, entire, glabrous, 5-plinerved, cross-venules hardly conspicuous or absent. Petiole

10—25 mm long, subleprose. Inflorescences few together; peduncle 2—3 mm long, bearing 2 or 3 flowers. Flowers 5-merous. Bracts linear, 2—3 mm × 0.5 mm. Pedicel 3—5 mm long. Calyx tube cylindrical, widened at the top, 5 mm long, glabrous; limb entire. Petals lanceolate, 7—9 mm × 2—3 mm, acute, thick, veinless, in the centre thickened and rugose. Stamens unequal; larger ones with 5—6 mm long filaments and wide, S-shaped, 2 mm long, broadly rostrate anthers, opening by two pores, whose connective is produced; smaller ones with 5—6 mm long filaments and with wide, S-shaped, 1 mm long, shortly rostrate anthers, opening by two pores. Ovary half as long as the calyx tube; style 9 mm long, grooved; stigma excavate, inside provided with 5 grooves. Berry ovoid, 10 mm long; stalk 5 mm long. Seeds smooth.

Observ: A remarkable species, whose alliance is perhaps with M. radicans (Bl.) Bl. var. quadrifolia (Bl.) Bakh. f.

Distribution: endemic.

NEW GUINEA. Northern Part: Mamberamo river, 50 m (Feuilletau de Bruyn nr. 70 [BZ], L, fr. July); idem, „Pioniersbivak", 60 m (Lam nr. 662 [BZ], L, fl. July); Tor river, 25 m (Gjellerup nr. 778 [BZ], L, fl. Oct.); Begowri river, 170 m (idem nr. 218 [BZ], L, fl. June); locality unknown (Atasrip nr. 224, L).

7. **Medinilla crassinervia Bl.** Blume in Flora XIV (1831) p. 510 and in Bijdr. Nat. Wet. VI (1831) p. 251; idem in Rumphia I (1835) p. 15; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 545; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 574; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 119 [pr. p.] ;idem in Nova Guinea XIV livr. II (1927) p. 203 [p. pr.]; Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 220; *Medinilla macrocarpa Bl.* in Flora XIV (1831) p. 510 and in Bijdr. Nat. Wet. VI (1831) p. 252; idem in Rumphia I (1835) p. 14 and tab. 2; Naudin in l.c. XV (1851) p. 294; Miquel, l.c. (1855) p. 544; idem in Ann. Mus. Lugd. Bat. I (1863) p. 217; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 576; Koorders, in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 468; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 120; Heyne, Nutt. Plant. Ned. Ind.II (1926) p. 1204; *Melastoma nodosum Zipp. ex Bl.* in Flora XIV (1831) p. 510 [nomen].

Climber. Branches terete or subquadrangular, ribbed, subverrucose or smooth, the leaf axils glabrous. Leaves quaternate or, rarely, ternate, elliptic, obovate or obovate-orbicular, 5—16 cm × 3—9 cm, at the base contracted or abruptly narrowed, at the top shortly

acuminate, entire, glabrous, 3-plinerved, cross-venules hardly conspicuous or absent. Petiole 5—22 mm long, flattened, glabrous. Flowers either in an axillary, few-flowered, 1—3 cm long cyme or, sometimes, in triads or solitary; the flowers themselves 5-or 6-merous. Peduncle 7—13 cm long, terete. Bracts absent. Pedicel 13—15 mm long. Calyx tube broadly campanulate, 6—10 mm long, glabrous, punctate; limb before anthesis entirely closed, later on dehiscing irregularly in 5- to 6-or, rarely, 3 lobes; lobes themselves broadly triangular, 4 mm × 4 mm. Petals obovate, 12 mm × 6 mm, obtuse, veinless, white. Stamens very unequal; larger ones with 4—6 mm long filaments and with linear, 5—7 mm long anthers, opening by a single pore, whose connective is not or scarcely produced, dorsally ending in a clavate, 1 mm long spur, ventrally ending in two up to 1.5 mm long lobes; smaller ones with 2.5—3 mm long filaments and with narrowly triangular, 3—4 mm long anthers, whose connective is not produced, dorsally spurred, ventrally ending in two lobes. Ovary half as long as the calyx tube; its top part swollen, glabrous; style 11—15 mm long. Berry broadly cylindrical at the top, ending in an up to 7 mm long neck, 13 mm × 10 mm, red. Seeds smooth.

Observ: Differs from M. radicans (Bl.) Bl. var. quadrifolia (Bl.) Bakh. f. a.o. by its broadly cylindrical calyx tube and large berries, whose limb consists of persistent, irregularly-shaped lobes. M. macrocarpa Bl. is fully identic with M. crassinervia Bl. The difference stated by Blume, namely whether the very young calyx limb before anthesis is entirely closed or cleft, is due to a mistake.

Distribution.

CELEBES. Locality unknown: (de Vriese s.n. L).

MOLUCCAS. Boeroe: Oké (de Vriese s.n. L, U). Ceram: Wai Noea, 300—400 m (Rutten nr. 1943 [BZ], L, fl. Jan.); N. of Wai Noea, 600 m (idem nr. 1958 [BZ], L, U, fl. Jan.); Roho, 100—200 m (Kornassi nr. 511 [BZ], L, U, fl. Nov.; v.n. kostoekoea). Ambon: Ambon Hila (Teysmann s.n. U); Locality unknown: (Zippel s.n. L, type of *Medinilla macrocarpa Bl.*, sub *Melastoma nodosum Zipp.*, fl. Sept.); idem (de Vriese s.n. L); idem (Robinson nr. 569, L). Banda: G. Bandaë (Reinwardt s.n. L, typus, fl. June). Ternate: (Teysmann s.n. U). Morotai: G. Ligojèr near Goegoeti, 100 m. (Lam nr. 3594, L, fr. June).

NEW GUINEA. Northern Part: Tor river, 25 m (Gjellerup nr. 764 [BZ], L, fl. Oct.).

FURTHER DISTRIBUTION: According to Cogniaux in l.c., also occurring in the Malay Peninsula, Singapore and Borneo, but I am very doubtful whether these records are correct, as this species has a pronounced distribution in the Eastern part of the Malay Archipelago.

8. **Medinilla mucronata Kds.** Koorders in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 467 [nomen]; Koorders-Schumacher, Syst. Verz. III Celebes (1914) p. 97. [nomen].

Suffrutex. („half-shrub.") Rami teretes pallidi laeves vel subverrucosi; axilla foliorum glaber. Folia quaternata obovato-oblonga 4.5—11 cm × 3—6 cm basi acuta apice breviter acuminata coriacea integra glabra 3- vel 5-plinervia, venulis transversis absentibus. Inflorescentia axillaris probabiliter pauciflora. Flores 5-meri. Pedicellus 4—5 mm longus. Calycis tubus late campanulatus 6—7 mm longus carnosus glaber; limbus integer. Petala lanceolata 10 mm × 7 mm subobtusa reticulata glandulosa. Stamina inaequalia; maiora filamentis 8 mm longis, antheris linearibus 12—14 mm longis 1-poris, connectivo non producto, dorso in appendicem clavatum exeunte, in parte ventrali biauriculato; minora filamentis 6 mm longis, antheris anguste triangularibus 7—9 mm longis curvatis, connectivo non producto, dorso in appendicem clavatum exeunte, in parte ventrali biappendiculato. Ovarium quam calycis tubus dimidio minus; stylus 14 mm longus. Bacca subglobosa in parte apicali contracta 15 mm × 15 mm laevis; pedicellus fere 1 cm longus.

Observ: Material incomplete. As Koorders in l.c. only stated "half-shrub", but gave no further detailed description, I consider M. mucronata Kds. as a nomen nudum and therefore I give here the Latin diagnosis.

Distribution: endemic.

CELEBES. Manado: G. Pinamorangan, Minahassa, 500 m (Koorders nr. 17856β, L, typus, dupl. in [BZ], fl. Jan.).

9. **Medinilla radicans (Bl.) Bl.** Blume in Flora XIV (1831) p. 509 and in Bijdr. Nat. Wet. VI (1831) p. 251; idem in Rumphia I (1835) p. 15 and tab. 3; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 257; Naudin in l.c. XV (1851) p. 287; Junghuhn, Java (1853) p. 512; Miquel, l.c. (1855) p. 539; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 85; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 573; Koorders, Exkurs. Flora Java II (1912) p. 696; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1204; Backer, Manuscr. Fl. Java, Melast. (1941) p. 25; *Melastoma radicans Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1069; De Candolle, l.c. (1828) p. 148.

Climber. Branches subterete or subquadrangular, ribbed, glabrous; the leaf axils glabrous. Leaves quaternate or verticillate, obovate-oblong, 7—12 cm × 2—5.5 cm, acuminate, entire or undulate, 1-nerved, cross-venules hardly conspicuous or absent. Petiole 20—25 mm long, flattened, glabrous. Inflorescence umbelliform, axillary, few-flowered; peduncle about 10 mm long. Flowers 4-merous. Bracts and bracteoles lanceolate, minute, deciduous.

Pedicel 3 mm long. Calyx tube narrowly campanulate, its upper part cylindrical, 7—11 mm long, glabrous, rough; the cylindrical upper part slightly 4-ribbed; limb consisting of 4-minute tubercles. Petals narrowly obovate, unequal, 5—7 mm × 2—3 mm, obtuse, with distinct mid-vein. Stamens unequal; larger ones with 8 mm long filaments and with linear, 15 mm long, rostrate anthers, opening by a single pore, whose connective is hardly produced, dorsally ending in a linear grooved appendage, ventrally ending in two long auricles; smaller ones with 6 mm long filaments and with narrowly triangular, 7 mm long anthers, whose connective is not produced, ending in appendages of the same kind as those of the larger stamens. Ovary at the top subconical or flattened, glabrous; style 12 mm long, sulcate. Berry at the base subglobose, its upper part cylindrical, 7—9mm × 9—10 mm.

Distribution: restricted to the localities quoted below.

JAVA. Bantam: Leuwi boengoer (Kuhl and van Hasselt s.n. L, fr. Sept.). Batavia: S. of Leuwiliang, 70 m (Backer nr. 25951 [BZ], fl. Sept.); G. Pantjar (collector unknown, L). Preanger Regencies: Pasir Malèla, S. of Tjibĕbĕr, 800 m (Bakhuizen van den Brink nr. 818 [BZ], L, fl. July). Exact locality unknown: „Parat." [May be G. Parat on Prinsen Island] (collector unknown, L). Locality unknown: (Blume s.n. L); (collector unknown, L, typus, sub *Melastoma radicans Bl.*).

BALI: G. Kĕlatakan, 515 m (Sarip nr. 84 [BZ], L, fr. July; v.n. boengoetji goetji).

SOEMBAWA: Saleh bay, Dompoe, 20—100 m (Elbert nr. 3992, L, fl. Dec.).

LOCALITY UNKNOWN: (Forbes nr. 2894*a*, L).

var. **quadrifolia (Bl.) Bakh. f.** comb. nov.

Medinilla Minahassae Kds. in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 633 and 467 [nomen]; Koorders-Schumacher, Syst. Verz. III Celebes (1914) p. 97; *Medinilla polyantha Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 245 and tab. 61; *Medinilla quadrifolia (Bl.) Bl.* in Flora XIV (1831) p. 509 and in Bijdr. Nat. Wet. VI (1831) p. 250; Naudin in l.c. XV (1851) p. 287; Miquel, l.c. (1855) p. 538; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122; Teysmann et Binnendijk, Cat. Plant. Hort Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 574; Koorders, Exkurs. Flora Java II (1912) p. 696; Koorders-Schumacher, Syst. Verz. I Java, Melast (1912); Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 119; idem in Nova Guinea XIV livr. II (1927) p. 203; Backer, Manuscr. Fl. Java, Melast. (1941) p. 25; *Melastoma quadrifolium Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1069; De Candolle, l.c. (1828) p. 148.

Climber. Leaves quaternate or verticillate, obovate-oblong or

obovate-lanceolate, 5—13 cm × 2.5—6 cm, shortly acuminate, 3- or 5-nerved, cross-venules on the upperside more distinct than on the underside. Petiole up to 15 mm long. Inflorescence umbelliform, axillary, few-flowered, up to 3 cm long; peduncle 20 mm long. Flowers 4-merous. Bracts lanceolate, 3—4 mm × 1 mm. Pedicel 8 mm long. Calyx tube 10 mm long. Petals 12 mm × 6 mm, red. Larger stamens with 6—7 mm long filaments and with 10—11 mm long, white anthers; smaller stamens with 6—7 mm long filaments and with 6—7 mm long, white anthers. Style 11 mm long. Berry 7—11 mm long; stalk 5—8 mm long.

Observ: Differs especially from the type species by the nervation of its leaves.

Distribution: restricted to the localities quoted below.

SUMATRA. Atjeh: Gajoe Loeas (Pringo Atmodjo nr. 60, L, fl. Febr.). Tapanoeli: Ankola, 300—1000 m (Junghuhn s.n. L). West Coast: G. Talakmau, 1100 m (Bünnemeyer nr. 609 [BZ], L, fr. May). Exact locality unknown: „Doekoe". (Korthals s.n. L, type of *M. polyantha Korth*).

P. ENGGANO: Boea boea, 100 m (Lütjeharms nr. 4517, L, ster.).

JAVA. Bantam: Tjihanjawar (Kuhl and van Hasselt s.n. L, sub Melastoma epidendra Reinw., fl. July). Batavia: Tjiomas near Buitenzorg. (Bakhuizen van den Brink fil. nr. 3108 (3110) [BZ],U, ster.). Locality unknown: (de Vriese s.n. L); (Blume s.n. L, typus, sub *Melastoma quadrifolium Bl.*); (Durand s.n. PAS.).

CELEBES. Manado: G. Pinamorangan, Minahassa, 500 m (Koorders nr. 17863β [BZ], L, type of *Medinilla Minahassae Kds.*, fr. March; v.n. gogoan manoempang).

NEW GUINEA. Northern Part: Mamberamo river (Feuilletau de Bruyn nr. 146 [BZ], L, fr. Oct.); idem (Janowsky nr. 430 [BZ], L, fl. Sept.), Southern Part: Bivak Sabang, 80 m (Branderhorst nr. 339 [BZ], L. U, fr. Apr.).

Sect. II. **Hetero-Medinilla Bakh. f.** nr. 10—52.

10. **Medinilla speciosa (Reinw. ex Bl.) Bl.** Blume in Flora XIV (1831) p. 515 and in Bijdr. Nat. Wet. VI (1831) p. 256; Naudin in l.c. XV (1851) p. 291; Miquel, l.c. (1855) p. 540; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 87; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 592; Kuntze, Revis. Gen. Plant. (1891) p. 247; Koorders in Nat. Tijdschr. Ned. Ind. LXIII afl. 1 (1903) p. 47; idem, Exkurs. Flora Java II (1912) p. 697, 698; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Baker f. in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 56; Koorders, Flora von Tjibodas (1918) p. 215; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 40; Hochreutiner in Candollea II (1925) p. 473; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 130; Merrill in Contr. Arnold Arbor. Harvard Univ. VII (1934) p. 115; Bailey in

Stand. Cyclop. Hortic. III (1937) p. 2021; Backer, Manuscr. Fl. Java, Melast. (1941) p. 24; *Medinilla speciosa Bl.* var. *genuina Hochr.* in Candollea II (1925) p. 473; *Medinilla speciosa Bl.* var. *genuina Hochr. forma rubriflora Hochr.* in Candollea II (1925) p. 473; *Medinilla speciosa Bl.* var. *minoriflora Hochr.* in Candollea II (1925) p. 473; *Medinilla speciosa Bl.* var. *minoriflora Hochr. forma albiflora Hochr.* in Candollea II (1925) p. 473; *Melastoma eximium Bl.* (*non Jack*), Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1072; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; *Melastoma speciosa Reinw.*, Blume, Catal. Buitenzorg (1823) p. 71 [nomen]; idem in Flora XIV (1831) p. 516. [nomen].

Epiphytic or terrestrial shrub, 1.5—3 m high. Branches acutely quadrangular or alate, glabrous; the leaf axils covered with up to 2 cm long stiff hairs. Leaves ternate or quaternate or, rarely, opposite, oblong, lanceolate or obovate, 17—37 cm × (6)—9—20 cm, at the base mostly slightly unequal, subauriculate, at the top acuminate, entire, glabrous, 7- to 11-plinerved, sometimes with 2 marginal nerves; the nerves thick, only the upper 5 to 9 ones confluent at the top, the upper 3 ones arising from 5 to 9 cm above the base of the leaf; sessile or with an up to 10 mm long petiole. Inflorescence a many-flowered, terminal panicle, glabrous, 15—32 cm long; peduncle quadrangular, 8—15 cm long; ramifications of the first order verticillate, 1.5—5 cm long. Flowers 4- or 5-merous. Bracts ternate or quaternate or, rarely, verticillate, obovate or lanceolate, 8—30 mm × 2—14 mm, veined, rather persistent. Bracteoles 5—11 mm × 3 mm, deciduous. Pedicel 3—5 mm long. Calyx tube campanulate, 3—5 mm long, slightly ribbed, glabrous; limb consisting of small lobes, ending in very short, obtuse teeth. Petals narrowly ovate, 5—10 mm × 4—6 mm, subobtuse, submucronate, glabrous, veined. Stamens equal; filaments 5—6 mm long, with subulate, S-shaped, 5—7 mm long anthers, opening by a single pore, whose connective is hardly produced, dorsally ending in a small, obtuse spur, ventrally ending in two horizontal, 1 mm long lobes. Top part of the ovary short but cylindrical, glabrous; style cylindrical, narrowed to the top, curved, 7—8 mm long. Berry cylindrical, contracted at the top, 6—8 mm long, red; stalk 6—7 mm long.

Observ: Forming with some other allied species a group of plants, of which the members are very difficult to distinguish, as they are mostly based on dubious characters. Closely allied to M. Teysmanni Miq., but differing a.o. by its whorled leaves, which are not decurrent at the base and subauriculate, and by the presence of

bracts. Specimens with large bracts form a transition to M. magnifica Lindl., but they are much smaller than those of M. magnifica Lindl. Forms with opposite leaves are a transition to M. intermedia Bl.

Distribution.

SUMATRA. West Coast: G. Merapi, 1200 m (Bünnemeyer nr. 4480 [BZ], L, U, fl. Sept.); Ajer Mantjoer near Padang, 360 m (Beccari nr. 511, L); idem (idem nr. 799, L, fl. Aug.). Benkoelen: G. Dempo, 1500 m (Forbes nr. 2320 [BZ], L); Liwa (de Voogd nr. 123 [BZ], L, fl. Febr.; v.n. laloeti).

JAVA. Batavia. G. Salak (Junghuhn s.n. L; v.n. harèndong besar); idem, 900 m (Lam nr. 2201 [BZ], L, fl. May); Tjiapoes, G. Salak, 600—850 (Schiffner nr. 2303, L, fl. Jan.); Tjiapoes kètjil, G. Salak (? Korthals s.n. L, typus, sub Melastoma eximium Jack; v.n. harendong dioek); Bobodjong, G. Salak (Koorders nr. 24252β [BZ], L, fl. Sept.). Preanger Regencies: Tjibodas (Boerlage s.n. L, fl. June); G. Bèsèr, S. of Tjibèbèr, 1000 m (Backer nr. 22853 [BZ], L, fl. Sept.); idem, 1200 m (Winckel s.n. [BZ], L, fl. May; harèndong bokor); Poentjak gedeh, G. Malabar (Monterie nr. 12 [BZ], L; v.n. harèndong). Semarang: Paridjojo, G. Oengaran, 1000—1500 m [or the locality may also be „G. Wajang, 2000 m" as has been written on a label] (Junghuhn s.n. L, fl. Apr.). Pasoeroean: Nongko Djadjar, G. Tengger, 1200 m (Buysman nr. 220, U). Locality unknown: (Junghuhn s.n. L); (de Vriese s.n. L; v.n. harèndong areuj mèra); (Reinwardt s.n. L); (Korthals s.n. L); (collector unknown, L)

BALI: G. Pala, 520 m (Sarip nr. 271 [BZ], L, fr. Sept.); G. Patas, 930 m (Sarip nr. 489 [BZ], L, fr. Nov.).

LOMBOK: Sankarèang, G. Rindjani, 700—1700 m (Elbert nr. 2259, L, fr. June); Sankarèang – Tai Manoek, G. Rindjani, Casuarina forest, 2000—2200 m (idem nr. 2296, L, fl. June); Kèmbarrè-Kèmbang, G. Rindjani, 750—1250 m (idem nr. 2121, L, ster.); Plambi, calcareous soil, 200—400 m (idem nr. 2436, L, fl. July).

MOLUCCAS. Ceram: N. of Melila, 550—750 m (Rutten nr. 1632 [BZ], L, U, fl. Aug.). Locality unknown (and doubtful). (de Vriese s.n. L); (Waitz s.n. L; on the label has been written „harèndong kadakka", which is a Sundanese word).

FURTHER DISTRIBUTION: Malay Peninsula, Penang.

11. **Medinilla engganensis Bakh. f.** spec. nov.

Frutex? Rami tereti minutissime verrucosi, axilla foliorum setis 5 mm longis obtecta. Folia ternata obovata 13.5—22 cm × 6.5—9.5cm basi acuta apice acuminata coriacea glabra 5-plinervia venulis transversis haud conspicuis, sessilia vel subsessilia. Inflorescentia paniculata terminalis 11 cm longa multiflora; pedunculus compresso-quadrangularis 5—5.5 cm longus glaber; rami oppositi, in parte inferiori subfurfuracei. Flores 5-meri. Bracteae obovatae-lanceolatae 10—12 mm × 3—6 mm acutissimae glabrae 3-nerviae. Bracteolae minutae. Pedicellus 6—8 mm longus. Calycis tubus campanulatus 3—4 mm longus costatus glaber; limbo truncato subintegro. Petala (ante anthesin) late ovata 6 m × 6 m obtusiuscula reticulata purpurea. Stamina aequalia, filamentis 3—3.5 mm longis, antheris

linearibus 4 mm longis 1-poris, connectivo non producto, dorso in calcarem minutum exeunte, in parte ventrali in lobos duos angustos exeunte. Stylus 7 mm longus. Bacca subglobosa 6—7 mm longa primo purpurea deinde nigra. Pedicellus 6—8 mm longus. Semina punctata.

Distribution: endemic.

P. ENGGANO (W. of Sumatra): 100 m (Lütjeharms nr. 4469, L, typus, fl. June; v.n. simbaoe doerô).

12. **Medinilla ternatensis Miq.** Miquel in Ann. Mus. Bot. Lugd. Bat. I (1863) p. 217; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 591; *Medinilla speciosa Bl.*; Koorders-Schumacher, Syst. Verz. III Celebes (1914) p. 97.

Perhaps a shrub. Branches subterete and striate or quadrangular, pulvinate, the leaf axils provided with 2—4 mm long, stiff hairs. Leaves ternate, oblong or lanceolate, 8—11 cm × 2.5—5 cm, at the base acute, at the top very acute or shortly acuminate, entire, coriaceous, glabrous, when dry the upperside yellow-green and the underside pale-brown, 5-plinerved, cross-venules hardly conspicuous, subsessile. Inflorescence a few-flowered, terminal panicle, 6 cm long; peduncle 3—4.5 cm long, subterete, striate; ramifications of the first order ternate. Flowers 4-merous (material incomplete). Bracts lanceolate, 3 mm × 0.5 mm, deciduous. Pedicel 2—3 mm long. Calyx tube campanulate, 3—3.5 mm long, glabrous; limb consisting of broad, undulate, truncate lobes. Petals (before anthesis) broadly ovate, obtuse. Stamens equal; filaments short; anthers linear, 4 mm long, straight, curved at the base, opening by a single pore; connective not produced, dorsally ending in a minute spur, ventrally ending in two short lobes. Top part of the ovary swollen. Berry subglobose, 3—3.5 mm long, provided with the persistent, patent calyx limb; stalk 3—6 mm long.

Observ: Only incomplete material could be studied. This species is allied to M. speciosa Bl., but differing a.o. by its entirely different habit.

Distribution: restricted to the localities quoted below.

CELEBES. Manado: Minahassa, 1300—1400 m (Koorders nr. 17857β [BZ], L, fl. Jan.); idem (idem nr. 17859β [BZ], L, fl. May).
MOLUCCAS. Ternate: (Teysmann s.n. U, typus).

13. **Medinilla muricata Bl.** Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 20; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 543; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122;

Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 579.

Perhaps a shrub? Branches slender, terete, glabrous, the leaf axils provided with up to 2 mm long, stiff hairs. Leaves opposite, oblong-cordate, 10—11 cm × 4.5—5 cm, very long and narrowly acuminate, entire, glabrous, somewhat shining, 7- or 9-plinerved, the 4—6 lowest nerves closely together, cross-venules hardly conspicuous. Inflorescence, according to Blume, axillary, few-flowered; peduncle very short. Flowers 4-merous. Pedicel present. Calyx tube globose, at the top contracted; limb very short, ending in obtuse, mucronate teeth. Petals lanceolate, acute, small. Stamens subequal; filaments present; anthers narrowly oblong, opening by a single pore; connective not produced, dorsally ending in a minute spur, ventrally ending in two very short and truncate appendages. Berry pea-shaped, 3—4 mm long, provided with the persistent calyx limb; stalk 4 mm long. Seeds punctate.

Observ: As the flowers are incomplete, the description is for the greater part cited according to Blume.

Distribution: endemic.

SUMATRA. Locality unknown: (Korthals s.n. L, typus); (idem s.n. L, sub Melastoma confertum Korth.).

14. **Medinilla warica Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 118, 129; idem in Nova Guinea XIV livr. II (1927) p. 206.

Shrub. Branches terete, glabrous, pulvinate, the leaf axils provided with stiff hairs, which are either glabrous or stellately furfuraceous. Leaves opposite, lanceolate or, rarely, according to Mansfeld, elliptic, 13.5—19 cm × 5.5—6.5 cm, at the base cuneate, at the top acute, entire, glabrous, 5- or 7-plinerved, cross-venules on the upperside distinct or absent, on the underside hardly conspicuous. Petiole 6—12 mm long, glabrous. Inflorescence a many-flowered, terminal panicle, 32 cm long; peduncle 14 cm long, terete, stellate-furfuraceous; ramifications stellate-furfuraceous. Flowers 4-merous. Bracts lanceolate, 3—5 mm × 1 mm, stellate-furfuraceous. Pedicel 4—5mm long, stellate-furfuraceous. Calyx tube campanulate, 2—3 mm long, stellate-furfuraceous; limb broad and patent, consisting of obtuse teeth. Petals oblong, 7 mm × 3 mm, subacute, veined, (according to Feuilletau de Bruyn) red-purple. Stamens equal, with 2.5 mm long filaments and with linear, 2—3 mm long, rostrate, curved anthers, opening by a single pore, whose connective is not produced, dorsally ending in a short spur, ventrally ending in two lobes. Top part of the ovary swollen; style 6—7 mm long. Young berry subglobose,

3—4 mm long, provided with the persistent calyx limb; stalk 8 mm long.

Observ: Allied to M. longifolia Cogn., but differing a.o. by its terete branches and stellate-furfuraceous stiff hairs occurring in the leaf axils. The materials from the Cycloop Mts. differ from the type specimen by their 7-plinerved leaves and by the absence of cross-venules on them.

Distribution: restricted to the localities quoted below.

NEW GUINEA. Northern Part: Cycloop Mts., 1700 m (Gjellerup nr. 536 [BZ], L, fr. June). P. Biak: Wari, coral coast. (Feuilletau de Bruyn nr. 388, type, dupl. in [BZ], L, fl. Sept.).

15. **Medinilla angusto-acuminata Bakh. f.** spec. nov.

Frutex. Rami adulti teretiusculi, juniores compresso-quadrangulares, glabri; axilla foliorum setis 1 mm longis vestita. Folia opposita late oblonga 11 cm × 5 cm basi rotundato-cuneata apice attenuata longe anguste acuminata subpulverulenta integra 7-plinervia, nervis basi approximatis, venulis transversis distinctis. Petiolus 4—6 mm longus. Inflorescentia ignota. Flores 5-meri. Pedicellus 3—5 mm longus quadrangularis verruculosus. Calycis tubus subglobosus 2—2.5 mm longus glaber; limbus undulato-cyathiformis 1 mm altus. Petala ovata 5.5 mm × 4 mm acuta venulata alba. Stamina aequalia, filamentis 2.5 mm longis, antheris linearibus 2 mm longis acutis, connectivo non producto, dorso in calcarem 1 mm longum exeunte, in parte ventrali in lobos duos exeunte. Stylus 3.5 mm longus.

Distribution: endemic.

NEW GUINEA. Southern Part: Hellwig Mts., 1350—1600 m (von Römer nr. 1149, L, typus, dupl. in [BZ], fl. Nov.).

16. **Medinilla intermedia Bl.** Blume in Flora XIV (1831) p. 516 and in Bijdr. Nat. Wet. VI (1831) p. 257; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 539; Triana in l.c. (1871) p. 87; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 597; Koorders, Exkurs. Flora Java II (1912) p. 697; Hallier in Meded. Rijks Herb. Leiden nr. 12 (1912) p. 28; Backer, Manuscr. Fl. Java, Melast. (1941) p. 24.

Shrub, 1.5—3 m high. Adult branches terete or subquadrangular, the younger ones obtusely quadrangular, glabrous; the leaf axils provided with about 5 mm long, stiff hairs. Leaves opposite, slightly unequal, elliptic, oblong or lanceolate, 16—19 cm × 4.5—8 cm, at the base obtuse-truncate, at the top acuminate or, rarely, acute, entire, glabrous, 5-plinerved, sometimes with 2 faint marginal nerves, the 3 central nerves only confluent at the top, arising at most 3 cm above the base

of the lamina, cross-venules absent or hardly conspicuous. Petiole short, robust. Inflorescence a many-flowered (50 flowers or more), terminal or, rarely, axillary panicle, 13—20 cm long; peduncle 7—10 cm long, terete, glabrous; ramifications verticillate, often dichotomous. Flowers 4-merous. Pedicel 2—3 mm long. Calyx tube campanulate, 3 mm long, slightly grooved, glabrous; limb very short, ending in short, obtuse teeth. Petals broadly ovate, 4—5 mm × 2—3 mm, hardly veined. Stamens equal; filaments 3 mm long; anthers linear, 4—5 mm long, decurrent at the top, slightly curved, opening by a single pore; connective not produced, dorsally ending in a small spur, ventrally ending in two subulate appendages. Toppart of the ovary conical; style 3.5 mm long, club-shaped. Berry cylindrical, contracted at the top, 5—6 mm long; stalk 3—4 mm long.

Observ: Allied to M. speciosa Bl., differing a.o. by its petiolate, smaller leaves.

Distribution: endemic.

JAVA. Bantam: Tjihanjawar. (Kuhl and van Hasselt s.n. L, typus). Soerakarta: G. Merapi. (Junghuhn s.n. L, U, fl. Apr.). Madioen: Djogolaran, G. Lawoe, 1200—1400 m (Elbert nr. 191, L, fl. Nov.). Locality unknown: (Blume s.n. L); (de Vriese s.n. L); (? Forbes nr. 246, L).

var. **Sieboldiana (Planch.) Bakh. f.** comb. nov.

Medinilla Siebold(t)iana Planch. in Flore des Serres V (1849) tab. 482; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 540; Triana in l.c. (1871) p. 87; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 596; Koorders, Exkurs. Flora Java II (1912) p. 697; Bailey in Stand. Cycl. Hortic. III (1937) p. 2021; Backer, Manuscr. Fl. Java, Melast. (1941) p. 24; *Melastoma eximum Siebold*, Catal.

Shrub. Branches subterete or subquadrangular, glabrous; the leaf axils minutely setose. Leaves opposite, obovate, obovate-oblong or lanceolate, 9.5—15 cm × 5—7 cm, at the base decurrent and acute, shortly acuminate, entire, glabrous, 5- or 7-plinerved, the central nerves prominent, cross-venules absent or hardly conspicuous. Petiole up to 1 cm long, slender, flattened, glabrous. Inflorescence an axillary panicle, 7—20 cm long; peduncle 5—5.5 cm long; ramifications quaternate. Flowers 4-merous. Pedicel 5—6 mm long. Calyx tube 5—6 mm long; limb truncate and erose or nearly entire. Petals obovate or elliptic, 12 mm × 8 mm, obtuse, veined. Stamens equal; filaments 5—6 mm long; anthers 5—6 mm long. Style 7 mm long. Berry subglobose, 5 mm long, provided with the widened, patent, erose calyx limb; stalk 4—5 mm long.

Observ: Differing from the type species by its decurrent and acute leaf base and by its erose calyx limb.

Distribution: restricted to the localities quoted below.

SUMATRA. Atjeh: G. Pagarang, Gajoe Loeas (van Daalen nr. 60*, L, fl. Febr.).
JAVA. Preanger Regencies: Tjipětir, (de Monchy s.n. [BZ], L, fl. May). Kediri: Sarangan, G. Lawoe, 1600 m (collector unknown [BZ], PAS, fr. Nov.; v.n. djalimampan).
MOLUCCAS. Ceram: Ora Mts. (Stresemann nr. 8, L, fl. May). Locality unknown: (according to Planchon in l.c.).

17. **Medinilla aggregata Bakh. f.** spec. nov.

Frutex. Rami acute alato-quadrangulares glabri; axilla foliorum setis vestita. Folia opposita oblonga 23—40 cm × 11—15 cm basi acuta auriculata apice acuta integra glabra 5-plinervia venulis transversis haud conspicuis sessilia. Inflorescentia fasciculata axillaris compacta multiflora ad 3 cm longa; pedunculus ad 1 cm longus quadrangularis; rami quaternati vel verticillati compacti. Flores 5-meri. Bracteae bracteolaeque subulatae ad 1 mm longae. Pedicellus 10—12 mm longus. Calycis tubus 3—4 mm longus glaber; limbus cupuliformis 1 mm altus. Petala obovata 5 mm × 3 mm alba. Stamina aequalia, filamentis 3 mm longis, antheris lineari-triangularibus 3 mm longis acutis violaceis, connectivo non producto, dorso in calcarem triangularem rectum exeunte, in parte ventrali in lobos duos parvos exeunte. Stylus 6 mm longus. Bacca globosa 4 mm longa, calycis limbo persistente munita; pedicellus 13—17 mm longus. Semina punctata.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Samarinda: Sei Boengaloen. (Rutten nr. 581, U, typus, buds Nov.).

18. **Medinilla longifolia Cogn.** Cogniaux in l.c. (1891) p. 597; idem in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 535 [nomen]; Baker f. in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 56; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 128; idem in Nova Guinea XIV livr. II (1927) p. 206.

Perhaps a shrub. Branches quadrangular, alate, glabrous; the leaf axils provided with up to 2 cm long, stiff hairs. Leaves opposite, lanceolate, 20—35 cm × 4.5—9.5 cm, at the base obtuse or subauriculate, at the top decurrent and acute, entire, glabrous, 5-plinerved, cross-venules hardly conspicuous, sessile or subsessile. Inflorescence a many-flowered, axillary panicle, 10 cm long; peduncle 7 cm long, subterete, glabrous; ramifications quaternate or verticillate. Flowers 4-merous. Bracts minute or absent. Pedicel 3 mm long. Calyx tube 3—5 mm long; limb truncate. Petals obovate,

5 mm × 3 mm, slightly veined. Stamens equal; filaments 2—2.5 mm long; anthers linear, 2.5—3 mm long, rostrate, opening by a single pore; connective not produced, dorsally ending in a very short spur, ventrally ending in two distinct lobes. Style 5 mm long. Berry globose, 5—6 mm long; stalk 5—10 mm long. Seeds smooth.

Observ: Differing from allied species a.o. by its long, lanceolate leaves.

Distribution: endemic.

NEW GUINEA. Western Part: Etna Bay. (New Guinea Exped. Koch, 1904—1905, nr. 26, L); Ramoi and Andai (vide Cogniaux in l.c.). Northern Part: Siriwo river (Janowsky nr. 117 [BZ], L, fl. July); Legarei river (idem nr. 38 [BZ], L, fl. Sept.); locality unknown (Atasrip nr. 28, L). Central Part: „Canoe Camp", Carstens Mts., 50 m (Wollaston Exped.; according to Baker f. in l.c.).

19. **Medinilla schraderbergensis Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 126, 127.

Epiphytic shrub. Branches quadrangular, alate, glabrous, pulvinate; the leaf axils densely provided with filiform, up to 12 mm long, stiff hairs. Leaves opposite, equal or subequal, ovate-oblong or ovate-lanceolate, 5—9 cm × 2—3.5 cm, at the base acute, at the top long acuminate, entire, on the upperside glabrous and pale-green when dry, on the underside stellate-furfuraceous and yellowish when dry, 5- or 7-subplinerved, cross-venules only on the underside distinct. Petiole 7—15 mm long, subfurfuraceous. Inflorescence a few-flowered, terminal panicle, 7—18 cm long; peduncle 2.5—7 cm long, subquadrangular; ramifications furfuraceous. Flowers 5-merous. Bracteoles subulate, minute. Pedicel 3—8 mm long. Calyx tube 3—4 mm long, verruculose; limb minutely 5-dentate. Petals (before anthesis) broadly ovate, 5 mm × 3—3.5 mm, (when adult, according to Mansfeld 13 mm long), subacute, slightly veined, white. Stamens equal; filaments 5 mm long; anthers ovate-lanceolate, 3—4 mm long, opening by a single pore; connective not produced, dorsally ending in an uncinate spur, ventrally inappendiculate. Style (in the bud) 4 mm long (when adult, according to Mansfeld 8 mm long).

Distribution: endemic.

NEW GUINEA. Southern Part: Hellwig Mts., 1350—1600 m (von Römer nr. 1104 [BZ], L, fl. Nov.). North Eastern Part: (according to Mansfeld in l.c.).

20. **Medinilla rhodorhachis Baker f.** Baker f. in Gibbs, Contr. Flor. Arfak Mts. (1917) p. 216; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 128.

Perhaps a shrub? Branches quadrangular, shortly alate, glabrous; the leaf axils provided with up to 1.5 cm long, stiff hairs. Leaves opposite, elliptic-oblong, 23—28 cm × 8.5—13 cm, at the base subcordate, at the top shortly acuminate, entire, glabrous, 5- or 7-subplinerved, the upper pair of nerves only confluent at the top, crossvenules distinct, sessile. Inflorescence a few-flowered, terminal panicle, 12 cm long; peduncle 7 cm long, quadrangular, glabrous; ramifications ternate. Flowers 4-merous. Bracts 3 mm × 1 mm. Pedicel 3—4 mm long. Calyx tube at the base subglobose, widened at the top, 2 mm long, glabrous; limb subtruncate .Petals narrowly obovate, 4—6 mm × 2.5—3.5 mm, at the base unguiculate, at the top obtuse, slightly veined, white. Stamens equal; filaments 3.5 mm long; anthers narrowly triangular, 2—2.5 mm long, shortly rostrate, opening by a single pore; connective not produced, dorsally ending in a very short spur, ventrally ending in two narrowly triangular lobes. Style 6—7 mm long. Berry unknown.

Observ: Allied to M. speciosa Bl. and M. Teysmanni Miq.

Distribution: endemic.

NEW GUINEA. P. Biak: (Gibbs nr. 6275, typus, dupl. in L); idem, on coral soil (Feuilletau de Bruyn nr. 385 [BZ], L, fl. Sept.).

21. **Medinilla Teysmanni Miq.** Miquel in Ann. Mus. Bot. Lugd.-Bat. I (1863) p. 217; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 593; Bailey in Stand. Cycl. Hortic. III (1937) p. 2021; Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 220.

Shrub. Branches quadrangular, alate or undulate-alate, glabrous; the leaf axils densely provided with up to 2 cm long, stiff hairs. Leaves opposite, obovate or ovate-oblong, 20—37 cm × 12—23 cm, at the base often broadly auriculate, at the top obtuse or subacute, entire, coriaceous, glabrous, 9- to 13-plinerved, nerves prominent and thick, sessile. Inflorescence a many-flowered, terminal, lax, divaricate panicle, at least 26 cm long; peduncle 7—16 cm long and up to 1 cm in diameter, quadrangular; ramifications robust, quaternate or verticillate. Flowers 5-merous. Bracts absent. Pedicel 7—14 mm long. Calyx tube 6—7 mm long, sulcate, glabrous; limb consisting of very short, obtuse teeth or nearly entire. Petals narrowly obovate, 10—18 mm × 5—7 mm, obtuse, veined. Stamens equal or unequal, isomorphous; filaments 5—6 mm long; anthers linear, 6—9 mm long, rostrate, curved, opening by a single pore; connective not produced, dorsally ending in a minute spur, ventrally ending in two up to 1.5 mm long lobes. Style slender, 10—15 mm long. Berry subglobose, 5—6 mm long; stalk 7—14 mm long.

Observ: not easily recognizable from M. speciosa Bl. when dry. It may be an ebracteate form with longer anthers.

Distribution.

CELEBES. Manado: Tondano. (Forsten s.n. L, fl. July); Minahassa, 500 m (Koorders nr. 17854β [BZ], L, fl. Febr.); locality unknown: (Teysmann s.n. L, typus, dupl. in U); idem (de Vriese s.n. L).

TALAUD ISLANDS. P. Karakelong: E. of Lobo, 30 m. (Lam nr. 2773, L, fr. May).

MOLUCCAS. Boeroe: Nal' besi, 780 m (Toxopeus nr. 251 [BZ], L, fl. July). Ceram: Kaloa, 120 m (Rutten nr. 162 [BZ], L, fl. Sept.); Kaniki, 600—800 m (Kornassi nr. 1387 [BZ], L, U, fl. June); Wai Lantabi, 700 m. (idem nr. 1229 [BZ], L, fl. May). Tidore: (Reinwardt s.n. L).

FURTHER DISTRIBUTION: the Philippine Islands; its occurrence in New Guinea (vide Mansfeld in l.c.) is very doubtful, as all specimens from New Guinea I have studied, referred by Mansfeld to M. Teysmanni Miq., belong to other species.

22. **Medinilla Lorentziana Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 118, 128; idem in Nova Guinea XIV livr. II (1927) p. 206; *Medinilla Lorentziana Mansf.* var. *suffruticosa Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 128; idem in Nova Guinea XIV livr. II (1927) p. 206; *Medinilla Teysmanni Miq.*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 126 [pr. p.]; idem in Nova Guinea XIV livr. II (1927) p. 205. [pr. p.].

Shrub. Branches quadrangular, alate, minutely furfuraceous; the leaf axils provided with up to 1 cm long, stiff hairs. Leaves opposite, elliptic or oblong, 19—42 cm × 10—18 cm, at the base subcordate, at the top acute, entire, glabrous, 9-plinerved, cross-venules on the upperside distinct, on the underside hardly conspicuous, sessile. Inflorescence a many-flowered, terminal panicle, up to 30 cm long; peduncle 7—8.5 cm long, quadrangular; ramifications quaternate. Flowers 4-merous. Pedicel 2—3 mm long. Calyx tube 2—3 mm long, glabrous. Petals obovate, 7 mm × 3 mm, obtuse, pink. Stamens equal; filaments 2.5—4 mm long; anthers linear, 3—4 mm long, acute, opening by a single pore; connective not produced, dorsally ending in a short spur, ventrally ending in two mammiform lobes. Style 6—8 mm long. Berry globose, 3—4 mm long; stalk 6—8 mm long. Seeds punctate.

Observ: Allied to M. rhodorhachis Baker f.

Distribution: restricted to the localities quoted below.

MOLUCCAS. Ceram: N. of Kaniki, 600—800 m (Kornassi nr. 1387 [BZ], L, fl. June).

NEW GUINEA. Northern Part: Bonggo Mts. (Janowsky nr. 598 [BZ], L, fl. Jan.); Mamberamo river (Feuilletau de Bruyn nr. 152, L, fl. Oct.); „Pioniers bivak", Mamberamo river (Lam nr. 495 [BZ], L, fl. July); Gautier

Mts., 300 m (Gjellerup nr. 919 [BZ], L, fl. Nov.). Southern Part: „Papua rand", Lorentz river (von Römer nr. 425 [BZ], L, fr. Oct.); „Geluksheuvel", Lorentz river, 350 m (idem nr. 471 [BZ], L, fl. Oct.); „Alkmaar bivak", Lorentz river (Versteeg nr. 1520, type, dupl. in [BZ], L); „Zandvoort-Sabang", Lorentzriver (idem nr. 1325 [BZ], L, fl. June). North Eastern Part: (according to Mansfeld in l.c.).

23. **Medinilla napiformis Bakh. f.** spec. nov. *Medinilla Teysmanni Miq.*; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 126. [pr. p.]; idem in Nova Guinea XIV livr. II (1927) p. 205.

Frutex. Rami quadrangulares sinuato-alati minutissime verrucosi pulvinati, axilla foliorum setis ad 1 cm longis vestita. Folia opposita obovata vel obovato-oblonga 20—27 cm × 10—16 cm basi acuta et subauriculata apice acuta vel brevissime acuminata integra subtus laeviter leprosula 13- vel 15-plinervia quasi penninervia, venulis transversis haud conspicuis sessilia. Inflorescentia terminalis paniculata multiflora ad 12 cm longa; pedunculus 4—5.5 cm longus quadrangularis fusco-furfuraceus, in parte basali ramis ternatis vel quaternatis, axillis quorum barbatis. Flores 5-meri. Bracteae lanceolatae 1—2 mm longae. Pedicellus 3—5 mm longus. Calycis tubus napiformis 2—3 mm longus furfuraceus; limbus late undulato-cupularis 1 mm altus. Petala late ovata 6 mm × 5 mm acute mucronata furfuraceo-reticulata. Stamina aequalia, filamentis 3.—3.5 mm longis, antheris lineari-triangularibus 3 mm longis in parte apicali abrupte angustatis 1-poris, connectivo non producto, dorso calcarato, in parte ventrali in appendices duos lineares 1.5—2 mm longos exeunte. Ovarium in parte apicali disco coronatum; stylus 6—7 mm longus. Bacca subglobosa 4—5 mm longa; pedicellus 8—11 mm longus.

Observ: Allied to M. jabiensis Bakh. f.

Distribution: endemic.

New Guinea. Northern Part: Jabi Mts. (Janowsky nr. 324 [BZ], L, fl. May); idem (idem nr. 335 [BZ], L, fl. Sept.); Doorman river, 200 m (Lam nr. 1383, L, typus, dupl. in [BZ], fl. Sept.); idem, 350 m (idem nr. 1340 [BZ], L, fl. Sept.).

24. **Medinilla ceramensis Bakh. f.** spec. nov.

Frutex 1 m altus. Rami quadrangulares alati pulvinati glabri, axilla foliorum setis 7 mm longis vestita. Folia opposita saepe inaequalia lanceolata 13—22.5 cm × 3—7 cm basi acuta et auriculata, apice acuta integra glabra 9-plinervia venulis transversis haud conspicuis sessilia. Inflorescentia terminalis paniculata submultiflora 8—12 cm longa; pedunculus 4—5.5 cm longus quadrangularis sparse furfuraceus; rami graciles quaternati. Flores 5-meri. Bracteae lineares

ad 3 mm longae. Pedicellus 5—7 mm longus bibracteolatus. Calycis tubus 2.5—3 mm longus minutissime verrucosus; limbus truncatus. Petala ante anthesin late ovata 3—3.5 mm × 3 mm acuta. Stamina aequalia, filamentis aequilongis, antheris linearibus obtusiusculis 1-poris, connectivo non producto, dorse in appendicem latum ovatum exeunte, in parte ventrali in lobos duos parvos exeunte. Stylus glaber.

Distribution: endemic.

MOLUCCAS. Ceram: G. Moerkele, 1000—1900 m (Kornassi nr. 1462, L, typus, dupl. in [BZ]).

25. **Medinilla auriculata Lauterb.** Lauterbach in Schumann u. Lauterbach, Nachtr. Flor. Deutsch Schutzgeb. Südsee (1905) p. 328; Baker f. in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 56; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 127; idem in Nova Guinea XIV livr. II (1927) p. 205.

Epiphytic shrub. Branches terete, the young ones densely covered with rather short stiff hairs, which are densely provided with minute hairs, the adult ones glabrescent, auriculate-pulvinate; the leaf axils provided with up to 4 mm long stiff hairs. *) Leaves opposite, very unequal in the same pair; larger ones oblong or lanceolate, 13—19 cm × 5—7.5 cm, at the base rounded or acute, at the top shortly acuminate, margin minutely but obtusely dentate, on the upperside glabrous, on the underside on the nerves setulose, 7- or 9-plinerved, cross-venules absent or hardly conspicuous; petiole 4—8 mm long, terete, covered with minute stiff hairs; smaller leaves oblong, 7—11 cm × 4—8 cm, acuminate, 3-plinerved, subsessile. Inflorescence terminal or axillary. Flowers 5-merous. Bracts subulate, minute. Pedicel 3 mm long. Calyx tube subglobose, 3 mm long, fleshy, glabrous; limb consisting of 1 mm long teeth. Petals narrowly oblong, 5 mm long. Stamens equal; filaments present; anthers linear, 3 mm long, opening with 2 slits; connective not produced. Style 6 mm long. Berry purple (according to Baker f. in l.c.).

Observ: *) According to Mansfeld, who studied the original specimen, the leaves are not alternate, as Lauterbach in l.c. stated and moreover the inflorescences are terminal and axillary. I have no flowers seen. Details are cited from Lauterbach. This species is allied to M. Lauterbachiana Mansf.

Distribution: endemic.

NEW GUINEA. Central Part: Central Range, 420 m (Lam nr. 1412 [BZ], L, ster.) North Eastern Part: (according to Lauterbach in l.c.).

26. **Medinilla Mansfeldii Bakh. f.** spec. nov. *Medinilla Lauterbachiana Mansf.* (pr. p.; typo excl.) in Engl. Bot. Jahrb. 60 (1926) p. 127; idem in Nova Guinea XIV livr. II (1927) p. 205.

Frutex 1 m altus. Rami tereti auriculato-pulvinati glabri, axilla foliorum setis ad 3 mm longis vestita. Folia opposita valde inaequalia in eodem jugo; maiora oblonga vel lanceolata 12—15 cm × 5—6.5 cm basi acuta apice acuminata integra supra glabra subtus sparse leprosa 7- vel 9-plinervia venulis transversis distinctis; petiolus 2—2.5 cm longus glaber supra laeviter canaliculatus; folia minora cordata vel cordato-oblonga 1.5—2 cm × 1.2—1.7 cm glabra integra 5-nervia venulis transversis absentibus, sessilia vel subsessilia. Inflorescentia axillaris umbelliformis pauciflora ad 5 cm longa vel longior; pedunculus gracilis 3.5 cm longus. Flores 5-meri. Bracteae lanceolatae 3 mm × 1 mm glabrae. Bracteolae lineares 1 mm longis. Pedicellus 12 mm longus. Calycis tubus subglobosus 2—2.5 mm longus glaber; limbus cupuliformis dentatus, dentibus 1 mm longis. Petala obovata 10—12 mm × 5—6 mm rotundata venulata alba. Stamina aequalia, filamentis 3—4 mm longis, antheris lineari-triangularibus 3—4 mm longis rostratis 1-poris, connectivo non producto, dorso in calcarem angustum triangularem brevem exeunte, in parte ventrali in lobos duos angustos minutos exeunte. Stylus 7 mm longus. Bacca ignota.

Observ: Allied to M. Lauterbachiana Mansf., differing by the nervation of its leaves, its long and slender peduncle and much larger flowers. I have named this species in honour of Dr. R. Mansfeld. (Germany; Berlin-Dahlem).

Distribution: endemic.

NEW GUINEA. Southern Part: Perameles Mts., 1200 m (Pulle nr. 480, L, U, fl. Nov.); Dromedaris Mts., 1250 m (idem nr. 619, L, typus, fl. Dec.); „Bijenkorf bivak", Hellwig Mts., 1800 m (idem nr. 740 [BZ], L, ster.).

27. **Medinilla Lauterbachiana Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 117, 127 [pr. p.]; idem in Nova Guinea XIV livr. II (1927) p. 205. [pr. p.].

Shrub, 1 m high. Branches quadrangular, alate or undulate-alate, pulvinate, verrucose, pale; the leaf axils provided with filiform, up to 1 cm long, stiff hairs. Leaves opposite, very unequal in the same pair; larges ones oblong or lanceolate, 14—18 cm × 5—8 cm, at the base acute, at the top acuminate, margin sinuate, glabrous, 9-plinerved, nerves on the underside prominent, cross-venules on the upperside hardly conspicuous, on the underside absent; petiole 4—12 mm long, on the upperside grooved; smaller leaves elliptic or oblong, 0.8—5 cm × 0.7—2.5 cm, glabrous, 5-plinerved; petiole

up to 5 mm long. Inflorescences terminal or axillary, at most 20-flowered umbels, up to 3 cm long; peduncle 1—2 cm long, ribbed; ramifications in whorls of 8 or more. Flowers 5-merous. Bracts many together, linear, 3—4.5 mm × 0.5—1 mm. Pedicel 2.5—3 mm long, leprose. Calyx tube 2.5—3 mm long, leprose; limb ending in narrowly triangular, 1—1.5 m long, acute teeth. Petals broadly obovate, 6 mm × 6 mm distinctly veined, white. Stamens equal; filaments 5 mm long; anthers linear 3—4 mm long, subrostrate, opening by a single pore; connective not produced, strongly thickened between the thecae, dorsally ending in a distinct but minute spur, ventrally ending in two lobes. Style 7—8 mm long; stigma capitate. Berry globose, 4—5 mm long, provided with the persistent calyx limb; stalk 8—10 mm long. Seeds smooth.

Observ: Together with M. auriculata Baker f. and M. Mansfeldii Bakh. f., belonging to a remarkable group, characterized by the very unequal, opposite leaves.

Distribution: restricted to the localities quoted below.

MOLUCCAS. Ceram: N. of Laimoe, 100—500 m (Rutten nr. 353 [BZ] L, fl. Oct.).

NEW GUINEA. Western Part: locality unknown. (Atasrip nr. 204, L). Southern Part: „Papua rand", Lorentz river (von Römer nr. 424 [BZ], L, fl. Oct.); Lorentz river (idem nr. 437 [BZ], L, fl. Oct.); „Nepenthes heuvel", Lorentz river (Versteeg nr. 1313 [BZ], L, fr. June); „Alkmaar bivak", Lorentz river (idem nr. 1361, type, dupl. in [BZ], L, fl. July).

28. **Medinilla barbata Bakh. f.** spec. nov.

Radicans. Rhizoma quadrangularis setis ad 7 mm longis dense vestita. Folia alterna lanceolata 35—39 cm × 10—11.5 cm basi apiceque attenuata et acutissima integra supra glabra subtus praecipue ad nervos ferrugineo-pilosella 7-plinervia nervis valde remotis, venulis transversis distinctis reticulata. Petiolus 11.5—14 cm longus quadrangularis multistriatus ferrugineo-pilosellus. Inflorescentia et flores mihi ignoti. Bacca immatura cylindrica apice dilatata 4—5 mm longa basi acuta medio subinflata setis ad 2 mm longis rubris dense vestita.

Observ: A remarkable form, allied to M. alternifolia Bl., but differing a.o. by the hairy calyx tube and underside of the leaves.

Distribution: endemic.

NEW GUINEA. Northern Part: „Pioniers bivak", Mamberamo river, 60 m (Lam nr. 663, L, typus, dupl. in [BZ], fr. July).

29. **Medinilla alternifolia Bl.** Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 19; Naudin in l.c. XV (1851) p. 29; Miquel, l.c. (1855) p. 544; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 123;

Triana in l.c. (1871) p. 89; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 591.

Creeping. Rhizome subterete or subquadrangular, glabrous. Leaves alternate or, very rarely, also at the same rhizome opposite, ovate-oblong, 18—23 cm × 6—13 cm, at the base subacute or rounded, at the top acute or shortly acuminate, entire, glabrous, 5- or 7-plinerved, nerves arising very close together, cross-venules distinct. Petiole 7—15 cm long, subterete. Inflorescence an axillary, at least 10-flowered fascicle; peduncle but a few mm long. Flowers 4-merous. Bracts absent. Pedicel 12 mm long. Calyx tube 4 mm long, at the base acute, glabrous, reddish-brown when dry; limb truncate, entire. Petals obovate, 5 mm × 3 mm, long and narrowly acuminate, veinless. Stamens equal; filaments 3—3.5 mm long; anthers linear, 4—5 mm long, abruptly rostrate; thecae reticulate; connective not produced, dorsally ending in a narrowly triangular, 1.5 mm long spur, ventrally inappendiculate. Style 8.5 mm long. Unripe berry tubular, widened at the top, 5—7 mm long.

Observ: Forming with some allied species, a remarkable group, characterized by its alternate leaves and creeping habit. Blume considered the plant belonging to a distinct section, Heteroblemma, but I do not maintain this subdivision, because of the inconstancy of its characters.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: G. Koerintji, swamp forest. (Blume s.n. L). Djambi: Sei Mengopeh, 50 m (Rutten-Kooistra nr. 78, U, fl. Sept.). Exact locality unknown: „Pasir Gontang" [= ? Pasir Ganting] (Blume s.n. L, typus).

P. SIMEULOEË: (Achmad nr. 355 [BZ], L, fl. Apr.; v.n. olor lawang dotan).

MENTAWAI ISLANDS. P. Siberoet: (Iboet nr. 82 [BZ], L, fl. Sept.; v.n. ngara-ngarad).

30. **Medinilla bisetosa Bakh. f.** spec. nov. *Medinilla alternifolia Bl.*; Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 40.

Frutex radicans. Rhizoma obtuso-quadrangularis glaberrima. Folia alterna oblongo-lanceolata 8—11.5 cm × 4—5 cm basi acuta apice anguste acuminata coriacea glaberrima 7-plinervia venulis transversis haud conspicuis vel absentibus. Flores ante anthesin solum vidi, solitarii in axillis foliorum, 4-meri; pedunculus ad 1 cm longus teretiusculus substriatus glaber. Bracteae absentes. Pedicellus presens. Calycis tubus cylindricus apice dilatata 4—5 mm longus crassus glaber; limbus dentatus. Petala ovata acuta crassa alba. Stamina aequalia, filamentis presentibus, antheris lineari-triangulari-

bus reticulatis 1-poris, connectivo non producto, dorso in calcarem longum exeunte, in parte ventrali in appendices duos lineares longos exeunte. Stylus filiformis.

Observ: Allied to M. alternifolia Bl.

Distribution: endemic.

SUMATRA. West Coast: G. Talang, Laras Talang, 1300 m (Bünnemeyer nr. 5662, L, typus, dupl. in [BZ], fl. Nov.).

31. **Medinilla Clarkei King** King in Journ. As. Soc. Bengal LXIX part. II (1901) p. 63; *Medinilla rosea Gaud.*; Clarke in Hook. f., Flor. Brit. India II (1879) p. 547.

Epiphytic shrub. Branches subterete, verrucose, the leaf axils provided with a cushion of minute, dark brown hairs. Leaves quaternate, elliptic or obovate, 4.5—10.5 cm × 2.5—5 cm, at the base acute or rounded, at the top acute or obtuse, entire, glabrous, 5-plinerved, cross-venules hardly conspicuous or absent. Petiole 1.5—2.5 cm long, subterete or flattened, minutely verrucose. Inflorescence axillary, at most 20-flowered, up to 8 cm long; peduncle slender, 2—5.5 cm long, subterete, furfuraceous; ramifications ternate or quaternate or, rarely, verticillate. Flowers 5-merous. Bracts and bracteoles linear, 0.5—2 mm long, glabrous. Pedicel 6—9 mm long, bibracteolate. Calyx tube, 3—5 mm long, glabrous; limb truncate, entire. Petals broadly ovate, 9 mm × 7 mm, obtuse, veined. Stamens equal; filaments 3—3.5 mm long; anthers narrowly triangular, 3—3.5 mm long, acute, opening by a single pore; connective not produced, dorsally ending in a very short spur or spur absent, ventrally ending in two minute lobes. Style 5 mm long. Berry unknown to me.

Distribution.

SUMATRA. Atjeh: G. Pagarang, Gajoe Loeas. (Pringo Atmodjo nr. 60, L, fl. Febr.). West Coast: G. Singgalang, 2300 m (Bünnemeyer nr. 2877 [BZ], L, fl. Jan.). East Coast: Sibaulangit, G. Sibajak, 1600 m (Lörzing nr. 6144 [BZ], L, fl. Sept.); idem, 2000 m (idem nr. 5996 [BZ], L, fl. Aug.); locality unknown. (Yates nr. 1493, L).

FURTHER DISTRIBUTION: Malay Peninsula.

32. **Medinilla varingoidea Bakh. f.** spec. nov.

An frutex? Rami teretiusculi verrucosi, axilla foliorum glabra. Folia ternata vel opposita lanceolata 3—7 cm × 1—2.5 cm basi acutiuscula apice breviter obtuso-acuminata integra glabra 5-plinervia venulis transversis supra subdistinctis subtus absentibus. Petiolus 3—6 mm longus glaber. Inflorescentia axillaris paniculata 10—20 flores gerens, ad 6 cm longa; pedunculus 0.5—1.0 cm longus

compressiusculus furfuraceus glabrescens; rami quaternati vel infimi tantum oppositi robusti. Flores 5-meri. Bracteae lanceolatae 4 mm × 1 mm. Pedicellus 2.5—3 mm longus. Calycis tubus late campanulatus 3—4 mm longus glaber; limbus truncatus integerrimus. Petala obovata 6 mm × 3 mm acutiuscula. Stamina aequalia, filamentis 3 mm longis, antheris lineari-triangularibus 3—3.5 mm longis 1-poris, connectivo non producto, dorso in calcarem brevissimum exeunte, in parte ventrali in lobos duos minutos exeunte. Stylus 7 mm longus. Bacca ignota.

Distribution: endemic.

SUMATRA. West-Coast: Bt. Gombak, Laras Talang, 1800 m (Bünnemeyer nr. 5745 [BZ], L, fl. Nov.); idem, 2330 m (idem nr. 5741, L, typus, dupl. in [BZ], fl. Nov.).

33. **Medinilla hypericifolia (Bl.) Bl.** Blume in Flora XIV (1831) p. 513 and in Bijdr. Nat. Wet. VI (1831) p. 254; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Naudin in l.c. XV (1851) p. 294; Miquel, l.c. (1855) p. 547; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 577; Koorders, Exkurs. Flora Java II (1912) p. 696; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Koorders, Flora von Tjibodas (1918) p. 215; Backer, Manuscr. Fl. Java, Melast. (1941) p. 25; *Medinilla laurifolia (Bl.) Bl.*; Baker f. in Journ. Bot. LXIII Suppl. I (1924) p. 40; *Medinilla pallida Cogn.* in l.c. (1891) p. 577; *Melastoma hypericifolium Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1070; De Candolle, l.c. (1828) p. 148.

Epiphytic shrub. Branches terete, smooth or, rarely, verruculose; the leaf axils provided with a cushion of minute, ferrugineous, single hairs. Leaves opposite, often unequal at the same pair, ovate-oblong or ovate-lanceolate, 6—10 cm × 1.5—3 cm, at the base rounded or subcordate, at the top acute or acuminate, entire, glabrous, glaucous, 3-plinerved, the lateral nerves arising 5—10 mm above the base of the leaf, not reaching the top, cross-venules on the upperside more distinct than on the underside, sessile. Inflorescences axillary, umbelliform or paniculate, at most 10-flowered, up to 3 cm long; peduncle 1—2.5 cm long, glabrous. Flowers 4- or 5-merous. Bracts and bracteoles small, persistent. Pedicel 1.5—2 mm long, wide and flattened. Calyx tube 2—2.5 mm long, grooved, glabrous; limb ending in very short teeth. Petals broadly ovate, 2.5—3 mm × 2.5—3 mm, acute, glabrous, with distinct mid-vein, (according to Baker f. in l.c.) white. Stamens equal; filaments 1 mm long, wide and flattened; anthers narrowly cordate, 1.5 mm long, opening by a single pore; connective

not produced, dorsally ending in a minute spur, ventrally ending in two short lobes, strongly thickened between the thecae. Top part of the ovary conical, glabrous; style 3 mm long, cylindrical, narrowed towards the top. Berry 2.5—3.5 mm long, glabrous. Seeds 0.8 mm long, tuberculate.

Observ: differing from all allied species by its Eucalyptus-shaped leaves.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: G. Singgalang. (Beccari nr. 214, type of *M. pallida Cogn.*, dupl. in L). Benkoelen: Passoewah, G. Dempo, 1600 m (Forbes nr. 2295 [BZ], L). Locality unknown: (Forbes nr. 755 [or perhaps nr. 725], L).

JAVA. Batavia: along the Tjianten, W. of Leuwiliang. (Den Berger nr. 496 [BZ], L). Preanger Regencies: G. Tjikoerai. (Blume s.n. L). Locality unknown: (Blume s.n. L, typus); (Zollinger nr. 1501, L); (idem s.n. U); (de Vriese s.n. L); (collector unknown, L).

34. **Medinilla macrophylla Bl.** Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 19; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 546; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 123; Triana in l.c. (1871) p. 88; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 600; *Medinilla floribunda Cogn.* in l.c. (1891) p. 599.

Shrub. Branches subterete, sometimes the young ones are subquadrangular, verrucose, densely covered with minute, brown, patent, plumose hairs, glabrescent; the leaf axils bearing a cushion of minute hairs. Leaves opposite, elliptic or oblong, 10—22 cm × 5—13 cm, at the base cordate, at the top shortly acuminate, entire, on the upperside, when dry often glaucous, subglabrous or scattered with very small brown hairs, on the underside, especially on the nerves, densely brown leprose. Petiole 10—25 mm long, terete, densely covered with brown, small hairs. Inflorescence axillary, umbelliform, 2—3 cm long; peduncle 1—1.5 cm long, terete, covered with brown hairs; ramifications ternate or quaternate. Flowers 5-merous (according to Cogniaux 4-merous), only seen by me before anthesis. Bracts lanceolate or oblong, 2—3 mm × 1 mm. Pedicel 8 mm long. Petals obovate, unequal, acute (according to Cogniaux 4 mm long). Calyx tube 3 mm long, glabrous; limb consisting of very short teeth. Stamens equal; anthers linear. Berry cylindrical, contracted at the top, 5—7 mm long; stalk 5—11 mm long. Seeds slightly punctate.

Observ: The flowers which are at my disposal, are incomplete. The specimens seen by me, have 5-merous flowers. According to Cogniaux M. macrophylla Bl. has 4-merous flowers. Probably the

plant has 4- and 5-merous flowers. Allied to M. javanensis (Bl.) Bl. and M. verrucosa (Bl.) Bl., differing a.o. by its petiolate leaves.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: Ajer Mantjoer, near Padang, 360 m (Beccari nr. 747, type of *M. floribunda Cogn.*, dupl. in L). Locality unknown: (Korthals s.n. L, typus).

MOLUCCAS. Boeroe: Nal' besie, 880 m (Toxopeus nr. 218 [B], L fl. June).

35. **Medinilla verrucosa (Bl.) Bl.** Blume in Flora XIV (1831) p. 514 and in Bijdr. Nat. Wet. VI (1831) p. 254; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 548; Triana in l.c. (1871) p. 87; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 594; Koorders, Exkurs. Flora Java II (1912) p. 697; idem, Flora von Tjibodas (1918) p. 216 [if true!]; *Medinilla Bornensis Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 20; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 546; Triana in l.c. (1871) p. 88; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 599; *Medinilla javanensis Bl.*; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. XIII livr. I (1933) p. 48; *Medinilla javensis* (*haud Bl.*) *Herb. Korth.*; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 20 [nomen]; *Medinilla septuplinervia Cogn.* in l.c. (1891) p. 576; Ridley in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 61; *Medinilla sumatrana Baker f.* in Journ. Bot. LXII. Suppl. I (1924) p. 41; *Melastoma verrucosa Bl.*, Cat. Buitenzorg (1823) p. 71 [descr.]; idem, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1078; De Candolle, l.c. (1828) p. 146.

Shrub. Branches terete or, sometimes, the very young ones triangular or subquadrangular, verrucose, brown leprose, glabrescent; the leaf axils provided with a cushion of minute hairs. Leaves opposite, elliptic or oblong, 12—17 cm × 6.5—9 cm, at the base acute or cuneate, at the top narrowly acuminate, entire, on the upperside subglabrous, on the underside, especially on the nerves, brown leprose or ,rarely, subglabrous, 5- to 9-plinerved, the nerves on the underside prominent, cross-venules distinct, sessile or with a 8—14 mm long petiole. Inflorescence a many-flowered, axillary panicle, 6—30 cm long; peduncle 3.5—13 cm long, terete, brown leprose or, rarely, subglabrous; ramifications of the first order in whorls of 6 to 8 or more, densely but brown leprose. Flowers 5-merous. Bracts subulate, 1—2 mm long. Pedicel 6—10 mm long. Calyx tube broadly campanulate, 3—5 mm long, brown leprose, glabrescent; limb minutely dentate. Petals obovate or obovate-orbicular, 4—12 mm × 3—7 mm, obtuse, veined. Stamens equal; filaments 2.5 mm long; anthers 2—2.5 mm long, arcuate, acute, opening by a single pore; connective

not produced, dorsally ending in a distinct spur, ventrally ending in two small lobes. Style 4 mm long, slender.

Observ: Allied to M. javanensis (Bl.) Bl., which is entirely glabrous; M. verrucosa (Bl.) Bl. on the contrary is leprose in various parts; differing moreover by its exclusively axillary inflorescences and terete adult branches.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: G. Merapi, 1300 m (Bünnemeyer nr. 4582 [BZ], L, ster.); idem, 1600 m (idem nr. 4941 [BZ], L, fl. Sept.); idem, 1700 m (idem nr. 4695 [BZ], L, fl. Sept.); idem, 1900 m (idem nr. 5004 [BZ], L, fl. Sept.); G. Talakmau, 1900 m (idem nr. 907 [BZ], L, fl. May); G. Koerintji, 1800 m (idem nr. 9131 [BZ], L, fl. March); idem, 2000 m (idem nr. 10331 [BZ], L, fl. May); idem, 2200 m (idem nr. 9209 [BZ], L, fl. Apr.); G. Singgalang (Beccari nr. 10, type of *M. septuplinervia Cogn.*, dupl. in L); idem, 2300 m (Bünnemeyer nr. 2639 [BZ], L, fl. May); G. Talang, 1550 m (idem nr. 5177 [BZ], L, buds Oct.; v.n. asam bantai). East Coast: Brastagi, 1600 m (Beumée nr. 822 [BZ], L, buds Dec.); G. Sibajak, 1900 m (Lörzing nr. 8292 [BZ], L, buds Jan.); Sibaulangit, S.S.E. of G. Sibajak, 1600—1750 m (idem nr. 5975 [BZ], L, U, fl. Aug.). Benkoelen: G. Dempo, 2500 m (Forbes nr. 2414a, type of *M. sumatrana Baker f.*, dupl. in L).

JAVA. Batavia: Tjiapoes, G. Salak. (Blume s.n. L, typus, sub *Melastoma verrucosa Bl.*, fl. Sept.-Oct.); idem (Reinwardt s.n. L). Preanger Regencies: G. Perbakti, G. Salak, N.W. of Tjitjoeroeg, 1700 m (Bakhuizen van den Brink nr. 6606 [BZ], L, fl. Apr.). Locality unknown: (Blume s.n. L).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang. (Korthals s.n. L, type of *M. Bornensis Bl.*).

36. **Medinilla javanensis (Bl.) Bl.** Blume in Flora XIV (1831) p. 515 and in Bijdr. Nat. Wet. VI (1831) p. 256; Naudin in l.c. XV (1851) p. 291; Miquel, l.c. (1855) p. 546; Triana in l.c. (1871) p. 87; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 595; Kuntze, Revis. Gen. Plant. (1891) p. 247; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten Java] p. 189; Koorders in Nat. Tijdschr. Ned. Ind. LXIII. afl. I (1903) p. 47; idem, Exkurs. Flora Java II (1912) p. 697; Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 40; Hochreutiner in Candollea II (1925) p. 474; Merrill in Contr. Arnold Arb. Harvard Univ. VII (1934) p. 115; Bailey in Stand. Cyclop. Hortic. III (1937) p. 2021; *Medinilla javanensis (Bl.) Bl.* var. *majoriflora Hochr.* in Candollea II (1925) p. 474; *Medinilla javanensis (Bl.) Bl.* var. *petiolata Hochr.* in Candollea II (1925) p. 474; *Medinilla javanica [Bl.]*; Triana in l.c. (1871) p. 168, tab. VII, fig. 94a; *Medinilla Kuhlii Bl.* in Flora XIV (1831) p. 514 and in Bijdr. Nat. Wet. VI (1831) p. 255; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 548; Teysmann et Binnendijk ,Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 87; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891)

p. 594; Koorders, Exkurs. Flora Java II (1912) p. 697; *Medinilla verrucosa Baker f.* in Journ. Bot. LXII. Suppl. I (1924) p. 41; *Medinilla verrucosa (Bl.) Bl.*; Backer, Manuscr. Fl. Java, Melast. (1941) p. 23; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); ? *Melastoma alpestris Jack* in Trans. Linn. Soc. XIV (1825) p. 20 and tab. I, fig. 3; *Melastoma epidendra Reinw. ex Bl.*; Blume, Cat. Buitenzorg (1823) p. 70 [nomen]; idem in Flora XIV (1831) p. 515 [nomen]; *Melastoma javanense Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1078; De Candolle, l.c. (1828) p. 147.

Shrub, 2—6 m high. Young branches acutely quadrangular, verrucose or smooth, pallid; the leaf axils provided with a cushion of minute hairs. Leaves opposite, equal or, very rarely, subequal, elliptic, oblong or lanceolate, 5—24 cm × 3—10 cm, at the base subcordate, rounded or amplexicaul, at the top acute or acuminate, entire or, rarely, crenulate, glabrous, 5- or 7-plinerved, cross-venules distinct, sessile. Inflorescences terminal or, rarely, axillary, divaricate, many-flowered panicles, 9—27 cm long; peduncle 4—13 cm long, subquadrangular, glabrous; the lower ramifications of the first order ternate or quaternate or, rarely, opposite. Flowers 5-merous. Bracts oblong or lanceolate, 3—7 mm × 1—5 mm. Pedicel 4—5 mm long. Calyx tube 2—3.5 mm long, slightly 10-ribbed, glabrous; limb ending in obtuse, mucronate teeth. Petals narrowly obovate, 3—8mm × 2—5 mm, veined, red. Stamens equal; filaments 2—3 mm long, widened at the base; anthers linear, 2.5—3 mm long, shortly rostrate, curved, opening by a single pore; connective not produced, dorsally ending in a short spur, ventrally ending in two large, ovoid lobes. Top part of the ovary conical, slightly ribbed, glabrous; style 4—6mm long. Berry globose, 5—8 mm long, at first red, later on black-purple; stalk 5—8 mm long. Seeds punctate.

Observ: This species is often joined with M. verrucosa (Bl.) Bl., but it is by no means identic with it (see under M. verrucosa [Bl.]Bl.).

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: Brani, Agam, 850 m (Bünnemeyer nr. 3205 [BZ], L, fl. June); G. Talakmau, 2750 m (idem nr. 965a [BZ], L, fl. June). Benkoelen: G. Dempo, 1400 m (Jacobson nr. 440 [BZ], L, fl. Aug.); idem, 1550 m (Forbes nr. 2292a, type of *M. verrucosa Baker f.*, dupl. in L). Locality unknown: (Korthals s.n. L).

JAVA. Bantam: G. Gedeh. (Kuhl and van Hasselt s.n. L). Batavia: Tjiapoes, G. Salak. (Reinwardt s.n. L); idem, 1000—1600 m (Zollinger s.n. U). Preanger Regencies: G. Perbakti, G. Salak (Bakhuizen van den Brink fil. nr. 3716 [3722], U, fl. Apr.); idem (idem nr. 1314, U, fl. June); G. Bèsèr, 1100 m (Backer nr. 22973, L, fl. Sept.); P sir Gombong, Tjibèbèr, 1100 m (idem nr. 23019 [BZ], L, fl. Sept.); Tjibodas, G. Gede (Hallier nr. 47, and 47a [BZ], L); idem (Boerlage s.n. L, fl. June); idem (Sapiin nr. 26 [BZ], L); idem (de Monchy s.n. L, fl. May); idem, 1400 m (Raap nr. 665, G. L,

fl. July); idem, 1500 m (Pulle nr. 4006, U, fl. June); G. Gede, 1200—1400 m (F. Kramer nr. 172, PAS, fl. March; v.n. areuj harèndong); Tjibeureum, G. Pangerango, 2000 m (Schiffner nr. 2297, L, fl. May); Tjinjiroean (Schouten s.n. [BZ], L, U); Telaga Warna, G. Megamendoeng, 1400 m (Schiffner nr. 2205, L, fl. Jan.); Pasir Kohok, G. Boerangrang, 1300 m (Bakhuizen van den Brink nr. 4484 [BZ], L, fl. July); G. Boerangrang (collector unknown, L); Telaga Bodas (Junghuhn or Horsfield s.n. L, U); G. Windoe (Soegandiredja nr. 253 and 296 [BZ], L, fr. Apr.); G. Malabar, 1500 m (Pulle nr. 3183, U, fl. June); idem, 2000 m (Denker nr. 36 [BZ], L, fl. July); Tjikopo (Boerlage s.n. L, fl. June); Pangentjongan, 1600 m (Koorders nr. 40616β [BZ], L); above Warpada, G. Tjikorai, 1800 m (Backer nr. 5398 [BZ], L, U, fl. Nov.). Pekalongan: Petoeng Kriånån, 1500 m (Backer nr. 16028 [BZ], L, U, fr. Sept.). Semarang: Medinie, G. Oengarang, 1000—1300 m (Junghuhn s.n. L; v.n. laliean); idem, 1000—1600 m (idem s.n. U; v.n. „paritioto"). Pasoeroean: G. Tengger, 1500 m (Buysman s.n. U, fl. Jan.); Taroeb near Probolinggo (van Dillewijn s.n. PAS, fl. Oct.). Exact locality unknown: „Parang Serap. G. Gede". (collector unknown, L). Locality unknown: (Blume s.n. L, typus); (van Hasselt s.n. L, type of *M. Kuhlii Bl.*); (de Vriese s.n. L); (Junghuhn s.n. L); (Plant. Jungh. Ined. nr. 199, L); (Ploem s.n. [BZ], L); (collector unknown, L); (collector unknown, L; v.n. harèndong badak).

BALI: G. Pala, 970 m (Sarip nr. 316 [BZ], L, ster.).

37. **Medinilla malaboensis Bakh. f.** spec. nov.

An frutex? Rami teretiusculi dense verrucosi, axilla foliorum glabra. Folia opposita elliptica vel ovato-oblonga 9—11 cm × 5.5—5.8 cm basi obtusa apice breviter acuminata integra glabra 7-plinervia venulis transversis distinctis. Petiolus 2 cm longus teretiusculus dense verrucosus. Inflorescentia paniculata terminalis submultiflora 14 cm longa; pedunculus 6 cm longus teretiusculus verrucosus furfuraceus; rami infimi quaternati robusti furfuracei. Flores ignoti. Ovarium 5-loculare. Bacca subglobosa 5—6 mm longa laevis; pedicellus 10—22 mm longus. Semina 1 mm longa.

Observ: Allied to M. astronioides Cogn.

Distribution: endemic.

CELEBES. Gvt. Celebes and dependencies: G. Malabo. (Rachmat nr. 507, L, typus, fr. Aug.).

38 **Medinilla compacta Bakh. f.** spec. nov.

Frutex 2 m alta. Rami teretes vel teretiusculi verruculosi. axilla foliorum glabra. Folia opposita oblonga vel ovato-oblonga 20—26 cm × 9—11 cm basi subcuneata apice acute acuminata coriacea crenata utrinque farinosa 7-plinervia venulis transversis haud distinctis. Petiolus 15—20 mm longus. Inflorescentia fasciculata axillaris submultiflora ad 2 cm longa. Flores 4-meri. Pedicellus 10—12 mm longus. Calycis tubus subglobosus 1.5—2 mm longus verruculosus glaber; limbus cyathiformis patens. Petala lanceolata 6 mm ×

1.5—2 mm basi attenuata apice acuta extus sparse sed minutissime puberula rubra (Pulle). Stamina aequalia, filamentis 3 mm longis, antheris lineari-triangularibus 3 mm longis breviter rostratis 1-poris, connectivo non producto, dorso minute calcarato, in parte ventrali in lobos duos minutos exeunte. Stylus 7 mm longus. Bacca late ovoidea 4 mm longa calycis limbo persistente munita rubra; pedicellus 14 mm longus.

Distribution: endemic.

NEW GUINEA. Northern Part: Doorman top, 1420 m (Lam nr. 1443 [BZ], L, fl. Oct.); idem (idem nr. 1558, L, typus, fl. Oct.). Southern Part: Hellwig Mts. (Pulle nr. 824 [BZ], L, buds Dec.); idem (idem nr. 713 and 736 [BZ], L, fr. Dec.); idem, 1350 m (von Römer nr. 1032 [BZ], L fr. Nov.).

39. **Medinilla rubrifolia Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 116, 122; idem in Nova Guinea XIV livr. II (1927) p. 204.

Shrub, 1—1.5 m high, with tuberous roots; tubers (according to Lam) white. Branches terete, densely verrucose, glabrous; the leaf axils glabrous. Leaves oblong or lanceolate, 15—30 cm × 5.5—10 cm, at the base acute, at the top shortly acuminate, crenulate, on the upperside subglabrous or sparsely furfuraceous, green, on the underside on the nerves brown furfuraceous, crimson, 5- or 7-plinerved, cross-venules hardly conspicuous, sessile. Inflorescences few together, axillary; peduncle absent. Flowers 4-merous. Pedicel 8 mm long, red furfuraceous. Calyx tube 2.5—3 mm long, subfurfuraceous; limb subtruncate. Petals obovate, 5 mm × 3 mm, obtuse, veined, crimson. Stamens equal; filaments 3 mm long, white; anthers linear, 2—3 mm long, subobtuse, opening by a single pore, pale yellow; connective not produced, dorsally ending in a very short, thick spur, ventrally ending in two lobes. Style 5—6 mm long, red; stigma capitellate, yellow. Berry subglobose, 8 mm long, bright red; stalk 7—8 mm long. Seeds punctate.

Distribution: restricted to the localities quoted below.

MOLUCCAS. Ceram: Roho, 100—200 m (Kornassi nr. 480 [BZ], L, U, fl. Nov.).

NEW GUINEA. Northern Part: „Prauwenbivak", 20 m (Lam nr. 883 [BZ], L, fl. Aug.). Southern Part: Lorentz river (von Römer nr. 280 [BZ], L, buds Sept.); idem (Versteeg nr. 1109 [BZ], L, fl. May). North Eastern Part: (vide Mansfeld in l.c.).

40. **Medinilla celebica Bl.** Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 18; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 543; idem in Ann. Mus. Bot. Lugd.-Bat. I (1863) p. 217;

Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 590; Koorders in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 468.

Perhaps a shrub? Branches subterete, verruculose, glabrous, ribbed towards the nodes. Leaves opposite, oblong, 7.5—10 cm × 3.5—4 cm, at the base cuneate, at the top shortly acuminate, entire, glabrous, 3-plinerved, cross-venules absent. Petiole 12—18 mm long, glabrous. Inflorescence axillary, probably few-flowered. Flowers unknown, probably 4-merous. Berry globose, 6 mm long, provided with the persistent, 4-dentate calyx limb, (according to Blume) orange; stalk 9 mm long. Seeds semiovate, unequal.

Observ: Allied to M. succulenta (Bl.) Bl. and it may be only a local form of it, differing a.o. by its petiolate leaves.

Distribution: endemic.

CELEBES. Manado: Tondano. (Forsten s.n. L, typus); Locality unknown: (Teysmann s.n. U); idem (de Vriese s.n. L).

41. **Medinilla driessenioides Bakh. f.** spec. nov.

Fruticulus 80 cm altus. Rami teretes glabri, axilla foliorum glabra. Folia opposita ovato-oblonga 13—14.5 cm × 5.5—7 cm basi rotundata vel acutiuscula apice breviter acuminata integra submembranacea utrinque glabra 5-nervia nervis lateralibus transverse striatis, venulis transversis distinctis. Petiolus 4—8 cm longus transverse striatus glaber. Inflorescentia umbelliformis 3- vel 5-flora axillaris 5 mm longa; pedunculus 1—1.5 mm longus. Flores 4-meri. Pedicellus 2 mm longus. Calycis tubus 1.5 mm longus teres glaber; limbus truncatus. Petala oblonga 2.5 mm × 1.5 mm basi paulum angustata apice acuta glabra avenia. Stamina aequalia, filamentis 1.5 mm longis, antheris lanceolatis 1 mm longis brevissime truncato-rostratis curvatis, connectivo non producto, dorso acute calcarato, in parte ventrali in appendices duos lineares longiusculos exeunte. Ovarium dimidio minus quam calycis tubus; stylus 2 mm longus. Bacca ignota.

Observ: A remarkable form, having the habit of Driessenia, but is nevertheless a true Medinilla.

Distribution: endemic.

SUMATRA. Locality unknown: (Forbes nr. 3094, L, typus).

42. **Medinilla laurifolia (Bl.) Bl.** Blume in Flora XIV (1831) p. 511 and in Bijdr. Nat. Wet. VI (1831) p. 252; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 257; Naudin in l.c. XV (1851) p. 290; Miquel, l.c. (1855) p. 545; Teysmann et Binnendijk, Cat. Plant.

Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 578; Koorders, Exkurs. Flora Java II (1912) p. 696, 698; Koorders-Schumacher, Syst. Verz. I. Java, Melast. (1912); Koorders, Flora von Tjibodas (1918) p. 215; Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 40; Hochreutiner in Candollea II (1925) p. 472; Backer, Manuscr. Fl. Java, Melast. (1941) p. 26; *Medinilla laurifolia* (*Bl.*) *Bl.* var.; Miquel, l.c. (1855) p. 545; *Medinilla Horsfieldii Miq.*, l.c. (1855) p. 545; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 578; Koorders, Exkurs. Flora Java II (1912) p. 697; Hochreutiner in Candollea II (1925) p. 472; *Medinilla Horsfieldii Miq.* var. *ovalis Miq.*, l.c. (1855) p. 546; Cogniaux in l.c. (1891) p. 578; *Melastoma carneum Zipp. ex Bl.* in Flora XIV (1831) p. 511. [nomen]; *Melastoma crassifolia Reinw.*; Blume, Cat. Buitenzorg (1823) p. 70 [nomen]; idem in Flora XIV (1831) p. 511 [nomen]; *Melastoma laurifolium Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1069; De Candolle, l.c. (1828) p. 148.

Epiphytic shrub, 0.50—1.50 m high. Branches subterete, subverruculose; the leaf axils glabrous. Leaves opposite, equal or, rarely, unequal, elliptic or oblong-lanceolate, 6—11 cm × 2.5—4 cm, at the base subacute or rounded, at the top acuminate, entire, glabrous, 3- or 5-nerved, cross-venules distinct. Petiole 8—15 mm long, glabrous. Inflorescence a few-flowered, axillary cyme, 7.5 cm long; peduncle 1—3 cm long, glabrous; ramifications (according to Backer in l.c.) red. Flowers 5- or 6-merous. Bracts minute. Pedicel 8—10 mm long. Calyx tube narrowly campanulate, 3—9 mm long, 10-ribbed, glabrous; limb truncate, ending in minute teeth. Petals broadly obovate, 18—21 mm × 9 mm, subacute, glabrous, strongly veined. Stamens equal; filaments 6—7 mm long; anthers linear, 5—6 mm long, narrowed at the top, curved, opening by a single pore, violet; connective not produced, thickened between the thecae, dorsally ending in a minute spur, ventrally ending in two triangular, yellow appendages. Top part of the ovary conical, glabrous; style 10—15 mm long. Berry cylindrical, contracted at the top, 8—15 mm long, black-red; stalk 12—15 mm long. Seeds smooth.

Observ: Easily distinguishable from M. crassifolia (Reinw. ex Bl.) Bl. by its compact habit and upright sloped leaves.

Distribution: restricted to the localities quoted below.

SUMATRA. Tapanoeli: Hoog Ankola. (Junghuhn s.n. L). Benkoelen: G. Raja, 1600 m (van Steenis nr. 3521 [BZ], L, ster.); G. Dempo, 1700 m (Forbes nr. 2295, L); Krohe, G. Besagi, 2200 m (idem nr. 2064, L). Lampong Districts: G. Tanggamoes, 1200 m (Forbes nr. 1860, L).

JAVA. Bantam: G. Poeloesari (Kuhl and van Hasselt s.n. L, fl. June);

Tjimandawal (idem s.n. L, fr. Sept.). Batavia: G. Salak, 1700 m (Raap nr. 260, G. L, fr. June). Preanger Regencies: G. Gede, 1300 m (Zollinger s.n. U); Tjibodas, G. Gede. (Boerlage s.n. [BZ], L); idem (Koorders nr. 15560β [BZ], L, fl. Dec.); idem, 1600 m (Pulle nr. 4097, U, fl. June); Tjibeureum, G. Gede (collector unknown, L, fr. June); G. Pangrango (Kuhl and van Hasselt s.n. L); G. Gegerbintang (Boerlage s.n. L); G. Megamendoeng (Zippel s.n. L, sub Melastoma carneum Zipp.); idem (Reinwardt s.n. L); Pasir Karet, G. Boerangrang, 1470 m (Bakhuizen van den Brink nr. 4502 [BZ], L); G. Wajang, 1900 m (Forbes nr. 725, L); Tjilaki, G. Malabar, 2000 m (idem nr. 986, L); Rantjas bolang (Smith and Rant nr. 293 [BZ], L, fl. Apr.). Banjoemas: locality unknown (Horsfield s.n. U, type of *M. Horsfieldii Miq.*). Kedoe: G. Dieng (Junghuhn s.n. L, U, type of *M. Horsfieldii Miq.* var. *ovalis Miq.*; v.n. „parit joddo"). Soerakarta: G. Merapi, 1300 m (Junghuhn s.n. L, U; v.n. „batigodo"). Locality unknown: (Waitz s.n. L); (Reinwardt s.n. L, sub Melastoma crassifolia Reinw.); (Plant. Jungh. Ined. nr. 200, L); (collector unknown L, typus, sub *Melastoma laurifolia Bl.*).

Celebes. Gvt: Celebes and dependencies: Banbasang, 1105 m (Bünnemeyer nr. 11803 [BZ], L, fl. fr. May). Locality unknown: (de Vriese s.n. L).

43. **Medinilla crassifolia (Reinw. ex Bl.) Bl.** Blume in Flora XIV (1831) p. 511 and in Bijdr. Nat. Wet. VI (1831) p. 253; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Naudin in l.c. XV (1851) p. 288; Miquel, l.c. (1855) p. 539; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 578; Koorders, Exkurs. Flora Java II (1912) p. 697, 698, Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Backer, Manuscr. Fl. Java Melast. (1941) p. 26; *Medinilla crassifolia* (*Reinw. ex Bl.*) *Bl.* var. *diaphana* (*Bl.*) *Bl.* in Flora XIV (1831) p. 511 and in Bijdr. Nat. Wet. VI (1831) p. 253; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Miquel, l.c. (1855) p. 539; Triana in l.c. (1871) p. 86; *Medinilla cuspidata Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 18; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 542; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 587; *Medinilla Hasseltii Bl.*; Miquel, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122, 319; *Medinilla Hasseltii* (*haud Bl.*) var. *latifolia Herb. Korth.*; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 18. [nomen]; *Medinilla inaequalis Miq.*, l.c. (1855) p. 542; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 585; Backer, Manuscr. Fl. Java, Melast. (1941) p. 26; *Medinilla Korthalsii Bl.*; Miquel, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122, 319; *Melastoma crassifolium Herb. Reinw.*; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1075; De Candolle, l.c. (1828) p. 147; *Melastoma diaphanum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1075; De Candolle, l.c. (1828) p. 147.

Epiphytic shrub. Branches terete, slightly grooved, subverruculose; the leaf axils glabrous. Leaves opposite, lanceolate, ovate-oblong or

ovate-lanceolate, 5.5—15 cm × 2—7 cm, at the base rounded, at the top cuspidate and acuminate, entire, glabrous, on the upperside when dry glaucous, 3- or 5-nerved, cross-venules mostly hardly conspicuous. Petiole 7—15 mm long, flattened, glabrous. Inflorescence an axillary, many-flowered cyme, 5.5 cm long; peduncle slender, 1—2.5 cm long; ramifications of the first order ternate or quaternate. Flowers 5-merous. Bracts subulate, 2 mm long. Pedicel 2—4 mm long. Calyx tube 2—3 mm long, 10-ribbed, glabrous; limb consisting of broadly triangular, mucronate, persistent teeth. Petals narrowly obovate, 4—7 mm × 2—4 mm, glabrous, distinctly veined, white. Stamens equal; filaments 2—3 mm long, slightly flattened; anthers linear, about 1 mm long, sagittate, straight, at the margin provided with a narrow membrane, opening by a single pore; connective not produced, dorsally ending in a minute spur, ventrally ending in two triangular appendages. Style 5—6 mm long. Berry globose, 5 mm long; stalk 6 mm long. Seeds smooth, 0.8 mm long.

Observ: M. crassifolia (Reinw. ex Bl.) Bl. and its var. Hasseltii (Bl.) Bakh. f., are often confused with M. laurifolia (Bl.) Bl., which has however an entirely different habit.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: Pariaman [„Priaman"] (Diepenhorst s.n. U v.n. bindaloe rimboe); Loeboe alang (Teysmann s.n. U; v.n. sibilantih); Koemantan, G. Koerintji, 900 m (Bünnemeyer nr. 8120 [BZ], L, fl. Febr.); G. Koerintji, 1600 m (idem nr. 8693 [BZ], L, fl. March). East Coast: Bandar baroe, 1200 m (Lörzing nr. 4731 [BZ], L, fl. Febr.). Benkoelen: G. Raja, 1600 m (van Steenis nr. 3525 [BZ], L, fl. Nov.). Locality unknown: (Korthals s.n. L).

MENTAWAI ISLANDS. P. Siberoet: Siberoet (Iboet nr. 251 [BZ], L, fl. Sept.).

JAVA. Bantam: Tjimandawal. (Kuhl and van Hasselt s.n. L); Tjihèrang [„Hariang"] (idem s.n. L, fl. Sept.). Batavia: Nirmala, S.W. of Buitenzorg, 1200 m (Backer nr. 11194 [BZ], L, fl. Dec.); G. Salak. (Reinwardt s.n. L). Preanger Regencies: G. Gedogan (? Kuhl and van Hasselt s.n. L); G. Limoes, G. Boerangrang, 1100 m (Bakhuizen van den Brink nr. 4366 [BZ], L, fl. July). Banjoemas: (Horsfield s.n. in herb.?, type of *M. inaequalis Miq.*). Besoeki: Sriwoeloeng litjing, 600 m (Koorders nr. 43157β [BZ], L, fl. July). Locality unknown: (Blume s.n. L, type of *M. crassifolia (Reinw. ex Bl.) Bl.* var. *diaphana [Bl.] Bl.*); (idem s.n. L, typus); (Kuhl and van Hasselt s.n. L); (de Vriese s.n. L).

BALI: G. Pala, 425 m (Sarip nr. 234 [BZ], L, fl. Sept.).

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unknown: „G. Rantan" [= ? Rantau] (Korthals s.n. L, type of *M. cuspidata Bl.*, sub M. Hasseltii Bl. var latifolia Korth.). Locality unknown: (de Vriese s.n. L).

var. **Hasseltii (Bl.) Bakh. f.** comb. nov.

Medinilla Hasseltii Bl. in Flora XIV (1831) p. 513 and in Bijdr.

Nat. Wet. VI (1831) p. 253; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 542; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1890) p. 586; Koorders, Exkurs. Flora Java II (1912) p. 697; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 41; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1204; Backer, Manuscr. Fl. Java, Melast. (1941) p. 26; *Medinilla crassifolia* (*Reinw. ex Bl.*) *Bl.* var. *diaphana* (*Bl.*) *Bl.* [pr. p.]; Triana in l.c. (1871) p. 86.

Epiphytic shrub. Branches terete, subverruculose; the leaf axils glabrous. Leaves opposite, oblong or lanceolate, 11.5—13 cm × 3.5—6 cm, at the base rounded, at the top acuminate, coriaceous, entire, glabrous, on the upperside 5-plinerved, on the underside 3- or 5-plinerved, the upper pair of nerves mostly confluent at the base of the acumen, cross-venules hardly conspicuous. Petiole 4—10 mm long, glabrous. Inflorescence axillary, many-flowered, 3 cm long; peduncle 5—7 mm long; ramifications quaternate or verticillate. Flowers 4-merous. Bracts subulate, minute. Pedicel 3—3.5 mm long. Calyx tube 3.5 mm long, slightly ribbed, glabrous; limb truncate-undulate. Petals obovate, unequal, 5 mm × 3 mm, submucronate, strongly veined, white or red. Stamens equal; filaments 2 mm long; anthers linear, 3—4 mm long, straight, elongate, opening by a single pore, pink; connective not produced, thickened between the thecae, dorsally ending in a short spur, ventrally ending in two elliptic appendages. Style 4 mm long; stigma capitate. Berry cylindrical, at the top contracted, 5—7 mm long; stalk 6 mm long. Seeds punctate.

Observ: not easily distinguishable from the type species. The criteria flowers either 4- or 5-merous are a source of confusion. In my opinion the variety differs only from the type species by the size of its flowers.

Distribution.

SUMATRA. Palembang: G. Karang nata, 300 m (Forbes nr. 3108a, L); Banjoeasin, 20 m (Greshoff nr. 896 [BZ], L, fr. Dec.; v.n. bongkol). Locality unknown: (Korthals s.n. L).

BANKA: Soengai Selan, 50 m (Bünnemeyer nr. 2107 [BZ], L, fl. Nov.; v.n. anjong); G. Maras, 700 m (de Leeuw nr. 1 [BZ], L, fr. Sept.; v.n. andjong).

JAVA. Bantam: Tjihèrang [„Hariang"] (Kuhl and van Hasselt s.n. L, typus, fl. Sept.); Leuwiboengoer (idem s.n. L). Batavia: G. Tjipoeti, Tjiampea, 650 m (Bakhuizen van den Brink nr. 4207 [BZ], L); Tjianten, S. of Leuwiliang, 1000 m (Backer nr. 25939 [BZ], L, fr. Sept.); Poerwasèda, 500 m (van Steenis nr. 2722 [BZ], L, fr. Febr.). Pasoeroean: Ranoe Daroengan, G. Smeroe, 1500 m (Backer nr. 36652 and 36935, PAS, ster.).

BORNEO. WESTERN PART. Pontianak: Soeka Lanting. (Hallier nr. 25 [BZ], L); Sei Poetat (Mondi nr. 58 [BZ], L, fr. March). SOUTHERN AND EASTERN PART. Boeloengan-Beraoe: „Oetan bintangor", Boeloengan (Rutten nr. 18, U); idem, 10 m (idem nr. 703, U, fl. Nov.); idem, 10—100 m (idem nr. 527, U, fl. Nov.); Sei Mentawir, 0—50 m (idem nr. 68, U). Exact locality unknown: Djili (Winkler nr. 3262, L, fl. Aug.).

CELEBES. Manado: Minahassa, 700 m (Koorders nr. 17862β [BZ], L); Poso, bivak Poena, 1800 m (Steup nr. 31 [BZ], L, fl. June). Gvt. Clebes and dependencies: Masaiva Palewali (Noerkas nr. 493 [BZ], L, fl. Aug.; v.n. raèka raèka manoe).

FURTHER DISTRIBUTION: Malay Peninsula, Singapore, the Philippine Islands.

44. **Medinilla Curtisii Hook. f.** Hooker f. in Bot. Magaz. (1882) tab. 6730; idem in Gard. Chron. XX (1883) p. 631, fig. 108; Boerlage, l.c. (1880) p. 535; Cogniaux in l.c. (1891) p. 595; Bailey in Stand. Cycl. Hortic. III (1937) p. 2021.

Shrub, 1 m high. Adult branches subterete, pale, the young ones subquadrangular, glabrous; the leaf axils glabrous. Leaves opposite, ovate or ovate-oblong, 5—9 cm × 2—5 cm, subamplexicaul, at the top acute or acuminate, entire, glabrous, 3-nerved or 3-plinerved, on the upperside with distinct cross-venules, on the underside veinless, sessile. Inflorescence a terminal, many-flowered panicle, 5—8 cm long; peduncle 2—3 cm long, terete or quadrangular; ramifications of the first order in the lower parts opposite, in the upper parts ternate or quaternate, red-orange. Flowers 5-merous. Bracts small. Pedicel 2—4 mm long, bibracteolate. Calyx tube 5—6 mm long, slightly grooved, glabrous; limb subtruncate, ending in minute teeth. Petals obovate, 12 mm × 9 mm, at the top subtruncate, white. Stamens equal; filaments 5 mm long; anthers 3—4 mm long, S-shaped, very acute, opening by a single pore, red; connective not produced, dorsally ending in a white spur, ventrally ending in two yellow lobes. Style 7 mm long, white. Berry 5—6 mm long, orange.

Distribution: endemic.

SUMATRA. West Coast: G. Merapi, 1500 m (Bünnemeyer nr. 4942 [BZ], L, fl. Sept.); locality unknown. (Curtis, ex Hook. f. in l.c.).

45. **Medinilla amplexicaulis Bl.** Blume in Mus.Bot.Lugd.-Bat. I nr. 2 (1849) p. 20; Naudin in l.c. (1851) p. 296; Miquel, l.c. (1855) p. 543; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 579.

Shrub. Branches terete, pallid, smooth or sparingly verruculose; the leaf axils glabrous. Leaves opposite, oblong, 6.5—14 cm ×

4.5—7 cm, at the base subcordate and semiamplexicaul, at the top acute, entire, glabrous, 5- or 7-plinerved, cross-venules distinct, sessile. Inflorescence terminal; peduncle terete, glabrous. Flowers unknown.Pedicel bibracteolate. Ovary 4-celled. Berry subglobose, 7 mm long, at the top truncate; stalk 5 mm long. Seeds 1 mm long, punctate.

Observ: The material is incomplete. An interesting form, whose alliance is with M. Curtisii Hook. f., but which is probably not identic with this species.

Distribution: endemic.

SUMATRA. Locality unknown: (Blume s.n. L, typus.).

46. **Medinilla robusticaulis Bakh. f.** spec. nov.

Frutex. Rami acute quadrangulares alati glabri, axilla foliorum pilis minutissimis densissime vestita. Folia opposita anguste ovato-oblonga 18—20 cm × 7—8 cm basi rotundata amplexicaulia apice breviter sed acutiuscule acuminata integra coriacea glabra 5-plinervia (cum nervis 2 marginalibus tenuibus) nervis infimis circa 2 cm supra basin foliorum enatis venulis transversis supra distinctissimis subtus absentibus vel haud distinctis subsessilia. Inflorescentia paniculata axillaris multiflora ad 15 cm longa; pedunculus 5—7.5 cm longus teretiusculus glaber; rami quaternati robusti. Flores 5-meri. Pedicellus 5—7 mm longus bibracteolatus. Calycis tubus cylindricus apice dilatatus 4—4.5 mm longus basi subcuneatus sulcatus; limbus truncatus minute apiculatus. Petala obovato-oblonga 8 mm × 3.5 mm acuta glabra venata. Stamina aequalia, filamentis 3 mm longis, antheris linearibus 4 mm longis curvatis 1-poris, connectivo non producto, dorso breviter calcarato, in parte ventrali in auriculas duas exeunte. Stylus 6.5 mm longus. Bacca subglobosa 4.5—5 mm longa; pedicellus 10 mm longus. Semina 1 mm longa laevia.

Observ: Allied to M. Bünnemeyeri Bakh. f.

Distribution: endemic.

SUMATRA. East Coast: W. of Bandar baroe, 850 m (Lörzing nr. 6880, L, typus, dupl. in [BZ], fl. Oct.).

47. **Medinilla Bünnemeyeri Bakh. f.** spec. nov.

Frutex? Rami teretes glabri laeves; axilla foliorum glabra. Folia opposita ovato-oblonga 8.5—11.5 cm × 5.5—7 cm basi subcordata subamplexicaulia apice acuminata coriacea integra glabra 3-nervia vel 5-plinervia nervis summis prope basin foliorum enatis, venulis transversis haud distinctis sessilia. Inflorescentia paniculata axillaris submultiflora quam minime 8 cm longa; pedunculus 6 cm longus teretiusculus glaber; rami ternati quaternati vel verticillati. Flores

5-meri. Bracteae absentes. Pedicellus 5 mm longus. Calycis tubus subglobosus 5—5.5 mm longus apice dilatatus glaber; limbus truncatus suberosulus. Petala obovata 12 mm × 7 mm apice acutiuscula furfuraceo-reticulata. Stamina aequalia, filamentis 5 mm longis, antheris lineari-triangularibus 6—6.5 mm longis acutissimis rectis 1-poris, connectivo non producto, dorso in calcarem curvatum exeunte, in parte ventrali in appendices duos triangulares exeunte. Stylus 12 mm longus. Bacca ignota.

Observ: Allied to M. Curtisii Hook. f. and M. amplexicaulis Bl. I have named this species in honour of Mr. E. Bünnemeyer to whose extensive collecting the Buitenzorg collections owe many additions.

Sumatra. West Coast: G. Talang, Laras Talang, 1300 m (Bünnemeyer nr. 5662, L, typus, dupl. in [BZ], fl. nov.).

48. **Medinilla Schumanniana Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 116 and 121; idem in Nova Guinea XIV livr. II (1927) p. 204.

Epiphytic shrub. Branches terete, verrucose, glabrous; the leaf axils glabrous. Leaves opposite, oblong or lanceolate, 5—6 cm × 3—5 cm, at the base subcordate, at the top very acute, undulate, glabrous, 5-plinerved, cross-venules on the upperside hardly conspicuous, on the underside absent, sessile. Inflorescences many together, axillary, up to 2 cm long; peduncle 2—4 mm long. Flowers 4-merous. Pedicel 5—10 mm long, furfuraceous, pink, ebracteolate. Calyx tube narrowly campanulate, 2—3 mm long, sparingly furfuraceous, white; limb cupuliform, ending in undulate lobes. Petals ovate-lanceolate, 6 mm × 2 mm, acute, glabrous, white. Stamens equal; filaments 2 mm long; anthers linear, 2 mm long, opening by a single pore; connective not produced, dorsally ending in a spur, ventrally ending in two auricles. Ovary half as long as the calyx tube; style 4—6 mm long.

Observ: Resembles M. myrtiformis (Naud.) Triana.

Distribution: endemic.

New Guinea. Southern Part: Treub Mts., 2400 m (Pulle nr. 1089, L, U, fl. Febr.). North Eastern Part: (vide Mansfeld in l.c.).

49. **Medinilla succulenta (Bl.) Bl.** Blume in Flora XIV (1831) p. 513 and in Bijdr. Nat. Wet. VI (1831) p. 254; Naudin in l.c. XV (1851) p. 294; Miquel, l.c. (1855) p. 541; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 582; Koorders, Exkurs. Flora Java II (1912) p. 697; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 40; Backer, Manuscr. Fl. Java, Melast. (1941)

p. 25; *Medinilla Korthalsii Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 18; Naudin in l.c. XV (1851) p. 296; Miquel, l.c. (1855) p. 542; Triana in l.c. (1871) p. 86; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 583; *Medinilla succulenta (haud Bl.) Herb. Korth.*; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 18 [nomen]; *Melastoma succulentum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1070; De Candolle, l.c. (1828) p. 148.

Epiphytic shrub. Branches subquadrangular, verruculose, sometimes ribbed, glabrous; the leaf axils glabrous. Leaves opposite, lanceolate, 9—14 cm × 3—5 cm, at the base rounded, at the top cuspidate and acuminate, entire, glabrous, 3-plinerved, cross-venules hardly conspicuous, sessile. Inflorescences axillary, rather few together, up to 2 cm long; peduncle 5—10 mm long. Flowers 4-merous. Bracts minute. Pedicel 3—4 mm long. Calyx tube 3 mm long, glabrous; limb dentate. Petals oblong, 4—8 mm × 3 mm, obtuse, pink. Stamens equal; filaments always present; anthers narrowly triangular, opening by a single pore, violet; connective not produced. Berry globose, 5—9 mm long, red; stalk 5 mm long. Seeds 1.5 mm long, smooth.

Observ: I have no flowers seen. The measurements of the flowers were taken from Backer in l.c.

Distribution.

SUMATRA. West Coast: Brani, Agam, 900 m (Bünnemeyer nr. 3099 [BZ], L, fl. June); Tanang Taloe, 1100 m (idem nr. 1070 [BZ], L, fr. June); G. Sago, 1300 m (idem nr. 4476 [BZ], L, fl. Aug.).

JAVA. Bantam: Leuwiboengoer. (Kuhl and van Hasselt s.n. L, fl. Sept.). Exact locality unknown: „Pasir Madang". (Zollinger nr. 1490, U); „water fall Latan". (Kuhl and van Hasselt s.n. L, fl. Nov.). Locality unknown: (Korthals s.n. L, sub M. corallina Korth.); (collector unknown, L); (idem, L, typus, sub *Melastoma succulentum Bl.*).

FURTHER DISTRIBUTION: ? Siam.

50. **Medinilla monantha Merr.** var. **papuana (Baker f.) Mansf.** Mansfeld in Engl. Bot. Jahrh. 60 (1926) p. 116, 122; idem in Nova Guinea XIV livr. II (1927) p. 204; *Medinilla myrtiformis (Naud.) Triana* var. *papuana Baker f.* in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 52.

Epiphytic shrub, up to 0.5 m high. Branches subterete or subquadrangular, densely furfuraceous; the leaf axils glabrous. Leaves opposite, rhomboid, 3—4.3 cm × 0.9—1.4 cm, at the base acute, at the top obtusely acuminate, acumen up to 1 cm long, glabrous, only on the nerves densely furfuraceous, remote-dentate, 3-nerved or 3-plinerved, subsessile. Flowers solitary, axillary, 4-merous. Pedicel 2—2.7 cm long, bibracteolate. Calyx tube narrowly campanulate, 2.5—3 mm long, furfuraceous, provided with wide grooves; limb

dentate. Petals ovate-lanceolate, 4—5 mm × 1.5 mm, very acute or acuminate, veinless, (according to Lam) greenish-white or (according to Mansfeld in l.c.) pink. Stamens unequal; larger ones with 2—2.5mm long filaments and with narrowly triangular, 3—4 mm long anthers, opening by a single pore, whose connective is not produced, dorsally ending in a broadly triangular appendage, ventrally inappendiculate; smaller stamens with 2 mm long filaments and with narrowly triangular, 2—3 mm long anthers. Style 5—7 mm long. Berry globose, 4 mm long, purple. Seeds semiovate, smooth.

Distribution: endemic.

NEW GUINEA. Northern Part: Doorman top, 1420 m (Lam nr. 1450 [BZ], L, fl. Oct.). Southern Part: Hellwig Mts. (von Römer nr. 290 [BZ], L, fr. Oct.); idem (idem nr. 972 [BZ], L, fr. Nov.); idem, 750 m (idem nr. 887 [BZ], L, fr. Nov.); idem, 1700 m (Pulle nr. 703, L, U, fl. Dec.). North Eastern Part: (vide Mansfeld in l.c.).

51. **Medinilla ramiflora Merr.** Merrill in Philipp. Gov. Lab. Bur. Publ. XIX (1905) p. 35; Baker f. in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 53; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 121; idem in Nova Guinea XIV livr. II (1927) p. 204.

Epiphytic shrub. Branches subterete, minutely verrucose, glabrous; the leaf axils glabrous. Leaves opposite, oblong or lanceolate, 6—9 cm × 2.5—3.5 cm, at the base subacute or rounded, at the top obtusely acuminate, entire, glabrous, 3-plinerved, cross-venules hardly conspicuous. Petiole 1—2 mm long. Inflorescences few together, axillary, up to 1 cm long; peduncle 2—3 mm long. Flowers 4-merous. Bracteoles lanceolate, 1—2 mm long. Pedicel 1—2 mm long, furfuraceous. Calyx tube narrowly campanulate, 2—3 mm long, provided with wide grooves, furfuraceous; limb dentate. Petals ovate-lanceolate, 4—6 mm × 2—2.5 mm, acute or acuminate, glabrous, pink. Stamens unequal; larger ones with 2—3 mm long filaments and with narrowly triangular, 3—4 mm long,acute anthers, opening by a single pore, whose connective is not produced, dorsally ending in a broadly triangular appendage, ventrally inappendiculate; smaller stamens with 2—3 mm long filaments and with 2.5 mm long anthers, having the same characters as those of the larger stamens. Style 5—7 mm long. Berry subglobose, 5 mm long.

Distribution.

NEW GUINEA. Western Part: Etna Bay. (Koch nr. 34, L). Northern Part: G. Pisero (Atasrip nr. 236, L). Southern Part: Sabang-Zandvoort, Lorentz river. (Versteeg nr. 1250 [BZ], L, U, fl. June); Lorentz river (von Römer nr. 91 [BZ], L, fl. Sept.). North Eastern Part: (vide Mansfeld in l.c.).

FURTHER DISTRIBUTION: the Philippine Islands.

52. **Medinilla myrtiformis (Naud.) Triana.** Triana in l.c. (1871) p. 86 and tab. VII, fig. 94 c; Cogniaux in l.c. (1891) p. 583; Merrill, Enum. Philipp. Flow. Plants Vol. 3, fasc. 5 (1923) p. 201; *Aplectrum myrtiforme Naud.* in l.c. XV (1851) p. 305 and tab. XV, fig. 2; *Diplectria myrtiformis (Naud.) Kuntze*, Revis. Gen. Plant. (1891) p. 246; *Kibessia celebica Kds.* in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 633 and 466. [nomen].

Shrub. Branches subterete or subquadrangular, glabrous; the leaf axils glabrous. Leaves opposite, slightly unequal, subrhomboid or elliptic, 4.5—7.5 cm × 2—3 cm, at the base rounded, at the top broadly but obtusely acuminate, entire, glabrous, 3- or 5-plinerved or 3- or 5-nerved. Petiole 1—2 mm long. Inflorescences few together, axillary, up to 4 cm long; peduncle 1—3 cm long, subterete, glabrous. Flowers 4-merous. Bracts linear, 1 mm long. Pedicel 8 mm long, bibracteolate. Calyx tube 3 mm long, not sulcate, glabrous; limb dentate. Petals lanceolate, 5—6 mm × 1.5—2 mm, at the base very acute, at the top very acute or acuminate, veinless. Stamens unequal; longer ones with 2—2.5 mm long filaments and with linear, 3 mm long, acute anthers, opening by a single pore, whose connective is not produced, dorsally ending in a broadly triangular, 1 mm long appendage, ventrally inappendiculate; smaller stamens with 2—2.5 mm long filaments and with 2 mm long anthers, having the same characters as those of the larger stamens. Style 5 mm long. Berry subglobose, 5—7 mm long; stalk 9—12 mm long. Seeds ellipsoid, punctate.

Distribution.

CELEBES. Manado: Minahassa, 1200 m (Koorders nr. 17881β [BZ], L, type of *Kibessia celebica Kds.*, ster.). Gvt. Celebes and dependencies: G. Boesoe. (Rachmat nr. 607 [BZ], L, fr. Aug.).

MOLUCCAS. Boeroe: Nal' besi, 1100 m (Toxopeus nr. 200 [BZ], L, fl. June); Msoema lawan, 1100 m (idem nr. 554 [BZ], L, U, fl. Sept.); between Loksoela and Oenges Waen, 1170 m (idem nr. 114 [BZ], L, fl. Apr.). Ceram: Ora Mts., growing together with Rhododendron on calcareous soil. (Stresemann nr. 11, L, fl. May). Ambon: Latoen (Boerlage nr. 455 [BZ], L); G. Toena (idem nr. 263 [BZ], L, fl. July).

FURTHER DISTRIBUTION: the Philippine Islands.

Species unknown to me, not mentioned in the key.

1. **M. alata Baker f.** in Trans. Linn. Soc. sér. II. IX. 1 (1916) p. 54. — New Guinea.
2. **M. alpestris (Jack) Bl.** in Flora XIV (1831) p. 514. — Sumatra.
3. **M. arfakensis Baker f.** in Gibbs, Contr. Flor. Arfak Mts. (1917) p. 158. — New Guinea.

4. **M. caudatifolia Schwartz** in Mitt. Inst. Bot. Hamburg. Bd. VII Heft 3. (1931) p. 252. — W. Borneo.
5. **M. coccinea Baker f.** in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 56. — New Guinea.
6. **M. corallina Schwartz** in Mitt. Inst. Bot. Hamburg. Bd. VII Heft 3 (1931) p. 253.
7. **M. Cumingii Naud.**; Koorders in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 466. — Celebes.
8. **M. dajakorum Schwartz** in Mitt. Inst. Bot. Hamburg. Bd. VII Heft 3 (1931) p. 254. — W. Borneo.
9. **M. eximia (Jack) Bl.** in Flora XIV (1831) p. 515. — Sumatra.
10. **M. Forbesii Baker f.** in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 55. — New Guinea.
11. **M. Hasseltii Bl.** var. **subsessilis Schwartz** in Mitt. Inst. Bot. Hamburg Bd. VII Heft 3. (1931) p. 255. — W. Borneo
12. **M. humilis T. et B.** in Nat. Tijdschr. Ned. Ind. XXV (1863) p. 247. — Celebes.
13. **M. Korinchensis Ridley** in Journ. Fed. Mal. Stat. Mus. VII. IV (1917) p. 35. — Sumatra.
14. **M. micrantha Ridley** in Journ. Branch Roy. As. Soc. I (1923) p. 61. — Sumatra.
15. **M. montana Cogn.** in l.c. (1891) p. 592. — New Guinea.
16. **M. Motleyi Hook. f. ex Triana** in l.c. (1871) p. 87. — Borneo.
17. **M. Naudinii Triana** in l.c. (1871) p. 86. — Java.
18. **M. nervulosa Baker f.** in Trans. Linn. Soc. sér. II. IX. 1 (1916) p. 54. — New Guinea.
19. **M. novoguinensis Baker f.** in idem (1916) p. 55. — New Guinea.
20. **M. papuana Scheffer** in Ann. Jard. Bot. Buitenzorg I (1876) p. 24. — New Guinea.
21. **M. patens Ridley** in Journ. Feder. Mal. Stat. Mus. VII. IV (1917) p. 36. — Sumatra.
22. **M. porphyrandra Ridley** in idem (1917) p. 35. — Sumatra.
23. **M. rubicunda (Jack) Bl.** in Flora XIV (1831) p. 512. — Sumatra.
24. **M. (?) salicifolia Bl.** in Mus. Bot. Lugd.-Bat. I. nr. 2 (1849) p. 21. — Java.
25. **M. sogeriensis Baker f.** in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 56. — New Guinea.
26. **M. subalata Baker f.** in idem (1916) p. 52. — New Guinea
27. **M. tenuicaule Ridley** in Journ. Feder. Mal. Stat. Mus. VII. IV. (1917) p. 36. — Sumatra.
28. **M. tenuipedicellata Baker f.** in Trans. Linn. Soc. sér. II.

IX. 1. (1916) p. 53, pl. 3, fig. 44—47. — New Guinea.
29. **M. vulcanica Ridley** in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 61. — Sumatra.

17. Diplectria Reichenb.

Reichenbach, Nom. (1841) p. 174; Kuntze, Revis. Gen. Plant. (1891) p. 246; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 179 [pr. p.]; *Anplectrum A. Gray* (pr. p.; typo excl.); Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 84; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 518; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 563; *Dissochaeta Bl. sect. 2 Diplectriae Bl.* in Flora XIV (1831) p. 501 and in Bijdr. Nat. Wet. VI (1831) p. 242; *Dissochaeta Bl.* (pr. p.; typo excl.); Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 69; Miquel, Flor. Ned. Ind. I (1855) p. 521; *Melastoma L.* (pr. p.; typo excl.); Jack in Trans. Linn. Soc. XIV (1825) p. 1; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1068; De Candolle, Prodr. III (1828) p. 144.

Climbers. Branches terete or subterete, glabrous, sparsely hirsute or stellate-furfuraceous, glabrescent; the nodes ring-shaped thickened. Leaves opposite, equal, oblong or lanceolate or ovate-oblong, at the base rounded or cordate, at the top acuminate, entire, on the upperside glabrous, on the underside glabrous or hairy, 3- or 5-nerved, cross-venules distinct, petiolate. Inflorescence a many-flowered, terminal panicle, which is in the lower parts subtended by leaves; main axis quadrangular, glabrous or furfuraceous; ramifications of the first order opposite or, rarely, quaternate; the end branchlets trichotomous. Flowers hermaphrodite, 4-merous. Bracts and bracteoles ovate or ovate-oblong, hairy, deciduous. Pedicel always present. Calyx tube campanulate or conical, terete or subquadrangular, glabrous or furfuraceous; limb subtruncate or consisting of 4 undulate lobes. Petals 4, ovate or lanceolate, acuminate, glabrous, veinless, blue. Stamens 8, mostly very unequal; filaments always present; anthers of the larger stamens 4, linear, S-shaped, rostrate, opening by a single terminal pore, whose connective is not produced at the base, dorsally ending in 1 or 2 appendages, ventrally ending in two linear appendages or in two tubercles; anthers („staminodes") of the smaller stamens very small, linear, opening by a single terminal pore, whose connective is not produced at the base, dorsally mostly ending in a triangular, flat appendage or, very rarely, ending in a spur, ventrally ending in two linear appendages. Ovary concrescent with the calyx tube with 4 septs; enterovarial chambers 8, 4 of which are large and descending far beyond the middle of the ovary and the

4 others small, only in the upper part; the ovary itself 4-celled, at least $^2/_3$ as long as the calyx tube; its top part swollen, 4-cristate, glabrous or furfuraceous; style glabrous, slightly ribbed. Berry subglobose or ellipsoid, glabrous or furfuraceous. Seeds cuneate, straight or slightly curved, beaked.

Distribution: Up to now there are known 4 species, all Asiatic: Malay Peninsula, Siam and Malay Archipelago.

Key to the species.

1*a*. Anthers rostrate. Petiole densely furfuraceous or setose . . 2
b. Anthers acute or subobtuse. Petiole glabrous 3
2*a*. Leaves on the underside glabrous. Petiole setose. Branches glabrous, sometimes covered with a few bristles.
1. D. cyanocarpa (Bl.) O.K.
b. Leaves on the underside brown puberulous, glabrescent. Petiole densely furfuraceous. Branches puberulous, glabrescent.
2. D. divaricata (Willd.) O.K.
3*a*. Calyx limb truncate, entire. Anthers of the larger stamens 5 mm long. Style 13 mm long . . . . . **3. D. conica Bakh. f.**
b. Calyx limb consisting of 4 undulate lobes. Anthers of the larger stamens 2 mm long. Style 5 mm long.
4. D. papuana (Mansf.) Bakh. f.

1. **Diplectria cyanocarpa (Bl.) O.K.** Kuntze, Revis. Gen. Plant (1891) p. 246; Krasser in l.c. (1893) p. 179; *Anplectrum cyanocarpum* (*Bl.*) *Triana* in l.c. (1871) p. 84 and tab. VII, fig. 90 c; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 569; Koorders, Exkurs. Flora Java II (1912) p. 693; Koorders-Schumacher, Syst. Verz. I. Java, Melast. (1912); Merrill in Contr. Arnold Arbor. Harvard Univ. VIII (1934) p. 114; *Dissochaeta cyanocarpa* (*Bl.*) *Bl.* in Flora XIV (1831) p. 501 and in Bijdr. Nat. Wet. VI (1831) p. 243; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 238 and tab. 56; Naudin in l.c. XV (1851) p. 71 and tab. IV, fig. 2; Miquel, l.c. (1855) p. 522; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Massart, Un botaniste en Malaisie (1895) p. 75; Backer, Manuscr. Fl. Java, Melast. (1941) p. 20; *Melastoma cyanocarpon Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1073; De Candolle, l.c. (1828) p. 149.

Climber, (according to Backer) 1—5 m high. Branches subterete, glabrous or sparsely coveredwith a few, 2—3 mm long bristles. Leaves

oblong, ovate-oblong or ovate-lanceolate, 9—12 cm × 3.5—6.5 cm, at the base cordate or subcordate, on both sides glabrous, 5-nerved, on the underside subreticulate. Petiole 7 mm long, covered with a few, 2—3 mm long bristles. Inflorescence 15—20 cm long; main axis flattened, glabrous or furfuraceous; ramifications of the first order long. Bracts ovate-oblong, 5—6 mm × 2 mm, furfuraceous, ciliate, stalked. Pedicel 2.5—3.5 mm long. Calyx tube 5—6 mm long, quadrangular, subglabrous, (according to Backer in l.c.) white; limb subtruncate. Petals ovate-oblong, 6 mm × 2.5 mm, blue. Stamens very unequal; larger ones with 3—4 mm long filaments and with linear, long rostrate, 6—7 mm long anthers, opening by a single, oblique pore, whose connective is dorsally ending in a small tubercle and ventrally ending in two, entire auricles; smaller stamens with 2 mm long filaments and with linear, 1.5 mm long anthers, whose connective is dorsally ending in a 1.5—2 mm long, broadly triangular appendage and ventrally ending in two appendages. Ovary $^2/_3$ × as long as the calyx tube; its top part subglabrous; style 12—13 mm long. Berry subglobose, 6—8 mm long, provided with the patent rests of the calyx limb, glabrous, blue; stalk 4—6 mm long. Seeds 1 mm long.

Observ: Allied to D. divaricata (Willd.) O.K. The bristles covering the petiole are not characteristic for this species as they also, but sporadically, occur in D. divaricata (Willd.) O.K.

Distribution.

SUMATRA. East Coast: Sibaulangit, 400 m (Lörzing nr. 5198 [BZ], L, fr. July); idem, Betimoes valley, 400 m (idem nr. 5724 [BZ], L, fl. June). Locality unknown: (Korthals s.n. L).

MENTAWAI ISLANDS. P. Siberoet: Siberoet. (Iboet nr. 423 [BZ], L, fl. Oct.; v.n. leket.).

JAVA. Batavia: G. Salak. (Blume s.n. L, typus, sub *Melastoma cyanocarpon Bl.*); G. Gede (Teysmann s.n. L); G. Paniisan, E. of Buitenzorg, 700 m (Bakhuizen van den Brink nr. 6165 [BZ], L, fl. Dec.). Preanger Regencies: Pasir Angin, Tjadas Malang, S. of Tjibĕbĕr, 1000 m (native collector s.n. [BZ], L, fl. June). Locality unknown: (Blume s.n. L); (Junghuhn s.n. L); (Reinwardt s.n. L, sub Melastoma coerulea Reinw.); (de Vriese s.n. L); (collector unnknown, L).

BORNEO. SOUTHERN AND EASTERN PART. P. Laoet: N. E. of Stagen, 100 m (van Slooten nr. 2282 [BZ], L, fr. Nov.).

? MOLUCCAS: (de Vriese s.n. L).

FURTHER DISTRIBUTION: Malay Peninsula, P. Penang.

2. **Diplectria divaricata (Willd.) O.K.** Kuntze, Revis. Gen. Plant. (1891) p. 246; Krasser in l.c. (1893) p. 179 and tab. 77c; *Diplectria tetrandra (Roxb.) O.K.*, Revis. Gen. Plant. (1891) p. 246; Krasser in l.c. (1893) p. 179; *Anplectrum divaricatum (Willd.) Triana* in l.c. (1871) p. 84 and tab. VII, fig. 90b; Boerlage, l.c. (1890)

p. 533; Cogniaux in l.c. (1891) p. 567; Koorders, Exkurs. Flora Java II (1912) p. 693; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 41; *Anplectrum divaricatum* (*Willd.*) *Triana* var. *anceps* (*Naud.*) *Cogn.* in l.c. (1891) p. 567; *Anplectrum glaucum* (*Jack*) *Triana* in l.c. (1871) p. 84; Cogniaux in l.c. (1891) p. 566; *Dissochaeta anceps Naud.* in l.c. XV (1851) p. 70; *Dissochaeta divaricata* (*Willd.*) *Naud.*; Docters van Leeuwen in Bull. Jard. Bot. Buitenzorg sér. III. Suppl. vol. I (1930) p. 115; Backer, Manuscr. Fl. Java, Melast. (1941) p. 20; *Dissochaeta glauca* (*Jack*) *Bl.* in Flora XIV (1831) p. 501 and in Bijdr. Nat. Wet. VI (1831) p. 242; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 522; *Dissochaeta palembanica Miq.*, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 317 and 121 [nomen]; *Melastoma divaricata Willd.*, Spec. Plant. II. 1. (1799) p. 596; De Candolle, l.c. (1828) p. 150; *Melastoma glauca Jack* in Trans. Linn. Soc. XIV (1825) p. 15; De Candolle, l.c. (1828) p. 151; Jack in Calcutta Journ. Nat. Hist. vol. V nr. XV (1843) p. 325.

Climber, (according to Backer in l.c.) 1.5—5 m high. Branches terete, densely covered with small, ferrugineous, stellate hairs. Leaves oblong, lanceolate or ovate-lanceolate, 6—12.5 cm × 2—5 cm, at the base rounded or the older ones subcordate, at the top very acute or shortly acuminate, coriaceous, on the underside brown stellately puberulous, glabrescent, 3- or 5-nerved. Petiole 5 mm long, densely covered with small, brown, stellate hairs, or, rarely, provided with a few, small bristles. Inflorescence lax, 10—20 cm long; main axis first covered with small, brown, stellate hairs, glabrescent. Bracts ovate-oblong, 7—8 mm × 3.5—4 mm, densely covered with small, brown, stellate hairs, ciliate, 3-nerved, stalked. Pedicel 2—3 mm long. Calyx tube narrowly campanulate, 3.5—6 mm long, quadrangular, brown but stellate furfuraceous, (according to Backer in l.c.) green; limb subtruncate or subundulate. Petals lanceolate, 4—5 mm × 2 mm , blue. Stamens very unequal; larger ones with 3—3.5 mm long filaments and with 5—7.5 mm long anthers, whose connective is dorsally ending in a very short lamel, whose margin is crisp, ventrally ending in two crisp auricles; smaller stamens with 1.5—2 mm long filaments and with 0.5 mm long anthers, whose connective is dorsally ending in a triangular, 0.8 mm long appendage. Ovary $^3/_4$ as long as the calyx tube; its top part puberulous; style 10—12 mm long. Berry subglobose, 6 mm long, blue; stalk 4—5 mm long. Seeds 0.8 mm long, slightly curved.

Observ: Allied to D. cyanocarpa (Bl.) O.K., differing at first sight by its densely brown haired, glabrescent or nearly glabrescent branches and leaves. Melastoma divaricata Willd. is a true Diplectria, although the stamens are not "sessile" or "shortly stalked". Disso-

chaeta divaricata (Willd.) Naud. is judging to the authentic description not identic with this species, having but 4 stamens. Naudin may be mistaken!

Distribution.

SUMATRA. Djambi: Batang Soengai, 200 m (Posthumus nr. 937 [BZ], L, fl. Nov.; v.n. kadoedoe). Palembang: Pandan doeloe enim. (Teysmann s.n. U, type of *Dissochaeta palembanica Miq.*; v.n. sidodo akar). Exact locality unknown: „Salaut". (Korthals s.n. L).

JAVA. Batavia: Pondok boedjang near Barengkok, Leuwiliang (Bakhuizen van den Brink nr. 5264 [BZ], L, fl. June); Pasir Honjè, Leuwiliang (idem nr. 7550 [BZ], L, fr. Nov.); Tjibatoe, Leuwiliang 300 m (idem nr. 6854 [BZ], L, fl. Aug.); Buitenzorg (Boerlage s.n. L, fl. Dec.); Tegal Sapi, Buitenzorg, 240 m (Bakhuizen van den Brink fil. nr. 2328 [BZ], U, fl. March); G. Karanggantoengan (Backer nr. 6305 [BZ], L). Locality unknown: (de Vriese s.n. L); (Kuhl and van Hasselt s.n. L); (Ploem s.n. L).

CELEBES. Gvt. Celebes and dependencies: Goeroepahi, 600 m (Kaudern nr. 6, L, fl. March).

MOLUCCAS. Soela Islands. P. Soela besi: G. Berberi (Atje nr. 318 [BZ], L). Ceram: N. of Piroe, 400 m (Rutten nr. 1904 [BZ], L, U, fl. Nov.)

FURTHER DISTRIBUTION: Malay Peninsula, P. Penang, Siam and (according to Mansfeld in l.c.) North Eastern New Guinea.

3. **Diplectria conica Bakh. f.** spec. nov.

Frutex scandens. Rami adulti teretiusculi, juniores compressi, glabri. Folia oblongo-lanceolata 8—13 cm × 3—5.5 cm basi rotundata utrinque glabra 5-nervia. Petiolus 8—12 mm longus glaber. Inflorescentia submultiflora 9 cm longa; axis principalis glaber; rami robusti. Bracteae ignotae. Pedicellus 5—8 mm longus glaber. Calycis tubus 5 mm longus teres glaber; limbus truncatus integerrimus. Petala ovata 5—6 mm × 3.5—4 mm crassa. Stamina inaequalia; maiora filamentis 4 mm longis, antheris 1.5—2 mm longis subrectis, connectivo dorso in calcarem 1 mm longum exeunte, in parte ventrali in appendices duos lineares 2 mm longos exeunte. Ovarium pro $^2/_3$ quam calycis tubus longius; stylus 13 mm longus; stigma pruinosa. Bacca ignota.

Observ: Resembles Dissochaeta glandulosa Merr. from the Philippine Islands, but differing by its much smaller flowers and by the absence of glands at the base of the petiole.

Distribution. endemic.

SUMATRA. West Coast: Brani, Agam, 950 m (Bünnemeyer nr. 3094, L, typus, dupl. in [BZ], fl. June).

4. **Diplectria papuana (Mansf.) Bakh. f.** comb. nov. *Anplectrum papuanum Mansf.* in Nova Guinea XIV livr. II (1927) p. 202; idem in Engl. Bot. Jahrb. 60 (1926) p. 115. [nomen].

Climber. Branches terete, glabrous; the nodes strongly thickened and scattered with bristles. Leaves ovate-oblong, 10—16 cm × 7—9 cm, at the base subcordate, on both sides glabrous, 5-nerved, sometimes with 2 marginal nerves, only on the upperside reticulate. Inflorescence pyramidal, 7—13 cm long; main axis furfuraceous, smooth or subverruculose. Bracts linear, 3 mm × 0.5 mm, furfuraceous. Pedicel 2—3 mm long, furfuraceous. Calyx tube 2.5—3 mm long, subterete, furfuraceous; limb consisting of undulate lobes. Petals ovate, 2 mm × 1.—1.5 mm, acute. Stamens very unequal; larger ones with 2 mm long filaments and with narrowly triangular, 2 mm long, subobtuse, curved anthers, whose connective is dorsally ending in a 1 mm long spur, ventrally ending in two small tubercles; smaller stamens with 2 mm long filaments and with 0.5—0.8 mm long anthers, whose connective is dorsally ending in a broadly triangular, 1 mm long appendage, ventrally ending in two linear, 0.5 mm long appendages. Ovary $^2/_3$ as long as the calyx tube; style 5 mm long. Berry globose, 2—3 mm long.

Observ: The leaves resemble those of Backeria stipularis (Bl.) Bakh. f.

Distribution: endemic.

NEW GUINEA. Northern Part: Siriwo river (Janowsky nr. 132, type, sub *Anplectrum papuanum Mansf.*, dupl. in [BZ], L, fl. July).

18. **Carionia Naud.**

Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 311; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 571; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 180; Baker f. in Trans. Linn. Soc. sér. II. IX. 1. (1916) p. 54; Merrill, Enum. Philipp. Flow. Plants vol. 3, fasc. 5 (1923) p. 191; *Medinilla Gaud.*; Baillon, Hist. d. plant. VII (1880) p. 14, 50.

Observ: 2 species, hitherto only known from the Philippine Islands.

19. **Macrolenes naud ex mig.**

Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 331. [nomen]; Miquel, Flor. Ned. Ind. I (1855) p. 557 [descriptio incompleta]; *Maieta Aubl.* (pr. p.; typo excl.); Ventenat, Choix de Plants (1803) tab. 32; idem in Mém. de la Cl. des Sc. l'Inst. de France (1807) p. 11; *Marumia Bl.* (*non Reinwardt* [1828]) in Flora XIV (1831) p. 504 and in Bijdr. Nat. Wet. VI (1831) p. 245; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 240; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 279; Miquel, Flor. Ned. Ind. I (1855)

p. 532; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 757; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 82; Baillon, Hist. d. plant. VII (1880) p. 52; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 517; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 548; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 180; *Melastoma L.* (pr. p.; typo excl.); De Candolle, Prodr. III (1828) p. 144; *Ptelandra* (*sine auctore*); Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 459. [nomen].

Climber. Branches terete, stellate-furfuraceous, stellate-pubescent or, rarely, hirsute; the nodes strongly thickened. Leaves opposite, equal, oblong, lanceolate or ovate-oblong, at the base subcordate, at the top mostly acuminate or, rarely, acute or subobtuse, entire, on the upperside mostly glabrous or, rarely, setose or pubescent, on the underside mostly ferrugineous and stellate-furfuraceous or stellate-pubescent or, rarely, glabrous, 5- or 7-nerved, nerves distinct and at the base often provided with two cushions of minute hairs, cross-venules distinct, often reticulate. Petiole always present. Flowers eihers many, mostly in axillary or, rarely, in terminal, compound cymes or flowers 3- to 5-together; peduncle terete or quadrangular, covered with a few stellate hairs; ramifications of the first order opposite; flowers themselves hermaphrodite, 4-merous. Bracts mostly large, entire or laciniate. Pedicel always present. Calyx tube campanulate, tubular and widened or ovoid, terete, robust, furfuraceous, stellate-pilose or, rarely, hirsute; limb 4-lobed, lobes narrowly triangular, ovate or lanceolate, either half as long as the calyx tube or longer, fleshy or, rarely, submembranaceous, mostly serrate or fimbriate. Petals 4, oblong or ovate-oblong, mostly large, glabrous or pubescent, veined, white or pink. Stamens 8, unequal; filaments always present; anthers unequal and subisomorphic; large ones linear or ovate-lanceolate, narrowed to the connective, rostrate, opening by a single pore, nearly straight; connective distinctly produced at the base, dorsally lamellate or provided with a tubercle or inappendiculate, ventrally ending in 2 or more linear appendages; smaller anthers linear or ovate-lanceolate, thicker than the larger ones, narrowed to the connective, at the top acute; connective produced at the base, dorsally mostly inappendiculate, ventrally ending in two linear appendages. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, all descending far beyond the middle of the ovary; ovary itself 4-celled, half as long as the calyx tube; its toppart conical, subvillose; style robust, quadrangular, at the base mostly subpilose; stigma hardly conspicuous. Berry ovoid, densely hirsute, stellate-pilose or furfuraceous, provided with the long, persistent calyx lobes. Seeds many, semiovate or, rarely, cuneate.

Distribution: About 20 species, all Asiatic: Malay Penisula, Siam and Malay Archipelago. (its occurence in New Guinea is doubtful; vide Cogniaux in l.c.).

Key to the species.

1*)*a*. Calyx tube densely covered with bristles or with prickles, which are at the top provided with stellate excrescences . . 2
b. Calyx tube stellately pubescent or, rarely, provided with a few, minute bristles. . . 1. **M. nemorosa (Jack) Bakh. f.**
Ia. Calyx tube without warts II
b. Calyx tube covered with small warts and minute bristles. 1*a*. **M. nemorosa (Jack) Bakh. f.** var. **bancana (Scheff.) Bakh. f.**
IIa. Calyx lobes as long as the calyx tube or longer, 13 mm × 5—7 mm. 1*b*. **M. nemorosa (Jack) Bakh. f.** var. **leprosa (Korth.) Bakh. f.**
b. Calyx lobes much shorter than the calyx tube, 5—6 mm × 4 mm. . 1*c*. **M. nemorosa (Jack) Bakh. f. s.s.**
2*a*. Calyx tube provided with bristles 3
b. Calyx tube provided with prickles, which are at the top provided with excrescences 9
3*a*. Calyx lobes linear. Branches rufous-setose. Leaves broadly ovate-cordate. Calyx tube ovate-lanceolate. 2. **M. horrida Bakh. f.**
b. Calyx lobes triangular or lanceolate. Calyx tube campanulate or ovoid. 4
4*a*. Bracts lanceolate or foliaceous, robust 5
b. Bracts linear, slender 6
5*a*. Branches covered with short, ferrugineous, stellate hairs. Leaves ovate-oblong, 7-nerved. 3. **M. magnibracteata Bakh. f.**
b. Branches long and rufous setose. Leaves lanceolate, 5-nerved. 4. **M. echinulata (Naud.) Bakh. f.**
6*a*. Branches long hirsute. Leaves elliptic, on the upperside hirsute, 7-nerved. . . . . 5. **M. Ruttenii Bakh. f.**
b. Branches furfuraceous, glabrous or covered with short, stellate hairs. 7
7*a*. Branches and leaves densely and shortly ferrugineous pilose. Stamens robust, 10—15 mm long; connective of the large anthers provided with a dense tuft of curled hairs. 6. **M. muscosa (Bl.) Bakh.** .

*) See also 13. **M. bipulvinata (Korth.) Bakh. f.**, which cannot be placed in this key as it is founded on a sterile specimen.

b. Branches and leaves subfurfuraceous or glabrous. Stamens not robust, 7—9 mm long; connective of the large anthers mostly provided with 2 to 4 hairs or, rarely, with a few more. . . . 8

8*a.* Flowers in triads. Leaves on the underside dull. Anthers ovate-lanceolate; connective provided with 4 or more hairs. 7. **M. zeylanica (Bl.) Bakh. f.**

b. Flowers 10—20, arranged in a cymose, lax inflorescence. Leaves on the underside, especially on the nerves, shining. Anthers linear, bisetose . . . . . 8. **M. annulata (Vent.) Naud.**

9*a.* Calyx lobes submembranaceous, ovate-oblong, reticulate. Calyx tube ovoid . . . . . 9. **M. submembranacea Bakh. f.**

b. Calyx lobes not membranaceous. Calyx tube campanulate . 10

10*a.* Bracts linear, entire, ferrugineously pubescent 11

b. Bracts oblong-lanceolate, strongly laciniate, grey pubescent. Calyx lobes long ciliate. 10. **M. ciliatiloba (Baker f.) Bakh. f.**

11*a.* Base of the leaves on the underside provided with 2 cushions of minute hairs. Prickles of the calyx tube at the base subglabrous, pallid, at the top provided with long, stellate excrescences. 11. **M. reticulata (Bl.) Bakh. f.**

b. Base of the leaves on the underside without hair cushions. Prickles of the calyx tube all over densely but shortly ferrugineous-tomentose; the stellate excrescences at the top very short and subcapitate. 12. **M. stellulata (Jack) Bakh. f.**

1. **Macrolenes nemorosa (Jack) Bakh. f.** comb. nov. *Marumia nemorosa (Jack) Bl.* in Flora XIV (1831) p. 505 and in Bijdr. Nat. Wet. VI (1831) p. 247; Blume in Mus. Bot. Lugd.-Bat. I. nr. 2 (1849) p. 33; Naudin in l.c. XV (1851) p. 279; Miquel, l.c. (1855) p. 533; idem, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 122; Triana in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 549; Krasser in l.c. (1893) p. 180; *Marumia affinis Korth.* in l.c. (1839—1842) p. 241 and tab. 60; Naudin in l.c. XV (1851) p. 282; Miquel, l.c. (1855) p. 533; *Melastoma nemorosa Jack* in Trans. Linn. Soc. XIV (1825) p. 8; De Candolle, l.c. (1828) p. 149; Jack in Calcutta Journ. Nat. Hist. vol. V nr. XV (1843) p. 319.

Climber. Branches brown stellate - furfuraceous or stellate - pubescent. Leaves narrowly oblong or lanceolate, 7.5—11.5 cm × 2.5—5.5 cm, abruptly acuminate, on the upperside glabrous, on the underside ferrugineous or grey-brown stellate - puberulous, 7-nerved, subreticulate. Petiole 6—8 mm long, ferrugineous-puberulous. Flowers axillary, in up to 5 cm long triads; peduncle 1.5—3.5 cm

long, quadrangular. Bracts linear, 3—4 mm long, on both sides brown-furfuraceous. Pedicel 3—4.5 mm long. Calyx tube tubular, widened at the top, 14 mm long, densely but minutely ferrugineous stellate-pubescent; lobes ovate- triangular, 5—6 mm × 4 mm, much shorter than the calyx tube, on both sides ferrugineous-pubescent. Petals ovate-oblong, glabrous (I have only seen them before anthesis). Larger stamens with 10 mm long filaments and with linear, 10 mm long, ± straight anthers, whose connective is 6 mm long, dorsally ending in a tubercle, ventrally ending in two 2 mm long appendages; smaller stamens with 8—9 mm long filaments and with linear, 8 mm long, curved anthers, whose connective is 2 mm long, ventrally ending in two short, linear appendages, dorsally ending in a tubercle. Top part of the ovary subvillose; style 20—25 mm long, glabrous. Berry elliptic, 10—15 mm long, at the top ending in a short, cylindrical neck, provided with the persistent calyx lobes; stalk 4—6 mm long.

Distribution.

SUMATRA: (vide Jack in l.c.).
P. NIAS: (vide Jack in l.c.).
BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang. (Korthals s.n. L, type of *Marumia affinis Korth.*). Exact locality unknown: G. Pamatton (Korthals s.n. L); (de Vriese s.n. L); BRITISH PARTS.
FURTHER DISTRIBUTION: Malay Peninsula, P. Penang.

var. **bancana (Scheffer) Bakh. f.** comb. nov.

Marumia bancana Scheffer in Observ. Phytogr. II (1868—1869) p. 43; idem in Flora (1870) nr. 16. p. 249; *Marumia nemorosa (Jack) Bl.* var. *verrucosa (Cogn.) Ridley*, Flor. Mal. Penins. I (1922) p. 795; *Marumia verrucosa Cogn.* in l.c. (1891) p. 549.

Climber. Leaves lanceolate, 8.5—10.5 cm × 2.5—3.5 cm, 5- or 7-nerved. Petiole 8—10 mm long. Peduncle 3—3.5 cm long. Flowers only seen before anthesis. Pedicel 6 mm long, having throughout the same diameter. Calyx tube 10—14 mm long, abruptly narrowed in the pedicel, either minutely, stellate-furfuraceous or pubescent and sparsely verruculose or setulose; lobes narrowly triangular or ovate, 7—13 mm × 4—5 mm, shorter or longer than the calyx tube. Berry 11—17 mm long. Seeds very narrowly cuneate.

Observ: Especially differing from the type species by its warty calyx tube.

Distribution.

SUMATRA. East Coast: Sibaulangit, above Bandar baroe, 900 m (Lörzing nr. 5333 [BZ], L, fl. Oct.); locality unknown (Yates nr. 1207, L).

RIOUW ARCHIPELAGO. P. D o m p a k: 10 m (Bünnemeyer nr. 6416 [BZ], L, fl. June).

BANKA: Djeboes (Teysmann s.n. L, typus, sub *Marumia bancana Scheffer*; v.n. akar penangil); Soengai sĕlan (idem s.n. L); between Soengai Selan and Melaboen, 80 m (Bünnemeyer nr. 1989 [BZ], L, fr. Nov.).

FURTHER DISTRIBUTION. Malay Peninsula.

var. **leprosa (Korth.) Bakh. f.** comb. nov.

Marumia leprosa Korth. in l.c. (1839—1842) p. 241; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 34; Naudin in l.c. XV (1851) p. 283; Miquel, l.c. (1855) p. 533; Triana in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 549.

Climber. Leaves narrowly oblong, lanceolate or narrowly ovate-oblong, 6—11.5 cm × 3—6 cm, 5- or 7-nerved, when dry between the nerves yellow-brown. Flowers either in up to 7 cm long triads, whose peduncle is 2.5—4.5 cm long or flowers solitary (Cogniaux). Pedicel 8 mm long, widened at the top or having throughout the same diameter. Calyx tube narrowly or broadly campanulate, 8—15 mm long; lobes broadly triangular or obovate, about as long as the calyx tube. Larger stamens with 10 mm long filaments and with 15—18 mm long, rostrate anthers, whose connective is 5 mm long, dorsally lamellate, ventrally ending in two linear appendages; smaller stamens with 7 mm long filaments and with 13 mm long anthers, whose connective is 1—2 mm long. Style 15—30 mm long, having throughout the same diameter, at the base pilose or subfurfuraceous. Berry broadly elliptic, 10—15 mm long, ending in a tubular neck; stalk 8 mm long.

O b s e r v: I do not maintain this form as a true species, because of the many transitions known between Marumia nemorosa (Jack) Bl. and M. leprosa Korth.

D i s t r i b u t i o n: endemic.

BORNEO. SOUTHERN AND EASTERN PART. B a n d j e r m a s i n: G. Sakoembang (Korthals s.n. L, typus, sub *Marumia leprosa Korth.*); BRITISH PARTS.

2. **Macrolenes horrida Bakh. f.** spec. nov.

Frutex scandens. Rami dense ferrugineo-stellato-furfuracei et setis simplicibus 2.5—4 mm longis rubiginosis hirsuti. Folia ovata 12 cm × 8 cm basi cordata subtus dense rubiginoso-stellato-pilosella, ad nervos hirsutula 7-nervia reticulata. Petiolus setis 12 mm longis rufis densissime hirsutus. Inflorescentia longa; rami patentes robusti dense rufo-setosi. Flores et bracteae ignotae. Calycis tubus post anthesin ovato-lanceolatus 10—12 mm × 4—5 mm, setis simplicibus 4—6 mm longis rufis dense hirsutus; dentes lineares

10—12 mm × 1—1.5 mm basi dilatati apice obtusi, extus dense rufo-stellato-pubescentes et rufo-setosi, intus dense rufo-stellato-pubescentes. Ovarium in parte apicali pilosiusculum.

Observ: A remarkable form by its habit. It may belong to a new genus, but as up to now no flowers are known, it seems better to me to consider this plant a species of Macrolenes, to which it is at any rate closely allied.

Distribution: endemic.

SUMATRA. West Coast: Brani, Agam, 850 m (Bünnemeyer nr. 3200, L, typus, dupl. in [BZ], fr. June).

3. **Macrolenes magnibracteata Bakh. f.** spec. nov.

Frutex scandens. Rami teretiusculi ferrugineo-stellato-pubescentes. Folia ovato-oblonga minime 10 cm longa et 4—4.5 cm lata acuminata supra glabra subtus dense rubiginoso-stellato-tomentosa subreticulata. Petiolus fere 1 cm longus rubiginoso-tomentosus. Inflorescentia ad 15 cm longa; rami 2 enascentes ex axilla foliorum. Bracteae lanceolatae 15—20 mm × 4—7 mm acutae utrinque sed praecipue subtus ferrugineo-stellato-pubescentes, margine setis ad 4 mm longis obtectae, 3- vel 5-nerviae costa crassa petiolatae. Pedicellus 5—7 mm longus. Calycis tubus ovato-oblongus 6—10 mm longus dense ferrugineo-stellato-pubescens et setis simplicibus usque ad 3.5 mm longis stellato-furfuraceis sparse hirsutus; lobi anguste triangulares vel lanceolati 4—5 mm × 2 mm utrinque minute stellato-furfuracei margine longe setosi. Petala ovato-oblonga 9—10 mm × 6 mm basi angustata apice acutissima subpubescentia venulata. Stamina maiora filamentis 11—14 mm longis, antheris linearibus 11—14 mm longis basi in connectivum angustatis acutis subrectis 1-poris, connectivo 4 mm longo, dorso in appendicem 1—2 mm longum apice breviter plurisetosum exeunte, in parte ventrali in appendices duos 5—6 mm longos plurisetosos exeunte; stamina minora filamentis 5—6 mm longis, antheris sigmoideis 5—6 mm longis basi obtusiusculis apice acutis, connectivo brevissimo, dorso inappendiculato, in parte ventrali in setas duas lineares 4 mm longas exeunte. Stylus basi sparse stellato-pubescens. Bacca immatura 1 cm longa stellato-hirsuta; pedicellus 6—8 mm longus.

Observ: Allied to M. muscosa (Bl.) Bakh. f., but differing by its large bracts, which are long setose at the margin.

Distribution: endemic.

SUMATRA. West Coast: N. of Taloe, 950 m (Bünnemeyer nr. 960, L, typus, dupl. in [BZ], fl. Apr.).

4. **Macrolenes echinulata (Naud.) Bakh. f.** comb. nov. *Marumia echinulata Naud.* in l.c. XV (1851) p. 280.

Climber. Branches sparsely hirsute with up to 3.5 mm long rufous bristles, which are reflexed at the top. Leaves lanceolate, 7—10 cm × 2.5—3.5 cm, acuminate, on the upperside glabrous, on the underside ferrugineous stellate-tomentose, 5-nerved, the nerves on the underside at the base of the leaves sparsely hirsute, reticulate. Petiole 3—5 mm long, ferrugineously subtomentose and sparsely hirsute. Inflorescence up to 8 cm long; main axis subtended by two pairs of leaves, in the axils of which arise short branchlets; the lower pair of leaves bearing 2 flowers, the upper pair bearing 3 flowers; the main axis itself strongly but laterally thickened on the nodes. Bracts unknown to me. Pedicel 11—18 mm long, flattened, furfuraceous and sparsely hirsute, with a thickening just below the calyx tube, which may be the forming of young buds. Calyx tube campanulate, 10—12 mm long, narrowed at the base, densely ferrugineously stellate-furfuraceous and hirsute with rufous bristles, which are sparsely stellate-pubescent and reflexed at the top; lobes narrowly triangular, 12—14 mm × 5 mm, inside stellate-furfuraceous, at the margin long setose. Stamens (only seen before anthesis) subequal; anthers lanceolate, 6 mm long, at the base abruptly narrowed, at the top abruptly but long rostrate, whose connective is produced, ventrally ending in two linear, 3 mm long appendages. Top part of the ovary 8-ribbed, provided with a short disc; style 20 mm long, widened at the base, glabrous. Berry ovoid, 10—12 mm long, widened at the top, rufously hirsute; stalk 2—4 mm long.

Observ: Allied to M. muscosa (Bl.) Bakh. f.

Distribution.

LINGGA ARCHIPELAGO. P. Lingga: Tg. Boetan, Kp. Daik, 30 m (Bünnemeyer nr. 7065 [BZ], L, fl. July; v.n. kĕmoenting akar.).

FURTHER DISTRIBUTION: Malay Peninsula, Singapore.

5. **Macrolenes Ruttenii Bakh. f.** spec. nov.

Frutex scandens. Rami in sicco pallide-flavescentes furfuracei et setis usque ad 2 mm longis sparse hirsuti. Folia elliptica 10.5 cm × 7.5 cm obtusiuscula supra sparse setosa subtus griseo-furfuracea 7-nervia reticulata. Petiolus 7 mm longus dense hirsutus. Inflorescentia ignota. Flores ante anthesin solum vidi. Bracteae lanceolatae 12 mm × 4 mm obtusiusculae utrinque flavescenti-puberulae margine setosae. Pedicellus 2 mm longus. Calycis tubus anguste campanulatus 6 mm longus dense sed minute flavescenti-stellato-pubescens et setis simplicibus usque ad 2 mm longis sparse hirsutus; lobi anguste triangulares 4—5 mm × 2—2.5 mm, flavescenti-stellato-pubescentes margine sparse setosi. Petala ovato-oblonga glabra. Stamina subaequalia; maiora filamentis 5 mm longis antheris

linearibus 7 mm longis rostratis, connectivo 1.5 mm longo, dorso minute lamellato, in parte ventrali in appendices duos lineares 1—2 mm longos exeunte; stamina minora filamentis 2.5 mm longis, antheris sigmoideis 5 mm longis rostratis, connectivo brevissimo, dorso inappendiculato, in parte ventrali in appendices duos lineares 0.5 mm longos exeunte. Stylus 13 mm longus glabriusculus. Bacca ignota.

Observ: I have named this species in honour of Prof. Dr. L. M. R. Rutten (Utrecht, Holland).

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Samarinda: Boengaloen, 10—100 m (Rutten nr. 535, U, typus).

6. **Macrolenes muscosa (Bl.) Bakh. f.** comb. nov. *Marumia muscosa (Bl.). Bl.* in Flora XIV (1831) p. 504 and in Bijdr. Nat. Wet. VI (1831) p. 246; idem in Rumphia I (1835) p. 17 and tab. 4; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 258; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Naudin in l.c. XV (1851) p. 280 and tab. XII, fig. 1; Junghuhn, Java (1853) p. 512; Miquel, l.c (1855) p. 534; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122 and 318; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 551; Krasser in l.c. (1893) p. 178, 180 and tab. G, H; Koorders, Exkurs. Flora Java II (1912) p. 694; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Bakhuizen van den Brink („Erythrina") in Trop. Nat. IV (1915) p. 181 and fig. on p. 181; Hochreutiner in Candollea II (1925) p. 471; Ochse (in collab. with Bakhuizen van den Brink), Indische Groenten (1931) p. 482 and tab. 300; Backer, Manuscr. Fl. Java, Melast. (1941) p. 16; *Melastoma ferruginea Reinw.*; Blume, Catal. Buitenzorg (1823) p. 70 [nomen]; Blume in Flora XIV (1831) p. 505 [nomen]; *Melastoma muscosum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1070; De Candolle, l.c. (1828) p. 148; *Melastoma muscosum Bl.* var; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1070; De Candolle, l.c. (1828) p. 148.

Climber, (according to Backer) 4—15 m high. Branches ferrugineously subtomentose. Leaves oblong or ovate-oblong, 5.5—18cm × 3.5—7.5 cm, acuminate or acute, on the upperside glabrous and dark, on the underside ferrugineously subtomentose, reticulate. Petiole 6—11 mm long. Inflorescences terminal and axillary, up to 5 cm long, at most 20-flowered; peduncle 1.5—2 cm long, densely ferrugineously subtomentose; ramifications of the first order decussate in the lower parts, very closely together, bearing 3 to 5 flowers. Pedicel 2—4 mm long. Bracts linear, 8—14 mm × 1—2 mm, on both sides

ferrugineously subtomentose, its margin long setose, stalked. Calyx tube ovoid, widened at the base, 6—9 mm long, densely but ferrugineously subtomentose and hirsute with up to 5 mm long bristles; lobes narrowly triangular, 5—8 mm long, on both sides ferrugineously subtomentose, its margin setose. Petals oblong, 10—15 mm × 5—6 mm, subacute, veined, outside ferrugineously subtomentose, pink. Stamens unequal; the larger ones with 10 mm long filaments and with linear, 15 mm long, ± straight anthers, whose connective is 3—4 mm long, densely covered with many linear, up to 8 mm long appendages; smaller stamens with shorter filaments and with linear, 10—12 mm long, slightly rostrate, curved anthers, whose connective is 2 mm long, dorsally ending in linear appendages or lamellate, ventrally covered with many linear appendages. Style 12—10 mm long, at the base hairy. Berry elliptic, 10 mm long; stalk 6—8 mm long.

Distribution: restricted to the localities quoted below.

SUMATRA. Djambi: locality unknown, 180 m (Posthumus nr. 715 [BZ], L, fl. Aug.). Palembang: Ogan Oeloe (Teysmann s.n. U; v.n. sedoedoek ajer).

JAVA. Bantam: Tjihèrang [?„Hariang"] (Kuhl and van Hasselt s.n. L, fl. Oct.); Lontar (Reinwardt s.n. L); G. Seriboe (Blume s.n. L); Tjimandawal (Kuhl and van Hasselt s.n. L, fl. Sept.); Leuwiboengoer (idem s.n. L, fl. Sept.). Batavia: G. Kembang, near Poerasèda (Bakhuizen van den Brink fil. nr. 3410, U, fl. June); G. Paroengpoeng, S. W. of Leuwiliang, 750 m (Bakhuizen van den Brink nr. 7696 [BZ], L); Rantja badak, near Poerasèda, 450 m (idem nr. 7033 [BZ], L, fl. Febr.); G. Batoe, along the Tjianten (Backer nr. 25794 [BZ], L, fl. Aug.); Bolang, 600 m (Docters van Leeuwen nr. 7907 [BZ], L, fl. May); Depok, 93 m (Beumée nr. 6729 [BZ], L, fl. May); G. Salak (Blume s.n. L). Preanger Regencies: Tjadas Malang, near Tjidadap, 1000 m (Winckel nr. 1302*β* [BZ], L, fl. May); idem (idem s.n. [BZ], L; v.n. areuj harèndong badak); Tjidadap, 1000 m (Bakhuizen van den Brink nr. 1858 [BZ], L, fl. Oct.); (Winckel s.n. [BZ], L); Tapos (Junghuhn s.n. L, U). Locality unknown (prob. W. Java): (Blume s.n. L, typus, sub *Melastoma muscosum Bl.*); (idem s.n. L, sub Melastoma muscosum Bl. var.); (idem s.n. L; v.n. tjaloentjoeng beureum); (de Vriese s.n. L); (idem s.n. L; v.n. harendong areuj); (Reinwardt s.n. L); (Boerlage s.n. L); (collector unknown, L).

7. **Macrolenes zeylanica (Bl.) Bakh. f.** comb. nov. *Marumia zeylanica Bl.* in Flora XIV (1831) p. 505 and in Bijdr. Nat. Wet. VI (1831) p. 246; idem in Rumphia I (1835) p. 19 and tab. 5; Triana in l.c. (1871) p. 82 and tab. VII, fig. 88b; *Marumia Horsfieldii Miq.*, l.c. (1855) p. 536; Triana in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 550; Koorders, Exkurs. Flora Java II (1912) p. 694.

Climber. Branches glabrous. Leaves oblong or ovate-oblong,

8.5—10 cm × 4—4.5 cm, acuminate, on the upperside glabrous, on the underside ferrugineously furfuraceous, 5-nerved. Petiole 4—7mm long, furfuraceous. Flowers in axillary, up to 6 cm long triads, only seen before anthesis; peduncle 2.5—3 cm long, subterete or subquadrangular, furfuraceous or subglabrous. Bracts linear, 4—5 mm long, furfuraceous. Pedicel 6—8 mm long, subterete, furfuraceous; those of the central flowers 6—8 mm long, ebracteolate; those of the lateral ones 12—15 mm long, bibracteolate. Calyx tube narrowly campanulate, 8 mm long, at the base rounded, stellate-furfuraceous and sparsely hirsute with up to 2.5 mm long bristles, yellow when dry; lobes lanceolate, 5—6 mm × 2—2.5 mm, much widened at the base, acute, on both sides stellate-furfuraceous, its margin setose. Stamens unequal; filaments shorter than the anthers; anthers ovate-lanceolate, 7 mm long, abruptly narrowed to the base, at the top very acute; connective dorsally ending in 3—4 mm long appendages, ventrally ending in 4 or more linear appendages. Style 9 mm long, at the base subvillose. Berry ovoid, 10 mm × 5—6 mm, hirsute, provided with the long calyx lobes, pale yellow when dry; stalk 5—7 mm long.

Observ: Allied to M. annulata (Vent.) Naud. and M. Ruttenii Bakh. f.

Distribution.

JAVA. Kedoe: G. Prahoe (Horsfield s.n. L, type of *Marumia Horsfieldii Miq.*). Locality unknown: (collector unknown, U).
FURTHER DISTRIBUTION: Ceylon.

8. **Macrolenes annulata (Vent.) Naud.** Naudin in l.c. XV (1851) p. 311; Miquel, l.c. (1855) p. 558; *Huberia annulata (Vent.) D.C.*, l.c. (1828) p. 167; *Maieta annulata Vent.*, Choix de Plant. (1803) tab. 32; idem in Mém. de la Cl. des Sc. l'Inst. France (1807) p.11; *Marumia annulata (Vent.) Triana* in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 550; Backer, Manuscr. Fl. Java, Melast. (1941) p. 16; *Melastoma annulatum Poir. ex Triana* in l.c. (1871) p. 82 [nomen].

Climber. Branches brown furfuraceous, glabrescent. Leaves oblong or lanceolate, 9.5—14.5 cm × 3.5—5.5 cm, acuminate, on the upperside glabrous, on the underside sparsely furfuraceous, glabrescent, pale yellow when dry, somewhat shining, reticulate. Petiole 5 mm long, brown furfuraceous. Inflorescence axillary, up to 10 cm long, bearing 10—20 flowers. Flowers only seen before anthesis. Pedicel hirsute, 5—8 mm long. Calyx tube cylindrical, widened at the top, 6—8 mm long, terete, densely furfuraceous and hirsute with pallid, up to 2.5 mm long bristles; lobes narrowly triangular, 4—5 mm

× 2 mm, at the top reflexed, on both sides furfuraceous, its margin setose. Petals ovate, acute, glabrous. Stamens subequal; filaments much shorter than the anthers; anthers linear, 8—9 mm long, abruptly narrowed to the base, rostrate; connective short, dorsally inappendiculate, ventrally ending in two linear appendages, which are half as long as the anthers. Top part of the ovary provided with a disc; style 18 mm long, filiform, at the top curved. Berry ovoid, 8—9 mm long, hirsute, pallid; stalk 5 mm long. Seeds narrowly cuneate.

Observ: Allied to M. zeylanica (Bl.) Bakh. f. and M. Ruttenii Bakh. f.

Distribution: restricted to the localities quoted below.

SUMATRA. Benkoelen: G. Kaba, 1000 m (Forbes nr. 2853, L).
JAVA. Locality unknown: (Lahaie, ex Ventenat in l.c., type).

9. **Macrolenes submembranacea Bakh. f.** spec. nov.

Frutex scandens. Rami ferrugineo-stellato-pubescentes. Folia ovato-oblonga, 9.5—15 cm × 5—6.5 cm, acuminata, supra glabra, in sicco opaca, subtus ad nervos dense ferrugineo-stellato-furfuracea, inter nervos sparse furfuracea, 7-nervia reticulata. Petiolus 12—28 mm longus ferrugineo-stellato-pubescens. Inflorescentia terminalis paniculata multiflora ad 30 cm longa; rami oppositi. Bracteae oblongae 10—13 mm × 5—6 mm acutae submembranaceae utrinque furfuraceae reticulatae. Pedicellus crassus furfuraceus, ille florum centralium 5—6 mm longus, ille florum lateralium 10—12 mm longus. Calycis tubus ovoideus 10—12 mm longus dense farinosus et setis stellatis ad 2 mm longis pilosellis sparse hirsutus; lobi ovato-oblongi 6—9 mm × 3.5—5 mm acuti submembranacei utrinque farinosi margine ciliati reticulati, costa crassa. Petala elliptica 17 mm × 12mm basi apiceque acuta glabra multivenulata. Stamina inaequalia; maiora filamentis 12 mm longis, antheris linearibus 12—13 mm longis basi angustata rostrata, connectivo 5—6 mm longo, dorso in appendicem brevem exeunte, in parte ventrali in appendices 4 vel pluros lineares 4—5 mm longos exeunte; stamina minora filamentis 9 mm longis, antheris linearibus 11 mm longis curvatis, connectivo 2 mm longo, dorso inappendiculato, in parte ventrali in appendices lineares duos breves exeunte. Ovarium quam calycis tubus dimidium longius, disco coronatum; stylus 20 mm longus anguste obclavatus in stigmatum minutum abrupte contractum.

Observ: Allied to M. ciliatiloba (Baker f.) Bakh. f.

Distribution: endemic.

SUMATRA. Benkoelen: G. Raja, E. of lake Ranau, 1300 m (van Steenis nr. 3522, L, typus, dupl. in [BZ], fl. Nov.).

10. **Macrolenes ciliatiloba (Baker f.) Bakh. f.** comb. nov. *Marumia ciliatiloba Baker f.* in Journ. Bot. LXII Suppl. I (1924) p. 40.

Climber. Branches densely, ferrugineously furfuraceous. Leaves ovate-oblong, at the base provided with two cushions of minute hairs, acuminate, on the upperside glabrous and dark when dry, on the underside ferrugineously stellate-pubescent, 7-nerved, reticulate, 9.5—15 cm × 4.5—7.5 cm. Petiole 10—14 mm long, ferrugineously stellate-pubescent. Inflorescence axillary, paniculiform, bearing at most 10 flowers,up to 11 cm long; peduncle 5—5.5 cm long, subterete or flattened, grey-furfuraceous. Bracts oblong or lanceolate, 8—10 mm × 3—4.5 mm, acute, laciniate, densely grey furfuraceous; midrib distinct. Pedicel at most 2 mm long. Calyx tube campanulate, 10—12 mm long, densely grey subtomentose and hirsute with 2—3 mm long, grey subtomentose prickles, which are at the top provided with stellate excrescences; lobes ovate-oblong, 8 mm × 4 mm, acute, laciniate, on both sides grey pubescent. Petals oblong, 15 mm × 8 mm, obtuse, outside subpubescent, veined, white. Stamens subequal; larger ones with 8 mm long filaments and with linear, 15 mm long, rostrate anthers (I have seen them only in the bud), whose connective is scarcely produced, ventrally ending in many linear, up to 10 mm long appendages; smaller stamens (when adult) with 7—10 mm long filaments and with linear, 13—15 mm long, obtuse anthers, whose connective is 2 mm long, dorsally ending in a 1 mm long appendage, ventrally ending in two short appendages. Top part of the ovary provided with a disc; style at least 25 mm long, up to the middle grey-pubescent. Berry elliptic, 12—15 mm long, grey and stellate hirsute, provided with the persistent calyx lobes; stalk up to 2 mm long.

Observ: Allied to M. stellulata (Jack) Bakh. f., but a.o. easily distinguishable by its grey hairs and by the shape of its bracts and calyx lobes.

Distribution: restricted to the localities quoted below.

SUMATRA. Djambi: Djambi, 200 m (Posthumus nr. 927 [BZ], L, fr, Sept.). Palembang: Soeka Radja, R. Roepit, 200 m (Forbes nr. 3008. type, dupl. in L; v.n. kidaroe).

LINGGA ARCHIPELAGO. P. Singkep: Manggee, 40 m (Bünnemeyer nr. 7170 [BZ], L, fl. Aug.); idem, 50 m (idem nr. 7187 [BZ], L, fr. Aug.).

(ISLE UNKNOWN TO ME): Bt. Sipiendjang. (Teysmann s.n. [BZ], L).

11. **Macrolenes reticulata (Bl.) Bakh. f.** comb. nov. *Marumia reticulata Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 34; Naudin in l.c. XV (1851) p. 282; Miquel, l.c. (1855) p. 535; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122; Triana in l.c. (1871) p. 82;

Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 551; *Marumia stellulata Korth.* in l.c. (1839—1842) p. 243.

Climber. Branches ferrugineously stellate-pubescent. Leaves oblong, 10.5—12 cm × 4.5—5.5 cm, shortly acuminate, on the upperside glabrous, on the underside, especially on the nerves, ferrugineously stellate-pubescent; the leaf base on the upperside densely stellate-tomentose, on the underside provided with two, cushions of minute hairs; 7-nerved, on both sides reticulate. Petiole short. Inflorescence terminal, in the lower parts subtended by leaves, perhaps many-flowered and according to Korthals in l.c. also axillary, bearing 3 to 5 flowers. Flowers unknown to me, according to Korthals in l.c. white. Calyx tube broadly campanulate, rounded at the base, densely ferrugineously pubescent and also covered with 2—2.5 mm long prickles, which are at the base pallid and subglabrous and at the top provided with stellate-haired, stellate excrescences; lobes suborbicular, 5 mm × 4 mm, on both sides densely but ferrugineously stellate-tomentose, minutely ciliate. Top part of the ovary long villose.

Observ: There is some resemblance with M. stellulata (Jack) Bakh. f.

Distribution:

SUMATRA. West Coast: G. Koerintji (Korthals s.n. L, typus, sub *Marumia stellulata Korth.*). Palembang: Tandjong Ning, 270 m (Forbes nr. 2783, L).

12. **Macrolenes stellulata (Jack) Bakh. f.** comb. nov. *Anplectrum reformatum (Bl.) Triana* in l.c. (1871) p. 85; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 568; *Diplectria reformata (Bl.) O.K.*, Revis. Gen. Plant. (1891) p. 246; *Dissochaeta reformata Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 37; Naudin in l.c. (1851) p. 79; Miquel, l.c. (1855) p. 530; *Marumia Jackii Korth.* in l.c. (1839—1842) p. 243; *Marumia Korthalsiana Miq.*, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 318 and 122; Triana in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 552; *Marumia oligantha Naud.* in l.c. XV (1851) p. 281; Miquel, l.c. (1855) p. 534; *Marumia pachygyna Korth.* in l.c. (1839—1842) p. 242 and tab. 59; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 34; Naudin in l.c. XV (1851) p. 281; Miquel, l.c. (1855) p. 535; Triana in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 552; *Marumia stellulata (Jack) Bl.* in Flora XIV (1831) p. 503 and in Bijdr. Nat. Wet. VI (1831) p. 246; Naudin in l.c. XV (1851) p. 282; Miquel, l.c. (1855) p. 535; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122; Triana in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 532;

Cogniaux in l.c. (1891) p. 552; *Marumia vulcanica Korth.* in l.c. (1839—1842) p. 243; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 34; Naudin in l.c. XV (1851) p. 282; Miquel, l.c. (1855) p. 536; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 122; *Melastoma stellulata Jack* in Trans. Linn. Soc. XIV (1825) p. 6; De Candolle, l.c. (1828) p. 148; Jack in Calcutta Journ. Nat. Hist. vol. V nr. XV (1843) p. 318.

Climber. Branches ferrugineously or rufously stellate-pubescent. Leaves oblong or lanceolate, 7—18 cm × 2.5—7.5 cm, acuminate, on the upperside glabrous, on the underside densely but ferrugineously or rufously stellate-pubescent, 5-nerved, on both sides reticulate. Petiole 7—14 mm long, densely but ferrugineously puberulous. Inflorescence axillary, paniculiform, at most 10-flowered, up to 10 cm long; peduncle 4 cm long, subterete, densely but ferrugineously stellate-puberulous. Bracts linear, 6—9 mm × 1 mm, on both sides ferrugineously pubescent. Pedicel 2 mm long. Calyx tube campanulate, 8—15 mm long, densely covered with ferrugineous prickles, which are either very small and provided with subcapitate, minute, stellate excrescences or prickles 2—3 mm long and provided with distinct, stellate excrescences at the top; lobes broadly ovate and acute or triangular and either thick, entire, on both sides ferrugineously stellate-setulose or shortly laciniate and on the upperside stellate-hirsute, on the underside subpubescent, 5—8 mm × 3—7 mm. Petals oblong or ovate-oblong, (before anthesis) 12 mm × 7 mm, inside glabrous, outside minutely, stellate-pubescent, purple or pink or, according to Korthals in l.c., white. Stamens unequal; larger ones with 14 mm long filaments and with linear, 15 mm long anthers, whose connective is 15 mm long, dorsally ending in a minute triangular appendage, ventrally ending in many, 4—8 mm long appendages; smaller stamens with 14 mm long filaments and with elongate, 12 mm long anthers, whose connective is 1—2 mm long, ventrally ending in two 2 mm long appendages. Toppart of the ovary provided with a disc; style 22—26 mm long, up to the middle stellate-pilose. Berry ovoid, 12—13 mm long.

Observ: A very variable species, having in almost all characters many transitions. I do not hesitate to reduce the many species to a single polymorphic one.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: Loeboek sikaping. (Teysmann s.n. U, type of *Marumia Korthalsiana Miq.*); G. Merapi (Korthals s.n. L, type of *Marumia vulcanica Korth.*); G. Malintang (idem s.n. L, type of *Marumia Jackii Korth.*); G. Singgalang (Beccari nr. 190, L). Exact locality unknown: „Saloomah". (Jack, vide Jack in l.c., type; v.n. „dadurah akkar"). Locality unknown: (Reinwardt s.n. L).

BORNEO. SOUTHERN AND EASTERN PART. Kapoeas-Barito: Tewe river. (Korthals s.n. L, type of *Marumia pachygyna Korth.*).

13. **Macrolenes bipulvinata (Korth.) Bakh. f.** comb. nov. *Dissochaeta bipulvinata Korth.* in l.c. (1839—1842) p. 239; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 36; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 530; *Marumia bipulvinata (Korth.) Triana* in l.c. (1871) p. 82; Boerlage, l.c. (1890) p. 533; Cogniaux n l.c. (1891) p. 553.

Climber. Branches ferrugineously furfuraceous and sparsely hirsute with up to 4 mm long bristles. Leaves elliptic or oblong, 8.5—14 cm × 3.5—6.5 cm, shortly acuminate, on the upperside glabrous and shining, on the underside ferrugineously subtomentose, 5-nerved, on the nerves shortly hirsute, cross-venules distinct on both sides; the leaf base on the underside provided with two cushions of minute hairs. Petiole 4 mm long, setose. Flowers and berry unknown.

Observ: Described by Korthals as a species of Dissochaeta but the plant is doubtless a true Macrolenes. It may belong to on of the above mentioned species, but I am not sure whether it i really so.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unknown: „G. Rantau". (Korthals s.n. L, typus).

Species unkncwn to me, not mentioned in the key.

1. **Marumia hirsuta Cogn.** in l.c. (1891) p. 553. — Borneo
2. **Marumia rhodocarpa Cogn.**; Baker f. in Journ. Bot. LXII Suppl. I (1934) p. 39 — Sumatra
3. **Marumia sumatrana Kds.** in Koorders-Schumacher, Syst Verz. II Sumatra (1911) p. 46 — Sumatra

20. Dissochaeta Bl.

Blume (*sect. 1. Dissochaeteae Bl.*, pr. p.; typo incl.) in Flora XIV (1831) p. 493 and in Bijdr. Nat. Wet. VI (1831) p. 234; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 69; Miquel, Flor. Ned. Ind. I (1855) p. 521; Bentham and Hocker, Gen. Plant. I 2. (1865) p. 758; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 82; Baillon, Hist. d. plant. VII (1880) p. 14, 51; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 504; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 554; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 180; *Anplectrum A. Gray* (pr. p.; typo excl.); Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 84; *Aplectrum Bl.* (pr. p.; typo excl.), in Mus. Bot. Lugd.-Bat. I nr.

(1849) p. 37; *Melastoma L.* (pr. p.; typo excl.); Jack in Trans. Linn. Soc. XIV (1825) p. 1; Blume; Bijdr. Flor. Ned. Ind. nr. 17 (1825) p. 1067; De Candolle, Prodr. III (1828) p. 144.

Climbers. Branches terete or subquadrangular, stellate-furfuraceous, pubescent or, rarely, hirsute; the nodes ring-shaped thickened. Leaves opposite, equal, oblong, ovate-oblong or, rarely, lanceolate, at the base rounded, subcordate or cordate, at the top acuminate or acute, entire, the upperside glabrous, the underside furfuraceous, stellate-subtomentose or dotted with small, stellate hairs, 3- to 7-plinerved, petiolate. Inflorescences terminal or, rarely, axillary panicles, in the lower parts subtended by leaves, mostly robust, many-flowered; main axis mostly quadrangular, strongly thickened on the nodes, stellate-furfuraceous or stellate-pubescent; ramifications of the first order opposite; terminal branchlets trichotome. Flowers hermaphrodite, 4-merous. Bracts and bracteoles linear and small or obovate and rather large, deciduous. Pedicel of the central flower much longer than those of the other; pedicel of the lateral flowers thickened just below the calyx tube. This may be the tendency of forming lateral flowers or a system of ramifications. Calyx tube campanulate, ovoid or conical, terete, quadrangular or ribbed, stellate-furfuraceous or pilose, mostly rather large; limb subtruncate, consisting of 4 sinuate or distinct lobes. Petals 4, ovate or ovate-oblong, mostly acuminate, glabrous, mostly large, often veined, red, purple or, rarely, white. Stamens 4 or 8, of about the same length; filaments filiform; anthers isomorphous, equal or subequal, at the base narrowed in a short connective, rostrate, large, opening by a single pore; connective shortly produced at the base, dorsally mostly ending in a triangular, long, flat appendage, ventrally ending in two linear appendages. Toppart of the ovary swollen, pilose, furfuraceous or, rarely, glabrous, sometimes cristate; ovary 4-celled, concrescent with the calyx tube with 4 or 8 septs; exterovarial chambers 4 or 8, all descending beyond the middle of the ovary, mostly even to near the base of it; style robust, glabrous or sparsely pubescent at the base; stigma hardly conspicuous and grooved or capitate. Berry ovoid, ellipsoid or globose, stellate-furfuraceous, provided with the short calyx limb. Seeds many, cuneate, 0.5—1 mm long, beaked, straight.

Distribution: Up to now there are known about 20 species, but it is very likely that there exist much more, all Asiatic: Malay Peninsula and Malay Archipelago (incl. the Philippine Islands and New Guinea. [Clemens nr. 1395]).

Key to the species.

1*a**) Stamens 4. 2
b. Stamens 8. 4

2*a*. Calyx limb distinctly lobed; lobes 3—3.5 mm high. Calyx tube robust. Inflorescence a lax, many-flowered panicle. 1. **D. leprosa (Bl.) Bl.**

b. Calyx limb slightly lobed; lobes up to 2 mm high. Calyx tube slender. 3

3*a*. Exterovarial chambers descending a little beyond the middle of the ovary. Anthers obtuse or subacute, 4 mm long. 2. **D. decipiens Bl.**

b. Exterovarial chambers descending far beyond the middle of the ovary, almost to near the base of it. Anthers rostrate, 8 mm long . . . . . 3. **D. intermedia Bl.**

4*a*. Calyx tube ovoid, the young ones even subglobose. Leaves on the underside glaucous, dotted with minute, stellate hairs. 4. **D. punctulata Hook. f. ex Triana.**

b. Calyx tube campanulate or cylindrical 5

5*a*. Bracts large, 3—5 mm wide, subpersistent. Calyx limb subtruncate or consisting of slightly sinuate lobes. 5. **D. bracteata (Jack) Bl.**

b. Bracts small, 1—$2^1/_2$ mm wide, deciduous 6

6*a*. Leaves either on the upperside glabrous and on the underside densely but brown subtomentose or hirsute, or on the upperside subhirsute and stellate-furfuraceous on the underside . . . 7

b. Leaves on the upperside always glabrous and on the underside stellate-furfuraceous, pubescent or glabrous 9

7*a*. Leaves on the underside densely subtomentose 8

b. Leaves on the underside hirsute or stellate-furfuraceous. Branches hirsute. 6. **D. hirsuta Hook. f. ex Triana.**

8*a*. Leaves 3-nerved. Calyx tube narrowly campanulate, at the base acute; limb consisting of lobes. 7. **D. Acmura Stapf et Green.**

b. Leaves 7-nerved. Calyx tube subconical; limb consisting of teeth . . . . . 8. **D. simalurensis Bakh. f.**

9*a*. Leaves on the underside dotted ("punctate") with minute ferrugineous stellate hairs 10

b. Leaves on the underside not "punctate", stellate-furfuraceous, pubescent or subglabrous 11

*) see also nr. 14. . . . . **D. rostrata Korth.**

10*a*. Calyx tube 8-ribbed, subglabrous. Leaves on the underside pallid, dotted with minute, hardly conspicuous, stellate hairs. 9. **D. pallida (Jack) Bl.**

b. Calyx tube terete, ferrugineously stellate-furfuraceous or pilose. Leaves on the underside ferrugineous, dotted with conspicuous, stellate hairs. 10. **D. annulata Hook. f. ex Triana.**

I*a*. Calyx tube sparsely glandular pilose. 10*a*. **D. annulata Hook f. ex Triana** var. **Robinsonii (Merr.) Bakh. f.**

b. Calyx tube not glandular pilose II

II*a*. Ovary at the top densely but shortly villose. 10*b*. **D. annulata Hook. f. ex Triana. s.s.**

b. Ovary at the top sparsely covered with long bristles. 10*c*. **D. annulata Hook. f. ex Triana** var. **setosa Bakh. f.**

11*a*. Calyx tube tubular-campanulate, 8-ribbed, glabrous, 9—10 mm long. Leaves on the underside glabrous. 11. **D. borneensis Bakh. f.**

b. Calyx tube campanulate, subterete or subquadrangular, furfuraceous or pilose, 3.5—8 mm long. Leaves on the underside furfuraceous or shortly pilose 12

12*a*. Calyx tube broadly campanulate, subquadrangular, cinereous. Branches cinereous; the nodes extremely thickened. 12. **D. nodosa Korth.**

b. Calyx tube campanulate, subterete, ferrugineous. Branches ferrugineous; the nodes normally thickened. 13. **D. sagittata Bl.**

1. **Dissochaeta leprosa (Bl.) Bl.** Blume in Flora XIV (1831) p. 494 and in Bydr. Nat. Wet. VI (1831) p. 237; Triana in l.c. (1871) p. 83; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 562; Koorders, Exkurs. Flora Java II (1912) p. 695; *Dissochaeta calothyrsa Miq.*, l.c. (1855) p. 523; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 83; Cogniaux in l.c. (1891) p. 563; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Koorders, Flora von Tjibodas (1918) p. 213; Backer, Manuscr. Fl. Java, Melast. (1941) p. 19; *Melastoma leprosum Bl.* (pr. p.; typo incl.), Flor. Ned. Ind. nr. 17 (1826) p. 1068; De Candolle, l.c. (1828) p. 151.

Climber; (according to Backer) 2—8 m high. Branches terete, densely cinereously furfuraceous. Leaves elliptic or ovate-oblong, 12—17 cm × 5—11 cm, at the base subcordate or cordate, acuminate,

on the underside densely but cinereously stellate-puberulous, 7-nerved, cross-venules, especially on the underside, very distinct. Petiole 15—20 mm long, densely but cinereously stellate-pubescent. Inflorescence terminal, lax, 23—40 cm long. Bracteoles lanceolate, 3—4 mm long, puberulous. Pedicel 5—12 mm long. Calyx tube campanulate, 5—7 mm long, subquadrangular, densely but cinereously stellate-puberulous; limb 3—3.5 mm high; lobes broadly triangular, densely puberulous. Petals ovate-oblong, 11 mm × 4—5 mm, subacute, lilac. Stamens 4, equal; filaments 7 mm long; anthers linear, 9—12 mm long, at the base narrowed to the connective, at the top ending in a 3 mm long rostrum; connective 2 mm long, dorsally ending in a narrowly triangular, 1 mm long appendage, ventrally ending in two linear, 4 mm long appendages. Ovary concrescent with the calyx tube with 4 septs; exterovarial chambers 4, descending far beyond the middle of the ovary; top of the ovary furfuraceous; style 13—15 mm long, glabrous. Berry elliptic, 8—10 mm × 7 mm, narrowed at the base; stalk 15—27 mm long. Seeds 1 mm long.

Observ: Allied to D. intermedia Bl., differing a.o. by its 7-nerved leaves and broadly lobed calyx limb.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: G. Singgalang. (Beccari nr. 369, L).

JAVA. Batavia: G. Pantjar (Schiffner nr. 2291, L, fl. Dec.); G. Salak (Blume s.n. L). Preanger Regencies: Tjibodas, G. Gede (Boerlage s.n. L); idem, 1400 m (Raap nr. 667, G, L, fr. July); G. Bèsèr, near Tjidadap, 1000 m (Smith nr. 719 [BZ], L, U, fl. June); G. Tankoeban Prahoe (de Vriese s.n. L); G. Melatti (Went s.n. L); above Bandoeng, 1550 m (Smith and Rant nr. 125 [BZ], L, U, fl. Apr.); Pengalengan, 1300 m (Junghuhn s.n. L); G. Goentoer, on 100 years old lava stream, 840—1500 m (Karsten nr. 66, L); Telaga Warna (Kuhl and van Hasselt s.n. L). Locality unknown: (de Vriese s.n. L); (Junghuhn s.n. U); (Blume s.n. L, typus, sub *Melastoma leprosum Bl.*); (Plant. Jungh. ined. nr. 196 and 198, L).

2. **Dissochaeta decipiens Bl.** Blume in Mus. Bot. Lugd. Bat.-I nr. 2 (1849) p. 36; Naudin in l.c. V (1851) p. 73 and tab. IV, fig. 3; Miquel, l.c. (1855) p. 524; *Dissochaeta gracilis (Bl.) Bl.*; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 237 [pr. p.].

Climber. Branches terete, brown stellate-furfuraceous, glabrescent. Leaves oblong or lanceolate, 7.5—14.5 cm × 3—6.5 cm, at the base rounded, at the top acuminate, on the underside sparsely brown stellate-furfuraceous, stellate-subpilose or subglabrous, 5-nerved, the nerves stellate-furfuraceous on the underside, cross-venules distinct. Petiole 7—15 mm long, brown stellate-furfuraceous or pubescent.

Inflorescence terminal, 20—26 cm long; main axis flattened, furfuraceous. Bracts linear, 8 mm × 1 mm, stellate-furfuraceous. Pedicel 3 mm long, slender. Calyx tube campanulate, 3—4 mm long, subquadrangular or acutely quadrangular, brown stellate-furfuraceous; limb slightly lobed. Petals oblong, 6 mm × 2 mm, obtuse or acute. Stamens 4, equal; filaments 2—4 mm long; anthers falcate, linear, 4 mm long, narrowed at the base to the connective, at the top obtuse or subacute; connective 1 mm long, dorsally ending in a 0.5 mm long spur, ventrally ending in two 2—3 mm long, linear appendages. Ovary concrescent with the calyx tube with 4 septs; exterovarial chambers 4, descending a little beyond the middle of the ovary; its top part sparsely furfuraceous; style 6—9 mm long, curled at the top, furfuraceous; stigma capitate. Berry globose, 4 mm long; stalk 8—12 mm long. Seeds 0.5 mm long.

Observ: Resembles Neodissochaeta by the size of the calyx tube and by the kind of hairs covering the leaves.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: G. Koerintji (Korthals s.n. L, sub Dissochaeta gracilis [Jack] Bl.).

JAVA. Batavia: Pasir Sireungit, Bolang, 600 m (Bakhuizen van den Brink fil. nr. 3336 [BZ], L, U, fl. Dec.). Preanger Regencies: Pasir Pogor, S. side of G. Salak, 800 m (Bakhuizen van den Brink fil. nr. 1305 [BZ], L, fl. June). Locality unknown: (Kuhl and van Hasselt s.n L, typus); (de Vriese s.n. L; v.n. harèndong areuj); (? Korthals s.n. L).

3. **Dissochaeta intermedia Bl.** Blume in Flora XIV (1831) p. 493 and in Bijdr. Nat. Wet. VI (1831) p. 236; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 237; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 35 and fig. 5; Naudin in l.c. XV (1851) p. 72; Miquel in l.c. (1855) p. 524; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 83; Koorders, Exkurs. Flora Java II (1912) p. 695; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Koorders, Flora von Tjibodas (1918) p. 213; Backer, Manuscr. Fl. Java, Melast. (1941) p. 19; *Dissochaeta intermedia Bl.* var.; Blume in Flora XIV (1831) p. 494 and in Bijdr. Nat. Wet. VI (1831) p. 236; *Dissochaeta monticola Bl.* in Flora XIV (1831) p. 494 and in Bijdr. Nat. Wet. VI (1831) p. 237; Naudin in l.c. XV (1851) p. 78; Miquel, l.c. (1855) p. 524; Triana in l.c. (1871) p. 83; Boerlage, l.c. (1890) p. 533 [pr. p.]; Cogniaux in l.c. (1891) p. 562 [pr. p.]; Koorders, Exkurs. Flora Java II (1912) p. 695 [pr. p.]; *Melastoma fallax Jack*; Blume, Flor. Ned. Ind. nr. 17 (1826) p. 1068; De Candolle, l.c. (1828) p. 150.

Climber, (according to Backer) 3—6 m high. Branches subquadrangular, densely but brown stellate-furfuraceous. Leaves ovate-oblong, 9.5—19 cm × 3.5—9 cm, at the base cordate, at the top acute or acuminate, on the upperside subglabrous, on the underside densely brown or, rarely, cinereous stellate-subpilose, 5-nerved, cross-venules distinct. Petiole 10—20 mm long, densely brown stellate-subpilose. Inflorescence terminal, pyramidal, slender, 18—20 cm long; main axis densely brown stellate-pilose. Bracts unknown to me. Pedicel 6—8 mm long. Calyx tube campanulate, 4—6 mm long, subquadrangular, stellate-furfuraceous; limb slightly lobed, 1 mm high. Petals ovate-oblong, 6—9 mm × 2—5 mm, subacute, 5-nerved, pink or purple. Stamens 4, equal; filaments 3.5 mm long; anthers linear, 8 mm long, at the base obtuse, at the top rostrate, curved, yellow; connective not produced, dorsally ending in a narrowly triangular, 1 mm long appendage, ventrally ending in two linear 2—3.5 mm long appendages. Ovary concrescent with the calyx tube with 4 septs; exterovarial chambers 4, descending beyond the middle of the ovary; its top part stellate-pilose; style 9—11 mm long, glabrous. Berry subglobose, 8 mm × 6—7 mm, slightly ribbed, acute at the base; stalk 7—10 mm long. Young seeds 1 mm long.

Observ: Allied to Dissochaeta leprosa (Bl.) Bl., differing a.o. by its slender, very densely-flowered inflorescence, much smaller flowers and subtruncate calyx limb. Sterile specimens distinguishable by their 5-nerved leaves.

Distribution.

SUMATRA. West Coast: G. Koerintji, 900 m (Bünnemeyer nr. 8074 [BZ], L, fl. Febr.); idem, 1800 m (idem nr. 10477 [BZ], L, fl. May); idem, 2000 m (idem nr. 9379 [BZ], L, fl. Apr.); idem, 2500 m (idem nr. 9230 [BZ], L, fl. Apr.).

JAVA. Bantam: G. Poeloesari (Kuhl and van Hasselt s.n. L, fl. June). Batavia: G. Salak, 1200 m (Raap nr. 158, G, L, fl. June); G. Pantjar (Schiffner nr. 2291, L, fl. Dec.); Koeripan (Blume s.n. L, type of *Dissochaeta monticola Bl.*). Preanger Regencies: Tjibodas, G. Gede (Boerlage s.n. L); idem (de Monchy s.n. L, fl. May); Tjibeureum, G. Gede, 1500 m (Pulle nr. 4073 [BZ], U, fl. June); G. Megamendoeng (Kuhl and van Hasselt s.n. L, fl. July); G. Gegerbintang (idem s.n. L, typus); Sitoe Lembang, G. Boerangrang, 1600 m (Bakhuizen van den Brink nr. 4557 [BZ], L, fl. July). Locality unknown: (Blume s.n. L); (Kuhl and van Hasselt s.n. L); (collector unknown, L, sub Dissochaeta leprosa [Bl.] Bl.).

FURTHER DISTRIBUTION: ? Malay Peninsula, ? P. Penang, ? Singapore. (all according to King in Journ. As. Soc. Bengal LXIX. II (1900) p. 54).

4. **Dissochaeta punctulata Hook. f. ex Triana.** Triana in l.c. (1871) p. 83; Cogniaux in l.c. (1891) p. 555; Krasser in l.c. (1893) p. 178 and tab. 77 J; King in Journ. As. Soc. Bengal LXIX. II (1900) p. 51.

Climber. Adult branches subterete and sparsely furfuraceous, the young ones flattened and densely ferrugineously furfuraceous. Leaves elliptic or oblong, 6—10 cm × 2.5—6.5 cm, at the base rounded or subcordate, at the top acute, on the upperside glabrous, on the underside glaucous, dotted with minute brown hairs, 5-nerved cross-venules distinct, prominent, reticulate. Petiole 7—10 mm long, when young densely ferrugineously furfuraceous, glabrescent. Inflorescence terminal, about 20 cm long; main axis quadrangular and slightly flattened, ferrugineously furfuraceous; ramifications of the first order short. Flowers and bracts unknown to me. Calyx tube ovoid, 5—6 mm long, terete, densely ferrugineously furfuraceous; limb dentate, its teeth triangular, 1.5 mm long, densely ferrugineously furfuraceous; when young the limb is entirely closed. Petals ovate, 3 mm × 2 mm, subacute, veinless. Stamens 8, subequal; filaments 2 mm long; anthers lanceolate, 5.5 mm long, rostrate; connective not produced, dorsally ending in a narrowly triangular appendage, ventrally ending in two 3.5—4 mm long, linear appendages. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far beyond the middle of the ovary; its toppart pilose; style filiform. Berry ovoid, 7—8 mm long, ferrugineously pubescent provided with the recurved calyx limb; stalk 3 mm long.

Observ: Allied to Dissochaeta annulata Hook. f. ex Triana, differing a.o. by its ovoid calyx tube. Sterile specimens hardly distinguishable from allied species.

Distribution.

RIOUW ARCHIPELAGO. P. Sengarang: (Teysmann s.n. [BZ], L).
FURTHER DISTRIBUTION: Malay Peninsula and Singapore.

5. **Dissochaeta bracteata (Jack) Bl.** Blume in Flora XIV (1831) p. 495 and in Bijdr. Nat. Wet. VI (1831) p. 238; Triana in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 558; Krasser in l.c. (1893) p. 180; *Dissochaeta bracteata Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 237 and tab. 55; *Dissochaeta Korthalsii Miq.*, l.c. (1855) p. 528; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 121; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 558; *Dissochaeta pallida (Jack) Bl.* (non quoad syn.) in Flora XIV (1831) p. 500 and in Bijdr. Nat. Wet. VI (1831) p. 242; *Melastoma bracteata Jack* in l.c. (1825) p. 9; De Candolle, l.c. (1828) p. 150; Jack in Calcutta Journ. Nat. Hist. vol. V nr. XV (1843) p. 320.

Climber. Branches terete, minutely brown stellate-furfuraceous. Leaves ovate-oblong, 10—11 cm × 4.5—5.5 cm, at the base rounded or subcordate, at the top abruptly but shortly acuminate, on the

upperside glabrous, on the underside dotted with brown stellate hairs, 5- or 7-nerved, cross-venules distinct. Petiole 7—10 mm long, brown furfuraceous or pubescent. Inflorescence terminal, about 15 cm long; main axis quadrangular, densely brown furfuraceous; ramifications of the first order robust. Bracts obovate or obovate-lanceolate, 6—12 mm × 3—5 mm, obtuse, on both sides brown furfuraceous, 1- or 3-nerved. Pedicel 3—5 mm long. Calyx tube tubular, widened at the top, 8 mm long, minutely brown stellate-furfuraceous; limb subtruncate or subsinuate. Petals obovate-oblong, 10—12 mm × 5—6 mm, obtuse. Stamens 8, unequal; larger ones with 10—12 mm long filaments and with linear, curved, 9—12 mm long anthers, narrowed at the base, rostrate, whose connective is 3—4 mm long, ending in a narrowly triangular, 0.5—1 mm long appendage, ventrally ending in two linear, 5.5—7 mm long appendages; smaller stamens with 6—10 mm long filaments and with linear, S-shaped, 6—10 mm long anthers, narrowed at the base, subrostrate, whose connective is 1—1.5 mm long, dorsally ending in a minute appendage, ventrally ending in two linear, 3—7 mm long appendages. Ovary concrescent with the calyx tube with 8 septs, $^2/_3$ × as long as the calyx tube; exterovarial chambers 8, descending far beyond the middle of the ovary; its toppart slightly flattened, furfuraceous; style 13—20 mm long, quadrangular, at the base stellate-puberulous. Berry narrowly ovoid, widened at the top, 9—10 mm × 6 mm, densely brown furfuraceous, glabrescent; stalk 3—5 mm long.

Observ: Forming with a few other species a remarkable group, which is characterized by its 8 large stamens, large berries and robust habit. Dissochaeta pallida (Jack) Bl. in Flora (1831), the description of which is based on a specimen from P. Penang, is certainly D. bracteata (Jack) Bl.

Distribution.

SUMATRA. Exact locality unknown: „Doekoe" (Korthals s.n. L, type of *Dissochaeta bracteata Korth.*).

JAVA. Locality unknown: (Blume s.n. L, sub Aplectrum viminale [Jack] Bl., ster.).

BORNEO. Locality unknown: (de Vriese s.n. L); (collector unknown, L, sub Aplectrum viminale [Jack] Bl.). BRITISH PARTS: Sarawak.

FURTHER DISTRIBUTION: P. Penang.

6. **Dissochaeta hirsuta Hook. f. ex Triana.** Triana in l.c. (1871) p. 83; Cogniaux in l.c. (1891) p. 556; King in Journ. As. Soc. Bengal LXIX part II (1900) p. 51.

Climber. Adult branches terete, the young ones flattened, densely covered with 1.5—3 mm long, slender, brown bristles, which are

curved at the top and also the branches are stellate-furfuraceous. Leaves broadly oblong, 8—10 cm × 4.5—5.5 cm, at the base narrowly cordate, at the top abruptly narrowed, acutely acuminate, on the upperside shortly hirsute, on the underside rather long hirsute and stellate-furfuraceous or, rarely, only stellate-furfuraceous, brown, 5- or 7-nerved, cross-venules on the upperside hardly conspicuous, on the underside very distinct, prominent, reticulate. Petiole 8—10mm long, covered with long bristles. Inflorescence terminal, 16—20 cm long, densely but rather long hirsute. Bracts linear, 6—8 mm long, hirsute. Bracteoles linear, 2—3 mm long. Pedicel 4—5 mm long, hirsute. Calyx tube cylindrical, widened at the top, 6—7 mm long, densely hirsute and stellate-furfuraceous; limb dentate, its teeth acutely triangular, 2 mm long, outside hirsute, inside stellate-furfuraceous. Petals unknown to me, but according to King in l.c. broadly lanceolate. Stamens 8, subequal; filaments 6—7 mm long; anthers linear, rostrate, curved, including the 3 mm long rostrum, 11 mm long; connective 1.5 mm long, dorsally lamellate, ventrally ending in two or four linear, 2—3 mm long appendages. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far beyond the middle of the ovary; ovary itself half as long as the calyx tube; its toppart acute; style 11 mm long, glabrous.

Distribution.

LINGGA ARCHIPELAGO. P. Singkep: Kp. Raja, 10 m (Bünnemeyer nr. 7096 [BZ], L, fl. Aug.).

FURTHER DISTRIBUTION: Malay Peninsula (King), Borneo (British Parts) and P. Labuan.

7. **Dissochaeta Acmura Stapf et Green.** Stapf and Green in Kew Bull. (1913) p. 42.

Climber. Adult branches subterete, the young ones slightly flattened, densely brown stellate-tomentellous. Leaves ovate-oblong, 14—16 cm × 5—6 cm, at the base rounded, at the top narrowed, narrowly but obtusely acuminate, on the upperside glabrous, on the underside densely brown stellate-tomentellous, 3-nerved, with 2 marginal nerves, cross-venules on both sides distinct. Petiole 15 mm long, densely tomentellous. Inflorescence axillary, bearing about 5 flowers, 5—8 cm long; main axis slightly flattened, 3—3.5 cm long, densely brown tomentellous; ramifications of the first order short. Flowers only seen before anthesis. Pedicel 4 mm long. Calyx tube narrowly campanulate, 10—12 mm long, at the base acute, densely ferrugineously stellate-tomentellous; limb rather high, thick, consisting of obtuse lobes. Petals suborbicular, (before anthesis) 7 mm × 8 mm, obtuse, thick, veined. Stamens 8, unequal; larger

ones with 4.5 mm long filaments and with linear 11 mm long,rostrate anthers, whose connective is shortly produced, ventrally ending in two, linear, 8—9 mm long appendages; smaller stamens with 4 mm long filaments and with linear, 9 mm long, rostrate anthers, whose connective is not produced, ventrally ending in two, linear, 5 mm long appendages. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far beyond the middle of the ovary; ovary itself half as long as the calyx tube; its toppart flattened, glabrous; style thick glabrous.

Observ: With some hesitation I refer this specimen to D. Acmura Stapf et Green, whose connective however has much longer appendages.

Distribution.

BORNEO. SOUTHERN AND EASTERN PART. Locality unknown: (Winkler nr. 3033, L).

FURTHER DISTRIBUTION: the Philippine Islands.

8. **Dissochaeta simalurensis Bakh. f.** spec. nov.

Frutex scandens. Rami adulti teretiusculi et dense ferrugineo-stellato-pubescentes, glabrescentes, juniores dense ferrugineo-tomentosi. Folia ovato-oblonga 15—18 cm × 6.5—9.5 cm basi subcordata apice acuminata supra glabra subtus dense ferrugineo-stellato-tomentosa 7-nervia venulis transversis utrinque distinctis. Petiolus 1.5—2 cm longus. Inflorescentia terminalis 20 cm longa robusta; axis principalis subquadrangularis dense fusco-stellato-pubescens. Bracteae ignotae. Pedicellus 1.5—3 mm longus pilosus. Calycis tubus subconicus 8—11 mm longus teres dense ferrugineo-stellato-pubescens; limbus dentatus dentibus late triangularibus 1 mm. longis Petala obovato orbicularia (in alabastro adulto) 12 mm × 10 mm avenia. Stamina 8 aequalia, filamentis 8 mm longis, antheris linearibus 9 mm longis curvatis in parte basali angustatis rostratis, connectivo 1—2 mm longo, dorso in appendicem triangularem 1—1.5 mm longum exeunte, in parte laterali in appendices duos lineares exeunte, in parte ventrali in appendices duos lineares 4—5 mm longos exeunte. Ovarium calycis tubo septis 8 adnatum; "loculi" 8 praeter dimidium ovarii multo descendentes; ovarium ipse $^2/_3$ × calycis tubus apice furfuraceum; stylus 14—16 mm longus apice incrassatus glaber; stigma pruinosa. Bacca apice dilatata 11—15 mm × 7—9 mm dense furfuracea, limbo magno persistente munita, insertionibus petalorum atque styli valde incrassatis; pedicellus 6—10 mm longus.

Observ: Allied to Dissochaeta Ramosii Merr. from the Philippine Islands, but differing a.o. by the kind of hairs covering the leaves and by the size of the flowers and berries.

Distribution: endemic.

P. SIMEULOEË (W. coast of Sumatra): Tapah, Dèfajan (Achmad nr. 1794 [BZ], L; v.n. olor sigĕpoe balah oejal); locality unknown (idem nr. 231 [BZ], L, fr. Dec.; v.n. sigĕpoe dotan); idem (idem nr. 1197, L, typus, dupl. in [BZ], U, fl. June; v.n. olor sigĕpoe balah oejoel).

9. **Dissochaeta pallida (Jack) Bl.** Blume in Flora XIV (1831) p. 500 and in Bijdr. Nat. Wet. VI (1831) p. 242; idem in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 36; Naudin in l.c. XV (1851) p. 77, tab. 4, fig. IV; Miquel, l.c. (1855) p. 528; Triana in l.c. (1871) p. 83, tab. VII, fig. 89b; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 557 [pr. p.]; King in Journ. As. Soc. Bengal LXIX. part II (1900) p. 52; *Dissochaeta astrosticta Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 318 and 122 [nomen]; Scheffer in Observ. Phytogr. II (1868—1869) p. 43; idem in Bijdr. Flor. Ind. Arch. (1874) p. 74; *Melastoma pallida Jack* in l.c. (1825) p. 12; De Candolle, l.c. (1828) p. 150; Jack in Calcutta Journ. Nat. Hist. vol. V nr. XV (1843) p. 322.

Climber. Branches terete, minutely stellate-furfuraceous, yellowish when dry. Leaves ovate or ovate-oblong, 8.5—10 cm × 4—6.5 cm, at the base cordate, at the top obtusely acuminate, on the upperside glabrous and pale yellow when dry, on the underside dotted with minute brown stellate hairs, lamina pallid when dry, 7-nerved, reticulations absent. Petiole short. Inflorescence terminal, 15—22 cm long; main axis quadrangular, pallid, furfuraceous; ramifications of the first order quadrangular. Bracts unknown to me. Pedicel 2—3 mm long, subglabrous. Calyx tube narrowly campanulate, 4—5 mm long, 8-ribbed, brown stellate-furfuraceous, glabrescent; limb 1—1.5 mm high, patent, subsinuate. Petals oblong, 10 mm × 4 mm, acute, veinless. Stamens 8, subequal; larger ones with 7—8 mm long, sparsely furfuraceous filaments and with linear, 9 mm long, rostrate anthers, narrowed at the base, its connective 1.5—2 mm long, dorsally ending in a 1 mm long spur, ventrally ending in two linear, 4—5 mm long appendages; smaller stamens having the same characters as the larger ones (only seen by me before anthesis). Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far beyond the middle of the ovary; ovary itself $^1/_2$—$^2/_3$ × as long as the calyx tube; its toppart cristate, subglabrous; style 18 mm long, sparsely stellate-furfuraceous. Seeds 1 mm long.

Observ: Allied to Dissochaeta bracteata (Jack) Bl., differing a.o. by having its leaves not reticulate and by the 8-ribbed, pallid calyx tube. In my opinion Dissochaeta astrosticta Miq. is identic with Melastoma pallida Jack. The authentic description agrees very well with the characters of the specimens compared. According to

Jack the calyx tube is "foursided", in this specimen however it is 8-ribbed, but in my opinion it is not necessary, that both characters exclude each other.

Distribution.

BANKA: Near Djeboes and Plangas (Teysmann s.n. U, type of *D. astrosticta Miq.*; v.n. akar sendoedoek, akar kĕkowak, kemoenting akar).
FURTHER DISTRIBUTION: according to Jack occurring in the „Malay Islands" and according to Cogniaux in the Malay Peninsula, P. Penang and Singapore.

10. **Dissochaeta annulata Hook. f. ex Triana.** Triana in l.c. (1871) p. 83; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 557; King in Journ. As. Soc. Bengal LXIX part II (1900) p. 50; *Diplectria annulata (Hook. f. ex Triana) O.K.*, Revis. Gen. Plant. (1891) p. 246.

Climber. Branches terete, brown stellate-puberulous. Leaves ovate-oblong, 10—12 cm × 5.5—7 cm, at the base rounded or truncate-rounded, at the top acuminate, on the upperside glabrous and when dry brown, on the underside dotted with brown, stellate hairs, 5-nerved, cross-venules on the underside prominent. Petiole 10—15 mm long, terete, densely brown stellate-puberulous. Inflorescence terminal, 18 cm long; main axis quadrangular, densely ferrugineously stellate-pubescent; ramifications of the first order robust. Bracts unknown to me. Pedicel 2 mm long, ferrugineously pubescent. Calyx tube cylindrical, widened at the the top, 8—9 mm long, densely ferrugineously puberulous; limb lobed, its lobes broadly triangular, 2 mm long. Petals ovate-oblong, 8—9 mm × 5—6 mm, subobtuse, (according to Ridley) pink. Stamens 8, subequal; filaments 9—11 mm long; anthers linear, S-shaped, 10—13 mm long, at the base narrowed, rostrate; connective 2—4 mm long, dorsally ending in a 1 mm long spur, ventrally ending in two linear, 2 mm long appendages. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far beyond the middle of the ovary; ovary itself $\frac{1}{2}$—$\frac{2}{3}$ × as long as the calyx tube; toppart flat and subvillose; style 16—21 mm long, glabrous. Young berry cylindrical, widened at the top, 8—9 mm long, densely ferrugineously pubescent, provided with the persistent calyx lobes; stalk 2 mm long.

Observ: Resembles Dissochaeta bracteata (Jack) Bl.

Distribution.

BILLITON: (vide Cogniaux in l.c.).
BORNEO: (vide Cogniaux in l.c.).
MOLUCCAS. Ceram: (de Vriese s.n. L).
FURTHER DISTRIBUTION: Malay Peninsula, P. Penang, Singapore.

var. **Robinsonii (Merr.) Bakh. f.** comb. nov.

Dissochaeta Robinsonii Merr. in Philipp. Journ. Sc. XI (1916) Bot. p. 298.

Climber. Leaves oblong or ovate-oblong, 8—10 cm × 3.5—4.5cm, acutely acuminate, 5-nerved. Petiole 8—10 mm long. Inflorescence 8—12 cm long. Flowers only seen before anthesis, similar as those of the type species. Bracts linear, 5—8 mm × 0.5 mm, ferrugineously tomentose. Pedicel 2—4 mm long. Calyx tube cylindrical, widened at the top, 10—11 mm long, densely ferrugineously stellate-tomentose and also scattered with 1—2 mm long, glandular, stiff hairs; limb consisting of very broad, 1.5 mm long, obtuse lobes. Petals obovate, 1.5 cm × 1 cm, at the top rounded and retuse, glabrous, lilac. Filaments 11 mm long; anthers 15 mm long, yellow with lilac tip. Berry unknown.

Distribution: endemic.

MOLUCCAS. Ambon: Hitoemĕsĕn, 100 m (Robinson nr. 2024, PNH, typus, dupl. in L, fl. Nov.).

var. **setosa Bakh. f.** var. nov.

Frutex scandens. Folia oblonga vel ovato-oblonga 9—12 cm × 4.5—5.5 cm obtuso-acuminata subtus dense ferrugineo-furfuracea 5- vel 7-plinervia venulis transversis distinctis. Petiolus 14—17 mm longus dense ferrugineo-furfuraceus. Inflorescentia ad 37 cm longa; axis principalis dense ferrugineo-furfuraceus. Bracteae lineares, 4 mm × 0.5 mm furfuraceae. Flores mihi ignoti (ex Iboet) albi. Bacca elliptica apice subangustata 10 mm × 7—8 mm teres dense ferrugineo-furfuracea in parte apicali subtumida setis 1—2 mm longis dense vestita; pedicellus 3—4.5 mm longus.

Observ: differing from the type species by the densely setose toppart of the berry.

Distribution: endemic.

MENTAWAI ISLANDS. P. Siberoet: Siberoet (Iboet nr. 12, L, typus, dupl. in (BZ), fr. Sept.).

11. **Dissochaeta borneensis Bakh. f.** spec. nov.

Frutex scandens. Rami teretes glabriusculi. Folia oblonga vel lanceolata 7.5—10 cm × 3—5 cm basi rotunda vel subcordata apice acutissima vel brevissime acuminata utrinque glabra 3- vel 5-nervia venulis transversis distinctis. Petiolus 7—10 mm longus glaber. Inflorescentia terminalis 14 cm longa circa 30 flores gerens; axis principalis quadrangularis ad nodos valde incrassatus glaber. Flores, stamina exclusa, mihi solum ante anthesin visi. Bracteae ignotae. Pedicellus 5—6 mm longus. Calycis tubus tubulosus apice dilatatus 9—10 mm longus irregulariter 8-costatus glabriusculus; limbus

dilatatus undulatus. Petala ovata 10 mm × 8 mm obtusa. Stamina aequalia, filamentis 9 mm longis, antheris linearibus 12 mm longis basi abrupte angustatis rostratis, connectivo 3 mm longo, dorso in appendicem triangularem exeunte, in parte ventrali in appendices duos lineares 5 mm longos exeunte. Ovarium calycis tubum septis 8 adnatum; "loculi" 8 praeter dimidium ovarii descendentes; ovarium ipse $^3/_4$ × calycis tubus apice compressum glabrum; stylus 20 mm longus glaber; stigma pruinosa. Bacca immatura cylindrica apice dilatata 11 mm longa; pedicellus 5—6 mm longus.

Distribution: endemic.

BORNEO. WESTERN PART. Pontianak: Kp. Andongan (Mondi nr. 252, L, typus, dupl. in [BZ], buds Apr.; v.n. lingkodo klido).

12. **Dissochaeta nodosa Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 239; Naudin in l.c. XV (1851) p. 79; *Anplectrum nodosum* (*Korth.*) *Triana* in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 566; *Aplectrum nodosum* (*Korth.*) *Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 37.

Climber. Branches subquadrangular or subterete, cinereously stellate-furfuraceous. Leaves ovate-oblong, 9—13 cm × 5—6 cm, at the base subcordate, at the top acuminate, on the upperside glabrous, on the underside subfurfuraceous, glabrescent, 5-nerved, cross-venules on the underside very distinct. Petiole short. Inflorescence terminal, 20 cm long; main axis quadrangular, cinereously furfuraceous; ramifications of the first order strongly thickened on the nodes. Flowers only seen before anthesis. Bracts according to Korthals, narrowly obovate, deciduous. Pedicel 4—5 mm long, strongly thickened below the calyx tube, furfuraceous. Calyx tube broadly campanulate, 3.5—4 mm long, subquadrangular, densely cinereously stellate-furfuraceous; limb dilatate, consisting of triangular short lobes. Petals obovate, 3 mm long, obtuse, more or less fleshy, veinless. Stamens 8, subequal; larger ones with 2 mm long filaments and with ovate-oblong, 2.5 mm long, long rostrate anthers, whose connective is not produced, dorsally inappendiculate, ventrally ending in two linear, short appendages; smaller stamens with 2 mm long anthers. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far beyond the middle of the ovary; the ovary itself $^3/_4$ × as long as the calyx tube; its toppart pilose; style 3 mm long, subterete, glabrous. Berry subglobose, 8 mm × 7 mm, subglabrous; stalk 4—5 mm long.

Distribution: endemic.

SUMATRA. West Coast: G. Koerintji (Korthals s.n. L, typus).

13. **Dissochaeta sagittata Bl.** Blume in Flora XIV (1831) p. 500 and in Bijdr. Nat. Wet. VI (1831) p. 241; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 525; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 84; Boerlage, l.c. (1890) p. 533; Cogniaux in l.c. (1891) p. 555; Koorders, Exkurs. Flora Java II (1912) p. 694; Backer, Manuscr. Fl. Java, Melast. (1941) p. 19; *Dissochaeta gracilis* (*Jack*) *Bl.*; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11.

Climber, according to Backer, 3 m high. Branches subquadrangular or subterete, densely stellate-puberulous, red-brown. Leaves elliptic or ovate-lanceolate, 8—13 cm × 4—6.5 cm, at the base rounded, at the top acuminate, on the upperside glabrous and green-yellow when dry, on the underside densely brown or red-brown stellate-pilosellous or stellate-furfuraceous, 5-nerved or 5-plinerved, cross-venules distinct on the underside. Petiole 9—12 mm long, densely red-brown stellate-puberulous. Inflorescence terminal, 16—26 cm long .Bracts obovate-lanceolate, 5—7 mm × 2—2.5 mm, acute, sub-membranaceous, stellate-puberulous, reticulate. Pedicel 9—12 mm long, brown stellate-puberulous. Calyx tube campanulate, 3.5—8 mm long, subterete, densely brown stellate-puberulous; limb consisting of broadly triangular, short lobes. Petals ovate-oblong or broadly triangular, 5—7 mm × 3—4 mm, acute, (according to Junghuhn) white or (according to Backer) pale purple. Stamens 8, subequal; larger ones with 5 mm long filaments and with narrowly triangular, 4—5 mm long, sagittate anthers, narrowed at the base, rostrate, whose connective is not produced, dorsally ending in a narrowly triangular, 1 mm long, flat appendage, ventrally ending in two linear, short appendages; smaller stamens with 5 mm long filaments and narrowly triangular, 4—5 mm long, acute anthers, whose connective is not produced, dorsally ending in a narrowly triangular appendage, ventrally ending in two linear appendages. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far beyond the middle of the ovary; top of the ovary conical, pilose; style 9—11 mm long, subquadrangular, glabrous. Berry elliptic, 7—8 mm × 6—7 mm, sparsely stellate-puberulous; stalk 7—12 mm long.

Observ: Resembles Dissochaeta intermedia Bl., D. leprosa (Bl.) Bl. and Neodissochaeta reticulata (Bl.) Bakh. f., differing a.o. by its 8 subequal anthers and 8 exterovarial chambers. Sterile specimens hardly distinguishable from the species quoted above.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: Tanang Taloe, 1100 m (Bünnemeyer nr. 1053 [BZ], L, fl. June). East Coast: near lake Toba (Ouwehand s.n. [BZ[, L); N. of Brastagi (Lörzing nr. 6810 [BZ], L, fr. July).

MENTAWAI ISLANDS. P. Sipora: Sioban. (Iboet nr. 432 [BZ], L, fr. Oct.; v.n. poeloetoe).

JAVA. Bantam: locality unknown (Blume s.n. L, typus). Preanger Regencies: Tjibodas, G. Gede, 1400 m (Raap nr.695, G, L, fl. July; v.n. harèndong areuj.); G. Kendeng (Junghuhn s.n. L). Locality unknown: (Blume s.n. L); (Zollinger nr. 3511, L); (Kuhl and van Hasselt s.n. L); (de Vriese s.n. L); (Reinwardt s.n. L); (Ploem s.n. L).

14. **Dissochaeta rostrata Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) p. 239; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 37; Naudin in l.c. XV (1851) p. 79; Miquel, l.c. (1855) p. 530; *Anplectrum Korthalsii Triana* in l.c. (1871) p. 85; Boerlage, l.c. (1890) p. 534; Cogniaux in l.c. (1891) p. 570; *Diplectria Korthalsii* (*Triana*) *O.K.*, Revis. Gen. Plant. (1891) p. 246.

Climber. Branches terete, densely covered with single, 2—3 mm long, brown hairs, which are thickened at the base and curved at the top. Leaves cordate-oblong or ovate-cordate, 11—14 cm × 7.5—8.5 cm, long and acutely acuminate, on both sides densely but long hirsute, submembranaceous, 5-nerved, cross-venules distinct. Petiole 10—15 mm long, terete, covered with 2—3.5 mm long hairs. Flowers unknown.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unnown: „G. Prarawin". (Korthals s.n. L, typus).

21. Hypenanthe Bl.

Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 21; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 298; *Dactyliota Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 21; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 298; *Medinilla Gaud.* (pr. p.; typo excl.); Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 285; Miquel, Flor. Ned. Ind. I (1855) p. 538; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 759; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 95; Baillon, Hist. d. plant. VII (1880) p. 50; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 520; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 572; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 181; *Medinilla Gaud. sect.* 4. *Dactyliota Bl.* in Flora XIV (1831) p. 518 and in Bijdr. Nat. Wet. VI (1831) p. 259; *Medinilla Gaud. sect.* 3. *Hypenanthe Bl.* in Flora XIV (1831) p. 517 and in Bijdr. Nat. Wet. VI (1831) p. 258; *Melastoma L.* (pr. p.;

typo excl.); Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1068; De Candolle, Prodr. III (1828) p. 144.

Epiphytic shrubs. Branches terete or subterete, densely pilose. Leaves opposite, equal or, rarely, unequal, elliptic, oblong or lanceolate, at the base acute, cuneate or subauriculate, at the top acute or acuminate, entire or dentate, on the upperside mostly glabrous, except on the mid-nerve, on the underside densely pilosellous or pilose, 5- to 15-plinerved, cross-venules distinct. Petiole always present. Inflorescences terminal or axillary, many-flowered, hairy panicles; peduncle subterete; ramifications of the first order opposite, ternate or quaternate. Flowers hermaphrodite, 4-, 5- or 6-merous, more or less enveloped by large, pilose, deciduous bracts or bracteoles. Pedicel always present. Calyx tube subglobose, terete, furfuraceous or pilose; limb consisting of 4—6 lobes or, rarely, subtruncate. Petals 4, 5 or 6, obovate, glabrous or pilose. Stamens 8, 10 or 12, equal or unequal; filaments well developed; anthers linear or narrowly triangular, arcuate, acute, opening by a single pore; connective not produced at the base, dorsally ending in a short spur, ventrally ending in two appendages. Ovary concrescent with the calyx tube with 8, 10 or 12 septs; exterovarial chambers 8, 10 or 12, descending far beyond the middle of the ovary; the ovary itself 4-, 5- or 6-celled; its toppart subconvex, pilose; style glabrous; stigma hardly conspicuous. Seeds many, straight, smooth or papillar.

Distribution: 4 species, all Asiatic: Malay Archipelago (incl. the Philippine Islands).

Key to the species.

1*a*. Flowers 4-merous. Limb consisting of long lobes. Leaves (9)-11- to 15-plinerved. Inflorescence many-flowered. 1. **H. venosum (Bl.) Bl.**

b. Flowers 5- or 6-merous. Limb consisting of short lobes or subtruncate. Leaves 5-9-plinerved. Inflorescence about 10-flowered 2

2*a*. Branches and leaves setose; bristles single. Limb subtruncate. 2. **H. Pulleanum (Mansf.) Bakh. f.**

b. Branches and leaves plumose-pilosellous or furfuraceous. Limb shortly, but distinctly lobed 3

3*a*. Calyx tube furfuraceous. Petals covered with reticulate glands, 10—12 mm long. . . 3. **H. bracteatum (Bl.) Bakh. f.** . .

b. Calyx tube densely setose. Petals glabrous, 7 mm long. 4. **H. setigerum (Bl.) Bakh. f.**

1. **Hypenanthe venosum (Bl.) Bl.** Blume in l.c. (1849) p. 21; Naudin in l.c. XV (1851) p. 298; *Medinilla venosa* (*Bl.*) *Bl.* in Flora XIV (1831) p. 258; Miquel, l.c. (1855) p. 549; idem in Ann. Mus. Bot. Lugd.-Bat. I (1863) p. 217; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; Triana in l.c. (1871) p. 88; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 600; Krasser in l.c. (1893) p. 181; Koorders in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 467; Bailey in Stand. Cycl. Hortic. III (1937) p. 2021; *Melastoma venosum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1075; De Candolle, l.c. (1828) p. 150.

Epiphytic shrub. Branches terete, densely covered with patent, plumose, short, brown hairs. Leaves oblong or lanceolate or, rarely, elliptic, 9—22 cm × 4—11.5 cm, at the base cuneate or subauriculate, at the top acuminate, thin, sinuate or remote-denticulate, on the upperside subglabrous, on the underside, especially on the nerves, stellate-furfuraceous, 9- to 15-plinerved, quasi-penninerved. Petiole 8—40 mm long, subterete, densely stellate-furfuraceous. Inflorescence axillary, up to 5 cm long, many-flowered; peduncle 3—3.5 cm long, subterete, densely stellate-furfuraceous; ramifications of the first order opposite, ternate or quaternate. Flowers 4-merous. Bracts lanceolate, 12 mm × 5 mm, densely stellate-furfuraceous, 3- or 5-nerved, deciduous. Bracteoles obovate, enveloping the flowers, 6 mm × 2—5 mm, stellate-furfuraceous. Pedicel 3 mm long. Calyx tube subglobose, 3—4 mm long, densely brown stellate-furfuraceous; limb 4-lobed, its lobes broadly triangular, up to 2 mm long, densely stellate-furfuraceous. Petals 4, obovate, 5—6 mm × 3 mm, subobtuse, carneous. Stamens 8, equal; filaments 3 mm long; anthers linear, 2—3 mm long, acute, straight; connective dorsally ending in a broad, obtuse spur, ventrally ending in two linear appendages. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8; ovary itself 4-celled; style 5 mm long. Berry globose, 6—7 mm long, furfuraceous; stalk 6—10 mm long.

Distribution.

CELEBES. Manado: Tondano (Forsten s.n. L, fl. Apr.); idem (idem s.n. L, fl. Aug.); idem (idem s.n. L, fl. May; v.n. kajoe wolok); Minahassa (Koorders nr. 17858β [BZ], L, fl. Febr.); idem, 500 m (idem nr. 17865β [BZ], L, fl. Apr.); idem, 500 m (idem nr. 17871β [BZ], L, fl. Jan.); locality unknown: (Teysmann s.n. L, U).

MOLUCCAS. Ternate: (Forsten s.n. L, typus, sub *Melastoma venosum Bl.*, fl. Aug.); (Teysmann s.n. L, U).

FURTHER DISTRIBUTION: the Philippine Islands.

2. **Hypenanthe Pulleanum (Mansf.) Bakh. f.** comb. nov. *Medinilla Pulleana Mansf.* in Engl. Bot. Jahrb. 60 (1926) p.

118 and 129; idem in Nova Guinea XIV livr. II (1927) p. 207.

Epiphytic shrub. Branches subterete, densely covered with patent, fasciculate, up to 4 mm long hairs, which are curved at the top; the leaf axils covered with 1 cm long, single hairs. Leaves lanceolate, 14—30 cm × 5—8 cm, narrowed at the base and subauriculate, at the top shortly acuminate, entire, on both sides densely covered with patent, 2—4 mm long, curved hairs, 7- or 9-plinerved, the nerves originating closely above each other, cross-venules on the upperside hardly conspicuous, on the underside distinct. Petiole short. Inflorescence, according to Mansfeld, axillary, paniculate or subracemose, up to 9 cm long; peduncle 3—4 cm long, densely covered with patent hairs or bristles; ramifications of the first order probably opposite .Flowers 5-merous. Bracts oblong or ovate-oblong, 8—12 mm × 6—7 mm, at the base subcordate or rounded, acute, mucronate, on both sides setose, veined, sessile. Pedicel 3—4 mm long, setose. Calyx tube subglobose, widened at the top, 3.5—5 mm long, densely covered with up to 5 mm long bristles; limb subtruncate. Petals 5, obovate-orbicular, (in mature bud) 6—8 mm × 4 mm, obtuse, furfuraceous, veined. Stamens 10, unequal; larger ones with 3.5 mm long filaments and with subcylindrical, 4 mm long anthers, whose connective is dorsally ending in a short spur and ventrally ending in two lobes; smaller stamens with 2.5 mm long filaments and with linear, 2.5 mm long anthers. Ovary concrescent with the calyx tube with 10 septs; exterovarial chambers 10; ovary itself 5-celled; its toppart pilose; length of the adult style unknown.

Distribution: endemic.

NEW GUINEA. Southern Part: Hellwig Mts., 1750 m (Pulle nr. 684, type, dupl. in L, fl. Dec.).

3. **Hypenanthe bracteatum (Bl.) Bakh. f.** comb. nov. *Axinaea bracteata Zipp. ex Bl.* in Flora XIV (1831) p. 519 [nomen]; *Dactyliota bracteata (Bl.) Bl.* in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 22; Naudin in l.c. XV (1851) p. 298; *Medinilla bracteata Bl.* in Flora XIV (1831) p. 519 and in Bijdr. Nat. Wet. VI (1831) p. 259;Naudin in l.c. XV (1851) p. 294; Miquel, l.c. (1855) p. 549; Triana in l.c. (1871) p. 89; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 601; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 130.

Epiphytic shrub. Branches subterete, minutely ribbed, the adult ones glabrous, the young ones densely covered with minute, cinereous, plumose hairs. Leaves oblong or lanceolate, 6—11.5 cm × 2.5—5.5 cm, at the base acute, at the top shortly acuminate, remotedentate, on the upperside subglabrous, on the underside, especially

on the nerves, covered with minute, cinereous, plumose hairs. Petiole absent or very short. Inflorescence axillary or, rarely, terminal, about 10-flowered, up to 4 cm long; peduncle 2—2.5 cm long, subterete, covered with plumose hairs; ramifications of the first order opposite. Flowers 5- or 6-merous. Bracts ovate-oblong, 8—10 mm × 2—4 mm, acute, sparsely plumose-pilosellous, 1-nerved, stalked. Bracteoles having the same characters as the bracts, 5—7 mm × 2—3 mm. Pedicel 4—5 mm long. Calyx tube subglobose, 3—3.5 mm long, furfuraceous; limb consisting of 5 small lobes. Petals 5 or 6, obovate, 10—12 mm × 5—6 mm, rounded, veined, reticulate, the reticulation consisting of rows of glands. Stamens 10 or 12, equal; filaments 4—6 mm long; anthers narrowly triangular, 4—4.5 mm long, acute, arcuate; connective dorsally ending in a spur, ventrally ending in two cylindrical, up to 1 mm long appendages. Ovary concrescent with the calyx tube with 10 or 12 septs; exterovarial chambers 10 or 12; ovary itself 5- or 6-celled; its toppart provided with a corona; style 7—10 mm long, glabrous. Berry unknown.

Distribution: endemic.

NEW GUINEA. Southern Part: Oroh valley, 1300 m (Pulle nr. 1124, L). Locality unknown: (Zippel s.n. L, typus, sub Axinaea bracteata Zipp. and medinilla bracteata Bl.)

4. **Hypenanthe setigerum (Bl.) Bakh. f.** comb. nov.

Dactyliota setigera Bl. in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 22; Naudin in l.c. XV (1851) p. 298; *Medinilla setigera (Bl.) Miq.*, l.c. (1855) p. 550; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 123; Triana in l.c. (1871) p. 88; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 601; *Medinilla Cogniauxii Merr.* in Philipp. Journ. Sc. 3 (1910) Bot. p. 249; *Medinilla involucrata Merr.* in Gvt. Lab. Publ. Philipp. 35 (1906) p. 51; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. Vol. XII livr. 2 (1932) p. 172 and 191; *Melastoma setigerum (haud Bl.) Herb. Korth.*; Blume in Mus. Bot. Lugd.-Bat. I nr. 2 (1849) p. 22 [nomen].

Epiphytic shrub. Branches subterete, the young ones densely covered with subfasciculate, patent, up to 2 mm long, ciliate hairs, glabrescent; the nodes covered with up to 2 mm long bristles. Leaves oblong or lanceolate, 7—12.5 cm × 3—5 cm, at the base cuneate or acute, at the top acuminate or acute, entire, on the upperside glabrous or on the mid-nerve only sparsely covered with plumose hairs, on the underside sparsely pilosellous or stellate-furfuraceous, on the nerves densely pilosellous or stellate-furfuraceous, 5- or 7-plinerved, cross-venules on both sides hardly conspicuous. Petiole 4—8 mm long, subterete, densely covered with patent hairs. Inflorescence

axillary or terminal, about 10-flowered, 7—8.5 cm long; peduncle 1.5—2 cm long, subterete, densely pilose; ramifications of the first order ternate or quaternate. Bracts lanceolate, 3—5 mm × 1—2 mm, densely pilose. Bracteoles 2, enveloping the flowers, ovate-orbicular, 8—10 mm × 7—8 mm, acute, pilosellous, ciliate, 7-nerved. Pedicel 5—6 mm long. Calyx tube subglobose, 5 mm long, densely covered with patent, plumose, up to 2 mm long hairs; limb consisting of 5 broadly ovate, 2 mm long, acute, 3-nerved lobes. Petals 5, narrowly obovate, 7 mm × 3.5 mm, acute, veined. Stamens 10, equal; filaments 2.5 mm long; anthers narrowly triangular, 2 mm long, acute, arcuate; connective dorsally ending in a minute spur, ventrally ending in two acute appendages. Ovary concrescent with the calyx tube with 10 septs; exterovarial chambers 10; ovary itself 5-celled; style 5.5 mm long. Berry subglobose, 7 mm long, setose; stalk 5—6 mm long. Seeds smooth.

Distribution.

SUMATRA. Palembang: Soekaradja, Kenali (Cramer s.n. [BZ], L, fl. Aug.). Locality unknown: (Korthals s.n. L, typus, sub *Dactyliota setigera Bl.*).

NATOENA ISLANDS (W. of Borneo). P. Boengoeran: G. Ranai, 150 m (van Steenis nr. 1111 [BZ], L, fr. Apr.; v.n. semoerot); idem, 250 m (idem nr. 1155 [BZ], L, fr. Apr.).

FURTHER DISTRIBUTION: Philippine Islands.

Tribus V. **Bertolonieae.**

Cogniaux in Martius' Flor. Bras. XIV part III (1885) p. 6 [tribus]; idem in De Candolle, Monogr. Phanerog. VII (1891) p. 259 [tribus]; Triana in Bull. Congr. Bot. d'Amsterdam (1875) p. 465 [tribus; nomen]; idem in Trans. Linn. Soc. XXVIII part I (1871) p. 5, 79 [tribus; nomen]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 171 [tribus]; „*Bertoloniées*", Baillon, Hist. d. plant. VII (1880) p. 31 [tribus; pr. p.]; *Lavoisiereae* (pr. p.), De Candolle, Prodr. III (1828) p. 100; *Sonerileae*; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 315 [subtribus Miconiales; pr. p.]; *Sonerileae* sér. III *Americanae*, Bentham and Hooker, Gen. Plant. I 2 (1865) p. 732.

22. **Bertolonia Raddi.**

Raddi in Mem. Soc. Ital. Sc. Modena XX (1820) Fis. p. 113 and in Atti. Soc. Ital. Sc. XVIII (1820) p. 384; De Candolle, Prodr. III (1828) p. 113; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 530; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7

(1893) p. 171; Bailey in Stand. Cycl. Hort. I (1937) p. 494; Backer, Manuscr. Fl. Java, Melast. (1941) p. 10.

Observ: According to Backer in l.c. Bertolonia hybrida Hort. is sometimes cultivated in Java. No material was seen by me. I am doubtful whether Bertolonia is not a later homonym of Bertolonia mentioned by. 1) Spinetti, Jard. de St. Sébastien (1809) p. 24; 2) De Candolle in Ann. Mus. Paris XIX (1812) tab. 14; 3) Rafinesque in Americ. Monthly Magaz. (1818) p. 267. As those literature were not available to me, I have for that reason maintained the name Bertolonia of Raddi, for this Melastomataceous genus.

Tribus VI. **Sonerileae.**

Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 315 and 67 [subtribus]; Lindley, Nat. Syst. ed. 2 (1836) p. 42 [subtribus; nomen]; Miquel, Flor. Ned. Ind. I (1855) p. 561 [subtribus]; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 727, 753 [tribus; nomen; pr. p.]; Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 457 [tribus]; idem in Trans. Linn. Soc. XXVIII part I (1871) p. 75 [tribus]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 503 [tribus]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 489 [tribus]; „*Bertoloniées*" (pr. p.; typo excl.), Baillon, Hist. d. plant. VII (1880) p. 31 [„série"]; *Cassebeerieae*, Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 174 and 143 [tribus]; *Miconieae* [pr. p.; typo excl.); Blume in Flora XIV (1831) p. 489.

Herbs or undershrubs. Flowers hermaphrodite, 3-, 4- or 5-merous. Calyx tube mostly 3- to 5-angular or, rarely, terete; limb shortly dentate or subtruncate, widened at the top; teeth sometimes alternating with appendages or with groups of hairs. Stamens 3 to 6, equal, subequal or unequal, twice as many as petals or equal in number; filaments well developed; anthers isomorphous or dissimilar, mostly linear or ovate, acute, rostrate or, rarely, truncate, opening by 1 or, rarely, 2 terminal pores; connective not or but slightly produced at the base, dorsally ending in a short spur or inappendiculate, ventrally ending in two linear appendages or inappendiculate. Ovary either fully concrescent with the calyx tube and septs absent or concrescent with it with 3—6 septs; ovary itself 3-, 4- or 5-celled; its toppart widened, often rimmed by erect scales, mostly glabrous; ovules many, minute. Fruit a capsule, mostly 3- to 5-angular or, rarely, terete. Seeds many, very variable in shape and size, cuneate, obovoid, subreniform or irregular, straight or slightly curved, without wings, sometimes beaked.

Distribution: Africa and Asia.

23. Driessenia Korth.

Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 251; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 283; Miquel, Flor. Ned. Ind. I (1855) p. 537; Bentham and Hooker, Gen.Plant. I 2 (1865) p. 753; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 73; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 510; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 475; Gilg in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7. Nachtr. I (1897) p. 264; *Blastus Lour.* (pr. p.; typo excl.); Baillon, Hist. d. plant. VII (1880) p. 48.

Erect herbs or shrubs, up to 2 m high. Branches subquadrangular or subterete, pilosellous or glandular. Leaves opposite, mostly unequal, ovate-oblong or lanceolate, at the base acute or subcordate, at the top acuminate, submembranaceous, entire, glabrous or hirsute, 5- to 15-nerved, cross-venules distinct. Petiole always present, very long. Inflorescences axillary, few-flowered panicles or fascicles, hirsute or glandular; peduncle very short; ramifications of the first order quaternate or verticillate; end branchlets cymose. Flowers hermaphrodite, 4-merous. Bracts small. Pedicel present. Calyx tube campanulate, subterete or quadrangular, subglabrous or hirsute with glandular hairs; limb 4-dentate, its teeth narrowly triangular or linear. Petals ovate-oblong, small, glabrous, pink. Stamens 8, equal or subequal; filaments present; anthers equal, ovate-oblong or lanceolate, opening by a single pore; connective not or slightly produced, dorsally ending in a spur, ventrally ending in two linear appendages. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; the ovary itself 4-celled, half as long as the calyx tube; its top part provided with a ciliate or dentate disc; style filiform, glabrous; stigma hardly conspicuous. Capsule widened at the top, quadrangular or subterete, often ribbed, hirsute or farinose, at the top loculicidally dehiscing with 4 valves; pericarp laterally not dehiscing. Seeds many, irregularly semiovoid, minute, papillar, beaked at the hilus.

Distribution: About 8 species, all Asiatic: Malay Peninsula, (according to Léveillé) S. China, Malay Archipelago.

Key to the species.

1*a*. Branches subglabrous. Leaves oblanceolate, at the base acute. **1. D. axantha Korth.**

b. Branches hirsute with long, glandular hairs. Leaves ovate-oblong. at the base subcordate. . . . . **2. D. ferox Bakh. f,**

1. **Driessenia axantha Korth.** Korthals in l.c. (1839—1842) p. 251 and tab. 53; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 13; Naudin in l.c. XV (1851) p. 283; Miquel, l.c. (1855) p. 537; Triana in l.c. (1871) p. 73 and tab. 64; Boerlage, l.c. (1890) p. 531; Cogniaux in l.c. (1891) p. 475; Krasser in l.c. (1893) p. 169, tab. 74H.

Shrub, up to 2 m high. Branches subquadrangular, the adult ones glabrous, the young ones farinose and densely covered with minute, glandular papillae; the nodes thickened, provided with large scars. Leaves often unequal, oblanceolate, 13.5—23 cm × 4—6 cm, at the base acute and gradually narrowed, at the top abruptly narrowed, acuminate, on both sides glabrous, on the underside punctate, pallid, 5-nerved. Petiole 3—6.5 cm long, covered with minute, glandular papillae. Inflorescences in fascicles, about 10-flowered, up to 2 cm long; peduncle 3—5 mm long, quadrangular. Pedicel 2—4 mm long. Calyx tube 1—2 mm long, quadrangular, subglabrous; teeth narrowly triangular, very small. Petals ovate-oblong, 3—3.5 mm × 1.5 mm, rounded, glabrous. Stamens subequal; filaments 2—3 mm long; anthers ovate-oblong, 1.8—2 mm long; connective slightly produced, dorsally ending in a short spur, ventrally ending in two linear appendages. Toppart of the ovary provided with a short, membranous, 8-dentate disc, its teeth narrowly triangular, ending in an orbicular tip; style 2 mm long, terete. Capsule widened at the top, 2—2.5 mm long, quadrangular, farinose; stalk 4—6 mm long. Seeds 0.5 mm long.

Distribution: endemic.

BORNEO. WESTERN PART. Singkawang: M. Passi. (Teysmann s.n. [BZ], L). SOUTHERN AND EASTERN PART. Exact locality unknown: „G. Prarawin". (Korthals s.n. L, typus); (de Vriese s.n. L).

2. **Driessenia ferox Bakh. f.** spec. nov.

Herba. Rami teretiusculi pilis glandulosis ad 2.5 mm longis dense vestiti. Folia subaequalia ovato-oblonga 15—18.5 cm × 6.5—8.5 cm subcordata apice acuminata utrinque densiuscule sed longe hirsuta 13- vel 15-nervia, venulis transversis haud conspicuis. Petioli saepe inaequales 3.5—10.5 cm longi teretiusculi dense sed longe hirsuti. Inflorescentia paniculiformis ad 5 cm longa; pedunculus 1—2.5 cm longus teres hirsutus; rami quaternati vel verticillati in verticillis 2 dispositi. Bracteae lineares 1.5—2 mm longae hirsutae. Pedicellus 2.5—3.5 mm longus hirsutus. Calycis tubus anguste campanulatus 1—1.5 mm longus teres glanduloso-hirsutus; limbus angustus in dentes lineares 1.5 mm longos hirsutos exeunte. Petala ovato-oblonga 2.5—3 mm × 1.5 mm glabra venulata. Stamina subaequalia, filamentis 2.5 mm longis, antheris lanceolatis 2 mm longis basi paulum

dilatatis, connectivo non producto, dorso in calcarem 0.5 mm longum exeunte, in parte ventrali in appendices duos lineares 1.5—2 mm longos exeunte. Ovarium in parte apicali disco membranaceo fortasse dentato munitum; stylus adultus ignotus. Capsula apice late dilatata 2.5—3 mm longa teretiuscula 8-costata sparse hirsuta calycis dentibus persistentibus munita; pedicellus 6—7 mm longus.

Observ: Allied to D. glanduligera Stapf from British North Borneo; differing by its habit, the greater number of nerves on the leaves and by the presence of a disc.

Distributions: endemic.

CELEBES. Gvt. Celebes and dependencies: G. Bilisang. (Rachmat nr. 585; L, typus, dupl. in [BZ], fl. Aug.).

Species unknown to me, not mentioned in the key.

1. **D. microthrix Stapf**; Schwartz in Mitt. Inst. Bot. Hamburg Bd. VII Heft 3 (1931) p. 238. — W. Borneo.
2. **D. minutiflora Schwartz** in l.c. (1931) p. 238. — W. Borneo.
3. **D. Teysmannii Cogn.** in l.c. (1891) p. 475. — S.E. Borneo.

24. Sarcopyramis Wall.

Wallich, Tent. Flor. Napal. (1824) p. 32; De Candolle, Prodr. III (1828) p. 485; Miquel, Flor. Ned. Ind. I (1855) p. 558; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 732; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 77; Baillon, Hist. d. plant. VII (1880) p. 46; Boerlage, Handl. Flor. Ned. Ind. I (1890) pl 515; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 517; Stapf in Ann. Bot. VI (1892) p. 314; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 176; Diels in Engl. Bot. Jahrb. 75 (1933) p. 107.

Erect, mostly few-branched, fleshy, glabrous herbs. Branches quadrangular, glabrous. Leaves opposite, equal or, rarely, slightly unequal, ovate, ovate-oblong or ovate-lanceolate, at the base rounded or acute, at the top acute or acuminate, submembranaceous or fleshy, serrulate or nearly entire, on both sides sparsely but shortly hirsute or subglabrous, 3- or 5-nerved, cross-venules hardly conspicuous. Petiole always present. Flowers few together in terminal or axillary, often distinctly pedunculate heads, enveloped by foliaceous bracts; flowers themselves hermaphrodite, 4-merous. Pedicel present. Calyx tube obpyramidal, glabrous; limb shortly 4-dentate, its teeth either oblong and setose at the top or narrowly triangular and pinnatifid. Petals 4, ovate or obovate, acute or acuminate, gla-

brous, pink. Stamens 8, equal; filaments well developed; anthers all similar in shape, oblong or obcordate, opening by a single pore; connective at the base produced, dorsally ending in a spur, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 4-celled, half as long as the calyx tube; its toppart glabrous, slightly flattened, ending in 4 short, membranous lobes (disc!); style filiform, glabrous; stigma capitate, papillose. Capsule obpyramidal, quadrangular, dehiscing apically with 4 valves, at the top provided with a disc, consisting of 4 erect, connate, strongly veined wings; pericarp laterally not dehiscing. Seeds many, cuneate, straight.

Distribution: About 6 species, all Asiatic: British India, Sikkim, Khasia Mts., Malay Peninsula, S. China, Formosa and the Malay Archipelago (incl. the Philippine Islands).

Key to the species.

1*a*. Anthers oblong, at the base and at the top obtuse. Pedicels of the capsules at most 6 mm long, not dichotomously diverging. Unbranched or few-branched herbs, usually large 2

b. Anthers narrowly obcordate. Pedicels of the capsules 7—10 mm long, dichotomously diverging. Distinctly and often strongly-branched herbs, with small and slender shoots.

1. S. delicata Robins.

2*a*. Leaves narrowly ovate, on the upperside glabrous. Calyx teeth with shallow incisions. Appendage of the connective as long as the anther. . . . . 2. **S. lanceolata Wall. ex Bennett.**

b. Leaves broadly ovate, on the upperside sparsely hirsute. Calyx teeth pinnatifid or pinnatipartite. Appendage of the connective much shorter than the anther. . . . 3. **S. napalensis Wall.**

I*a*. Leaves acuminate. Calyx teeth narrowly triangular, pinnatipartite. Petals 5—9 mm long. 3*a*. **S. napalensis Wall. s.s.**

b. Leaves acute. Calyx teeth flattened cylindrical, at the top suborbicular in shape, provided with many rather deep incisions. Petals 10—18 mm long.

3*b*. **S. napalensis Wall.** var. **javanica (Z. et M.)Hochr.**

1. **Sarcopyramis delicata Robins.** Robinson in Bull. Torrey Bot. Club XXXV (1908) p. 72 and 75; Merrill in Philipp. Journ. Sc. 2 (1907) Bot. p. 424; idem, Enum. Philipp. Flow. Plants. Vol. 3. fasc. 5 (1923) p. 189.

Low, slender, mostly strongly-branched herb, 7.5—18 cm high; when fruiting the leaves often have already been fallen off, so that

the fruit-bearing branchlets resemble dichotomously-branched inflorescences. Leaves ovate, 2—3 cm × 1—1.8 cm, acuminate, not transparent when dry, coarsely dentate, sparsely hirsute, 3- or 5-nerved. Petiole 5—7 mm long. Flowers in diads on dichotomously diverging pedicels. Bracts spathulate, 5—8 mm × 2—3 mm, acute, dentate. Pedicel 7—10 mm long. Calyx tube 4—5 mm long; teeth narrowly triangular, about 2 mm long, pinnatipartite. Petals obovate, 6 mm × 3 mm, acuminate, pink. Filaments 3 mm long; anthers narrowly obcordate, 1 mm long; connective less than 0.5 mm long, dorsally ending in an about 1 mm long appendage. Style 5 mm long, thick. Capsule 5 mm long; its disc often pink.

Distribution.

SUMATRA. West Coast: G. Singgalang, 2500—2600 m, growing with S. napalensis Wall. (Schiffner nr. 2311, L, fl. July).

FURTHER DISTRIBUTION: Philippine Islands and according to Merrill also occurring in Formosa.

2. **Sarcopyramis lanceolata Wall. ex Bennett.** Bennett, Plant. Jav. Rar. (1838—1852) p. 214; Miquel, l.c. (1855) p. 558; Triana in l.c. (1871) p. 78 (not tab. VI, fig. 74b); Kurz in Journ. As. Soc. II (1877) p. 77; Boerlage, l.c. (1890) p. 516; Hochreutiner in Candollea II (1925) p. 471.

Herb, at least 2 dm high. Leaves narrowly ovate, 2.5—4 cm × 1—1.5 cm, acute, not transparent when dry, remote-serrate, subglabrous, 3- or 5-nerved. Petiole 10—15 mm long. Flowers in terminal, very few-flowered heads. Pedicel 5—8 mm long, distinctly alate. Calyx tube 4 mm long; limb wide and membranous, ending in suborbicular teeth, wich are provided with shallow incisions. Petals ovate-lanceolate, 10—13 mm × 3—4 mm, acuminate. Filaments 2.5 mm long; anthers oblong, 1 mm long, at the base rounded, at the top obtuse, acutely two-lobed; connective minute, dorsally ending in a 1 mm long, curved spur. Style 3 mm long. Capsule up to 5 mm long.

Observ: This species is often confused with S. napalensis Wall., but is however a remarkable form, differing by its habit and floral characters.

Fig. 74b, plate VI in Triana in l.c. is not S. lanceolata Wall. ex Bennett, but is S. napalensis Wall.

Distribution.

SUMATRA. East Coast: G. Toemanggoe (Bartlett and la Rue nr. 252, L, fl. July).

FURTHER DISTRIBUTION: Himalaya and according to Triana in l.c. also occurring in Bengal, Burma and the Malay Peninsula.

3. **Sarcopyramis napalensis Wall**. Wallich, Tent. Flor. Nap. (1824) p. 32 and tab. 23; De Candolle, Prodr. III (1828) p. 558; Bennett, Plant. Jav. Rar. (1839—1852) p. 214; Miquel, l.c. (1855) p. 558; Triana in l.c. (1871) p. 77 (not tab. VI, fig. 74a); Boerlage, l.c. (1890) p. 516, 532; Cogniaux in l.c. (1891) p. 517 [pr. p.]; Krasser in l.c. (1893) p. 176 and tab. 76F; Diels in Engl. Bot. Jahrb. 65 (1933) p. 111; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III livr. 2 (1934) p. 227.

Erect, few-branched herb, 7—40 cm high or higher; stem often woody. Leaves often unequal in shape and size, broadly ovate or ovate-oblong, 2.5—6.5 cm × 1.5—3.5 cm, at the base rounded or acute, at the top acuminate, transparent when dry, submembranaceous, distinctly serrulate, sparsely hirsute on both sides. Petiole 1—3 cm long. Flowers few together in terminal and axillary heads. Pedicel 2—6 mm long. Calyx tube 3—4.5 mm long; limb membranous, ending in narrowly triangular, 2 mm long, pinnatifid teeth. Petals ovate, 5—9 mm × 6 mm, acuminate, according to Wallich in l.c., not fragant. Filaments 2—2.5 mm long, white; anthers oblong, 0.8—1 mm long, at the base rounded, at the top obtusely two-lobed, orange; connective not produced, dorsally ending in a minute spur. Style 3.5 mm long, curved at the top. Capsule 4—5 mm long. Seeds papillar.

Observ: Instead of „napalensis", all authors write „nepalensis". Plate VI, fig. 74a in Triana in l.c. is not S. napalensis Wall. but is S. lanceolata Wall. ex Bennett.

Distribution.

SUMATRA. Atjeh: Pagarang, Gajoe and Alas lands (van Daalen nr. 83, L, fr. Febr.); G. Boerni Gĕrĕdong, 1650 m (van Steenis nr. 6470 [BZ], L). West Coast: G. Singgalang (Beccari nr. 32, L); idem, 2300 m (Bünnemeyer nr. 5117 [BZ], L, fl. Oct.); idem, 2500—2600 m, growing together with S. delicata Robins. (Schiffner nr. 2311 [pr. p.], L, fl. July); G. Talang, 1650 m. (Bünnemeyer nr. 5117 [BZ], L, fl. Oct.); G. Sag. 1430 m (idem nr. 4276 [BZ], L, fl. Aug.).

FURTHER DISTRIBUTION: Nepal and according to Ridley also occurring in Britisch India, the Malay Peninsula and S. China.

var. **javanica (Z. et M.) Hochr.** Hochreutiner in Candollea II (1925) p. 471; *Sarcopyramis javanica Z. et M.*, Moritzi in Zollingers Syst. Verz. (1845—1846) p. 12; Miquel, l.c. (1855) p. 558; Backer, Manuscr. Fl. Java, Melast (1941) p. 12; *Sarcopyramis nepalensis Wall. ex Bennett* (pr. p.; typo excl.); Bennett, Plant. Jav. Rar. (1839—1852) p. 214; Triana in l.c. (1871) p. 78; Boerlage, l.c. (1890) p. 516, 532; Cogniaux in l.c. (1891) p. 518; Koorders, Exkurs. Flora Java II (1912) p. 691; *Osbeckia ovata Zoll.* in Flora (1847) p. 665; Teysmann

et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; *Sonerila Naudiniana Miq.*, l.c. (1855) p. 565; Clarke in Hooker's Flora Brit. India II (1879) p. 541.

Herb, 7—20 cm high. Leaves often very unequal, broadly ovate, 2—5.5 cm × 1.5—2.5 cm, acute, nearly entire or minutely remote-serrate, on the upperside sparsely hirsute, 3- or 5-nerved. Petiole 1—2.5 cm long. Flowers solitary, in diads or in triads, terminal or axillary. Pedicel 5—6 mm long. Calyx tube 2.5 mm long; teeth flattened, cylindrical, 1 mm long, provided with many, rather deep incisions, at the top suborbicular. Petals obovate, according to Backer in l.c., 10—18 mm × 8—13 mm, acute, red-purple, according to Bakhuizen van den Brink fil., smelling of roses. Filaments 2.5—4 mm long, white; anthers ovoid, 0.8—1 mm long, at the top obtusely two-lobed; connective minute, ending in an minute spur; capsule 3—4 mm long.

Observ: differing from the type species by the less robust habit, acute leaves and large petals.

Distribution: endemic.

JAVA. Batavia: G. Salak (Zollinger nr. 880, L, typus, also the type specimen of *Sonerila Naudiniana Miq.*); G. Boender near G. Salak. (Hochreutiner nr. 1951 vide Hochreutiner in l.c.). Preanger Regencies: G. Perbakti, G. Salak, 1700 m (Bakhuizen van den Brink fil. nr. 1707 [BZ], L, U, fl. Sept.).

Species unknown to me, not mentioned in the key.

1. **S. gracilis Schwartz** in Mitt. Inst. Bot. Hamburg Bd. VII Heft 3 (1931) p. 241. — W. Borneo.

25. Sonerila Roxb.

Roxburgh, Flor. Indica I (1820) p. 180; idem, Hort. Beng. (1814) p. 5 [nomen]; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 248; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 319; Miquel, Flor. Ned. Ind. I (1855) p. 561; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 753; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 75; Baillon, Hist. d. plant. VII (1880) p. 11, 46; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 513; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 490; Stapf in Ann. Bot. VI (1892) p. 291 King in Journ. As.Soc. Bengal LXIX. part II (1900) p. 18; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III vol. XII livr. 1 (1933) p. 51; Intern. Rules Bot. Nomencl. 1935 (ed. J. Briquet) p. 104; *Cassebeeria Dennst.* in Schlüss. Hort. Malab. (1818) p. 35; Kuntze, Revis. Gen. Plant. (1891) p. 254, 953; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 177.

Erect or ascending low herbs or undershrubs, often provided with a rhizome. Branches terete or quadrangular, pilose, glabrous or subglabrous. Leaves opposite, often unequal, elliptic to lanceolate, ovate or obovate, at the base acute, obtuse, cordate or auriculate, at the top acute or acuminate, submembranaceous or fleshy, serrate, dentate or, rarely, undulate, mostly sparsely hirsute or, rarely, glabrous or villous, 3- to 7-nerved or 3-to 7-plinerved. Petiole absent or present. Flowers solitary, in triads or many in racemes, pseudo-umbels or, which is the common case, in bifurcate or trifurcate, pedunculate, scorpioid spikes; flowers themselves hermaphrodite, 3-merous. Bracts often present. Pedicel always present. Calyx tube obconical or trigonous, sparsely hirsute, subglabrous or scattered with a few, glandular hairs; limb consisting of 3 triangular teeth or lobes, which are often scattered with glandular hairs and which are sometimes alternating with dots of glandular hairs. Petals 3, ovate, obovate or lanceolate, acute, acuminate or obtuse, glabrous or, rarely, glandulose. Stamens 3 or, rarely, 6, equal or subequal; filaments well developed; anthers equal, oblong, lanceolate, subquadrangular or sagittate, at the top acute, rostrate or obtuse, opening by a single or two terminal pores; connective not produced at the base, dorsally and ventrally often ending in a minute appendage. Ovary concrescent with the calyx tube with 3 or 6 septs; exterovarial chambers 3 or 6; ovary itself 3-celled; its toppart flattened and rimmed by 3 scales; style filiform, glabrous; stigma capitate or hardly conspicuous. Capsule trigonous, obconical, hemispherical or subcylindrical, sparsely hirsute, tuberculate or glabrous, at the top largely widened and flattened, rimmed by 3 erect scales, dehiscing with 3 valves or with 6 teeth. Seeds many, clavate or ovoid, minute, rough or smooth.

Distribution: About 175 species, all Asiatic: British India, Malay Peninsula, Siam, French Indo-China, Hainan, S. China, Formosa and the Malay Archipelago (incl. the Philippine Islands).

Key to the species.

1*a**) Stamens 6. 2
b. Stamens 3. 3
2*a*. Calyx tube glabrous. Leaves acuminate. 1. **S. obliqua Korth.**
b. Calyx tube glandulose-puberulous. Leaves acute.
2. **S. Junghuhniana Miq.**
3*a*. Leaves of the same pair very unequal; the larger ones at least 5× as long as the smaller ones 4
b. Leaves of the same pair about equal; the larger ones, at most 2× as long as the smaller ones. 8

4*a*. Inflorescence a many-flowered, lax spike, provided with a long peduncle and rhachis. Capsule broadly campanulate; stalk very short, covered with glandular hairs 6

b. Inflorescence a few-flowered, compact spike, provided with a short peduncle and rhachis. Capsule turbinate, gradually narrowed into the swollen, tuberculate stalk 5

5*a*. Flowers 2 to 4 in a sessile or subsessile spike. 3. **S. heterophylla Jack**

b. Flowers 5 to 10 in a distinctly pedunculate spike; peduncle about 1 cm long . . . . . 4. **S. tuberculifera Cogn.**

6*a*. The smaller leaves lanceolate. Anthers oblong, obtuse. Small and slender herbs. . . . . 5. **S. papuana Cogn.**

b. The smaller leaves reniform. 7

7*a*. Rhachis long. Bracts present, persistent. Calyx tube hirsute. Leaves unequal, ovoid, subacute . 6. **S. begoniaefolia Bl.**

b. Rhachis very short. Bracts absent. Calyx tube covered with glandular hairs. Leaves equal, obovate-lanceolate, acuminate. 7. **S. Ruttenii Bakh. f.**

8*a*. Anthers quadrangular. Leaves submembranaceous. Calyx tube tubular . . . . . 8. **S. brachyandra Naud.**

b. Anthers sagittate or ovoid. 9

9*a*. Anthers sagittate, acuminate. 10

b. Anthers ovoid, acute or rostrate 12

10*a*. Peduncle ending in 2 long, many-flowered rhaches. Leaves 7- or 9-plinerved, at the base cordate. Juicy herbs with a hollow stem. . . . . 9. **S. insignis Bl.**

b. Peduncle ending in a single, very short, few-flowered rhachis or flowers in diads or triads. 11

11*a*. Peduncle bearing 2 or 3 flowers. Leaves thin, on the underside glabrous. . . . . 10. **S. tenuifolia Bl.**

b. Peduncle bearing 5 flowers. Leaves fleshy, on the underside on the nerves densely covered with appressed, rufous hairs. 11. **S. pallida Stapf et King**

12*a*. Leaves ovate-cordate or ovate-lanceolate, immaculate, on the underside with hardly conspicuous, pale, lateral nerves . . 13

b. Leaves lanceolate, at the base cuneate, often maculate, on the underside with prominent, dark-coloured, lateral nerves 15

13*a*. Young branches, leaves and petioles densely covered with long, curved hairs. Peduncle and rhachis long, pilose. Capsule sparsely tuberculate, between the ribs hardly prominent. 12. **S. decipiens Bakh. f.**

b. Young branches subglabrous, leaves and petioles either subglabrous or very sparsely pilose. Capsule smooth, between the ribs strongly prominent and thick 14

14*a.* Leaves at the base subcordate, not transparent when dry, shortly acuminate, 5-plinerved 13. **S. buruensis Bakh. f.**

b. Leaves at the base cuneate, transparent when dry, long acuminate, 3-plinerved . . . . . 14. **S. amoena Bakh. f.**

15*a.* Anthers rostrate, ovate-lanceolate. Flowers in pseudo umbels. Leaves on the upperside white-striped along the nerves. 15. **S. picta Korth.**

b. Anthers not rostrate. Flowers in a short rhachis or a few together. Leaves mostly not white-striped on the upperside. 16

16*a.* Anthers oblong, subobtuse. Flowers in a short rhachis. Leaves (when dry) dark-coloured on the upperside, immaculate or, rarely, maculate, not transparent. 16. **S. laeviuscula Z. et M. ex Miq.**

b. Anthers ovate-lanceolate, very acute. Flowers in a short rhachis or a few together. Leaves (when dry) bright-green on the upperside, always immaculate, transparent. 17. **S. biflora Z. et M.**

*) see also . . . . . 18. **S. Daalenii Bakh. f.**

1. **Sonerila obliqua Korth.** Korthals in l.c. (1839—1842) p. 249 and tab. 52; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 11; Naudin in l.c. XV (1851) p. 323; Miquel, l.c. (1855) p. 563; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 124; Triana in l.c. (1871) p. 77; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 515; *Sonerila heterostemon Naud.* in l.c. XV (1851) p. 325 and in l.c. XVI (1851) tab. 18, fig. 4; *Sonerila Teysmanniana Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 320; Triana in l.c. (1871) p. 77; Cogniaux in l.c. (1891) p. 515; *Cassebeeria obliqua (Korth.) Krasser* in l.c. (1893) p. 177.

Herb, 5 to 35 cm high or more. Stem subquadrangular, glabrous, hollow. Leaves of the same pair equal in size; the leaves themselves unequal, ovate or ovate-oblong, 7—9 cm × 3—5 cm, at the base rounded, at the top acuminate, on both sides subglabrous, 5- or 7-nerved. Petiole 2—3 cm long, glabrous. Inflorescence axillary, 2—5.5 cm long, up to 20-flowered; peduncle single, 10—15 mm long, glabrous or furfuraceous; spikes 1—4 cm long. Flowers in two alternate rows. Bracteoles spathulate, on both sides glabrous, venulated, mostly persistent. Pedicel up to 1 mm long. Calyx tube campanulate, 1.5 mm long, 3-ribbed, glabrous; lobes broadly triangular,

obtuse, minute, glabrous. Petals obovate, 6—8 mm long, obtuse, glabrous, pink. Stamens 6, equal; filaments 2.5—4 mm long; anthers sagittate, 3.5 mm long, their basal lobes acute, at the top obtuse, opening by a single pore; connective ventrally ending in a spur or a tubercle. Ovary half as long as the calyx tube; its top part produced in a small, narrow tube, from which the style arises; style 5—10 mm long, glabrous; stigma capitate. Capsule obpyramidal, 4—7 mm long, woody, glabrous, subsessile.

Observ: Together with S. Junghuhniana Miq. forming an isolated group, characterized by the possess of 6 stamens. Sterile specimens resemble S. insignis Bl., but differing by the mostly 5-nerved leaves.

Distribution.

SUMATRA. West Coast: G. Ambadjang (Korthals s.n. L, typus); Agam, Brani, 950 m (Bünnemeyer nr. 3102 [BZ], L, fl. June); Loeboek Sikaping, 650 m (idem nr. 1198 [BZ], L, fl. June). East Coast: P. Bengkalis: Sĕngoro, 3 m (Beguin nr. 439 [BZ], L, fl. Oct.; v.n. daoen slokan). Palembang: Moeara doewa. (Teysmann s.n. U, type of *S. Teysmanniana Miq.*; v.n. sedoedoe tanah).

LINGGA ARCHIPELAGO. P. Lingga: Resoen, 40 m (Bünnemeyer nr. 6752 [BZ], L, fl. July); idem, 60 m (idem nr. 6755 [BZ], L, fl. July; v.n. djari sotong).

BANKA: G. Mangkol, Pangkal pinang, 160 m (Bünnemeyer nr. 2112 [BZ], L, fl. Nov.); locality unknown. (idem nr. 2173 [BZ], L).

FURTHER DISTRIBUTION: Malay Peninsula, Singapore.

2. **Sonerila Junghuhniana Miq.** Miquel, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 566 and 124 [nomen]; Triana in l.c. (1871) p. 77; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 515. (description according to Miquel, l.c.).

Erect, puberulous herb. Leaves at the same pair unequal, ovate, acute or subacute, serrulate, subpuberulous, subquintuplinerved; the larger ones a few cm longer than the smaller ones; petiole long. Flowers in subcapitate, pedunculate, small racemes. Calyx tube "turbinate-campanulate", covered with glandular hairs; teeth 3, short. Stamens 6, subequal; anthers sagittate, rostrate, opening by a single pore; connective of the larger anthers ending in a rather small spur; that of the smaller ones subtuberculate.

Observ: From this dubious species, I have only seen a single leaf, preserved in the Utrecht Herbarium, which probably belong to the type specimen. According to Miquel, l.c. this species has 6 stamens, but judging to the shape of the leaf, the number of 3 will be more probable. Miquel may be mistaken and then this species will be identic with or at least closely allied to S. laeviuscula Z. et M. ex Miq.

Distribution: endemic.

SUMATRA. Exact locality unknown: „Hoeroeng". (Junghuhn. s.n. U, ? typus).

3. **Sonerila heterophylla Jack** Jack in Malay Misc. II (1822) p. 16; idem in Trans. Linn. Soc. XIV (1825) p. 16; idem in Hook. Journ. Bot. I (1834) p. 368; Bennett, Plant. Jav. Rar. (1838—1852) p. 217; Jack in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 333; Naudin in l.c. XV (1851) p. 323; Junghuhn, Java (1853) p. 521; Miquel, l.c. (1855) p. 562; idem, Flor. Ned. Ind. Suppl. I Sumatra. (1860) p. 124; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; Triana in l.c. (1871) p. 77; van Hasselt en Boerlage, Bijdr. kennis M. Sumatra (1884) p. 19; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 510; Koorders, Exkurs. Flora Java I (1912) p. 692; Hochreutiner in Candollea II (1925) p. 470; Backer, Manuscr. Fl. Java, Melast. (1941) p. 13; *Sonerila pauciflora Bl.*, Catal. Buitenzorg (1823) p. 42 [descr.]; idem in Flora XIV (1831) p. 491 and in Bijdr. Nat. Wet. VI (1831) p. 233; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 12.

Herb or undershrub, mostly unbranched or, less common, few-branched in the upper parts, 5—50 cm high or more. Stem subterete, densely brown or rufously hirsute. Leaves of the same pair very unequal in size; the larger ones unequal, lanceolate or, rarely, oblong, 4—7 cm × 1.2—2.5 cm, at the base acute and to one side auriculate, at the top obtusely acuminate, irregularly remote-crenate, on the upperside sparsely pilose or subglabrous, on the underside between the nerves sparsely pilose, on the nerves densely pilose, 3-nerved or 3-, 5- or 7-plinerved, cross-venules in the upperpart of the leaf more distinct than at the base; petiole 3—6 mm long, densely hirsute; the smaller leaves broadly cordate, 5 mm × 5 mm, very acute, on both sides shortly pilose, sessile. Flowers axillary, arranged in an up to 1 cm long, at most 5-flowered inflorescence or flowers solitary; peduncle 0.5—4 mm long. Pedicel 2—4 mm long. Calyx tube obconical, 3—4 mm long, densely covered with deciduous papillose, glandular hairs; teeth narrowly triangular, widened at the base and provided with 3 glandular papillae, 1 mm long. Petals ovate-lanceolate, 3—6 mm × 2—4 mm, gradually narrowed to the base, outside with a few glandular hairs on the veins, inside entirely glabrous; mid-vein strong. Stamens 3; filaments 2—3 mm long, arcuate, membranous-alate, glabrous; anthers oblong or lanceolate, 2—3 mm long, obtuse, minutely mucronate, opening by a single pore; connective dorsally ending in a tubercle. Ovary half as long as the calyx tube; style 6 mm long; stigma capitate, glandulose. Capsule obconical, 3—4 mm long, densely covered with tubercles ending in fine, deciduous bristles,

pale-grey; stalk 3—4 mm long.

Observ: Allied to S. papuana Cogn., which has however the smaller leaves reniform and to S. tuberculifera Cogn., which has a different habit, a distinct rhachis and more flowers.

Distributions: restricted to the localities quoted below.

SUMATRA. Tapanoeli: (Jack, vide Jack in l.c., type). West Coast G. Talakmau, 1100 m (Bünnemeyer nr. 652 [BZ], L, fl. May); Bt. Tinggi 1100 m (idem nr. 3003 [BZ], L, fl. June); G. Singgalang. (Beccari nr. 31, L), East Coast: W. of Bandar baroe, 850 m (Lörzing nr. 6869 [BZ], L, fl. Sept.); Pantjoer batoe, N.W. of lake Toba, 1400 m (idem nr. 7122 [BZ], L, fl. Jan.). Benkoelen: (vide Miquel, l.c. [1860]). Locality unknown: (Teysmann and de Vriese s.n. L); (Sumatra Exped. 1877—1878, L.)

JAVA. Bantam: „Hariang" [? Tjihèrang] (Kuhl and van Hasselt s.n. L, fl. Sept.). Batavia: G. Perbakti, G. Salak (Bakhuizen van den Brink nr. 5659 [BZ], L, fl. Sept.); idem (Bakhuizen van den Brink fil. nr. 1286 [BZ], L, U, fl. June); G. Salak, 1600 m (Backer nr. 36256, PAS, fr. June). Preanger Regencies: G. Kendeng, S.E. of Tjibĕbĕr, 1050 m (Bakhuizen van den Brink nr. 5973 [BZ], L, fl. June); Tjipĕtir (de Monchy s.n. L, fl. May); G. Melatti (Went s.n. L). Semarang: G. Oengaran, Medinie, 1000—1300 m (Junghuhn s.n. L, U, fl. Jan.-Apr.). Locality unknown: (Blume s.n. L); (Reinwardt s.n. L, type of *S. pauciflora Bl.*, fl. Aug.; v.n. „tjodjok buwu".); (Zollinger nr. 881, L).

4. **Sonerila tuberculifera Cogn.** Cogniaux in l.c. (1891) p. 511; idem in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 532 [nomen]; Ridley in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 60; *Cassebeeria tuberculifera* (*Cogn.*) *Kuntze*, Revis. Gen. Plant. (1891) p. 953.

Undershrub, 36 cm high. Stem subterete, densely covered with appressed hairs. Leaves of the same pair very unequal in size; the larger ones unequal, obovate-oblong, 4—4.5 cm × 2—2.5 cm, at the base shortly emarginate, at the top long, but obtusely acuminate, remote-dentate, on the upperside subglabrous, on the underside between the nerves minutely pilose, on the nerves covered with appressed hairs, 5-nerved; petiole 4 mm long, densely hirsute; the smaller leaves broadly cordate, 6 mm × 6 mm, shortly acuminate, on both sides pilose; petiole up to 2 mm long. Inflorescence axillary, 10—15 mm long, bearing 5 to 10 flowers; peduncle bifurcate, 5—10 mm long, pilose; spikes about 5 mm long. I have no flowers seen. Pedicel 2—4 mm long. Calyx tube broadly campanulate, 3 mm long, tuberculate; teeth 3, subulate, 0.6 mm long. Petals lanceolate, 3—4 mm long, acuminate. Stamens 3; anthers narrowly ovoid, 2 mm long, obtuse. Capsule broadly obconical, 3—5 mm long, densely tuberculate; stalk 4—5 mm long.

Observ: Allied to S. heterophylla Jack. Stapf in l.c. p. 291 considered this form a variety of S. heterophylla Jack.

Distribution: endemic.

SUMATRA. West Coast: G. Singgalang (Beccari nr. 264, type, dupl. in L).

5. **Sonerila papuana Cogn.** Cogniaux in l.c. (1891) p. 510; idem in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 532 [nomen]; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 112; idem in Nova Guinea XIV livr. II (1927) p. 202; *Cassebeeria papuana* (*Cogn.*) *Kuntze*, Revis. Gen. Plant. (1891) p. 953.

Slender herb, up to 15 cm high. Stem subterete, densely covered with appressed, brown hairs. Leaves of the same pair very unequal in size; the larger ones unequal, lanceolate or obovate-lanceolate, 2.8—5 cm × 0.7—2 cm, at the base emarginate-auriculate, at the top acuminate, remote-crenate, on the upperside very sparsely pilose or arachnoid, on the underside between the nerves arachnoid, on the nerves densely covered with appressed hairs, 5- or 7-plinerved; petiole 3—7 mm long; the smaller leaves lanceolate, 3—7 mm × 1—1.5 mm, on both sides sparsely covered with short hairs; petiole 1—1.5 mm long. Inflorescence axillary, up to 1 cm long, bearing 2 to 6 flowers; peduncle 3—5 mm long. Pedicel 3 mm long. Calyx tube campanulate, 2—2.5 mm long, sparsely hirsute; teeth narrowly triangular, 1.5 mm long, glabrous. Petals ovate-oblong, 2—3 mm × 1.5 mm, according to Janowsky, white. Stamens 3; filaments 3 mm long; anthers oblong, 1.5 mm long, obtuse, opening by two pores; connective inappendiculate. Ovary half as long as the calyx tube; style 5 mm long; stigma hardly conspicuous. Capsule widened at the top, 2.5—3 mm long, tuberculate; stalk 3 mm long.

Observ: Allied to S. heterophylla Jack.

Distribution: endemic.

NEW GUINEA. Southern Part: Lorentz river (Versteeg nr. 1379 [BZ], L, fl. July); Siriwo river (Janowsky nr. 161 [BZ], L, fl. Sept.); Hellwig Mts., 750 m (von Römer nr. 915 [BZ], L, fr. Nov.); North Eastern Part: (vide Mansfeld in l.c.).

6. **Sonerila begoniaefolia Bl.** Blume in Flora XIV (1831) p. 490 and in Bijdr. Nat. Wet. VI (1831) p. 233; Korthals in l.c. (1839—1842) p. 248, tab. 54; Blume in Mus. Bot. Lugd.-Bat. I. nr. 1 (1849) p. 10; Naudin in l.c. XV (1851) p. 322; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; Triana in l.c. (1871) p. 77; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 39; Backer, Manuscr. Fl. Java, Melast. (1941) p. 13; *Sonerila begoniaefolia Bl.* var. *pilosiuscula Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 11; Miquel, l.c. (1855) p. 562 [under S. begoniaefolia Bl. var. *β.*]; *Sonerila begoniaefolia Bl.* var. *pilosula* [*Bl.*]; Triana in l.c. (1871)

p. 77; *Sonerila moluccana Roxb.*; Jack in Malay Misc. (1822) p. ? ; Korthals in l.c. (1839—1842) p. 248; Bennett, Plant. Jav. Rar. (1838—1852) p. 215 [pr. p.]; Jack in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 322; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 12; Miquel, l.c. (1855) p. 562; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 124; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 508; Koorders, Exkurs. Flora Java II (1912) p. 692; *Sonerila moluccana Roxb.* var. *pilosula* (*Triana*) *Stapf* in. Ann. Bot. VI (1892) p. 312; *Sonerila paradoxa Naud.* in l.c. XV (1851) p. 321.

Herb, up to 2 dm high. Stem quadrangular, flattened, densely hirsute. Leaves at the same very pair unequal in size; the larger ones very unequal, oblong or lanceolate, 6—14 cm × 3.5—7 cm, at the base to one side auriculate, at the top mostly shortly acuminate, entire or subserrulate, ciliate, on the upperside between the nerves sparsely pilose, on the nerves densely covered with appressed hairs, sometimes on both sides glabrous and shining, 7-plinerved; petiole 15—40 mm long, densely hirsute; the smaller leaves reniform, 5 mm × 5 mm, on both sides sparsely pilose, sessile. Inflorescence 1—11 cm long, many-flowered; peduncle single, 0.5—6 cm long, pilose, ending in 3 or more racemes. Bracts narrowly obovate, 1.5 mm × 1 mm, at the base wide, dentate, pilose. Pedicel 1—2 mm long. Calyx tube campanulate, 3—4 mm long, slightly 3-ribbed, hirsute; teeth ovate-triangular, 1 mm long, mucronate, sparsely hirsute, deciduous. Petals ovate, 4—5 mm × 2—3 mm, acute, glabrous, white or pink. Stamens 3; filaments 5 mm long; anthers linear, 3 mm long, at both ends obtuse, opening by 2 pores; connective i nappendiculate. Ovary half as long as the calyx tube; style 7 mm long; stigma truncate, sunken. Capsule widened at the top, 4—6 mm long, slightly angular, densely covered with tubercles ending in deciduous bristles; stalk 2—4 mm long.

Observ: Instead of „begoniaefolia" usually is written „begoniifolia". The form with glabrous, shining leaves is rarely found. Erroneously King in l.c. considered glabrous leaves typical for S. begoniaefolia Bl. and pilose leaves for S. paradoxa Naud. Both forms however are identic and their names were due to non-identification of S. moluccana Roxb. According to Clarke in Hook. f., Flor. Brit. India II (1879), it is not unlikely that Roxburgh meaned „malaccana" instead of „moluccana" and „malaccis" instead of „moluccis". This explanation seems to me very acceptable, if we take into account that this species has never been found Eastward of West Java. As S. moluccana Roxb. must be considered a species dubia, I therefore prefer the name S. begoniaefolia Bl.

Distribution.

SUMATRA. West Coast: G. Malintang or G. Singgalang. (Korthals s.n. L, sub S. begoniaefolia Bl. var. pilosiuscula Bl.). Djambi: Batang Soengai, 200 m (Posthumus nr. 950 [BZ], L, fl. Sept.); Sei Mengopoh, 60 m (Rutten-Kooistra nr. 26, U, fl. Sept.). Palembang: Rawas, 500 m (de Voogd nr. 1510 [BZ], L, fl. Febr.). Benkoelen: G. Seminoeng, lake Ranau, 1000 m (Forbes nr. 2159, L). Locality unknown: (collector unknown, L).

Banka: G. Pading, near Koba, 150 m (Bünnemeyer nr. 2173 [BZ], L, fl. Dec.).

JAVA. Bantam: S. Coast. (Zollinger nr. 1496, L). Batavia: Pasir Tjarèwed, Bolang (Bakhuizen van den Brink fil. nr. 3293 (3295), U); G. Tjipoetih, Tjiampea, 650 m (Bakhuizen van den Brink nr. 4200 [BZ], L, fl. Sept.). Preanger Regencies: Tjiawi (van Hasselt s.n. L, typus, fl. Jan. and Dec.). Locality unknown: (Reinwardt s.n. L, sub. S. rugosa R.); (Blume s.n. L); (Boerlage s.n. L); (collector unknown, L).

7. **Sonerila Ruttenii Bakh. f.** spec. nov.

Herba adscendens, ad nodos radicans circa 2 dm alta; caulis quadrangularis compressiusculus dense fusco-pilosus. Folia in eodem jugo valde inaequalia; maiora obliqua obovato-lanceolata 9—10.5 cm × 3—4 cm basi biauriculata, auriculis inaequalibus, apice breviter acuminata undulata ciliata supra sparsissime pilosa et nitida, subtus inter nervos distincte rufo-sericea, in nervis densissime rufo-sericea 5- vel 7-plinervia; petiolus 10—15 mm longus dense appresse pilosus; folia minora reniformia 4—5 mm × 5—6 mm obtusa ciliata supra glabra et in sicco rubescentia subtus pilosa; petiolus 2 mm longus dense pilosus. Inflorescentia subterminalis ad 5 cm longa, quam maxime gerens 10 flores; pedunculus simplex 4 cm longus. Pedicellus 3—4 mm longus. Calycis tubus campanulatus 4 mm longus subcostatus pilis glandulosis basi valde tuberculatis vestitus; dentes triangulares 1.5 mm longi acuti basi dilatati dorso glanduloso-pilosi. Petala ovato-lanceolata 4—5 mm longa in vena mediana pilis glandulosis 0.5 mm longis sparse obtecta rosea. Stamina 3, filamentis 1.5 mm longis, antheris linearibus 2 mm longis basi apiceque obtusis, connectivo inappendiculato. Ovarium quam calycis tubus dimidium minus; stylus 4 mm longus; stigma capitata. Capsula apice valde dilatata 3 mm longa tuberculata.

Observ: Allied to S. begoniaefolia Bl. I have named this species in honour of Prof. Dr. L. M. R. Rutten. (Utrecht, Holland).

Distribution endemic.

BORNEO. SOUTHERN AND EASTERN PART. Boeloengan-Beraoe Sadjan (Rutten nr. 670, U, typus, fl. Oct.).

8. **Sonerila brachyandra Naud.** Naudin in l.c. XV (1851) p. 320 and in l.c. XVI (1851) tab. 18, fig. 2; Triana in l.c. (1871) p. 75 and tab. VI, fig. 72f.; Cogniaux in l.c. (1891) p. 491.

Delicate herb, about 1 dm high. Stem quadrangular, compressed, subalate, sparsely covered with minute rufous glandular hairs. Leaves equal, oblong or lanceolate, 10—15 mm × 5—8 mm, abruptly narrowed at the base, at the top subacute, minutely remote-dentate, submembranaceous, on the upperside covered with a few long hairs, on the underside glabrous, 3-nerved, cross-venules irregular. Petiole 3 mm long, covered with minute glandular hairs. Inflorescence slender, up to 3 cm long, few-flowered; peduncle up to 1.5 cm long. Pedicel up to 1 mm long. Calyx tube cylindrical, 4 mm long, slightly ribbed, sparsely covered with glandular hairs; teeth broadly triangular, acute, sparsely covered with glandular hairs. Petals obovate, 1.5 mm × 1 mm (according to Naudin 4 mm long). Stamens 3; filaments 1—1.5 mm long; anthers subquadrangular, 0.5 mm long, truncate, opening by 2 pores; thecae at the top slightly widened; connective inappendiculate. Ovary a little shorter than the calyx tube; style 2—2.5 mm long; stigma capitate. Capsule subpyramidal, 5—6 mm long, glabrous; stalk 1—1.3 mm long.

Observ: differing from all species mentioned in this paper by the quadrangular anthers, the transparent leaves and delicate habit. Allied to S. tenera Royle and it may be identic with it.

Distribution.

CELEBES. Gvt. Celebes and dependencies: Boeloe Tanah near Lombasang, 750 m (Bünnemeyer nr. 11429 [BZ], L, fl. May).
FURTHER DISTRIBUTION: Philippine Islands.

9. **Sonerila insignis Bl.** Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 11; Naudin in l.c. XV (1851) p. 328; Miquel, l.c. (1855) p. 565; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 124, 320; Triana in l.c. (1873) p. 76; van Hasselt en Boerlage, Bijdr. kennis M. Sumatra (1884) p. 19; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 504.

Juicy herb, up to 30 cm high. Stem subterete, widened towards the nodes, subglabrous or furfuraceous, hollow. Leaves equal, cordate or cordate-oblong, 8—14 cm × 4—7 cm, long acuminate, submembranaceous, minutely but coarsely dentate, on both sides sparsely, shortly pilose, 7- or 9-nerved, nerves very wide at the base, cross-venules distinct. Petiole 2—8 cm long, sparsely pilose. Inflorescence a many-flowered, 7—13 cm long, cincinnus; peduncle 6—10 cm long, alate, shortly pilose, widened at the top and splitting in two 1—2 cm long spikes. Bracts absent. Pedicel 3—5 mm long. Calyx tube narrowly obcuneate, 6 mm long, glabrous; teeth triangular, about 1 mm long. Petals ovate, 6 mm × 4 mm, subobtuse. Stamens 3; filaments 4 mm long; anthers sagittate, 6—7 mm long, opening

by a single pore; connective inappendiculate. Ovary 1/3 to 1/2× as long as the calyx tube; style 7—11 mm long; stigma capitate. Capsule trigonous, 5—8 mm long, 6-ribbed; stalk 3—5 mm long.

Observ: resembling S. obliqua Korth., but differing by the bifid peduncle, the absence of bracts and the number of 3 stamens. Sterile specimens distinguishable by their 7- or 9-nerved leaves.

Distribution: endemic.

SUMATRA. West Coast: G. Koerintji (Sumatra Exped. 1877—1878, L); idem, 1300 m (Bünnemeyer nr. 8227 [BZ], L, fl. Febr.); idem, 1600 m (idem nr. 8466 [BZ], L, fl. March; v.n. kadoedoek ajer); Tanang Taloe, G. Talakmau (idem nr. 1031 [BZ], L, fl. June); idem, 1100 m (idem nr. 1043a [BZ], L, fl. June); Bt. Nan Tigo, G. Malintang, 1250 m (idem nr. 3762 [BZ], L, fl. July); G. Malintang, 1200 m (idem nr. 4140 [BZ], L, fl. July); G. Talang, 1700 m (idem nr. 5092 [BZ], L, fl. Oct.; v.n. sikadoedoek); G. Sago, 1200 m (idem nr. 4335 [BZ], L, fr. Aug.); Loeboek sampia. (Teysmann s.n. U; v.n. piladang rimboe). Benkoelen: Rimboe pengading. (Jacobson nr. 77 [BZ], L, fl. June). Locality unknown: (Kuhl s.n. L, typus).

10. **Sonerila tenuifolia Bl.** Blume in Flora XIV (1831) p. 491 and in Bijdr. Nat. Wet. VI (1831) p. 234; Bennett, Plant. Jav. Rar. (1838—1852) p. 211, 217 and tab. 44; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Naudin in l.c. XV (1851) p. 324; Junghuhn, Java (1853) p. 521; Miquel, l.c. (1855) p. 563; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 124, 320; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 241; Triana in l.c. (1871) p. 76; Boerlage, l.c. (1890) p. 531; Cogniaux in l.c. (1891) p. 502; Koorders, Exkurs. Flora Java II (1912) p. 692, tab. 86; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Baker f. in Journ. Bot. Suppl. I (1924) p. 39; van Steenis in Tijdschr. Ned. Kon. Aardr. Genootschap V 5 (1938) p. 752 [perhaps we have to do here with Sarcopyramis]; Backer, Manuscr. Fl. Java, Melast. (1941) p. 14; *Sonerila tenuifolia Bl.* var. *albiflora Hochr.* in Candollea II (1925) p. 470; *Sonerila tenuifolia Bl.* var. *Cogniauxii Hochr.* in Candollea II (1925) p. 470.

Undershrub with a well developed root system, 10—40 cm high or more. Branches acutely quadrangular, ribbed, often flattened, the adult ones sparsely hirsute, the younger ones densely covered with glandular hairs. Leaves unequal, lanceolate or ovate-lanceolate, 2.5—5 cm × 1—2.5 cm, often subcordate at the base, long acuminate, coarsely dentate, on the upperside sparsely pilose, on the underside glabrous, 5-nerved. Petiole 7—26 mm long, glabrous or sparsely covered with glandular hairs. Inflorescence 2- to 4-flowered, up to 4 cm long; peduncle bifid, up to 2 cm long. Pedicel 6—7 mm long, quadrangular, glandulose. Calyx tube campanulate, 4 mm long,

slightly 3-alate, at the base only covered with a few glandular hairs; teeth narrowly triangular, 1 mm long, widened at the base, sometimes alternating with dots of glandular hairs. Petals obovate, 8—15 mm × 5—9 mm, acuminate, mid-vein distinct, venules hardly conspicuous, pink or, rarely, white. Stamens 3; filaments 4—7 mm long, glabrous; anthers sagittate, 2.5—5 mm long, widened at the base, opening by 2 pores; connective inappendiculate. Ovary half as long as the calyx tube; style 8—10 mm long; stigma capitate. Capsule obpyramidal, 5—6 mm long, smooth or, rarely, tuberculate; stalk 9—16 mm long.

Observ: differing from allies species by its sagittate anthers and gracious habit.

Distribution.

SUMATRA. Tapanoeli: G. Loeboe Radja. (collector unknown, L, fl. Nov.). West Coast: Bt. Gombak, 1800 m (Bünnemeyer nr. 5465 [BZ], L, fl. Nov.); idem, 2300 m (idem 5740 [BZ], L, fl. Nov.); G. Malintang, 2000 m (idem nr. 3929 [BZ], L, fl. July); idem, 2260 m (idem nr. 4091 [BZ], L, fl. July); G. Talakmau, 2000 m (idem nr. 663 [BZ], L, fl. May); G. Sago, 1900 m (idem nr. 4000 [BZ], L, fl. July); idem, 2000 m (idem nr. 4381 [BZ], L, fl. Aug.). Limassan Ketjiel, Alahan pandjang. (Teysmann s.n. U). Lampong Districts: G. Tanggamoes, 1700 m. (Forbes nr. 1865, L).

BANKA. Locality unknown: (Teysmann, vide Miquel, l.c. [1860]).

JAVA. Batavia: G. Salak (collector unknown, L, fl. Aug.); idem, 1700 m (Raap nr. 270, L, fl. June); G. Gadjah, G. Salak (Bakhuizen van den Brink nr. 3997 [BZ], L, fl. Aug.); idem (Bakhuizen van den Brink fil. nr. 488 [BZ], U, fl. Aug.); G. Gedokan (Kuhl and van Hasselt s.n. L); G. Patoeha (Reinwardt s.n. L, sub S. tripetala Reinw.); idem (Junghuhn s.n. U); idem (collector unknown, L); G. Wajang, 1800 m (Pulle nr. 3213, U, fl. June); idem, 1800 m (Forbes nr. 722, L); Telaga Bodas (Boerlage s.n. L, fl. July); idem, 1500 m (Schiffner nr. 2304, L, fl. Febr.); Kawah Manoek, G. Papandajan, 1750—1860 m (idem nr. 2306, L, fl. Febr.). Locality unknown: (Blume s.n. L, typus); (de Vriese s.n. L).

FURTHER DISTRIBUTION: Malay Peninsula.

11. **Sonerila pallida Stapf et King** Stapf and King in Journ. As. Soc. Bengal LXIX part II (1900) p. 27; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. Vol. XII livr. 2 (1932) p. 175.

Erect, strongly branched herb, up to 25 cm high. Branches acutely quadrangular, strongly thickened on the nodes, densely covered with rufous, appressed hairs. Leaves subequal, elliptic or ovate-oblong, 4—5.5 cm × 2—3.5 cm, gradually narrowed at the base, acute or shortly acuminate, entire, ciliate, on both sides between the nerves covered with minute, appressed hairs, on the underside on the nerves densely but rufously pilose, 5- or 6-plinerved. Petiole 1—2.5 cm long, densely but rufously pilose. Inflorescence about 5-flowered, up to 5 cm long; peduncle 2—3 cm long, quadrangular, covered with glandular hairs. Pedicel 3—5 mm long, covered with glandular hairs.

Calyx tube narrowly campanulate, 3 mm long, sparsely covered with glandular hairs; teeth triangular, small. Petals oblong, according to Stapf and King, 11—13 mm long, with distinct mid-vein, outside sparsely covered with glandular hairs, pink. Style 1.5—10 mm long; stigma hardly conspicuous. Capsule trigonous, 4—6 mm long, scattered with glandular hairs; stalk 4—6 mm long, sparsely muricate.

Observ: differing from all species mentioned in this paper by its large, fleshy, poplar-like leaves and rufous stem.

Distribution.

NATOENA ISLANDS (W. of Borneo). P. Boengoeran: G. Ranai, 700 m (Bünnemeyer nr. 5796 [BZ], L, fl. May); idem, 1000 m (idem nr. 5896 [BZ], L, fl. May).

FURTHER DISTRIBUTION: Malay Peninsula.

12. **Sonerila decipiens Bakh. f.** spec. nov.

Suffrutex ad 40 cm altus; caulis subquadrangularis pilis flexuosis dense obtectus. Folia ovoidea obliqua 2.5—4 cm × 0.8—2 cm basi subrotunda vel cuneata apice longe acuminata grosse remote serrata utrinque praecipue in nervis pilis flexuosis obtecta 7- vel 9-plinervia venulis transversis distinctis. Petiolus 8—15 mm longus pilis flexuosis dense obtectus. Inflorescentia terminalis axillarisque pauciflora ad 3 cm longa; pedunculus 2 cm longus; rhachis circa 1 cm longus. Pedicellus 3 mm longus hirtellus. Calycis tubus anguste campanulatus 4 mm longus pilis flexuosis sparse vestitus; dentes lineares 1 mm longi hirtelli. Petala anguste obovata 8 mm × 4 mm obtusa venulata in vena mediana pilis glandulosis sparse vestita subciliata. Stamina 3, filamentis 2.5 mm longis, antheris cordato-ovatis 2 mm longis acutiusculis biporis, connectivo inappendiculato. Stylus 4.5mm longus; stigma capitata. Capsula anguste trigona 4—7 mm longa sparse tuberculata; pedicellus 3—5 mm longus.

Observ: resembling S. tenuifolia Bl., but differing by its softly-haired leaves and obtuse anthers.

Distribution: endemic.

MOLUCCAS. Ceran: Meseleiman pass, 1200 m (Rutten nr. 349, L, typus, dupl. in [BZ], U, fl. Oct.).

13. **Sonerila buruensis Bakh. f.** spec. nov.

Herba ramosa 15—20 cm alta; caulis obtuso-quadrangularis glabriusculus. Folia aequalia ovata 18—31 mm × 10—18 mm acuminata breviter remote dentata utrinque inter nervos glabriuscula in nervis glandulis minutis obtecta 5-plinervia. Petiolus 8—15 mm longus glandulosus. Inflorescentia axillaris ad 3 cm longa quam maxime flores 8 gerens; pedunculus 10—15 mm longus glandulis minutis

obtectus; rhachis 5 mm longus. Calycis tubus anguste campanulatus 2.5 mm longus subcostatus;dentes acuto-triangulares 0.8 mm longi glabri. Petala ovata 3.5 mm × 2 mm acuminata glabra vena mediana distincta. Stamina 3, filamentis 2.5 mm longis, antheris ovatis 1.8 mm longis obtusis 1-poris, connectivo inappendiculato. Ovarium quam calycis tubus dimidium minus; stylus 3 mm longus; stigma capitatus. Capsula obpyramidalis 4—5 mm longus 6-costata glabra; pedicellus 5—7 mm longus.

Observ: resembling slightly S. tenuifolia Bl., differing a.o. by the shape of its anthers.

Distribution: endemic.

MOLUCCAS. Boeroe: Nal' besie, 900 m (Toxopeus nr. 195, L, typus, dupl. in [BZ], fl. June).

14. **Sonerila amoena Bakh. f.** spec. nov.

Herba delicata ad 15 cm alta; caulis subquadrangularis vel teretiusculus ad nodos incrassatus glaber rubescens. Folia ovato-oblonga vel ovato-lanceolata obliqua 1.5—3 cm × 0.8—1.2 cm basi abrupte angustata et subcuneata apice acuta remote undulata ciliata utrinque glaberrima 3-plinervia venulis transversis distinctis. Petiolus 10—13 mm longus tenuis glaber. Inflorescentia terminalis axillarisque subumbellata gerens circa 5 flores, ad 2 cm longa; pedunculus 7—12 mm longus tenuissimus teretiusculus. Pedicellus 2.5—5 mm longus tenuissimus glaber. Calycis tubus anguste trigonus 2—3 mm longus glaber; dentes late triangulares 1 mm longi glabri. Petala anguste obovata 8—9 mm × 3—4 mm obtusa mucronata venulata. Stamina 3, filamentis 3 mm longis, antheris cordatis 2 mm longis obtusis biporis, connectivo inappendiculato. Stylus 6 mm longus. Capsula anguste trigona 3—4 mm longa glabra; pedicellus 5 mm longus.

Observ: resembling slightly S. tenuifolia Bl., differing by its obtuse anthers. Also allied to S. lilacina Elmer of the Philippine Islands.

Distribution: endemic.

MOLUCCAS. Soela Islands. P. Taliaboe: G. Bapengkaja (Atje nr. 257, L, typus, dupl. in [BZ]).

15. **Sonerila picta Korth.** Korthals in l.c. (1839—1842) p. 249, tab. 52; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 11; Naudin in l.c. XV (1851) p. 326; Miquel, l.c. (1855) p. 564; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 124, 320; Triana in l.c. (1871) p. 76; van Hasselt en Boerlage, Bijdr. kennis M. Sumatra (1884) p. 19; Boerlage, l.c. (1890) p. 531; Cogniaux in l.c. (1891) p. 504.

Erect or ascending, rooting herbs, 5—15 cm high. Stem subquadrangular, covered with minute glands, dark-coloured. Leaves subequal, oblong or narrowly lanceolate, 6—8 cm × 2.5—3 cm, at the base cuneate or slightly rounded, at the top abruptly narrowed, obtusely acuminate, coarsely remote-serrate, subglabrous on both sides, on the upperside along the main nerves white-striped, 7-plinerved, cross-venules hardly conspicuous. Petioles in each pair unequal, 1—2 cm long, covered with minute glands. Inflorescence terminal, bearing up to 10 flowers, 2—3 cm long; peduncle single, up to 1.5 cm long. Flowers in 2 rows. Pedicel up to 2 mm long. Calyx tube obpyramidal, 4 mm long, covered with minute glands; teeth triangular, 1 mm long, acute. Petals ovate, 3—4 mm × 2.5 mm, slightly narrowed at the base, acute, with thick, furfuraceous midvein, pink. Stamens 3; filaments 2—3 mm long, glabrous; anthers ovate-lanceolate, 2.5—4 mm long, rostrate, opening by 2 pores; connective inappendiculate. Ovary about as long as the calyx tube, ending at the top in a neck, consisting of 3 scales; style 5—6 mm long; stigma hardly conspicuous. Capsule obpyramidal, 4—5 mm long, 6-ribbed, glabrous; stalk 3 mm long. Seeds many, clavate, minute, smooth, with laterally swollen raphe.

Observ: To this species I also count specimens collected by Boerlage, the origin of which should be Java, which however, in my opinion may be very well the Botanical Garden at Buitenzorg; those specimens differ from the Sumatran ones by their narrowly lanceolate leaves and gracious habit.

Distribution.

SUMATRA. ? West Coast: Batang besie (Korthals s.n. L, typus). Benkoelen: Rimboe pengading (Jacobson nr. 149 [BZ], L, fl. June).
JAVA? Locality unknown: (Boerlage s.n. L).
FURTHER DISTRIBUTION: Malay Peninsula.

16. **Sonerila laeviuscula Z. et M. ex Miq.** Miquel, l.c. (1855) p. 564; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 124, 320; Triana in l.c. (1871) p. 76; Boerlage, l.c. (1890) p. 531; Cogniaux in l.c. (1891) p. 500.

Erect or ascending herb, 4—10 cm high. Stem covered with minute, glandular papillae, dark-coloured. Leaves ovate, oblong or lanceolate, subequal, 3.5—6 cm × 1—2 cm, at the base gradually narrowed, shortly acuminate, shortly remote-serrate, glabrous on both sides or on the underside only furfuraceous, sometimes on the upperside along the main nerves white-striped, 5-plinerved. Petiole 1.2—1.8 cm long, furfuraceous. Flowers in terminal or subterminal, up to 1.5 cm long, compact pseudo umbels, about 10 together;

peduncle 4—8 mm long, furfuraceous and covered with minute, glandular hairs. Pedicel 2 mm long. Calyx tube cylindrical, 3.5—4 mm long, slightly ribbed, furfuraceous and sparsely glandulose; teeth acutely triangular, 1 mm long, outside furfuraceous and on the mid-vein covered with small, glandular hairs. Petals narrowly ovate, 3.5—5 mm × 2—2.5 mm, long acuminate, outside furfuraceous and covered with glandular hairs on the mid-vein, white. Stamens 3; filaments 3 mm long, glabrous; anthers oblong, 2—2.5 mm long, obtuse at both ends, opening by a single pore; connective inappendiculate, inside slightly grooved. Ovary about half as long as the calyx tube, ending at the top in a short neck; style 3.5—4.5 mm long; stigma hardly conspicuous. Capsule unknown.

Observ: Specimens with white-striped leaves have sometimes been confused with S. picta Korth., but the latter has rostrate anthers.

Distribution: endemic.

SUMATRA. East Coast: Aek Koewaloe, Habinsaran, 800 m (Lörzing nr. 7990 [BZ], L, fl. Nov.). Lampong Districts: Manggala near Tarabangi (Zollinger nr. 763 Z, U, typus). Locality unknown: (Sumatra Exped. 1877—1878, L).

17. **Sonerila biflora Z. et M.** Zollinger et Moritzi in Moritzi, Zollingers Syst. Verz. (1845—1846) p. 11; Miquel, l.c. (1855) p. 564; Triana in l.c. (1871) p. 76; Boerlage, l.c. (1890) p. 531; Cogniaux in l.c. (1891) p. 500; Backer, Manuscr. Fl. Java, Melast. (1941) p. 14.

Delicate herb, at least 1 dm high. Stem subquadrangular, densely covered with minute glands, dark-coloured. Leaves, lanceolate or ovoid, subequal, 2.5—3 cm × 1—1.5 cm, narrowed at the base and acute, at the top acute or subacute, remote-dentate, on both sides but especially on the underside minutely leprose, silvery, on the underside on the nerves glandulose, 5-plinerved. Petiole 5—10 mm long. Inflorescence axillary, 2-to 4-flowered, 2—2.5 cm long; peduncle 7—12 mm long, quadrangular, glandulose. Calyx tube campanulate, 3 mm long, glandulose; teeth subulate, 1 mm long, widened at the base. Petals unknown to me, but according to Backer, l.c., they are 7—8 mm long. Stamens 3; filaments 2 mm long; anthers ovate-lanceolate, 3 mm long, acute, opening by a single pore; connective inappendiculate. Style unknown to me. Capsule obtrigonous, 5—6 mm long; stalk 5—6 mm long.

Observ.: Allied to S. laeviuscula Z. et M. ex Miq. I have not seen the type specimen.

Distribution: restricted to the localities quoted below.

SUMATRA. West Coast: Tanang Taloe, 1100 m (Bünnemeyer nr. 1043 [BZ], L, fl. June).

BILLITON: (vide Cogniaux in l.c.).
JAVA. Locality unknown (prob. Western Part): (Zollinger nr. 879b, ex Moritzi, l.c., type); (Boerlage s.n. L).

18. **Sonerila Daalenii Bakh. f.** spec. nov.
Herba ramosa minime 2 dm alta; caulis teretiusculus laeviter costatus dense rufo-hirsutus. Folia elliptica vel oblonga subaequalia 20—23 mm × 9—10 mm basi acuta apice breviter acuminata vel acutissima utrinque densissime sed longissime rubro-villosa 7- vel 8-plinervia. Petiolus 3—5 mm longus dense rufo-hirsutus. Inflorescentia ignota. Flores incompleti. Calycis tubus ignotus. Petala obovata 8 mm × 3 mm acuta venulata. Stamina probabiliter 3, filamentis 8 mm longis, antheris linearibus 6 mm longis basi bilobis acutissimis 1-poris. Stylus 12 mm longus glaber; stigma capitata.
Observ. A very interesting species. It may be allied to the very little known S. Helferi Clarke from Tenasserim or the Andamans. I have named this species in honour of G. C. E. van Daalen, leader of an expedition in 1904 to the Gajoe and Alas lands.
Distribution: endemic.
SUMATRA. Atjeh: Gajoe Loeas, Djamboe repan. (Pringo Atmodjo nr. 314, L, typus, fl.-fr. Apr.).

Species unknown to me, not mentioned in the key.

1. **S. Beccariana Cogn.**; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 244. — W. Borneo.
2. **S. biflora Z. et M.** var. **minor Cogn.** in l.c. p. 501. — Billiton.
3. **S. exacoides Ridley** in Journ. Fed. Mal. Stat. Mus. VIII. IV. (1917) p. 34. — Sumatra.
4. **S. laeviuscula Z. et M. ex Miq.** var. **grandifolia Cogn.** in l.c. (1891) p. 500. — Celebes.
5. **S. margaritacea Lindl.** in Gard. Chron. (1854) p. 727. — Java.
6. **S. Naudiniana Miq.** var. **pilosissima T. et B.**, Cat. Plant. Hort. Bot. Bog. (1866) p. 241 [nomen]. — Java.
7. **S. obovata Schwartz** in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 244. — W. Borneo.
8. **S. pedunculata Schwartz** in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 245. — W. Borneo.
9. **S. picta Korth.** var. **maculata Ridl.**, Flor. Mal. Penins. I (1920) p. 785. — Sumatra, Lingga Archipelago, Borneo.
10. **S. repens Stapf et King** in Journ. Fed. Mal. Stat. Mus. VIII. IV (1917) p. 35. — Sumatra.
11. **S. rubro-villosa Schwartz** in Mitt. Inst. Bot. Hamburg. Bd. 7. Heft 3 (1931) p. 246. — W. Borneo.

12. **S. Ruttneri Ridley** in Arch. Hydrobiol. Suppl. Band. XI (1932) p. 312. — Sumatra.
13. **S. stricta Hook.**; Triana in l.c. (1871) p. 75. — Java
14. **S. tenera Royle**; Backer, Manuscr. Fl. Java, Melast. (1941) p. 14. — Java.
15. **S. velutina Cogn**; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 246. — W. Borneo.
16. **S. virgata Schwartz** in l.c. (1931) p. 246. — W. Borneo.

26. Phyllagathis Bl.

Blume in Flora XIV (1831) p. 507 and in Bijdr. Nat. Wet. VI (1831) p. 248; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 332; Miquel, Flor. Ned. Ind. I (1853) p. 559; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 754; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 77; Baillon, Hist. d. plant. VII (1880) p. 47; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 514; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 518; Stapf in Ann. Bot. VI (1892) p. 315; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 176; Diels in Engl. Bot. Jahrb. 65 (1933) p. 114; *Melastoma L.* (pr. p.; typo excl.); Jack in Trans. Linn. Soc. XIV (1825) p. 1; De Candolle, Prodr. III (1828) p. 144.

Undershrubs, up to 5 dm high. Stem erect or ascending, very short and fleshy, hollow, mostly bearing but very few leaves, subglabrous or pilose. Leaves opposite, equal or unequal, solitary or few, ovate, ovate-oblong, cordate, suborbicular or lanceolate, at the base cordate or rounded, at the top subacute or acuminate, entire or denticulate, on both sides glabrous or pilose, 9- to 15-nerved, cross-venules distinct, long petiolate. Inflorescences terminal or, rarely, axillary, mostly many-flowered pseudo umbels, which are either entirely enveloped by large bracts ("heads") or are without bracts; peduncle well developed, ending either in a few rhaches, which have the flowers in 2 rows or in a pseudo umbel, consisting of minute, rhachis-like branchlets. Flowers hermaphrodite, 4-merous (according to Blume also 3-merous flowers have been found, but they are unknown to me). Bracts ovate or ovate-oblong, more or less enveloping the flowers or absent. Pedicel present. Calyx tube oblong or obovate-cylindrical, 8-ribbed, glabrous; limb consisting of 4 short lobes. Petals 4, oblong, lanceolate or obovate, glabrous, pink. Stamens equal, mostly 8 or, rarely, 6 or 4; filaments well developed; anthers equal, linear, at the top narrowed, opening by a single pore; thecae undulate; connective not produced at the base, dorsally inappendiculate, ventrally ending in two tubercles or inappendiculate. Ovary

fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 4-celled, half as long as the calyx tube; its top part glabrous, without disc; style filiform, glabrous; stigma hardly conspicuous. Capsule obpyramidal, glabrous or subpilose, at the top loculicidally dehiscing with 4 valves; pericarp laterally not dehiscing. Seeds many, cuneate, curved, minute.

Distribution: About 23 species have been described, but surely some of them do not belong to Phyllagathis, all Asiatic: Burma, Malay Peninsula, Siam, French Indo-China, S. China and the Malay Archipelago.

Key to the species.

1*a*. Inflorescence bracteate 2
b. Inflorescence ebracteate 3
2*a*. Petiole subglabrous. Leaves 22—32 cm × 15—25 cm. Bracts large. Anthers 5—7.5 mm long. 1. **P. rotundifolia (Jack) Bl.**
b. Petiole densely but unilaterally long setose. Leaves 12—13.5 cm × 10.5—12.5 cm. Bracts small. Anthers 3.5 mm long. 2. **P. decipiens Bakh. f.**
3*a*. Peduncle and pedicel glabrous 4
b. Peduncle and pedicel hirsute. Leaves 15-nerved; petiole long hirsute . . . . . 3. **P. sumatrana Bakh. f.**
4*a*. Petiole long hirsute. Leaves suborbicular, on the underside long hirsute. . . . . 4. **P. nymphaeifolia Hall. f.**
b. Petiole pilosellous. Leaves cordate-oblong, on the underside shortly hirsute. . . . . 5. **P. gymnantha Korth.**

1. **Phyllagathis rotundifolia (Jack) Bl.** Blume in Flora XIV (1831) p. 507 and in Bijdr. Nat. Wet. VI (1831) p. 249; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 252 and fig. 57; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 12; Naudin in l.c. XV (1851) p. 332; Miquel, l.c. (1855) p. 559; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 77 and pl. VI, fig. 73; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 518; Krasser in l.c. (1893) p. 176 and tab. 76c; Ridley in Journ. Feder. Mal. Stat. Mus. VIII part IV (1917) Bot. p. 35; idem in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 61; de Voogd in Trop. Nat. Jrg. XXI (1932) p. 219, fig. 2; Bailey in Stand. Cyclop. Hortic. III (1937) p. 2605; *Melastoma rotundifolia Jack* in l.c. (1825) p. 11; De Candolle, l.c. (1828) p. 149; Jack in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 321.

Herb, up to 5 dm high. Stem erect, flattened, quadrangular, fleshy, subglabrous or minutely papillose. Leaves ovate, ovate-oblong or suborbicular, equal, 22—32 cm × 15—25 cm, at the base rounded or subcordate, at the top mostly rounded and acuminate, crenulate, on the underside glabrous or by young leaves also scattered with long hairs, on the underside especially on the nerves densely covered with hair papillae, 9- or 11-plinerved, with 2 thin marginal nerves, densely reticulate. Petiole 6—21 cm long, dorsally grooved, covered with minute papillae, apically densely covered with tufts of hairs, laterally scattered with up to 5 mm long hairs. Inflorescence a terminal or axillary, many-flowered, bracteate "head", 7—14 cm long; peduncle 5—11 cm long, at least 5 mm in diameter, fleshy, striate, covered with minute papillae and with a few hairs. Bracts ovate or ovate-oblong, 17—20 cm × 12—15 cm, acuminate, crenulate or with setose margin, glabrous, 5-nerved, cross-venules distinct. Pedicel 3—4 mm long. Calyx tube oblong-cylindrical, 6—8 mm long, at the base acute, quadrangular, 8-ribbed; lobes ovate, 2—2.5 mm long, acute, setose at the margin. Petals oblong or lanceolate, 6—8 mm × 2.5—3.5 mm, acute, pink. Stamens 8; filaments 3—5 mm long, subterete; anthers linear, 5—7.5 mm long, narrowed at the top, basally ending in two oblong auricles; connective ventrally biauriculate. Top of the ovary slightly sunken; style 10—12 mm long, glabrous. Capsule 5—7 mm long; its valves truncate, dorsally concrescent with triangular, elongated parts of the calyx tube.

Observ: The anthers open by a single terminal pore and not with valves as Korthals erroneously stated in l.c., tab. 57.

Distribution.

SUMATRA. Atjeh: Alas lands. (Pringo Atmodjo nr. 376, L, fr. June; ? v.n. djamoer boeloe loetan). West Coast: Lake Koerintji, G. Koerintji, 800 m (Bünnemeyer nr. 8347 [BZ], L, fl. Febr.); G. Malintang, 1100 m (idem nr. 3625 [BZ], L, U, fl. July); Palembajan, near Loeboek Sampit and Batang Taroh. (Teysmann s.n. U; v.n. poeterandji); „Paauw" (Korthals s.n. L). East Coast: Bandar baroe, 1200 m (Lörzing nr. 4580 [BZ], L, fl. Dec.). Djambi: Moesi river (Jack, vide Jack in l.c., type).

FURTHER DISTRIBUTION: Burma, Malay Peninsula and Siam.

2. **Phyllagathis decipiens Bakh. f.** spec. nov. *Phyllagathis rotundifolia (Jack) Bl.*; Clarke in Hook. f., Flor. Brit. India II (1879) p. 541 [pr. p.]; Cogniaux in l.c. (1891) p. 518 [pr. p.]; King in Journ. As. Soc. Bengal LXIX part II. (1900) p. 46 [pr. p.].

Herba ad 1 dm alta; caulis adscendens irregulariter angularis 5-foliata subglaber. Folia orbiculari-ovata 12—13.5 cm × 10.5 — 12.5 cm, basi laeviter cordata apice obtusiuscula margine undulata supra sparse hirtella subtus in nervis pilis minutis obtecta inter nervos

glabra pallida 9-nervia nervis marginalibus duobus tenuibus, venulis transversis distinctis subrectis reticulatis. Petiolus 7.5—8 cm longus, dorso canaliculatus sparse hirsutus. Inflorescentia terminalis umbelliformis, umbellis ad 1.5 cm longis minute bracteatis; pedunculus 2.5 cm longus quadrangularis pilis parvis obtectus et setis sparsus. Bracteae 4 oblongo-lanceolatae 10—12mm × 4—6 mm acutae pilosiusculae 3- vel 5-nerviae. Pedicellus 2 mm longus quadrangularis glanduloso-verrucosus. Calycis tubus obovato-cylindricus 2.5—3 mm longus medio constrictus apice sensim dilatatus, 8-costatus glanduloso-verrucosus; limbus dentatus, dentibus lineari-triangularibus 2 mm longis extus glanduloso-verrucosis, margine sparse sed longe setosis. Petala ante anthesin solum vidi, oblonga acuta. Stamina 8, filamentis 3.5—4 mm longis, antheris linearibus 3.5 mm longis basi rotundatis, connectivo in parte ventrali in auriculos duos minutos exeunte. Stylus 10—11 mm longus. Capsula ignota.

Observ: Allied to P. rotundifolia (Jack) Bl., but by no means closely related to it.

Distribution.

SUMATRA. Benkoelen: Bt. Daoen, K.m. 54 (de Voogd nr. 584, L typus, dupl. in [BZ], fl. Jan.).

FURTHER DISTRIBUTION: Malay Peninsula (Maingay nr. 783, K, L) and Perak (Scortechini s.n.; L).

3. **Phyllagathis sumatrana Bakh. f.** spec. nov.

Herba ad 40 cm alta; caulis brevis angularis pilis ferrugineis fere 1 cm longis basi tuberculatis densissime vestitus. Folia cordata vel cordato-oblonga 13.5—17.5 cm × 12.5—13.5 cm, basi valde cordata apice acutiuscula margine undulata vel grosse crenata supra pilis 3—4 mm longis sparsissime vestita, subtus praecipue in nervis densiuscule longe hirsuta, 15-nervia reticulata. Petiolus 9.5—18 cm longus angularis pilis ferrugineis glandulosis ad 1 cm longis densissime vestitus. Inflorescentia pseudo umbellata ebracteata pauciflora; pedunculus minime 16 cm longus teretiusculus sparse hirsutus. Flores ignoti. Capsula late campanulata 5 mm longa quadrangularis 8-costata sparse glanduloso-hirsuta, apice valvata valvis truncatis 2 mm altis; pedicellus 10—18 mm longus pilis glandulosis 2 mm longis sparse vestitus. Semina numerosa 1 mm longa acutissima curvata epunctata.

Observ: Resembling slightly P. hirsuta Cogn. from Borneo.

Distribution: endemic.

SUMATRA. Atjeh: Kali Renoeng, Gajoe and Alaslands (Pringo Atmodjo nr. 525, L, typus, fr. July).

4. **Phyllagathis nymphaeifolia Hall. f.** msc. spec. nov.

Herba radicans robusta paucifoliata; rhizoma crassissima. Folia suborbicularia 22—24 cm × 19—21 cm, basi profunde cordata apice obtusiuscula, margine grosse dentata ciliata, supra glabriuscula subtus inter nervos glabra, in nervis dense sed longe hirsuta 11-nervia, nervis lateralibus prominentibus, reticulata. Petiolus 9—11.5 cm longus teretiusculus pilis ad 8 mm longis obtectus. Inflorescentia umbelliformis ebracteata pauciflora minime 7 cm longa; pedunculus teres glaber; rhaches 4 secundiflori. Flores ignoti. Capsula apice dilatata 7 mm longa quadrangularis glabra apice exsculpta, valvis rotundatis glabris; pedicellus 7—10 mm longus glaber.

Observ: resembling slightly P. hirsuta Cogn.

Distribution: endemic.

BORNEO. WESTERN PART. Exact locality unknown: G. Kenepai (Hallier nr. 1732, L, typus).

5. **Phyllagathis gymnantha Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 252; Blume in Mus; Bot. Lugd.-Bat. I nr. 1 (1849) p. 12; Naudin in l.c. XV (1851) p. 333. Miquel, l.c. (1855) p. 559; Triana in l.c. (1871) p. 77; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 519; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7 Heft 3 (1931) p. 239; Bailey in Stand. Cyclop. Hortic. III (1934) p. 2605.

Herb. Stem up to 2 cm high, bearing but a few leaves, subglabrous or scattered with small hairs. Leaves cordate, cordate-oblong or, rarely, subreniform, 13—15.5 cm × 11—18 cm, at the base strongly cordate, at the top subacute, crenulate, ciliate, on the upperside scattered with up to 4 mm long hairs, on the underside especially on the nerves densely but shortly hirsute, 11- or 13-plinerved, coarsely reticulate. Petiole 8—17 cm long, subterete, dorsally grooved, densely subpilose. Inflorescence terminal, umbelliform,consisting of very short racemes, ebracteate, few-flowered, up to 18 cm long; peduncle 10—16.5 cm long, 2—3 mm in diameter, subglabrous. Flowers unknown. Capsule widened at the top, quadrangular, 4—5 mm long, 8-ribbed, glabrous; valves truncate, dorsally concrescent with subulate, elongated parts of the calyx tube; pedicel 5—6 mm long, quadrangular, glabrous.

Distribution: endemic.

BORNEO. WESTERN PART. Locality unknown: (Winkler nr. 2754, vide Schwartz in l.c.). SOUTHERN AND EASTERN PART. Locality unknown: (Korthals s.n. L, typus, sub Sonerila Reinwardtii Korth.).

Species unknown to me, not mentioned in the key.

1. **P. Johannis Winkleri Schwartz** in Mitt Inst. Bot. Hamburg Bd. 7 Heft 3 (1931) p. 240. — W. Borneo.
2. **P. Johannis Winkleri Schwartz** var. **glaberrima Schwartz** in l.c. (1931) p. 241. — W. Borneo.
3. **P. lanceolata Schwartz** in l.c. (1931) p. 239. — W. Borneo.
4. **P. pallida Schwartz** in l.c. (1931) p. 240. —. W. Borneo.

27. Triuranthera Back.

Backer in Bull. Jard. Bot. Buitenzorg. sér. III. Vol. II livr. 3 (1920) p. 319; idem, Manuscr. Fl. Java, Melast. (1941) p. 11.

Under-shrubs, often strongly-branched, up to 1 m high. Branches subterete or quadrangular, ribbed, glabrous. Leaves opposite, oblong or lanceolate, often unequal, narrowed at the base, cordate or subcordate, barbate just above the top of the petiole, at the top acuminate, serrulate, on the upperside glabrous or sparsely pilose, on the underside mostly glabrous, 5-nerved, cross-venules distinct, shortly petiolate. Flowers few or many, in terminal or axillary, pedunculate cymes; flowers themselves hermaphrodite, 4-merous. Pedicel present Bracts linear, small. Calyx tube broadly campanulate, quadrangular, alate, glabrous; limb short, ending in 4 teeth, alternating with minute tubercles. Petals 4, oblong, unequal, rather large, veined, pink. Stamens 8, equal; filaments well developed; anthers linear, opening with a single pore; connective not or but hardly produced at the base, dorsally ending in a spur, ventrally ending in two linear appendages. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 4-celled; top part glabrous; style filiform, glabrous; stigma hardly conspicuous. Capsule widened at the top, acutely alate-quadrangular, provided with the persistent calyx teeth, dehiscing apically with 4 valves. Seeds many, narrowly cuneate, straight, minute. beaked.

Distribution: 2 species, Asiatic: Malay Archipelago.

Key to the species.

1*a*. Peduncle 2—4.5 mm long. Pedicel 10—15 mm long. Leaves subsessile . . . . . 1. **T. brevipedunculata Bakh. f.**
b. Peduncle 10—50 mm long. Pedicel 4—5 mm long. Leaves shortly. but distinctly petiolate. . . . . 2. **T. Winkleri (Cogn.) Back.**

1. **Triuranthera brevipedunculata Bakh. f.** spec. nov.

Suffrutex minime 60 cm altus. Rami acute quadrangulares cavi verruculosi, ad nodos subincrassati longe barbati. Folia lanceolata

inaequalia 16.5 cm × 4.5 cm acutissima serrulata ciliata supra glabra subtus praecipue in nervis griseo-papillacea 5-nervia subsessilia. Inflorescentia axillaris pauciflora ad 7 cm longa; pedunculi 2 vel 3 ex axillis defoliatis enati robusti 2.5—4 mm longi, ramis 3 terminati, quorum centralibus abortis; rami tenuissimi quadrangulares subpilosi non florigeri, medio bibracteati, in parte apicali bracteis duobus muniti, ex quorum axillis ramuli 3 enati gerentes 3, 4 vel 5 flores. Bracteae lineares ad 3 mm longae. Pedicellus 10—15 mm longus medio minute bibracteolatus. Calycis tubus 2—3 mm longus; dentes anguste triangulares 1.5—2 mm longi acutissimi. Petala obovato-oblonga 9—11 mm × 5—6 mm apiculata membranacea venulata.

Filamenta 4—4.5 mm longa basi dilatata; antherae lineares 4.5—5 mm longae; connectivum dorso in appendicem linearem 4—5 mm longum exeunte, in parte ventrali in appendices duos lineares 4—5 mm longos exeunte. Stylus 10 mm longus; stigma haud conspicua. Capsula ignota.

Observ: resembling slightly T. Winkleri (Cogn.) Back.

Distribution: endemic.

SUMATRA. Benkoelen: Rimboe pengadang. (Jacobson nr. 93, L, typus, dupl. in [BZ]).

2. **Triuranthera Winkleri (Cogn.) Back.** Backer apud Ruys in Ann. Jard. Bot. Buitenzorg 34 (1925) p. 74; Backer, Manuscr. Fl. Java, Melast. (1941) p. 11; *Triuranthera Bakhuizenii Back.* in Bull. Jard. Bot. Buitenzorg sér. III. Vol. II livr. 3 (1920) p. 319; *Driessenia Winkleri Cogn.* in Engl. Bot. Jahrb. XLVIII (1912) p. 107; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7 Heft 3 (1931) p. 239.

Undershrub, 0.25—1 m high. Branches subquadrangular or subterete, on the nodes barbate. Leaves oblong or lanceolate, often unequal, 13—23 cm × 4—7.5 cm, gradually narrowed to the top, acuminate, serrulate, ciliate, on the upperside glabrous or sparsely setulose, on the underside glabrous, excepted on the nerves which are furfuraceous, 5-nerved or slightly 5-plinerved, reticulate. Petiole 3—6 mm long, sparsely setulose. Inflorescences terminal or axillary, few- or many-flowered, compound cymes, 4—8 cm long; peduncles 1 or 2 from each leaf axil, 10—50 mm long, subterete, glabrous, ending in 3-flowered branchlets. Bracts linear, 1—2 mm long. Pedicel 4—5 mm long. Calyx tube 4 mm long; teeth broadly triangular, 1—1.5 mm long, acuminate. Petals oblong, unequal, 13—15 mm × 6—7 mm, mucronate, pink. Filaments 4—4.5 mm long, white; anthers linear, 5 mm long, pale yellow; appendages of the connective 4—4.5 mm long, pale yellow with an orange spot in the centre.

Style 10—11 mm long, white. Capsule much widened at the top, 4—5 mm long, alate, glabrous, its valves obtuse; stalk 6—9 mm long. Seeds 0.5 mm long; testa papillose.

Distributio n: restricted to the localities quoted below.

JAVA. Batavia: Tjiletoeh, S. of Leuwiliang. (Bakhuizen van den Brink nr. 7650 [BZ], L). Preanger Regencies: Tjiastana, near Tjisalak, above Paroengkoeda. (Bakhuizen van den Brink fil. nr. 680 [BZ], U); G. Halimoen, 600 m (Bakhuizen van den Brink, vide Backer in l.c. [1920], type of *T. Bakhuizenii Back.*).

BORNEO. WESTERN PART: (Winkler, vide Schwartz in l.c.); SOUTHERN AND EASTERN PART: (Winkler, vide Cogniaux in l.c.).

28. Cyanandrium Stapf

Stapf in Hook. Icon. Plant. (1895) tab. 2419; Gilg in Engl. u. Plant, Die Nat. Pfl. Fam. III 7, Nachtr. I (1897) p. 265; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. Vol. XII livr. 2 (1932) p. 196.

Observ: 2 species, known from British Borneo only.

29. Brittenia Cogn. apud Boerl.

Cogniaux in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 515; idem in De Candolle, Monogr. Phanerog. VII (1891) p. 519; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III Vol. XII livr. 2 (1932) p. 196.

Observ: 1 species, known from British Borneo only.

30. Enaulophyton v. Steenis

van Steenis in Bull. Jard. Bot. Buitenzorg sér. III Vol. XII livr. 2 (1932) p. 196. (Characters according to van Steenis). Undershrub, up to 3 dm high (leaves included). Stem erect, unbranched, 2.5—6 cm long, long setose, bearing many leaves and large leafscars. Leaves irregularly in 2 rows or? opposite, lanceolate or oblanceolate, equal, gradually narrowed at the base and very acute or subcuneate, at the top acute or acuminate, on the upperside glabrous, on the underside between the nerves glabrous, the nerves themselves densely covered with appressed bristles, 5-plinerved, cross-venules distinct and prominent. Petiole long, covered with long bristles. Inflorescence a terminal, long pedunculate, few-flowered, ebracteolate pseudo-umbel. Flowers hermaphrodite, 5-merous. Pedicel present. Calyx tube campanulate, 10-ribbed, sparsely furfuraceous; limb subcyathiform, minutely 5-lobed. Stamens 10, equal; filaments well developed; anthers equal, narrowly ovate, gradually narrowed to the top, shortly acuminate; connective not produced at the base,

dorsally ending in a spur, ventrally ending in two auricles. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 5-celled; top part provided with a 5-lobed disc, glabrous; style filiform, glabrous; stigma hardly conspicuous. Capsule widened at the top, 10-ribbed, glabrous, provided with the persistent calyx teeth, dehiscing apically with 5 valves; pericarp laterally not dehiscing. Seeds many, oblong, straight, minute, terete, apically provided with a bullate appendage.

Distribution: 1 species, only known from the Natoena Islands (W. of Borneo).

1. **Enaulophyton lanceolatum v. Steenis.** van Steenis in Bull. Jard. Bot. Buitenzorg sér. III Vol. XII livr. 2 (1932) p. 197 (descr.), 175 and fig. 8.

Undershrub, up to 3 dm high (leaves included). Stem angular, densely covered with linear, straw-like, basally tuberculate, 10—15 mm long bristles. Leaves straight or subfalcate, subcoriaceous, 8.5—19.5 cm × 1.7—4.5 cm, cross-venules ascending. Petiole 3—7 cm long, quadrangular, densely covered with appressed, linear, straw-like, up to 5 mm long bristles. Inflorescence up to 20 cm long, bearing at most 20 flowers; peduncle 11—28 cm long, quadrangular, sparsely covered with 1.—1.5 mm long, glandular hairs. Pedicel 4—5 mm long, quadrangular, furfuraceous. Calyx tube 6.5—8 mm long; lobes triangular, 1.5 mm long, outside thickened. I have no adult flowers seen. Citing van Steenis, I give here the following measurements. Petals 13 mm × 9 mm . Filaments 6—8 mm long; anthers 6—7 mm long. Style 13—14 mm long. Capsule 6—7 mm long; stalk 8—10 mm long. Seeds 0.5—0.8 mm long, punctate.

Distribution: endemic.

NATOENA ISLANDS (W. of Borneo). P. Boengoeran (Groot Natoena): G. Ranai, 300 m (van Steenis nr. 1166, typus [BZ], dupl. in L, fl., fr. April; v.n. daoen molèh).

Tribus VII. **Oxysporeae.**

Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 457 [tribus]; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 727 [tribus]; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 77 [tribus]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 502. [tribus]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 461 [tribus]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 143, 168 [tribus]; *Miconiales subtr. Dissochaeteae* (pr. p.); Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 67; Miquel, Flor. Ned. Ind. I (1855) p. 520;

Miconieae (pr. p.), De Candolle, Prodr. III (1828) p. 152; *Rhexiae* (pr. p.); De Candolle, Prodr. III (1828) p. 114; „*Rousseauxiées*", Baillon, Hist. d. plant. VII (1880) p. 31 [série].

Shrubs or, rarely, undershrubs. Flowers hermaphrodite, mostly 3- or 4-merous or, rarely, 5- or 6-merous. Calyx limb mostly distinctly dentate or, rarely, subtruncate. Stamens 6- to 12, equal, subequal or unequal, mostly twice as many as the petals or, rarely, equal in number; anthers equal or unequal, mostly linear and acute, opening by a single terminal pore; connective not or but slightly produced at the base, dorsally appendiculate or inappendiculate, ventrally inappendiculate or ending in a spur. Ovary either concrescent with the calyx tube with 6 to 12 septs and exterovarial chambers 6 to 12 or the ovary only in the lower part fully concrescent with the calyx tube and septs and exterovarial chambers absent, but in the upper part septs are always present; ovary itself mostly 3- or 4-celled or, rarely, 5- or 6-celled; its toppart glabrous or pilose, either provided with a scaly disc or disc absent; ovules many, minute. Fruit a capsule, loculicidally dehiscing at the top with 3 to 6 valves. Seeds many, cuneate, oblong and at both ends very long elongated, pyramidal or irregular, never cochleate, ± straight, often beaked.

Distribution: Madagascar, S.E. Asia and possibly the Fiji Islands.

31. **Blastus** Lour.

Loureiro, Flor. Cochinch. (1790) p. 526; Miquel, Flor. Ned. Ind. I (1855) p. 555; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 753; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 73; Baillon, Hist. d. plant. VII (1880) p. 480 [pr. p.]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 511; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 476; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 170.

Shrubs. Branches terete or subquadrangular, the adult ones glabrous, the younger ones densely covered with orbicular, flat, yellow-orange glands or subpilose. Leaves opposite, oblong, lanceolate or ovate-oblong, often unequal, at the base subacute or cuneate, at the top acuminate, submembranaceous, on the upperside glabrous, on the underside between the nerves glandulose (vide supra), on the nerves glandulose or, rarely, subpilose, 5-nerved, cross-venules distinct, coarsely reticulate. Petiole present. Inflorescences terminal or axillary, few- or many-flowered, glandulose panicles, cymes or fascicles; peduncle well developed; ramifications of the first order opposite. Flowers hermaphrodite, 4-merous. Bracts minute. Pedicel

present. Calyx tube campanulate, subquadrangular, glandulose; limb minutely but acutely 4-dentate. Petals 4, ovate, minute, acuminate, glabrous. Stamens 4, equal; filaments well developed; anthers ovate-lanceolate, rostrate, opening by a single pore; thecae with reticulate-undulate surface; connective not produced at the base, dorsally and ventrally inappendiculate. Ovary concrescent with the calyx tube with 4 septs; exterovarial chambers 4, descending to near the base of the ovary; ovary itself 4-celled, half as long as the calyx tube; its top part glabrous; style filiform, glabrous; stigma hardly conspicuous. Capsule broadly campanulate, 4-ribbed or quadrangular, dehiscing at the top with 4 valves; pericarp laterally not dehiscing. Seeds many, irregular, minute, slightly curved, beaked.

Distribution: About 20 species have been described, but in my opinion most of them do not belong to this genus, all Asiatic: British India, Malay Peninsula, Siam, French Indo-China, S. China and the Malay Archipelago.

Key to the species.

1*a*. Young branches and the petioles glabrous, glandulose. Capsule 2—2.5 mm long . . . . . 1. **B. Cogniauxii Stapf**

b. Young branches and the petioles densely subtomentose, not glandulose. Capsule 3—3.5 mm long. 2. **B. tomentosus Bakh. f.**

1. **Blastus Cogniauxii Stapf.** Stapf in Hook. f. Icon. Plant. (1894) tab. 2311; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7 Heft 3 (1931) p. 238; Merrill in Papers Michigan Acad. Sc. etc. vol. XX (1934) p. 105; *Ochthocharis parviflora Cogn.* in l.c. (1891) p. 481.

Shrub. Branches terete, the younger ones densely covered with flat, yellow-orange glands. Leaves oblong or broadly lanceolate, often unequal, 9.5—22 cm × 4.5—6.5 cm, at the base cuneate, at the top long acuminate, on the underside densely glandulose. Inflorescence a terminal or axillary, many-flowered panicle, up to 6 cm long; peduncle 1—1.7 cm long, subterete; end branchlets umbelliform, bearing 10—15 flowers. Bracts at most 1 mm long. Pedicel 1.8—2 mm long. Calyx tube 2—2.5 mm long; teeth narrowly triangular, 0.3—0.5 mm long. Petals 1 mm × 0.8 mm. Filaments 1.5 mm long; anthers 3—3.5 mm long. Style 3—6 mm long. Capsule subquadrangular, 2—2.5 mm long; stalk 2.5—3 mm long. Seeds about 0.3 mm long.

Distribution.

SUMATRA. West Coast: Tanang Taloe, 1100 m (Bünnemeyer nr. 1141 [BZ], L, fl. June); Agam, Brani, 850 m (idem nr. 3206 [BZ], L, U, fl. June);

G. Talang, 1600 m (idem nr. 5361 [BZ], L, fl. Oct.). East Coast: Bandar baroe, 950 m (Lörzing nr. 5203 [BZ], L, fl. July); Sibaulangit, between Bandar baroe and Dolok Baros Estate, 900 m (idem nr. 5666 [BZ], L, U, fl. May). Benkoelen: Rimboe pengading (Jacobson nr. 384 [BZ], L, fl. June).

BORNEO. WESTERN PART. Exact locality unknown: Bt. Raja (Winkler nr. 908, vide Schwartz in l.c.); BRITISH PARTS.

CELEBES. Gvt. Celebes and dependencies: Baoela in Roembia, 150 m (Elbert nr. 3205, L, fl. Sept.).

FURTHER DISTRIBUTION: Malay Peninsula (Ridley) and French Indo-China (Guillaumin).

2. **Blastus tomentosus Bakh. f.** spec. nov.

Frutex. Rami subquadrangulares pilis ciliolatis dense obtecti. Folia oblonga vel ovato-oblonga aequalia vel subaequalia 14—16 cm × 5.5—7.5 cm, basi acutiuscula apice acuminata subtus inter nervos dense glandulosa, in nervis dense griseo-tomentosa. Petiolus 1—1.5 cm longus teretiusculus, juvenilis densissime pilosiusculus, adultus pilosiusculus glabrescens. Inflorescentia terminalis paniculata pauciflora 5—6.5 cm longa; pedunculus 2—3 cm longus subquadrangularis pilosiusculus; rami ad 2 cm longi. Flores ignoti. Capsula late campanulata 3—3.5 mm longa in parte apicali subconstricta teretiuscula 4-costata interdum 8-subcostata, dentibus anguste triangularibus fere 1 mm longis pilosiusculis munita. Semina 0.8 mm longa.

Observ: Allied to B. Cogniauxii Stapf.

Distribution: endemic.

SUMATRA. Atjeh: Boernilintang, 1800 m (van Steenis nr. 6283, L, typus, dupl. in [BZ]); G. Pagarang, Gajoe Loeas (Pringo Atmodjo nr. 69, L, fr. Febr.).

32. Poikilogyne Baker f.

Baker f. in Gibbs, Flor. Arfak Mts. (1917) p. 157; Mansfeld in Engl. Bot. Jahrb. 60 (1927) p. 110; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III livr. 2 (1934) p. 227; *Allomorphia Bl. sect. Hollrungiophyta Cogn.* in De Candolle, Monogr. Phanerog. VII (1891) p. 468.

Shrubs or little trees, 1.5—5 m high. Branches subterete or subquadrangular, pilose, furfuraceous or glabrous. Leaves opposite, ovate, ovate-oblong or lanceolate, equal, at the base rounded, subcordate or subacute, at the top acute or acuminate, on the upperside hairy or glabrous, on the onderside pilosellous or furfuraceous, 7- or 9-nerved, cross-venules distinct, petiolate. Inflorescence terminal or axillary, paniculiform, few- or many-flowered, often covered with small glandular hairs; peduncle long; ramifications of the first order

quaternate, dichotomously branched. Flowers hermaphrodite, 5-merous. Bracts present. Pedicel present. Calyx tube campanulate, quadrangular or ribbed, often pilosellous or, rarely, glabrous or pulverulent; limb subcyathiform, minutely 5-lobed or 5-dentate. Petals ovate-oblong or ovate-lanceolate, glabrous, pink. Stamens 10, equal; filaments well developed; anthers ovate-lanceolate or, rarely, linear, acute, opening by a single pore or, rarely, by two pores; connective not produced at the base, dorsally ending in a short, thick, swollen spur, ventrally inappendiculate. Ovary concrescent with the calyx tube with 10 septs; exterovarial chambers 10, not descending beyond the middle of the ovary; ovary itself 5-celled, $\frac{1}{2}$—$\frac{3}{4}$ as long as the calyx tube; its toppart glabrous, without disc; style filiform, glabrous; stigma hardly conspicuous. Capsule widened at the top, equally long as wide; pericarp at maturity dehiscing laterally in such a manner that the vascular bundles of the calyx tube become visible. Seeds many, cuneate, straight, minute, beaked.

Distribution: 8 species, all Asiatic: Malay Archipelago.

Key to the species.

1*a*. Young branches glabrous. 2
b. Young branches densely covered with glandular, small hairs 3
2*a*. Leaves lanceolate, 7-nerved. Anthers opening by 2 pores. **1. P. biporosa Bakh. f.**
b. Leaves broadly ovate, 9-nerved. Anthers opening by a single pore.. . . . . **2. P. robusta Mansf.**
3*a*. Leaves 7-nerved, 4—6 cm × 3—3.5 cm, on the underside with small, soft hairs. Petiole 10—18 mm long. **3. P. arfakensis Baker f.**
b. Leaves 9-nerved, 7—12.5 cm × 5.5—8 cm, on the underside covered with small, rough hairs. Petiole 40—55 mm long. **4. P. Roemeri Mansf.**

1. **Poikilogyne biporosa Bakh. f.** spec. nov.

Arbor. Rami subquadrangulares glabriusculi, juveniles fusco-furfuracei. Folia lanceolata 12—15 cm × 5—5.5 cm basi obtusiuscula vel acutiuscula apice acuta subtus sparsissime furfuracea 7-nervia, non vel haud conspicue reticulata. Petiolus 3—4.5 cm longus glabriusculus. Inflorescentia terminalis ad 30 cm longa glabra. Bracteae 1 mm longae. Pedicellus 1—2 mm longus. Calycis tubus campanulatus 3—3.5 mm longus subquadrangularis glaber; limbus minute dentatus. Petala ovato-oblonga 3—4 mm × 1.5—2 mm subacuminata avenia. Filamenta 1 mm longa; antherae lineares 2 mm longae

biporosae. Ovarium quam calycis tubus dimidium minus; stylus 4 mm longus. Fructus ignotus.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Boeloengan-Beraoe. river Sadjan, near Sei Boelongan (Rutten nr. 89, U, typus).

2. **Poikilogyne robusta Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 110, 111; *Allomorphia robusta Mansf.* in Nova Guinea XIV livr. II (1927) p. 201.

Shrub, 4—5 m high. Branches subquadrangular, subglabrous, sparsely covered with lenticels. Leaves broadly ovate, 18 cm × 15 cm, at the base subcordate, at the top acute, on both sides sparsely pilosellous, 9-nerved. Petiole 6 cm long, quadrangular, fleshy, sparsely verruculose and furfuraceous. Inflorescence terminal, few-flowered, up to 17 cm long, pulverulent; peduncle 7 cm long, subquadrangular. Bracts minute. Pedicel 3.5—4 mm long, quadrangular. Calyx tube 4—5 mm long, 5-angled, 10-ribbed, subglabrous or pulverulent; limb slightly lobed. Petals ovate-oblong, 5—6.5 mm × 3.5—5 mm, subobtuse, slightly veined. Filaments 2—2.5 mm long; anthers ovate-lanceolate, 3 mm long, opening by a single pore. Ovary $^3/_4$ × as long as the calyx tube; style 5—6 mm long. Fruit unknown.

Distribution: endemic.

NEW GUINEA. Southern Part: Oroh river (Pulle nr. 1178, type, dupl. in [BZ], L, fl. Febr.).

3. **Poikilogyne arfakensis Baker f.** Baker f. in Gibbs, Contr. Flor. Arfak Mts. (1917) p. 157 and fig. 14; Mansfeld in Engl. Bot. Jahrb. 60 (1916) p. 110; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III livr. 2 (1934) p. 227; *Allomorphia asperifolia Mansf.* in Nova Guinea XIV livr. II (1927) p. 201.

Shrub, 3—5 m high. Branches subterete, the younger ones subquadrangular, densely covered with small glandular hairs. Leaves ovate or ovate-oblong, 4—6.5 cm × 3—3.5 cm, at the base subcordate, at the top subacute, on the upperside scabrid, sparsely covered with triangular, patent, short scales, on the underside scabrid, hirtellous, 7-nerved. Petiole 10—18 mm long, subterete, densely covered with patent, small hairs. Inflorescence terminal and axillary, few-flowered, up to 4 cm long, covered with short, glandular hairs; peduncle 2.5—3 cm long, subterete. Bracts lanceolate, 3 mm long. Pedicel 3—4 mm long, hirtellous. Calyx tube 4—6 mm long, densely hirtellous; limb slightly 5-lobed. Petals ovate-oblong, 10—15 mm × 4—5 mm, subacute, veined, pink. Filaments 4—5 mm long; anthers

ovate-lanceolate, 4 mm long, opening by a single pore; connective dorsally ending in a 1 mm long, fleshy spur. Ovary $^3/_4\times$ as long as the calyx tube; style 9 mm long, rather fleshy. Capsule 8—10 mm long.

Distribution: endemic.

NEW GUINEA. Western Part: Arfak Mts., 1900 m (Gjellerup nr. 1088, type of *Allomorphia asperifolia Mansf.*, dupl. in [BZ], L, fl. June); idem, Angi lakes, 2700—3000 m (Gibbs nr. 5512, vide Baker f., type, fl. Dec.).

4. **Poikilogyne Roemeri Mansf.** Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 110; *Allomorphia Römeri Mansf.* in Nova Guinea XIV livr. II (1927) p. 201; idem in Engl. Bot. Jahrb. 60 (1926) p. 110 [nomen].

Shrub. Branches quadrangular, flattened, densely covered with patent, up to 1 mm long, glandular hairs. Leaves ovate or ovate-oblong, 7—12.5 cm × 5.5—8 cm, at the base subcordate, at the top acuminate, on the upperside covered with soft, short, patent hairs, on the underside between the nerves very sparsely pilose or subglabrous, on the nerves densely hirsute, ciliate, 9-nerved. Petiole 4—4.5 cm long, densely covered with patent, glandular hairs. Inflorescence terminal or axillary, few-flowered, up to 7 cm long, densely covered with glandular hairs; peduncle about 3 cm long, quadrangular. Pedicel 3—4 mm long, covered with short, glandular hairs. Calyx tube 3.5—5 mm long, subquadrangular and ribbed, densely covered with small, glandular hairs. Petals obovate, 9—10 mm × 6—7 mm, acute, slightly veined. Filaments 2—3.5 mm long; anthers ovate-lanceolate, 3.5—4 mm long, opening by a single pore. Ovary $^3/_4\times$ as long as the calyx tube; style 4—5 mm long. Capsule 6 mm long; stalk 10—12 mm long.

Distribution: endemic.

NEW GUINEA. Southern Part: Perameles Mts., 1200 m (Pulle nr. 472 [BZ], L, fr. Sept.); Hellwig Mts. (von Römer nr. 762, type, dupl. in [BZ], L, fl. Oct.); idem, 1460 m (idem nr. 1040 [BZ], L, fl. Nov.).

33. Dicerospermum Bakh. f. gen. nov.

Allomorphia Bl. (pr. p.; typo excl.); Mansfeld in Nova Guinea XIV livr. II (1927) p. 201; *Poikilogyne Baker f.* (pr. p.; typo excl.); Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 110.

Arbor 5 m alta. Rami compressiuscule quadrangulares. Folia opposita suborbicularia vel late cordata aequalia basi profunde cordata apice obtusiuscula subserrulata utrinque glabra 13-nervia venulis transversis distinctis grosse reticulatis petiolata. Inflorescentia ter-

minalis paniculata submultiflora robusta pedunculata. Flores hermaphroditi 5-meri pedicellati. Calycis tubus campanulatus 5-angularis; limbus minute 5-dentatus. Petala 5 ovato-oblonga vel ovato-lanceolata longe acuminata glabra. Stamina 10 aequalia, filamentis distinctis, antheris oblongo-lanceolatis 1-poris, connectivo non producto, dorso in calcarem brevem exeunte, in parte ventrali appendiculato. Ovarium pro maxima parte calycis tubum totum adnatum, in parte superiori septis 10 adnatum; loculi 10; ovarium ipse 5-loculare, in parte apicali acutum glabrum; stylus filiformis glaber. Capsula cylindrica, apice limbo calycis subcyathiformi praedita. Semina oblonga; testa basi apiceque longe sed lineariter elongata.

Distribution: One species, only known from New Guinea.

1. **Dicerospermum parviflorum (Mansf.) Bakh. f.** spec. nov. *Poikilogyne parviflora Mansf.* in Engl. Bot. Jahrb. 60 (1926) p. 110 [nomen]; *Allomorphia parviflora Mansf.* in Nova Guinea XIV livr. II (1927) p. 201.

Arbor 5 m alta. Rami glabri vel pulverulenti. Folia 22—28 cm × 23—30 cm subcoriacea subtus pallida. Petiolus 9—13 cm longus farinosus dorso canaliculatus. Inflorescentia 36—45 cm longa minute fusco-furfuracea; pedunculus 9.5—14.5 cm compressiuscule quadrangularis; rami oppositi basi dilatati. Bracteae minutae. Pedicellus 2.5—3 mm longus. Calycis tubus apice subdilatatus 4 mm longus fusco-furfuraceus; dentes triangulares obtusi. Petala 5—7.5 mm × 2.5—3.5 mm avenia. Filamenta 3.5 mm longa; antherae 3—4 mm longae. Stylus 7—8 mm longus. Capsula 12 mm longa fusco-furfuracea vel glabriuscula; pedicellus 6—10 mm longus. Semina 0.5 mm longa, alis terminalibus inclusis, 3.5 mm longa.

Distribution: endemic.

New Guinea. Northern Part: Doorman river, 240 m (Lam nr. 1397, L, typus floris, dupl. in [BZ], fl. Sept.). Southern Part: Lorentz river, near „Kloof bivak", 40 m (Pulle nr. 120, L, typus fructus, dupl. in [BZ], fr. Oct.).

34. Oxyspora D.C.

De Candolle, Prodr. III (1828) p. 123; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 306; Miquel, Flor. Ned. Ind. I (1855) p. 556; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 751; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 73; Baillon, Hist. d. plant. VII (1880) p. 48 [pr. p.]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 510; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 470; Krasser in Engl. u. Pranti, Die Nat. Pfl. Fam. III 7 (1893)

p. 170; *Hylocharis Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 319.

Shrubs, up to 4.5 m high. Branches quadrangular, shortly hirsute or farinose. Leaves opposite, elliptic, ovate-oblong or ovate-lanceolate, equal, at the base rounded, subcordate or acute, at the top acuminate, fleshy but not coriaceous, entire, on both sides shortly hirsute or farinose, 5- or 7-plinerved, cross-venules distinct, reticulate, long petiolate. Inflorescence a terminal, divaricate, many-flowered panicle, robust, shortly hirsute or farinose; ramifications of the first order quaternate. Flowers hermaphrodite, 4-merous. Bracts small or absent. Pedicel present. Calyx tube cylindrical-obconical, quadrangular, ribbed, stellate-pilosellous; limb 4-dentate. Petals 4, ovate or ovate-oblong, acute, glabrous. Stamens 8, unequal; filaments well developed; the larger anthers linear, opening by a single pore; its connective not produced at the base, dorsally inappendiculate, ventrally inappendiculate or ending in two small lobes; the smaller anthers ovate-oblong, opening by a single pore; its connective not produced at the base, dorsally and ventrally inappendiculate. Ovary up to $^1/_4$ fully concrescent with the calyx tube; the upper part adnate to the calyx with 8 septs; exterovarial chambers 8, descending far below the middle of the ovary; ovary itself 4-celled, equally long as the calyx tube or, rarely, shorter; its toppart glabrous; disc absent; style filiform, glabrous; stigma hardly conspicuous. Capsule obconical or turbinate, dehiscing apically with 4 valves; pericarp laterally not dehiscing at maturity. Seeds many, irregularly clavate-cuneate, minute.

Distribution: About 25 species have been described, but I doubt whether they all belong to this genus, all Asiatic: British India, Malay Peninsula, Siam (Geddes), S. China (Jeffrey-Smith) and the Malay Archipelago.

Key to the species.

1*a*. Branches densely but shortly hirsute. Leaves elliptic or broadly oblong, shortly hirsute, rounded at the base.
1. **O. macrophylla (Miq.) Triana**

b. Branches farinose. Leaves obovate-oblong or obovate-lanceolate, farinose, acute at the base. . . . . 2. **O. robusta Bakh. f.**

α. Inflorescence with umbelliform terminal branchlets.
2*a*. **O. robusta Bakh. f. s.s.**

β. Inflorescence with paniculate terminal branchlets.
2*b*. **O. robusta Bakh. f.** var. **laxiflora Bakh. f.**

1. **Oxyspora macrophylla (Miq.) Triana.** Triana in l.c. (1871) p. 73; Boerlage, l.c. (1890) p. 531; Cogniaux in l.c. (1891) p. 471; Krasser in l.c. (1893) p. 170; *Hylocharis macrophylla Miq.*, l.c. (1860) p. 319 and 123 [nomen].

Shrub. Branches densely covered with lanceolate, up to 0.8 mm long, ciliate, grey hairs. Leaves elliptic or broadly oblong, 13—31 cm ×8—12.5 cm, at the base subcordate, at the top shortly acuminate, on the upperside green, sparsely but minutely strigillose between the nerves, the nerves themselves shortly hirsute, on the underside, especially on the nerves, densely covered with short, grey hairs, 7-plinerved, the lateral nerves closely together. Petiole 4.5—6.5 cm long, subterete, densely but shortly hirsute. Inflorescence up to 27 cm long; ramifications of the first order quaternate, 2 in each axil. Bracts occurring on the peduncle, 1.5—2 mm long and shortly hirsute; those occurring on the ramifications lanceolate, enveloping the bud and densely hirsute. Pedicel 2 mm long. Calyx tube 4 mm long, quadrangular, densely but shortly hirsute; teeth narrowly triangular, 1—1.5 mm long, hirtellous. Petals ovate, 3 mm × 2—2.5 mm, pink. Larger stamens with 1.5 mm long filaments and with linear, 4.5 mm long anthers, its base rounded and widened; the smaller stamens with 1.5 mm long filaments and with narrowly triangular, 2.5—3 mm long anthers, its base rounded. Adult style unknown to me. Capsule unknown.

Distribution: endemic.

SUMATRA. West Coast: Batang baroes (Teysmann s.n. U, typus; v.n. sikadoedoek rimboe); Alahan Pandjang (idem s.n. U; v.n. simassan gĕdang).

2. **Oxyspora robusta Bakh. f.** spec. nov. *Oxyspora stellulata King*; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 39.

Frutex 4.5 m altus. Rami compressiusculo-quadrangulares cavi farinosi in sicco griseo-virescentes. Folia obovato-oblonga vel obovato-lanceolata, 28—34 cm × 11—13 cm, basi angustata acuta, apice brevissime acuminata, supra laeviter farinosa, subtus pallide farinosa, 5- vel 7-plinervia irregulariter reticulata. Petiolus 6—7 cm longus compressiusculo-striatus basi dilatatus griseo-farinosus. Inflorescentia ad 24 cm longa farinosa griseo-virescens; pedunculus 5.5 cm longus compressus; ramuli umbelliformes. Pedicellus 4 mm longus. Calycis tubus 3—4 mm longus quadrangularis 8-costatus transverse striatus sparse stellato-pilosellus; dentes anguste triangulares 1.5 mm longi. Petala 3.5—4 mm × 2 mm venulis medianis crassis rosea. Stamina maiora filamentis 6 mm longis, antheris linearibus 7—8 mm

longis; stamina minora filamentis 2.5—3 mm longis, antheris ovato-oblongis 3—4 mm longis basi acute bilobis rostratis. Stylus 8—10 mm longus. Capsula immatura 4 mm longa.

Distribution: endemic.

SUMATRA. Palembang: Moeara Mengkoelan, R. Rawas. (Forbes nr. 3034, L, typus).

var. **laxiflora Bakh. f.** spec. nov.

Frutex. Folia oblonga 25—30 cm × 12—15 cm, basi rotundata acutiuscula vel subcordata, apice longiuscule acuminata 7-plinervia. Petiolus 9—12 cm longus. Inflorescentia ad 26 cm longa; ramuli paniculati. Flores mihi ignoti. Capsula turbinata 4—5 mm longa, apice valvis 4 dehiscens, valvis obovatis in parte apicali incisis; pedicellus 7 mm longus. Semina ignota.

Observ: differing from the type species mainly by its inflorescence.

Distribution: endemic.

SUMATRA. West Coast: Agam, Brani, 850 m (Bünnemeyer nr. 3208, L, typus, dupl. in (BZ], fr. June).

35. Ochthocharis Bl.

Blume in Flora XIV (1831) p. 523 and in Bijdr. Nat. Wet. VI (1831) p. 263; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 306; Miquel, Flor. Ned. Ind. I (1855) p. 556; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 752; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 74; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 512; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 479; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 170; *Blastus Lour.*; Baillon, Hist. d. plant. VII (1880) p. 47 [pr. p.].

Shrubs. Branches terete or quadrangular, glabrous or subpilose. Leaves opposite, ovate, oblong or lanceolate, often unequal, at the base acute or, rarely, subobtuse, at the top mostly acuminate, dentate, on both sides glabrous or furfuraceous, 3- to 7-nerved or, rarely, 3- or 5-plinerved, cross-venules hardly conspicuous or distinct. Petiole present. Inflorescence terminal or axillary, many-flowered panicles, cymes or fascicles; ramifications of the first order opposite. Flowers hermaphrodite, 4- or 5-merous. Bracts minute, mostly furfuraceous. Pedicel present. Calyx tube campanulate, subterete, glabrous or furfuraceous; limb either subtruncate or consisting of 4 or 5 short teeth. Petals 8 or 10, triangular, ovate or lanceolate, equal and isomorphous; filaments well developed; anthers linear or oblong, basally and apically obtuse, opening by a single pore; con-

nective not or but shortly produced at the base, dorsally ending in a short spur or in tubercles, ventrally inappendiculate. Ovary for more then the half fully concrescent with the calyx tube; upper part concrescent with the calyx with 8 or 10 septs; exterovarial chambers 8 or 10, only in the upper part of the ovary; ovary itself 3- to 5-celled; its toppart often swollen, glabrous; style filiform, glabrous; stigma capitate or hardly conspicuous. Capsule slightly contracted at the top, 4- or 5-ribbed, with sunken top, dehiscing apically with 3 to 5 valves. Seeds many, cuneate, straight, not beaked; testa often costulate.

Distribution: About 5 species, all Asiatic: Tenasserim, Malay Peninsula, French Indo-China and the Malay Archipelago (incl. the Philippine Islands).

Key to the species.

1*a*. Inflorescences axillary cymes or fascicles 2
b. Inflorescences terminal panicles 4
2*a*. Inflorescence a sessile or subsessile fascicle. Leaves 5-nerved, cross-venules distinct . . . . . 1. **O. bornensis Bl.**
b. Inflorescence with a short but distinct peduncle, mostly a lax cyme 3
3*a*. Leaves 3-plinerved, cross-venules absent or hardly conspicuous, 4.5—8 cm × 1.5—3 cm; petiole 5—15 mm long. 2. **O. javanica Bl.**
b. Leaves 5-plinerved, cross-venules mostly distinct, 9—12 cm × 4—5 cm; petiole 25—60 mm long 3. **O. attenuata Bakh. f.**
4*a*. Leaves oblong or lanceolate, 6—14 cm × 2.5—4.5 cm. Petals triangular-ovate . . . . . 4. **O. paniculata Korth.**
5*b*. Leaves ovate or ovate-oblong, 10—18 cm × 5—8 cm. Petals ovate. . . . . 5. **O. megalophylla Mansf.**

1. **Ochthocharis bornensis Bl.** Blume in Mus. Bot. Lugd.-Bat. I. nr. 3 (1849) p. 40; Naudin in l.c. XV (1851) p. 307; Miquel, l.c. (1855) p. 557; Triana in l.c. (1871) p. 74; Boerlage, l.c. (1890) p. 512, 531; Cogniaux in l.c. (1891) p. 480; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1204; *Ochthocharis buruensis T. et B.* in Nat. Tijdschr. Ned. Ind. XXV (1863) p. 426; Miquel in Ann. Mus. Bot. Lugd.-Bat. I (1863) p. 216; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 242; *Ochthocharis javanica (haud Bl.) herb. Korth.*; Blume in Mus. Bot. Lugd.-Bat. I. nr. 3 (1849) p. 40 [nomen].

Erect shrub. Branches subquadrangular, glabrous, the younger ones puberulous, ferrugineous. Leaves ovate, ovate-oblong, oblong or lanceolate, mostly equal, 8—14 cm × 3.5—6 cm, at the base rounded, at the top acuminate, slightly dentate, on the upperside glabrous, on the underside subglabrous or puberulous, often pallid, 5-nerved, cross-venules very distinct. Petioles equal, 2—6.5 cm long, mostly puberulous. Inflorescence a sessile or very shortly pedunculate, many-flowered fascicle. Calyx tube 1.5 mm long, glabrous; limb short, consisting of 5 teeth, its teeth broadly triangular, 0.2 mm long, deciduous. Petals 5, ovate, 2 mm × 1 mm, glabrous. Stamens 10; filaments 1.5 mm long; anthers linear, 0.5 mm long; connective not produced. Ovary 5-celled; style 2.5 mm long; stigma capitate. Capsule contracted at the top, 4 mm long, slightly 10-ribbed, Seeds cuneate; testa irregularly costulate.

Observ: Instead of „bornensis", mostly is written „borneensis".

Distribution.

SUMATRA. Palembang: Banjoeasin and Koeboelands. (Grashoff nr. 683 [BZ], L; v.n. kĕmoenting). P. Enggano: Telok kiowa, in mangroves. (Lütjeharms nr. 5199 L, fl. July; v.n. doerô).

LINGGA ARCHIPELAGO. P. Lingga: Kp. Panggak, 50 m (Bünnemeyer nr. 7026 [BZ], L, fr. July).

BANKA: Sei Djeboes. (Berkhout s.n. L, fr. Aug.; v.n. andjoeng kĕboekĕm).

BORNEO. WESTERN PART. Pontianak: Sei Poetat (Mondi nr. 60 [BZ], L, fr. March; v.n. tjingkodo air); Sei Landak (Teysmann s.n. [BZ], L); locality unknown (idem s.n. [BZ], L). SOUTHERN AND EASTERN PART. Exact locality unknown: Samenggaris (Hallier nr. 1067 [BZ], L, fr. Dec.); Tikoeng (Amdjah nr. 893 [BZ], L, fr. Nov.); P. Kĕmbang (Winkler nr. 3444, L, fl. Sept.). Locality unknown: (Korthals s.n. L, typus); idem (collector unknown, L, sub Melastoma achynocarpon Korth). BRITISH PARTS: (Haviland, Beccari).

MOLUCCAS. Boeroe: Oki (Teysmann s.n. L); idem (idem s.n. L, sub O. palustris Miq.); locality unknown: (de Vriese s.n. L).

FURTHER DISTRIBUTION: Malay Peninsula, Singapore and French Indo-China.

2. **Ochthocharis javanica Bl.** Blume in Flora XIV (1831) p. 523 and in Bijdr. Nat. Wet. VI (1831) p. 264; idem in Mus. Bot. Lugd.-Bat. I. nr. 3 (1849) p. 40; Naudin in l.c. XV (1851) p. 307; Miquel, l.c. (1855) p. 556; idem, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 123 and 319; Teysmann et Binnendijk, Cat. Plant. Hort. Bot.Bog. (1866) p. 242; Scheffer, Observ. Phytogr. II (1868—1869) p. 44; Triana in l.c. (1871) p. 74 and tab. 6, fig. 6 and 7; Boerlage, l.c. (1890) p. 512, 531; Cogniaux in l.c. (1891) p. 480; Krasser in l.c. (1893) p. 170 and fig. 74 B and C; Backer, Manuscr. Fl. Java, Melast. (1941) p. 10.

Shrub, up to 1 m high. Branches terete, glabrous; the nodes often strongly thickened. Leaves oblong or lanceolate, subequal, 4.5—11 cm × 1.5—3 cm, at the base narrowed and acute, at the top acuminate, coriaceous, denticulate or nearly entire, on both sides glabrous, on the upperside dark-coloured, on the underside pallid, 3-nerved or 3-plinerved, cross-venules absent or hardly conspicuous. Petiole up to 18 mm long, glabrous. Inflorescence an axillary, many-flowered fascicle, at most 2 cm long, puberulous; peduncle 3—8 mm long. Pedicel 3—6 mm long. Calyx tube 2—2.5 mm long, glabrous; teeth 5, triangular, 0.3 mm long, persistent. Petals 5, broadly ovate, 2.5 mm × 1—1.5 mm, acuminate, glabrous, hardly veined, pink. Stamens 10; filaments 1.5 mm long; anthers oblong, 1.5 mm long; connective not produced, dorsally ending in a curved spur. Ovary 3- to 5-celled; style 5.5 mm long; stigma hardly conspicuous. Capsula 6- to 10-ribbed, 3—6 mm long; stalk 5—6 mm long. Seeds cuneate; testa smooth.

Distribution.

SUMATRA. East Coast: Dedop (Bruinier nr. 195 [BZ], L, fr. Sept.); P. Bengkalis: Kp. Dorak, Selat pandjang, in mangroves (Beguin nr. 465 [BZ], L; v.m. kĕnoedoe ajer, kĕmoenting).

RIOUW ARCHIPELAGO. P. Doerian: (Rachmat nr. 50 [BZ], L, fl. June). P. Bintang: Tandjoeng Pinang. (Teysmann s.n. [BZ], L).

LINGGA ARCHIPELAGO. P. Lingga: Sei Semarong, 10 m (Bünnemeyer nr. 7519 [BZ], L, fl. Aug.; v.m. boenggah slokan).

BANKA: Sei Selan, 25 m (Bünnemeyer nr. 2089 [BZ], L, fl. Nov.; v.n. kĕmoenting soengai); Soengai liat (Teysmann s.n. [BZ], L, fr. Sept.; v.n. kĕdĕbie); Djeboes (idem s.n. [BZ], L; v.n. mĕloekan); locality unknown (idem s.n. L).

BILLITON: (Riedel, vide Cogniaux in l.c.).

JAVA. ? Bantam: „Panimbang" river (Blume s.n. type; probably the specimen from Leyden nr. 908, 132—303 is the type specimen); locality unknown (van Hasselt s.n. L); idem (collector unknown, L).

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unknown: Sidoearing (Winkler nr. 3097, L, fl. July); Sei Wair (Rutten nr. 89, U).

FURTHER DISTRIBUTION: Tenasserim, Malay Peninsula, Singapore, Philippine Islands.)

3. **Ochthocharis attenuata Bakh. f.** spec. nov.

Arbor. Rami subquadrangulares, adulti glabri, juniores glandulosofurfuracei. Folia oblonga subaequalia 9—12 cm × 4—5 cm basi angustata in petiolum et acutissime cuneata, apice cuneata breviter acuminata, remote dentata, utrinque inter nervos glabra, in nervis subtus fusco-furfuracea, 5-plinervia venulis transversis distinctis vel haud conspicuis. Petiolus 2.5—6 cm longus glaber. Inflorescentia axillaris cymosa submultiflora 3—4 cm longa sparse furfuracea; pedunculus 8—15 mm longus quadrangularis. Bracteae lineares 1 mm

longus quadrangularis. Bracteae lineares 1 mm longae.Pedicellus 2—3 mm longus. Calycis tubus anguste campanulatus 2—5 mm longus; limbus subtruncatus. Petala 4, 2.5 mm × 1—1.5 mm, albido-aurantiaca. Stamina 8 filamentis 0.8—1 mm longis, antheris ellipticis 1.5 mm longis, connectivo breviter producto, dorso in calcarem uncatum exeunte. Ovarium 4-locularis; stylus 5 mm longus; stigma haud conspicua. Capsula 3—4 mm longa; pedicellus 5—6 mm longus. Semina 1 mm longa laevia nitida.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Samarinda: Pamaloean (Rutten nr. 147, U, typus, fl., fr. May).

4. **Ochthocharis paniculata Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 247 and tab. 4; Blume in Mus. Bot. Lugd.-Bat. I. nr. 3 (1849) p. 40; Naudin in l.c. (1851) p. 307 and tab. 15, fig. 3; Miquel, l.c. (1855) p. 556; Triana in l.c. (1871) p. 74; Boerlage, l.c. (1890) p. 512; 531; Cogniaux in l.c. (1891) p. 480; Winkler in Engl. Bot. Jahrb. 50. Suppl. (1914) p. 203.

Shrub. Branches subquadrangular, the adult ones glabrous, the young ones rufously furfuraceous or puberulous or, rarely, subglabrous. Leaves oblong or lanceolate, often unequal, 6—14 cm × 2.5—4.5 cm, at the base acute or obtuse, at the top acute, serrulate or subrepand, on the upperside glabrous, on the underside, especially at the base of the leaf, furfuraceous, 5- or, rarely, 3-nerved, crossvenules distinct. Petioles often unequal, 0.5—3.5 cm long, furfuraceous. Inflorescence a terminal, pyramidal panicle, 2—7 cm long, furfuraceous or puberulous; peduncle 0.5—2.5 cm long. Pedicel 1—3 mm long. Calyx tube 1—3 mm long, glabrous; teeth 5, triangular, 0.7 mm long, alternating with tufts of minute glandular hairs. Petals 5, ovate-triangular, 3—4 mm × 1.5—2 mm, veinless. Stamens 10; filaments 2—3 mm long; anthers linear, 1.5—2 mm long; connective not produced, dorsally ending in a straight spur. Ovary 5-celled; style 5 mm long; stigma hardly conspicuous. Capsule 3.5—5 mm long, 10-ribbed. Seeds cuneate, smooth.

Distribution.

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: Pelampai („Poeloe Lampei") (collector unknown, L). Kapoeas-Barito: Doessoen (Korthals s.n. L, typus). Exact locality unknown: Djihi (Winkler nr. 3320, L); Moeara Djawa (Teysmann s.n. [BZ], L; v.n. kĕmoenting djawa); Soengei Sanak (idem s.n. [BZ], L). BRITISH PARTS: Sibu.
FURTHER DISTRIBUTION: ? Malay Peninsula (Ridley).

5. **Ochthocharis megalophylla Mansf.** Mansfeld in Engl. Bot.

Jahrb. 60 (1926) p. 111; idem in Nova Guinea XIV livr. II (1927) p. 202.

Shrub. Branches acutely quadrangular, puberulous or subglabrous, the younger ones and the leaf buds ferrugineous-furfuraceous. Leaves of the same pair often unequal in length, ovate or ovate-oblong, equal, 10—18 cm × 5—8 cm, at the base rounded or subcordate, at the top acute or shortly acuminate, repand or denticulate, on the upperside glabrous, on the underside on the nerves puberulous, 5-nerved, with 2 marginal nerves, cross-venules distinct. Petioles of the same pair unequal in length, 3—6 cm long, puberulous. Flowering specimens unknown to me; the following data have been taken from Mansfeld in l.c. Inflorescence a terminal, pyramidal panicle, up to 6 cm long, puberulous. Pedicel up to 6 mm long. Calyx tube obconical, widened at the top, glabrous; teeth 5, short. Petals 5, ovate, acute. Stamens 10; connective not produced, dorsally ending in a short spur. Ovary 5-celled; style 3.5 mm long. Capsule 7 mm long. Seeds cuneate; testa subcostulate.

Distribution: endemic.

NEW GUINEA. Northern Part: „Prauwen bivak", Mamberamo river (Lam nr. 1064 [BZ], L). North Eastern Part: (vide Mansfeld in l.c.).

36. **Allomorphia Bl.**

Blume in Flora XIV (1831) p. 522 and in Bijdr. Nat. Wet. VI (1831) p. 262; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 310; Miquel, Flor. Ned. Ind. I (1855) p. 557; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 752; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 74; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 509; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 463; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 169; *Oxyspora* D.C. (pr. p.; typo excl.); Baillon, Hist. d. plant. VII (1880) p. 48; *Sonerila Roxb. sect.* III *Oxycentria Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 320.

Shrubs. Branches subterete or obtusely quadrangular, furfuraceous or glabrous. Leaves opposite, ovate, ovate-oblong or lanceolate, equal or unequal, at the base rounded, subacute or subobtuse, at the top acuminate, entire, on the upperside glabrous or, rarely, pulverulent, on the underside glabrous or pulverulent on the nerves, 3- or 5-nerved, cross-venules distinct, coarsely reticulate. Petiole mostly very long. Inflorescences terminal panicles or racemes, few- or many-flowered, glabrous or furfuraceous; peduncle quadrangular; ramifications of the first order opposite, 1 or 2 from each leaf axil; terminal branchlets 3-flowered. Flowers hermaphrodite, 3- or 4-merous.

Bracteoles and pedicel present. Calyx tube cylindrical, elliptic-cylindrical or obconical, at the top slightly widened, 3- or 4-angular glabrous or glandulose; limb dentate, its teeth 3 or 4, minute. Petals 3 or 4, ovate or ovate-oblong, acuminate, glabrous or paleaceous. Stamens 6 or 8, unequal in length, similar or dissimilar; filaments well-developed; anthers linear, at the base sagittate or two-lobed, at the top gradually narrowed and acute or subrostrate, opening by a single pore; connective not produced at the base, dorsally ending in a short spur, in tubercles or inappendiculate, ventrally inappendiculate. Ovary for $^3/_4$ fully concrescent with the calyx tube; septs and exterovarial chambers absent; in the upper $^1/_4$, 6 or 8 septs and exterovarial chambers present; ovary itself 3- or 4-celled, $^1/_5$—$^1/_2$ the length of the calyx tube; style filiform, glabrous or pilosellous; stigma hardly conspicuous. Capsule equally long as wide, contracted at the top, 6- or 8-ribbed, dehiscing apically with minute valves; pericarp laterally not dehiscing at maturity. Seeds many, irregular, straight, beaked.

Distribution: About 40 species have been described, all Asiatic, but in my opinion many of them do not belong to this genus: Malay Peninsula, Siam (Geddes), French Indo-China (Guillaumin), S. China (Léveillé) and the Malay Archipelago (excl. the Philippine Islands).

Key to the species.

1*a*. Inflorescence spiciform. Leaves lanceolate, ending in a very long and narrow acumen. 1. **A. racemosa (Ridley) Bakh. f.**

b. Inflorescence a lax panicle. Leaves ovate or ovate-oblong, shortly acuminate 2

2*a*. Leaves broadly ovate or ovate-oblong, 19—27 cm × 12—14 cm. Anthers at the base two-lobed. Style 3—3.5 mm long. 2. **A. magnifica (Miq.) Guill.**

b. Leaves narrowly ovate-oblong, 7.5—10 cm × 3—4.5 cm. Anthers at the base sagittate. Style 10—12 mm long. 3. **A. sagittata Bakh. f.**

1. **Allomorphia racemosa (Ridley) Bakh. f.** comb. nov *Oxyspora racemosa Ridley* in Journ. Mal. Branch Roy. As. Soc. I (1923) p. 60; Merrill in Contr. Arnold Arbor. Harvard Univ. VIII (1934) p. 114.

Shrub. Branches subterete, glabrous, the younger ones brown furfuraceous. Leaves lanceolate, often unequal, 10—19 cm × 3—6.5 cm, at the base subacute or subobtuse, at the top narrowed and very long

acuminate, on both sides very sparsely pulverulent, 3- or 5-nerved, nerves transversally striate, hardly reticulate. Petiole 13—26 mm long, subterete, dorsally grooved, subglabrous, transversally striate. Inflorescence terminal, spiciform, few-flowered, up to 15 cm long, subglabrous; peduncle 17 mm long, subquadrangular, transversally striate; ramifications of the first order 2—5 mm long, in origin 3-flowered, but the 2 lateral flowers abort, only the central ones remain, so that the inflorescence has some resemblance with a spike. Bracts linear, 1—1.5 mm long. Pedicel 3—3.5 mm long. Calyx tube elliptic-obconical, 3-angular, 6-ribbed, 6 mm long, pulverulent; limb 3-dentate, its teeth acutely triangular, 0.8—1 mm long. Petals 3, ovate-oblong, 3.5—4 mm × 2—3.5 mm, shortly acuminate, veinless. Stamens 6, unequal and similar; the larger ones with 4.5—5 mm long filaments and with linear, 3.5—4 mm long anthers, at the base rounded and slightly widened; the smaller stamens with 3—3.5 mm long and with 3—4 mm long anthers. Ovary 3-celled, $^1/_5$—$^1/_2$ the length of the calyx tube; style 10—12 mm long, glabrous. Capsule near the top constricted, next obconically widened, 7 mm long, 6-ribbed; stalk 4—5 mm long. Seeds about 1 mm long.

Distribution: endemic.

SUMATRA. Tapanoeli: Kota Djoeloe, Battak lands (Pringo Atmodjo nr. 534, L, fl. July). West Coast: G. Sago, 1900 m (Bünnemeyer nr. 4373 [BZ], L, fl. Aug.); G. Malintang, 1800 m (idem nr. 4104 [BZ], L, fl. July); idem, 1800 m (idem nr. 3892 and 3945 [BZ], L, fl. July); East Coast: near lake Toba (Yates nr. 1403, L); Sibaulangit near Brastagi, 1350—1450 m (Lörzing nr. 5970 [BZ], L, fl. Aug.); above the Petani river (Docters van Leeuwen nr. 7751 [BZ], L, fl. Febr.); G. Sibajak (vide Ridley in l.c., type).

2. **Allomorphia magnifica (Miq.) Guill.** Guillaumin in Bull. Soc. Bot. France 60 (1913) p. 88; *Allomorphia exigua Bl.*; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 39; *Cassebeeria magnifica* (*Miq.*) *Krasser* in l.c. (1893) p. 177; *Sonerila magnifica Miq.*, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 320 and 124 [nomen]; Triana in l.c. (1871) p. 77; Boerlage, l.c. (1890) p. 532; Cogniaux in l.c. (1891) p. 516.

Shrub. Branches obtusely quadrangular, glabrous, the younger ones ferrugineously furfuraceous. Leaves ovate or ovate-oblong, equal, 19—27 cm × 12—14 cm, at the base subobtuse, at the top shortly acuminate, thin, on both sides glabrous, 5-nerved, with 2 marginal nerves, the nerves at the base of the leaf ferrugineously furfuraceous. Petiole 7—9 cm long, slightly flattened, ferrugineously furfuraceous, glabrescent. Inflorescence paniculate, many-flowered up to 20 cm long, subglabrous or furfuraceous; peduncle 4—6.5 cm long, quadrangular and slightly flattened; ramifications of the first

order quaternate, 2 together in each leaf axil; one branchlet is much longer than the other one. Bracts minute. Pedicel 2 mm long. Calyx tube tubular or slightly oblong-tubular, 2 mm long, 3-angular, 6-ribbed, furfuraceous; limb 3-dentate, its teeth triangular, 0.3—0.5 mm long. Petals 3, ovate, 1.5 mm × 0.8—1 mm, shortly acuminate, veinless, white. Stamens 6, unequal and dissimilar; the larger stamens with 3 mm long filaments and with linear, 2 mm long, basally two-lobed anthers, whose connective is dorsally ending in a 0.8 mm long spur. Ovary 3-celled, half the length of the calyx tube; its top part flattened; style 3—3.5 mm long, curled at the top, persistent. Capsule 2—2.5 mm long, 6-ribbed; stalk 1—1.5 mm long. Seeds 0.3 mm long.

Distribution: endemic.

SUMATRA. Tapanoeli: Padang sidempoean (Teysmann s.n. U, typus, sub *Sonerila magnifica Miq.*); West Coast: Tanang taloe, 1100 m (Bünnemeyer nr. 1084 [BZ], L, fl. June); Palembang: Moeara mengkoelen, R. Rawas, 230 m (Forbes nr. 3062, L).

3. **Allomorphia sagittata Bakh. f.** spec. nov.

Frutex. Rami compressiusculi glabri. Folia ovato-oblonga aequalia 7.5—10 cm × 3—4.5 cm basi acutiuscula vel subrotunda, apice breviter obtuso-acuminata, supra glabra, subtus inter nervos glabra, in nervis sparse furfuracea 5-nervia. Petiolus 13—22 mm longus sparse furfuraceus. Inflorescentia paniculata submultiflora ad 21 cm longa, minute furfuracea glabrescens; pedunculus 4.5—6 cm longus compressiusculus; rami ramulique oppositi. Bracteae 0.5 mm longae. Pedicellus 2—2.5 mm longus. Calycis tubus elliptico-cylindricus, 4—5 mm longus, quadrangularis glandulosus; limbus 3-dentatus, dentes anguste triangulares 1 mm longi. Petala 3 ovato-oblonga 3.5—4 mm × 2—2.5 mm breviter acuminata vel acutissima paleacea subvenulata. Stamina 6 inaequalia et similia, filamentis pilosiusculis; stamina maiora filamentis 4—5 mm longis, antheris linearibus 6—7 mm longis basi sagittatis apice acutissimis vel subrostratis, connectivo dorso in tuberculam exeunte; stamina minora filamentis 2.5—4 mm longis, antheris 4—5 mm longis. Ovarium 3-loculare $^1/_4$ × calycis tubus; stylus 10—12 mm longus sparse pilosellus.

Observ: This species may be allied to A. sumatrana Boerl. et Kds., of which no material could be studied by me.

Distribution: endemic.

SUMATRA. West Coast: S. W. of Taloe, 800 m (Bünnemeyer nr. 155, L, typus, dupl. in [BZ], fl. Apr.).

Species unknown to me, not mentioned in the key.

1. **A. sumatrana Boerl. et Kds.** in Koorders-Schumacher, Syst. Verz. II. Sumatra (1911) p. 46. — Sumatra.

37. Krassera Schwartz

Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 247; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. Vol. XII livr. 2 (1932) p. 194.

(No material was available to me. All records are according to Schwartz in l.c.).

Under shrubs. Leaves opposite, aggregated at the top of the stem, elliptic to lanceolate or obovate, unequal or subequal, at the base narrowed and acute, subauriculate to one side, at the top acuminate, entire or repand, on the upperside glabrous or subpilose, on the underside on the nerves pilose, 5- or 7-plinerved, petiolate. Inflorescence axillary, umbelliform, aggregated at the top of the stem, many-flowered, pedunculate. Flowers hermaphrodite, 4-merous. Pedicel present. Calyx tube campanulate; limb consisting of 4 sinuate lobes. Petals 4, ovate, acuminate, pink. Stamens 8, unequal and isomorphous; filaments well developed; anthers subulate, opening by a single pore; connective probably not produced at the base. Ovary concrescent with the calyx tube with 8 septs, 4-celled; its toppart glabrous, provided with a short disc; style filiform, glabrous; stigma hardly conspicuous. Capsule subglobose, dehiscing apically with 4-valves. Seeds many, cuneate, minute, tuberculate.

Distribution: 2 species, only known from Netherlands West-Borneo.

Key to the species.

1*a*. Leaves 5-plinerved, elliptic-lanceolate, acute. Stem 42—57 cm long . . . . . 1. **K. ciliata Schwartz**

b. Leaves 7-plinerved, obovate-lanceolate, shortly acuminate. Stem 13—18 cm long . . . . . 2. **K. dajakorum Schwartz**

1. **Krassera ciliata Schwartz.** Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 249.

Under shrub, 42—57 cm high, with short internodes. Leaves 6 to 8, aggregated at the top of the stem, elliptic-lanceolate, entire, ciliate, 15—23 cm × 5—8 cm, at the top narrowed and acute, on the upperside on the nerves only pilose, on the underside between the nerves pilosellous, on the nerves setulose, cross-venules distinct. Petiole

1 cm long, densely but long pilose. Inflorescence bearing 14—17 flowers; peduncle 3—8 cm long, terete, densely hirsute. Flowers unknown. Capsule subglobose, 3 mm long, sparsely setulose. Seeds many, cuneate, densely tuberculate.

Distribution: endemic.

BORNEO. WESTERN PART. Exact locality unknown: Bt. Mehipit, 500 m. (Winkler nr. 733, HBG, type, fr. Dec.).

2. **Krassera dajakorum Schwartz.** Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 249.

Undershrub, 13—18 cm, with very short internodes. Leaves 5 or 6 aggregated at the top of the stem, obovate-lanceolate, slightly unequal, 12—19 cm × 4.5—6.5 cm, at the top shortly acuminate, entire or repand, on the upperside glabrous, on the underside shortly hirsute on the nerves, 7-plinerved, cross-venules distinct. Petiole 1 cm long, pilose. Inflorescence bearing about 20 flowers; peduncle 6 cm long, terete, pilose, red. Pedicel 8 mm long, pilose. Calyx tube broadly campanulate 3.2 mm long, glabrous; limb dentate, its teeth short and setose. Petals ovate, 4.3 mm × 2.5 mm, long acuminate, pink. The larger stamens with 3.5 mm long filaments and subulate, 4.3 mm long, rostrate, violet anthers; the smaller stamens with 3 mm long filaments and with subulate, 3 mm long, rostrate, violet anthers. Top of the ovary glabrous, provided with a 1 mm long disc. Fruit unknown.

Distribution: endemic.

BORNEO. WESTERN PART. Exact locality unknown: Lebang Hara, 170 m (Winkler nr. 596 and 596a, HBG, type, fl. Dec.).

38. **Anerincleistus Korth.**

Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 250; Naudin in Ann. Sc. Nat. sér. III. XV (1851) p. 306; Miquel, Flor. Ned. Ind. I (1855) p. 555; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 753; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 75; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 512; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 477; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 177; *Blastus Lour.* (pr. p.; typo excl.); Baillon, Hist. d. plant. VII (1880) p. 48.

Shrub, up to 4 m high. Branches terete, pilose. Leaves opposite, elliptic to lanceolate, ovate-oblong or obovate-oblong, equal or slightly unequal, at the base cuneate, rounded or subauriculate, at the top acuminate, submembranaceous or herbaceous, entire, on the upperside setulose or subglabrous, on the underside setulose, 5-or

7-plinerved, cross-venules distinct, petiolate. Inflorescences terminal or axillary, few-flowered, pedunculate, setulose pseudo-umbels. Flowers hermaphrodite, 4-merous. Bracteoles minute. Pedicel present. Calyx tube campanulate, hirsute; limb 4-dentate and hirsute. Petals 4, ovate-oblong or lanceolate, acuminate, glabrous. Stamens 8, equal and isomomorphous; filaments well developed; anthers ovate-lanceolate, opening by a single pore; connective not produced at the base, dorsally ending in a short spur, ventrally inappendiculate. Ovary concrescent with the calyx tube with 8 septs; exterovarial chambers 8, descending far below the middle of the ovary; ovary itself 4-celled, a little shorter than the calyx tube; its top part provided with a disc, consisting of 4 ciliate teeth; style filiform, glabrous; stigma hardly conspicuous. Capsule campanulate, hirsute, loculicidally dehiscing at the top with 4 valves. Seeds many, semiovate, straight, minute, papillose, beaked.

Distribution: About 22 species have been described, but in my opinion many of them do not belong to this genus, all Asiatic: Malay Peninsula (Ridley), French Indo-China (Guillaumin) and the Malay Archipelago (incl. the Philippine Islands [Merrill]).

Key to the species.

1*a*. Leaves obovate-oblong, at the base gradually narrowed and very acute, on the underside minutely hirsute, submembranaceous. 1. **A. hirsutus Korth.**

b. Leaves elliptic, ovate-oblong or lanceolate, at the base cuneate and subauriculate or rounded, on the underside between the nerves densely hirsute or subtomentose 2

2*a*. Leaves at the base subauriculate, 8.5—14.5 cm wide, on the underside subtomentose. . . . 2. **A. macrophylla Bakh. f.**

b. Leaves at the base not subauriculate, 5.5—8 cm wide, on the underside long hirsute. . . . . 3. **A. borneensis Bakh. f.**

1. **Anerincleistus hirsutus Korth.** Korthals in l.c. (1839—1842) p. 250 and tab. 68; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 13; Naudin in l.c. XV (1851) p. 306; Miquel, l.c. (1855) p. 555; Triana in l.c. (1871) p. 75 and tab. 6, fig. 71; Boerlage, l.c. (1890) p. 531; Cogniaux in l.c. (1891) p. 478; Krasser in l.c. (1893) p. 177 and fig. 76G.

Shrub, 2—4 m high. Branches terete or obtusely subquadrangular. Leaves obovate-oblong, slightly unequal, 11.5—17.5 × 5.5—7 cm, at the base gradually narrowed and very acute, at the top acuminate, submembranaceous, ciliate, on the upperside between the nerves

glabrous, on the nerves pilosellous, on the underside between the nerves very sparsely hirsute, on the nerves densely but brown hirsute, 5- or 7-plinerved, reticulate. Petiole 1—2 cm long, densely covered with brown, up to 2 mm long, linear scales. Inflorescence terminal or axillary; peduncle 2.5—3.2 cm long, subquadrangular, densely covered with brown, short, linear scales. Bracts oblong or lanceolate, minute. Flowers only seen before anthesis. Pedicel 6—9 mm long, densely hirsute. Calyx tube 4 mm long, subquadrangular, densely covered with linear, up to 2.5 mm long scales; teeth ovate, 2—2.5 mm long, long acuminate, densely hirsute. Petals ovate-oblong or lanceolate. Anthers ovate-lanceolate, rounded at the base. Style terete, slightly thickened in the middle. Capsule 4 mm long; stalk 6—9 mm long. Seeds semiovate, quadrangular, 0.3 mm long.

Distribution: endemic.

SUMATRA. West Coast: G. Malintang (Korthals s.n. L, typus).

2. **Anerincleistus macrophylla Bakh. f.** spec. nov.

Frutex. Rami teretiusculi pilis fuscis parvis dense obtecti. Folia elliptica vel oblonga, aequalia basi cuneata et subauriculata, apice abrupte angustata acuminata, crassa, ciliata, supra inter nervos sparsissime scabrida, in nervis subpilosa, subtus inter nervos dense subtomentosa, in nervis appresse hirsuta, 5-plinervia. Petiolus 1.5—2 cm longus teretiusculus crassus appresse pilosus. Inflorescentia ignota. Flores incompletos solum vidi. Calycis tubus campanulatus 3—3.5 mm longus hirsutus; dentes ovati 1.—1.5 mm longi extus dense hirsuti. Petala ignota. Stamina probabiliter 8, filamentis 2 mm longis, antheris ovato-lanceolatis 2 mm longis. Stylus 4 mm longus teretiusculus glaber. Capsula incompleta. Semina minuta.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Samarinda: Sei Boengaloen, 10—100 m. (Rutten nr. 526, U, typus, fl. Apr.).

3. **Anerincleistus borneensis Bakh. f.** spec. nov.

Frutex. Rami teretiusculi minute sed appresse fusco-setulosi. Folia oblonga vel late lanceolata laeviter inaequalia, 16—19 cm × 5.5—8 cm, basi subangustata vel subcuneata vel subrotundata, apice angustata acuminata, ciliata, supra sparse setulosa non scabra, subtus inter nervos setis patentibus ad 2.5 mm longis dense obtecta, in nervis appresse setosa, 5-plinervia. Petiolus 1.5—3 cm longus teretiusculus dense sed appresse setulosus. Inflorescentia axillaris ad 5 cm longa; pedunculus 1—4.5 cm longus teretiusculus setulosus. Flores anthe anthesin solum vidi. Calycis tubus campanulatus 4 mm longus,

setis ad 3 mm longis dense obtectus; dentes ovati 3 mm longi setulosi. Capsula ignota.

Observ: resembling slightly A. hirsutus Korth.

Distribution: endemic.

BORNEO. EXACT LOCALITY UNKNOWN: G. Damoes (Hallier nr. 584, L, typus, dupl. in [BZ])

Species unknown to me, not mentioned in the key.

1. **A. setulosus Schwartz** in Mitt. Inst. Bot. Hamburg. Bd. 7. Heft 3 (1931) p. 242. — W. Borneo.
2. **A. suffruticosus Schwartz** in l.c. (1931) p. 243. — W. Borneo.

39. **Creaghiella Stapf.**

Stapf in Hook. f. Icon. Plant. (1896) tab. 2455; Gilg in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 Nachtr. I (1897) p. 264.

Observ: 2 species, only known from British Borneo.

Subfamily B. **Astronioideae**

Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 143, 194 [subfamilia]; Astronieae, Decaisne in Ann. Sc. Nat. sér. III. V (1846) p. 312 [subordo]; Naudin in Ann. Sc. Nat. sér. III. XII (1849) p. 201 [subordo], idem in idem XVIII (1852) p. 257 [subordo]; Miquel, Flor. Ned. Ind. I (1855) p. 566 [subordo]; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 727 (subordo]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 505 [subfamilia]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 9 [subordo]; „*Astronieés*", Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 4; *Chariantheae*, Seringe apud De Candolle (pr. p.; typo excl.; subordo), Prodr. III (1828) p. 196; Blume in Flora XIV (1831) p. 524 and in Bijdr. Nat. Wet. VI (1831) p. 264 [tribus]; idem in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 1 [subordo].

Shrubs or trees or, very rarely, climbers. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 2- to 6-celled; ovules in each cell many, either on an axillary and sometimes strongly prominent placenta, which is inserted at the base of the cell or ovules on a parietal placenta. Fruit a berry or a capsule. Seeds many, obcuneate or elongate-linear, straight, minute or rather large; embryo fleshy, minute; cotyledons minute.

Tribus VIII. **Astronieae**

Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 457 [tribus];

Bentham and Hooker, Gen. Plant. I 2 (1865) p. 727 [tribus]; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 151 [tribus]; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 505 [tribus]; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1092 [tribus]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 143, 194 [tribus].

Shrubs or trees. Flowers hermaphrodite and mostly 4- or 5-merous or, rarely, 6-merous or by abortion unisexual. Calyx limb mostly shortly dentate or, rarely, forming a calyptra. Stamens 8 or 10, equal; anthers dolabriform or, rarely, linear, opening introrsely with 2 slits; connective not produced at the base, thickened between the thecae, dorsally ending in a short spur, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 2- to 6-celled or, rarely, aborted; its toppart swollen or sunken, provided with radiating ribs; ovules many in each cell, on an axillary placenta, which is inserted at the base of the cell. Fruit either an irregularly dehiscing capsule or a berry. Seeds many, either oblong and strongly elongated on both ends or, rarely, cuneate.

Distribution: Asia and Pacific region.

Subtribus 1. Astroniinae Bakh. f. subtribus nova.

Flores ante anthesin bracteis non inclusi. Bracteae minutae. Capsula. Semina linearia vel lineari-obcuneata 2—3 mm longa.

Distribution: Asia and Polynesia.

40. Astrocalyx Merr.

Merrill in Philipp. Journ. Sc. V (1910) Bot. p. 203; Pilger in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 Nachtr. IV (1915) p. 216; Merrill, Enum. Philipp. Flow. Plants Vol. 3 fasc. 5 (1923) p. 211.

Observ: 1 or 2 species, only known from the Philippine Islands.

41. Astronia Bl.

Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1080; Noronha *) in Verhand. Batav. Genootsch. V (1790) ed. I. art. IV 1 [nomen]; De Candolle, Prodr. III (1828) p. 197; Naudin in Ann. Sc. Nat. sér. III. XVIII (1852) p. 257; Miquel, Flor. Ned. Ind. I (1855) p. 566; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 771; Triana

*) Noronha in l.c. already used the name Astronia, but it is unknown to me whether this nomen nudum concerns this genus.

in Trans. Linn. Soc. XXVIII part I (1871) p. 151; Baillon, Hist. d. plant. VII (1880) p. 62; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 524; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1093; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 194; *Pharmacum Rumph.* (pr. p.), Herb. Amboin. IV (1743) p. 134; Kuntze, Revis. Gen. Plant. (1891) p. 247, 953.

Shrubs or trees. Branches quadrangular, densely covered with brown or rufous, stalked, flat, laciniate, orbicular scales or subglabrous. Leaves opposite or ternate, oblong, lanceolate or obovate, equal or subequal, at the base cuneate, rounded or acute, at the top acuminate or acute, subcoriaceous, entire, on the upperside glabrous, on the underside mostly densely lepidote or furfuraceous and often glabrescent or, rarely, glabrous, 3- or 5-nerved or 3- or 5-plinerved, cross-venules mostly distinct, petiolate. Inflorescence terminal, thyrsoid, in the lower part subtended by leaves, many-flowered, mostly lepidote; main axis quadrangular, strongly thickened on the nodes; ramifications of the first order opposite; those of the second order opposite or in whorls of 4 or 6; end branchlets cymose. Flowers hermaphrodite or by abortion unisexual. Bracts often present. Pedicel often present. Calyx tube ovoid or campanulate, at the top widened or contracted and often constricted, subterete or subquadrangular, often ribbed, furfuraceous or lepidote; limb minutely 5-dentate or 5-lobed. Petals 5, ovate or obovate, glabrous, brown or white. Stamens 10, equal and isomorphous; filaments ± medifix, short and wide; anthers dolabriform, obtuse or subacute, opening introrsely by 2 slits; connective not produced at the base, fleshy, dorsally ending in a short spur or inappendiculate, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 2- to 5-celled or, rarely, aborted; its top part flattened or sunken, provided with radiating ribs, glabrous; style filiform, quadrangular; subglabrous or lepidote; stigma capitate. Capsule subglobose, provided with the persistent calyx limb, dehiscing irregularly; when burst, the vascular bundles of the calyx tube are visible as a stellate frame. Seeds many, linear of linear-obcuneate, straight.

Distribution: About 70 species in Asia and the Pacific region and according to Stuhlmann also 1 species occurs in Africa, but this seems to me very doubtful with regard to the generic distribution: Malay Peninsula, Malay Archipelago (incl. the Philippine Islands), Formosa, Melanesia, Fiji Islands, Samoa and Tahiti.

Key to the species.

1*a*. Calyx tube ovoid . . . . . 1. **A. papetaria Bl.**
b. Calyx tube campanulate 2
2*a*. Calyx tube 5—7 mm long; lobes separated from each other by wide U-shaped sinuses. Flowers unisexual 2. **A. spectabilis Bl.**
b. Calyx tube at most 3 mm long; lobes separated from each other by minute U- or V-shaped sinuses. Flowers mostly hermaphrodite or, rarely, unisexual 3
3*a*. Calyx tube near the top distinctly constricted. 3. **A. ternatana Bakh. f.**
b. Calyx tube not or but very slightly constricted 4
4*a*. Calyx tube slightly 10-ribbed 5
b. Calyx tube without ribs 6
5*a*. Calyx lobes separated from each other by distinct V-shaped curves; limb distinctly 5-dentate. Leaves ternate. Ovary 3-celled. 4. **A. gracilis Bakh. f.**
b. Calyx lobes very closely together; limb slightly 5-dentate. Leaves opposite. Ovary 2-celled. 5. **A. macrophylla Bl.**
6*a*. Calyx tube glabrous or subfurfuraceous; lobes separated from each other by U-shaped curves. 7
b. Calyx tube densely ferrugineous-lepidote; lobes separated from each other by V-shaped curves. 6. **A. papetaroides Bakh. f.**
7*a*. Leaves subcoriaceous, 3-nerved. Calyx tube 2.—2.5 mm long. 7. **A. Steenisii Bakh. f.**
b. Leaves submembranaceous, 3-plinerved. Calyx tube 1—1.5 mm long . . . . . 8. **A. Stapfii Kds.**

1. **Astronia papetaria Bl.** Blume in Flora XIV (1831) p. 526 and in Bijdr. Nat. Wet. VI (1831) p. 267; idem in Rumphia I (1835) p. 20 and tab. 6; Naudin in l.c. XVIII (1852) p. 259; Miquel, l.c; (1855) p. 567; idem in Ann. Mus. Bot. Lugd.-Bat. I (1863) p. 216; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 151; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1098; van Eeden, Houtsoorten Ned. Ind. (1905) p. 144; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1205; *Astronia papetaria Bl.* var. *β*; Miquel in Ann. Mus. Bot. Lugd.-Bat. I (1863) p. 216; *Astronia spectabilis Zipp. ined.*; Blume in Flora XIV (1831) p. 526 [nomen]; *Pharmacum papetarium Rumph.*, Herb. Amboin. IV (1743) p. 134 and tab. 69; Kuntze, Revis. Gen. Plant. (1891) p. 247.

Small tree. Adult branches terete, the younger ones subquadrangular, glabrous. Leaves opposite, lanceolate, equal, 15.5—27 cm × 4.5—9.5 cm, at the base cuneate, at the top acuminate, on the upperside green, on the underside brown, densely lepidote, the scales themselves persistent; 3-nerved, with 2 marginal nerves, subreticulate. Petiole 3—5 cm long, sparsely lepidote, glabrescent. Inflorescence up to 9 cm long; main axis grooved, brown, glabrescent. Flowers hermaphrodite. Pedicel 2—3 mm long. Calyx tube ovoid, not constricted at the top, 2—3 mm long, subterete or subquadrangular, at the base slightly rounded, ferrugineously lepidote, the scales themselves persistent; limb distinctly lobed, its lobes triangular, closely together, 1.5—2 mm × 1 mm. Petals obovate, 2—2.5 mm × 1.5 mm, obtuse, veined and, according to Blume, brown-purple. Filaments 1.5 mm long; anthers dolabriform, 1 mm long, obtuse. Ovary 2-celled; style 3 mm long, subterete, slightly grooved, glabrous; stigma slightly flattened, 1 mm wide. Capsule 4—5 mm long, provided with 1.5—2.5 mm long calyx lobes, brown lepidote; stalk 5—7 mm long. Seeds linear, 3 mm long.

Distribution: restricted to the localities quoted below.

MOLUCCAS. Ambon: Wai (Teysmann s.n. [BZ], L); Hoetoemoeri (idem s.n. [BZ], L); Laha (Forsten s.n. L); Soja (Treub s.n. [BZ], L); Hitoe Lama (idem s.n. [BZ], L); Latoen (Boerlage nr. 454 [BZ], L); Ambon Ema, G. Hori (collector unknown [BZ], L); locality unknown (de Fretes s.n. L, U, sub A. papetaria Bl. var. β.); idem (Binnendijk s.n. L); idem (Teysmann s.n. [BZ]. L); idem (de Vriese s.n. L); idem (Robinson nr. 514, L, PNH); Ceram: W. of Miniem, 100—200 m (Rutten nr. 1940 [BZ], L, fl. Jan.); Oeloe, W. of Soho, 500—700 m (idem nr. 1704 [BZ], L, U, fl. Sept.); Roho, 100—200 m (Kornassi nr. 519 [BZ], L, U, fl. Nov.); Wai Lantabi, 700—1000 m (idem nr. 1233 [BZ], L, U, fl. May); Wai Kaba, 0—100 m (idem nr. 864, L,fl. Jan,) Ternate: (de Vriese s.n. L).

2. **Astronia spectabilis Bl.** Blume, Bijdr. Flor. Ned.-Ind. nr. 17 (1826) p. 1080; De Candolle, l.c. (1828) p. 197; Blume in Flora XIV 1831) p. 526 and in Bijdr. Nat. Wet. VI (1831) p. 267; idem in Rumphia I (1835) p. 22 and tab. 7; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 259; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Naudin in l.c. XVIII (1852) p. 259; Junghuhn, Java (1853) p. 512; Miquel, l.c. (1855) p. 567; Teysmann et Binnendijk, Cat. Blant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 151; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1097; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten Java] p. 191; Koorders, Exkurs. Flora Java II (1912) p. 699 and tab. 88; Koorders-Schumacher, Syst. Verz. I, Java, Melast. 1912); Hallier in Meded. Rijks Herb. Leiden nr. 12 (1912) p. 28; Koorders in Engl. Bot. Jahrb. 50 Suppl. (1914)

p. 301; Koorders, Flora von Tjibodas (1918) p. 217; Baker f. in Journ. Bot. LXII. Suppl. I (1924) p. 41; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1205; Backer, Manuscr. Fl. Java, Melast. (1941) p. 29; *Astronia spectabilis Bl.* var. *intermedia* (*Bl.*) *Miq.*, l.c. (1855) p. 567; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1097; *Astronia intermedia Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 9; Naudin in l.c. XVIII (1852) p. 259; Triana in l.c. (1871) p. 152; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten Java] p. 194.

Tree, 10—20 m high. Branches grooved, the young ones brown-furfuraceous, glabrescent. Leaves opposite, oblong or, rarely, broadly lanceolate, equal, 12.5—20 cm × 4.5—8 cm, at the base rounded, at the top acute, on the upperside green, on the underside densely ferrugineously lepidote, the scales themselves deciduous, 5-nerved, the 3 central nerves thick, reticulate. Petiole 3-8 cm long, quadrangular, dorsally grooved, subglabrous. Flowers unisexual. Bracts minute. Calyx tube broadly campanulate, 4—5 mm long, terete, densely but cinnamomeously lepidote; teeth triangular, 1—1.5 mm long, widened at the base, separated from each other by wide U-shaped sinuses. Petals broadly ovate, 5—7 mm × 3—5 mm, subacute, white. Filaments 3—4 mm long, flattened and strongly widened; anthers dolabriform, 2—2.5 mm long, subacute, according to Backer in l.c. red. Ovary 2-celled, often aborted; style 4—5 mm long, grooved, subterete; stigma 1 mm in diameter, yellow. Capsule subglobose, 7—8 mm long, furfuraceous; stalk 6 mm long. Seeds linear, 4 mm long.

Distribution: restricted to the localities quoted below.

JAVA. Preanger Regencies: near a water fall, G. Gede (Blume s.n. L); Tjibodas, G. Gede (Koorders nr. 4611β [BZ], L, fl. Febr.); idem (idem nr. 25925β [BZ], L, fl. Oct.); G. Wajang (Smith and Rant nr. 592 [BZ], L, U, buds Sept.); Pengalengan plateau (Junghuhn s.n. U); Tjilaki, 1600 m (Forbes nr. 908 and 986a, L). Kedoe: G. Dieng (Junghuhn s.n. L, U). Madioen: G. Lawoe, 1200—1400 m (Elbert nr. 193, L). Pasoeroean: Between Bremi and Tama hidoep, G. Hjang (Dillewijn s.n. PAS, fl. Oct.); Locality unknown: (Blume s.n. L, type of *A. intermedia Bl.*); idem (idem s.n. typus); idem (Plant. Jungh. Ined. nr. 194, L; v.n. kiharèndong); idem (idem nr. 195, L); idem (Zollinger nr. 1705, L).

BALI: G. Batoe kaoe, 1840 m (Sarip nr. 391 [BZ], L, fl. Oct.; v.n. kědoekdoek boekit).

LOMBOK: G. Rindjani, casuarina forest, 1700—2000 m (Elbert nr. 2283, L, ster).

CELEBES. Gvt. Celebes and dependencies: G. Bonthain (Teysmann s.n. [BZ], L; v.n. kajoe parang).

3. **Astronia ternatana Bakh. f.** Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 219.

Tree, up to 19 m high. Branches densely ferrugineously lepidote. Leaves opposite, oblong, 8.5—14 cm × 3.5—6 cm at the base acute, at the top shortly acuminate, on the upperside somewhat shining, on the underside densely ferrugineously lepidote, 5-plinerved, not reticulate. Petiole 15—25 mm long, densely ferrugineously lepidote. Inflorescence at least 10 cm long. (material incomplete), densely ferrugineously lepidote; main axis grooved. Flowers only seen before anthesis. Bracts lanceolate, 3 mm × 1 mm, densely ferrugineously lepidote. Bracteoles 1—1.5 mm long, lepidote. Pedicel 1—1.5 mm long. Calyx tube campanulate, 2.5—3 mm long, at the base subrotundate, narrowed towards the top and than distinctly constricted, densely ferrugineously lepidote; lobes ovate, 1—1.5 mm long, very acute, convex, fleshy. Petals suborbicular, obtuse; bud ovoid, obtuse, slightly surpassing the calyx limb. Anthers dolabriform, obtuse. Ovary 3-celled; style 3—3.5 mm long, lepidote; stigma subglobose, 1 mm in diameter, lepidote. Capsule ovoid, 3.5—4 mm long, densely ferrugineously or rufously lepidote; stalk 3—3.5 mm long. Seeds linear, 3 mm long.

Observ: resembling slightly A. papetaria Bl.

Distribution: restricted to the localities quoted below.

MOLUCCAS. Halmahera: G. Doekono, W. of Tobelo, 800 m (Beguin nr. 2311, L, typus floris, dupl. in [BZ], fl. Dec.; v.n. lobi-lobi); Ternate: Lagoena, 450 m (Beguin nr. 692, L, typus fructus, dupl. in [BZ]; v.n. lobi-lobi); Morotai: G. Ligojer near Goegoeti, 60 m (Lam nr. 3581, L; v.n. gohora).

4. **Astronia gracilis Bakh. f.** spec. nov.

Arbor. Rami obtuso-quadrangulares, adulti glabri, juveniles laeviter fusco-furfuracei. Folia ternata lanceolata 16.5 cm × 4 cm, basi acuta, apice breviter acuminata, utrinque glabriuscula, 3-nervia reticulata. Petiolus 20—25 mm longus laeviter furfuraceus glabrescens. Inflorescentia minime 10 cm longus permultiflora; axis principalis canaliculatus laeviter fusco-furfuraceus; rami in verticillis 4 vel 6 dispositi. Flores adulti mihi ignoti. Bracteolae multae lineares 1 mm longae. Pedicellus 1—1.5 mm longus. Calycis tubus campanulatus, apice constrictus, 1—1.5 mm longus teretiusculus subdecemcostatus; dentes triangulares ad 0.5 mm longi, sinubus late V-formibus inter se separati. Ovarium 3-loculare; stylus 1.5—2 mm longus gracilis; stigma subconvexa 1 mm in diametro.

Distribution: endemic.

CELEBES. Gvt. Celebes and dependencies: Malili, Toli toli (Boschwezen nr. Cel/V—291, L, typus, dupl. in [BZ], buds May).

5. **Astronia macrophylla Bl.** Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1080; De Candolle, Prodr. III (1828) p. 197; Blume in Flora XIV (1831) p. 527 and in Bijdr. Nat. Wet. VI (1831) p. 267; Naudin in l.c. XVIII (1852) p. 259; Miquel, l.c. (1855) p. 566; idem, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 124, 321; idem in Ann. Mus. Bot. Lugd.-Bat. I (1863) p. 216; Triana in l.c. (1871) p. 152; Baillon, l.c. VII (1880) p. 22, tab. 31—34; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1096; Krasser in l.c. (1893) p. 195; Koorders in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 466; idem in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5 Boomsoorten Java] p. 194; Koorders, Exkurs. Flora Java II (1912) p. 699; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Hallier in Meded. Rijks Herb. Leiden nr. 12 (1912) p. 28; Koorders-Schumacher, Syst. Verz. III Celebes (1914) p. 97; Hochreutiner in Candollea II (1925) p. 477; Backer, Manuscr. Fl. Java, Melast. (1941) p. 30; Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 219; *Astronia macrophylla Bl.* var. *β*; Blume in Flora XIV (1831) p. 537 and in Bijdr. Nat. Wet. VI (1831) p. 267; *Astronia macrophylla Bl.* var. *concolor Bl.* in Flora XIV (1831) p. 527 and in Bijdr. Nat. Wet. VI (1831) p. 268; Miquel, l.c. (1855) p. 567; *Astronia macrophylla Bl.* var. *β discolor G. Don* in Gen. Hist. Dichlam. Plants II (1832) p. 802; *Astronia concolor Zippel ined.*; Blume in Flora XIV (1831) p. 527 [nomen]; *Astronia spec.*; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; *Astronia triplinervia Cogn.* in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 536 [nomen]; *Melastoma arborea W.(illd.)*; Blume, Catal. Buitenzorg (1823) p. 70 [nomen].

Tree, 5—12 m high. Branches brown-furfuraceous subglabrescent. Leaves opposite, elliptic to lanceolate or ovate-oblong, equal or rarely, subequal, 12—34 cm × 5—13 cm, at the base rounded, acute or subcuneate, at the top shortly acuminate, on the underside green, between the nerves sparsely furfuraceous; on the nerves slightly ferrugineously lepidote, 3- or 5-plinerved, with 2 marginal nerves. Petiole 5—6.5 cm long, dorsally grooved, ferrugineously lepidote, glabrescent. Leaf buds densely ferrugineously lepidote. Inflorescence up to 15 cm long, many-flowered; main axis ferrugineously lepidote, subglabrescent; ramifications of the first order quaternate. Flowers hermaphrodite. Bracts lanceolate, 5—10 mm × 2—2.5 mm, on both sides lepidote, stalked. Bracteoles linear, 2 mm long. Pedicel 2—3 mm long, ferrugineous. Calyx tube campanulate, 1.5—2 mm long, towards the top often narrowed, slightly constricted, slightly 10-ribbed, ferrugineously lepidote; teeth rather closely together, triangular, 0.4 mm long, brown. Petals ovate, 2.5—3 mm long, subobtuse, brown; bud ovoid, obtuse, subglabrous, according to Lam, red.

Filaments 2 mm long; anthers dolabriform, 1.5 mm long. Ovary 2-celled; style 2—4 mm long, subquadrangular, subglabrous; stigma flattened, 1 mm in diameter, lepidote. Capsule subglobose, 3—6 mm long, provided with many, hardly conspicuous nerves, brown furfuraceous; stalk 3—6 mm long. Seeds linear, 2—3 mm long, whitish when dry.

Observ: The shape of the leaf is very variable. Forms with a rounded leaf base occur in the Greater Sunda Islands, while forms with an acute leaf base have been found in the Moluccas.

Distribution.

SUMATRA. Tapanoeli: Dellong, Dairi lands, 1066 m (Boschwezen nr. b.b. 15367 [BZ], L, fl. Apr.; v.n. delaing); West Coast: Bondjol (Teysmann s.n. U); Ajer mantjoer, near Padang (Beccari nr. 824, L); East Coast: Sibaulangit, 500 m (Lörzing nr. 4434 [BZ], L, fl. Sept.); Palembang: Rawas, 200 m (Dumas nr. 1634 [BZ], L, fl. July; v.n. kajoe lapan); Locality unknown: (Korthals s.n. L); (Forbes nr. 3007, L).

P. SIMEULOEË: Tapah, Dèfajan (Achmad nr. 1580 [BZ], L, fl. Dec.; v.n. toetoen koelit ladang balah); idem (nr. 604 [BZ], L, fr. Sept.; v.n. awa loedang loedang).

JAVA. Batavia: Nangèla, S. W. of Leuwiliang, 450 m (Bakhuizen van den Brink nr. 7068 [BZ], L); G. Salak (Blume s.n. L, typus; v.n. „kihariendung"); idem (Bakhuizen van den Brink fil. nr. 1306, U, ster.); Preanger Regencies: S. of Lampegan, 900 m (Backer nr. 14797 [BZ], L, fr. July); Madioen: G. Lawoe, 1300—1500 m (Elbert nr. 190, L); Exact locality unknown: „Kapang dungang" (Kuhl and van Hasselt s.n. L); Locality unknown: (Reinwardt s.n. L); (Blume s.n. L, sub A. macrophylla Bl. var. β.); (idem s.n. L); (de Vriese s.n. L, U); (herb. var. botan. s.n. L; v.n. harèndong tangkal).

BORNEO. SOUTHERN AND EASTERN PART. Locality unknown: (Korthals s.n. L).

CELEBES. Manado: G. Klabat, 340 m (Boschwezen nr. bb. 13764 [BZ], L, fr. July); Amoerang, 650 m (idem nr. bb. 18681 [BZ], L, fr. Aug.); Minahassa, 50 m (Koorders nr. 17845 β, 17846β, 17847β [BZ], L, fr. Febr.); idem, 800 m (idem nr. 17849β [BZ], L, ster.).

TALAUD ISLANDS. P. Karakelong: S. of G. Doeata, 60 m (Lam nr. 2695, L, fr. Apr.; tengtaramisèan); G. Piapi, 400 m (idem nr. 3320, L); Pasir Malap, 50 m (Lam nr. 2979, L, fr. May, tengtaramisèan).

MOLUCCAS. Ambon: (Zippel s.n. L, sub A. macrophylla Bl. var concolor Bl.); (de Vriese s.n. L, sub A. triplinervia Cogn.); (idem s.n. L).

6. **Astronia papetaroides Bakh. f.** spec. nov.

Arbor. Rami obtuso-quadrangulares, squamis ferrugineis detergendis densissime lepidoti. Folia opposita anguste oblonga vel lanceolata saepe inaequalia, 13.5—20 cm × 4—6 cm, basi acuta, apice acutiuscula, subtus squamis ferrugineis sessilibus detergendis dense lepidota, 5-nervia subreticulata. Petiolus 25—40 mm longus quadrangularis dense ferrugineo-lepidotus. Inflorescentia minime 8 cm longa submultiflora; axis principalis canaliculatus dense ferrugineo-

lepidotus; rami oppositi; ramuli oppositi vel quaternati. Flores unisexuales, ante anthesin solum vidi. Bracteae lanceolatae 7 mm × 2 mm ferrugineo-lepidotae. Bracteolae numerosae parvae. Pedicellus 2 mm longus. Calycis tubus late campanulatus 2—2.5 mm longus teres ecostatus apice non constrictus ferrugineo-lepidotus; dentes breviter sed late triangulares sinubus V-formibus inter se separati. Capsula ignota.

Observ: Only ♂ buds are known to me.

Distribution: endemic.

MOLUCCAS. Ternate: Foramadiahi, 500 m (Beguin nr. 1573, L, typus, dupl. in [BZ], U, fl. Apr.; v.n. lobi-lobi).

7. **Astronia Steenisii Bakh. f.** spec. nov. *Astronia smilacifolia Triana*; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III Vol. XII livr. 2 (1932) p. 176.

Arbor. Rami obtuso-quadrangulares glabriusculi. Folia opposita obovata 8—12 cm × 3.5—6.5 cm, basi acuta, apice acuminata, coriacea, subtus fusco-furfuracea, 3-nervia reticulata. Petiolus 25—35 mm longus quadrangularis minute verrucosus. Inflorescentia ad 6 cm longa submultiflora; axis principalis canaliculatus subfurfuraceus. Flores mihi ignoti. Bracteae lineares minutae. Pedicellus 1—2 mm longus. Calycis tubus campanulatus 2—2.5 mm longus teretiusculus ecostatus apice non angustatus subfurfuraceus; dentes minuti sinubus late U-formibus inter se separati. Capsula mihi ignota.

Observ.: resembling slightly A. smilacifolia Triana. I have named this species in honour of Dr. C. G. G. J. van Steenis (Java; Buitenzorg).

Distribution: endemic.

NATOENA ISLANDS (W. of Borneo). P. Boengoeran: S. top of G. Boengoeran, 950 m (van Steenis no. 1388, L, typus, dupl. in [BZ], fl. Apr.).

8. **Astronia Stapfii Kds.** Koorders in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 633 and 466 [nomen]; Koorders-Schumacher, Syst. Verz. III Celebes (1914) p. 97; Koorders, Suppl. Flor. N.O. Celebes II (1922) p. 49 and tab. 100.

Tree, up to 18 m high. Branches unknown to me. Leaves may be opposite, obovate-lanceolate, 14—18 cm × 5—5.5 cm, at the base acute, at the top abruptly acuminate, submembranaceous, on both sides glabrous, on the upperside green, on the underside pale-brown and shining, 3-plinerved, with 2 marginal nerves. Petiole 20—25 mm long, minutely furfuraceous. Flowers unisexual, ♂, only known to me

before anthesis. Pedicel 1.5 mm long. Calyx tube campanulate, slightly narrowed towards the top, 1—1.5 mm long, subglabrous; teeth minute, separated from each other by U-shaped sinuses. Young capsule subglobose, 2 mm long. Seeds linear, 1—1.5 mm long.

Observ: The material available to me is very incomplete.

Distribution: endemic.

CELEBES. Manado: Minahassa, 700 m (Koorders nr. 17851β [BZ], typus, dupl. in L, buds Apr.; v.n. aliwowos).

Species unknown to me, not mentioned in the key.

1. **A papuana Cogn.** in l.c. (1891) p. 1095. — New Guinea.

42. Beccarianthus Cogn.

Cogniaux in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 525; idem in De Candolle, Monogr. Phanerog. VII (1891) p. 1101; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 195; Merrill, Enum. Philipp. Flow. Plants vol. 3 fasc. 5 (1923) p. 185; *Everettia Merr.* in Philipp. Journ. Sc. Vol. VIII (1913) Bot. p. 356; idem, Enum. Philipp. Flow. Plants vol. 3 fasc. 5 (1923) p. 212; Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 130, 136.

Observ: About 5 species, only known from the Philippine Islands and N. E. New Guinea. Everettia based by Merrill only on features of the leaves, cannot be held up as a distinct genus, as its floral characters do not differ from those of Beccarianthus. Therefore I reduce Everettia to Beccarianthus after examining specimens from the Philippine Islands and New Guinea.

Subtribus 2. **Creochitoninae Bakh. f.** subtribus nova.

Astronieae (pr. p.; tribus); Mansfeld in Engl. Bot. Jahrb. 60 (1926) p. 130; *Creochiteae*, Miquel, Flor. Ned. Ind. I (1855) p. 539 [subtribus]; *Dissochaeteae* (pr. p.; tribus); Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 459; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 733; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 85; Baillon, Hist. d. plant. VII (1880) p. 51; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 535; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 545; Krasser in Engl. u. Plantl, Die Nat. Pfl. Fam. III 7 (1893) p. 177; *Miconieae* [pr. p.; tribus]; Blume in Flora XIV (1831) p. 489 and in Bijdr. Nat. Wet. VI (1831) p. 232.

Flores in alabastro bracteolis foliaceis carnosis omnino inclusi. Bacca. Semina cuneata circa 1 mm longa.

Distribution: Malay Archipelago (incl. the Philippine Islands).

43. Creochiton Bl.

Blume in Flora XIV (1831) p. 506 and in Bijdr. Nat. Wet. VI (1831) p. 247; Naudin in Ann. Sc. Nat. sér. III. XVIII (1852) p. 153; Miquel, Flor. Ned. Ind. I (1855) p. 560; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 758; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 85; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 519; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 604; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 179; Winkler in Engl. Bot. Jahrb. 50. Suppl. (1914) p. 200; *Diplectria Reichenb.* (pr. p.; typo excl.); Kuntze, Revis. Gen. Plant. (1891) p. 246; *Dissochaeta Bl.* (pr. p.; typo excl.); Baillon, Hist. d. plant VII (1880) p. 31; *Melastoma L.* (pr. p.; typo excl.); Blume, Bijdr. Flor. Ned. nr. 17 (1826) p. 1068.

Shrubs or, according to Mansfeld in l.c., also climbers. Branches terete or slightly flattened, the young ones furfuraceous or densely covered with plumose hairs, often glabrescent; the nodes laterally thickened. Leaves opposite, elliptic, oblong, obovate-oblong, cordate or suborbicular, equal, at the base obtuse or cordate, at the top obtuse or acuminate, coriaceous, entire, on the upperside glabrous, on the underside furfuraceous or subpilose, sometimes glabrescent, 3- or 5-nerved or 3- tot 5-plinerved or, rarely, 7- to 9-plinerved, cross-venules dictinct, petiolate. Inflorescence axillary, umbelliform, single or compound, 3- to many-flowered; peduncles 1 or 2 from each leaf axil; ramifications opposite, umbellate. Flowers hermaphrodite, 4-merous. Bracts lanceolate or obovate, hairy or furfuraceous, deciduous. Bracteoles obovate, large, fully enveloping the bud, fleshy, deciduous. Pedicel present. Calyx tube campanulate or subpyriform, terete, mostly furfuraceous; limb shortly 4-lobed or 4-dentate. Petals 4, elliptic or oblong, acute, glabrous, pink or white. Stamens 8, equal; filaments well-developed; anthers linear, acute, opening by a single pore; connective shortly produced at the base, dorsally ending in a short spur, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 4-celled; its toppart convex, glabrous; style filiform, glabrous; stigma hardly conspicuous. Berry subglobose. Seeds many, cuneate, to one side flattened, hardly beaked.

Distribution: About 6 species, only in the Malay Archipelago: Java, Borneo, the Philippine Islands and New Guinea.

Key to the species.

1*a*. Branches densely ferrugineously subpilose. Leaves cordate or suborbicular. Bracteoles veinless, outside subpilose, 13—17 mm long. . . . . 1. **C. bibracteata (Bl.) Bl.**

b. Branches furfuraceous, glabrescent. Leaves oblong or obovate-oblong. Bracteoles 5-nerved, outside furfuraceous, glabrescent, 7—9 mm long . . . . . 2. **C. pudibunda (Bl.) Bl.**

1. **Creochiton bibracteata (Bl.) Bl.** Blume in Flora XIV (1831) p. 507 and in Bijdr. Nat. Wet. VI (1831) p. 248; Naudin in l.c. XVIII (1852) p. 154; Miquel, l.c. (1855) p. 560; Triana in l.c. (1871) p. 85 and tab. VII, fig. 91; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 605; Krasser in l.c. (1893) p. 178 and tab. 77a; Koorders, Exkurs. Flora Java II (1912) p. 693; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Koorders, Flora van Tjibodas (1918) p. 212; Backer, Manuscr. Fl. Java, Melast. (1941) p. 15; *Creochiton superbum Naud.* in l.c. XVIII (1852) p. 153; Miquel, l.c. (1855) p. 560; *Diplectria bibracteata (Bl.) Kuntze*, Revis. Gen. Plant. (1891) p. 246; *Dissochaeta bibracteata (Bl.) Baillon*, l.c. VII (1880) p. 15 and fig. 24; *Melastoma bibracteatum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1071; De Candolle, Prodr. III (1828) p. 148.

Shrub, 0.5—0.75 m high. Very young specimens with suborbicular leaves and with up to 7 cm long petioles. Branches terete, densely covered with ferrugineous, plumose hairs. Leaves cordate, cordate-oblong or suborbicular 5—12 cm by 3.5 cm at the top acuminate or subacute, on the upperside glabrous, on the underside between the nerves pilosellous, glabrescent on the nerves covered with plumose hairs, 5- to 9-nerved or 5- to 9-plinerved, cross-venules on the upperside much less distinct than on the underside; the nerves on the underside prominent. Petiole 1.5—2 cm long, terete, densely ferrugineously pilosellous. Inflorescence a single or compound umbel, up to 7 cm long, bearing about 5 flowers; peduncle 2—3 cm long, robust, densely ferrugineously pilosellous. Bracts obovate, 8—11 mm × 5—7 mm, obtuse, on both sides ferrugineously pilosellous, rapidly deciduous. Bracteoles first fully enveloping the bud, next in the mid of the junction between the two bracteoles dehiscing with an elliptic opening; the bracteoles themselves oblong, 13—17 mm × 6—8 mm, at both ends acute, fleshy, outside densely ferrugineously pilosellous, inside glabrous, veinless, white. Pedicul 0.75—1.5 cm. Flowers only seen by me before anthesis. Calyx tube subpyriform, 5 mm long, subangular, furfuraceous or subglabrous; limb consisting of hardly conspicuous lobes. Petals oblong, 9 mm × 4 mm, acute, glabrous, veinless, (according

to Backer) pink. Filaments 5—6 mm long; anthers 6 mm long; connective very short, dorsally ending in an ovoid or narrowly triangular and flattened 1 mm long appendage. Berry globose, 8 mm × 8—11 mm; stalk 23 mm long.

Distribution: endemic.

JAVA. Batavia: G. Salak (Zollinger nr. 3009, U, type of *C. superbum Naud.*); idem (Blume s.n. L, typus, sub *Melastoma bibracteatum Bl.*); G. Gadjah, G. Salak (Bakhuizen van den Brink fil. nr. 615, U). Preanger Regencies: G. Pangerango (Kuhl and van Hasselt s.n. L). Locality unknown: (de Vriese s.n. L); (Teysmann s.n. L); (Kuhl and van Hasselt s.n. L).

2. **Creochiton pudibunda (Bl.) Bl.** Blume in Flora XIV (1831) p. 506 and in Bijdr. Nat. Wet. VI (1831) p. 248; Naudin in l.c. XVIII (1852) p. 154 and tab. VI, fig. 4; Miquel, l.c. (1855) p. 560; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 85; Boerlage, l.c. (1890) p. 535; Cogniaux in l.c. (1891) p. 604; Krasser in l.c. (1893) p. 178 and tab. 77b; Koorders, Exkurs. Flora Java II (1912) p. 693; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Backer, Manuscr. Fl. Java, Melast. (1941) p. 15; *Creochiton pudibunda (Bl.) Bl.* var. *coriacea Naud.* in l.c. XVIII (1852) p. 154; Miquel, l.c. (1855) p. 560; *Creochiton emarginata Miq.*, l.c. (1855) p. 561; *Diplectria pudibunda (Bl.) Kuntze*, Revis. Gen. Plant. (1891) p. 246; *Melastoma pudibunda Bl.*, Catal. Buitenzorg (1823) p. 71 [descr.]; idem in Flora (1825) p. 139; idem, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1071; De Candolle, Prodr. III (1828) p. 148.

Shrub, 0.5—0.75 m high or according to Koorders a climber, up to 25 m high, but this seems to me a mistake. Very young plants with oblong or lanceolate leaves and up to 3 cm long petioles. Branches terete, brown furfuraceous, glabrescent. Leaves oblong or ovate-oblong, 4.5—9.5 cm × 2.5—4.5 cm, at the base obtuse, at the top obtuse and provided with a short groove, on the upperside glabrous or subglabrous, on the underside glabrous or furfuraceous, glabrescent, 5-nerved, reticulate. Petiole 7—14 mm long, swollen at the base, furfuraceous. Inflorescences 2 in each leaf axil, a single umbel, bearing less than 10 flowers, up to 4 cm long; peduncle 1.5—3.5 cm long, terete, slender, furfuraceous, near the top laterally swollen, forming a semiorbicular body, from which radiate the flowers. Bracts lanceolate, 3 mm × 1.5 mm, furfuraceous, rapidly deciduous. Bracteoles obovate or obovate-oblong, enveloping the bud, 7—9 mm × 5—6 mm, obtuse or very shortly but obtusely acuminate, glabrous or subfurfuraceous, provided with 5 faint veins, deciduous. Pedicel 6—15 mm long, terete

brown furfuraceous. Calyx tube subpyriform or campanulate, 3—4 mm long, subfurfuraceous; limb slightly 4-lobed. Petals elliptic or oblong, 6—7 mm × 3—4 mm, acute, glabrous, subvenulate, red-purple. Filaments 5 mm long; anthers linear, 5 mm long, narrowed at the top and subacute, red-purple; connective short, dorsally ending in a narrowly triangular, 0.8 mm long appendage. Top of the ovary subconvex, glabrous, provided with a short disc; style 6 mm long, quadrangular, glabrous. Berry subglobose, 5—6 mm × 5—6 mm; stalk 10—14 mm long. Seeds narrowly cuneate, 1 mm long.

Distribution: endemic.

JAVA. Batavia: „Kapang dungang", G. Salak (Blume s.n. L, typus, sub *Melastoma pudibundum Bl.*; v.n. „tjaluntjung"); Pasir Pogor, G. Salak (Bakhuizen van den Brink nr. 5524 [BZ], L, fl. June); Tjitjilebak, along the Tjiapoes, G. Salak (Kuhl and van Hasselt s.n. L; v.n. harèndong areuj poetih.) Preanger Regencies: G. Patoeha (Blume s.n. L, sub C. bibracteata Bl.); idem, 1300—1400 m (Junghuhn s.n. L, U, type of *C. emarginatum Miq.*). Locality unknown: (Blume s.n. L); (de Vriese s.n. L); (Teysmann s.n. L, sub C. bibracteata Bl.); (collector unknown, L; v.n. harèndong areuj mèra).

Tribus IX. **Kibessieae.**

Naudin in Ann. Sc. Nat. sér. III. XII (1849) p. 201 [subordo] and in idem XVIII (1852) p. 260 [subordo]; Miquel, Flor. Ned. Ind. I (1853) p. 568 [subordo]; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 143 and 195 [tribus]; *Astronieae Decaisne* (pr. p.); Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 461; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 735; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 151; Baillon, Hist. d. plant. VII (1880) p. 32, 62; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 505; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1092; *Chariantheae Seringe ex Candolle* (pr. p.), Prodr. III (1828) p. 196; Blume in Flora XIV (1831) p. 489 and in Bijdr. Nat. Wet. VI (1831) p. 264; idem in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 5.

Trees. Flowers hermaphrodite, 4- or 6-merous. Calyx tube covered with scales, prickles and bristles; limb shortly dentate or forming a calyptra. Stamens 8 to 12 or, rarely, up to 30, equal; anthers oblong, lanceolate or ovate, equal in length, opening introrsely by 2 slits; connective not produced at the base, swollen between the thecae. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary 4-celled; ovules many, minute on a parietal placenta. Fruit a berry. Seeds obovate or cuneate, minute, straight, exalate, not beaked.

Distribution: Malay Peninsula and the Malay Archipelago. (incl. the Philippine Islands and New Guinea).

44. Kibessia D.C.

De Candolle, Prodr. III (1828) p. 196; Naudin in Ann. Sc. Nat. sér. III. XVIII (1852) p. 262; Miquel, Flor. Ned. Ind. I (1855) p. 569; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 771; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 152; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 525; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1105; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 195; *Ewyckia Bl.* (pr. p.; typo excl.); Korthals in Temminck, Verhand Nat. Gesch. (1839—1842) p. 254; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 5; Miquel, Flor. Ned. Ind. I (1855) p. 568; *Macroplacis Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 7; Naudin in Ann. Sc. Nat. sér. III. XVIII (1852) p. 260; Miquel, Flor. Ned. Ind. I (1855) p. 569; *Melastoma L.* (pr. p.; typo excl.); Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1067; *Pternandra Jack*; Baillon, Hist. d. plant. VII (1880) p. 62; King in Journ. As. Soc. Bengal LXIX part II (1900) p. 67; Ridley, Flor. Mal. Penins. I (1922) p. 807; Burkill in Kew Bull. (1935) p. 319; *Rectomitra Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 6; Naudin in Ann. Sc. Nat. sér. III. XVIII (1852) p. 261; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 153.

Shrubs or trees. Branches terete or quadrangular, glabrous or, rarely, pilosellous. Leaves opposite, elliptic, ovate-oblong or, very rarely, lanceolate, equal, at the base acute, cuneate or cordate, at the top acuminate or, rarely, obtuse, coriaceous, subcoriaceous or submembranaceous, entire, on the upperside glabrous, on the underside glabrous or pilosellous, mostly 3-nerved or 3-plinerved or, rarely, 7-nerved, cross-venules distinct, petiolate. Flowers axillary, either 3 to 5 in a pedunculate cyme or 10 to 30 in fascicles or solitary; the flowers themselves hermaphrodite, 4-merous. Bracts and bracteoles mostly present, small. Pedicel present. Calyx tube campanulate or subcylindrical, terete, either covered with imbricate, sometimes flat, triangular scales or with stout prickles, which are at the top provided with stellate excrescences or calyx tube covered with bristles; limb forming either a conical true calyptra, which is either in the middle part provided with a whirl of prickles or bristles or which is nude or the limb is ovoid and dehiscing in 4 triangular lobes. Petals 4, ovate or obovate, blue, purple or white. Stamens 8, equal; filaments slightly medifixed; anthers dolabriform or, rarely, oblong, opening introrsely with 1 or 2 slits; connective not produced at the base,

dorsally sometimes ending in a short spur, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 4-celled; its toppart sunken, glabrous; style filiform, glabrous; stigma either capitate and sulcate, wide or narrowly conical. Berry hemispherical and subtruncate. Seeds many, narrowly cuneate or irregular-straight, minute.

Distribution: About 20 species, all Asiatic: Malay Peninsula and the Malay Archipelago (incl. the Philippine Islands).

Key to the species.

1*a*. Calyptra deciduous 2
b. Calyptra not deciduous, dehiscing in about 4 lobes 7

2*a*. Calyx tube covered with prickles, which are at the top provided with stellate excrescences or calyx tube covered with long bristles or, rarely, both with prickles and bristles. Calyptra in the middle part provided with a whirl of prickles or bristles 3
b. Calyx tube covered with triangular or flat scales. Calyptra nude. 6

3*a*. Leaves at the base acute. Calyx tube covered with prickles, which are at the top provided with stellate excrescences . 4
b. Leaves at the base cordate, subcordate or rounded. Calyx tube covered with bristles or, rarely, mixed with a few prickles, which are at the top provided with stellate excrescences 5

4*a*. Leaves on the underside covered with rufous, papillose hairs, thick. Calyptra broadly ovate. . . . 1. **K. hirtella Cogn.**
b. Leaves on the underside glabrous, thin. Calyptra narrowly conical. . . . . 2. **K. azurea (Bl.) D.C.**
α. Branches subterete. . . . . 2*a*. **K. azurea (Bl.) D.C. s.s.**
β. Branches minutely but distinctly alate.
2*b*. **K. azurea (Bl.) D.C.** var. **subalata (Bl.) Miq.**

5*a*. Leaves at the base cordate or subcordate. Branches sinuate-alate.
3. **K. cordata Korth.**
b. Leaves at the base rounded. Branches not alate.
4. **K. simplex Korth.**

6*a*. Leaves elliptic or oblong, at the base and at the top rounded, very coriaceous, 3.2—4.5 cm × 1.8—2.4 cm. Branches glabrous.
5. **K. pachyphyllum Bakh. f.**
b. Leaves lanceolate, at the base and at the top acute, submembranaceous, 7—7.5 cm × 2—2.5 cm. Branches covered with short, rubiginose hairs. . . . . 6. **K. acuminata Decne.**

7*a*. Leaves at the base cordate, 7-nerved, 13—26 cm × 7—13 cm. 7. **K. Korthalsiana Cogn.**

b. Leaves at the base acute, 3-nerved, 9—14 cm × 3.5—8 cm. 8

8*a*. Calyx tube tesselate. Flowers in subsessile pseudo-fascicles. Berry in the lower part globose, ending in a short, cylindrical neck . . . . . 8. **K. galeata (Korth.) Cogn.**

b. Calyx tube covered with flat, triangular scales. Flowers not in pseudo-fascicles; peduncle distinct. Berry widened at the top, truncate. 9. **K. tuberculata (Korth.) Hook. f. ex Clarke.**

α. Leaves ovate or broadly ovate-oblong, 5—8 cm × 2.5— 4 cm. Anthers subreniform. 9*a*. **K. tuberculata (Korth.) Hook. f. ex Clarke s.s.**

β. Leaves ovate-oblong or oblong, 12—13.5 cm × 6.5—7 cm. Anthers broadly deltoid. 9*b*. **K. tuberculata (Korth.) Hook. f. ex Clarke** var. **grandifolia Bakh. f.**

1. **Kibessia hirtella Cogn.** Cogniaux in l.c. (1891) p. 1107; Boerlage, l.c. (1890) p. 536 [nomen].

Tree. Branches acutely quadrangular, often minutely sinuate-alate, densely covered with short, rufous, papillose hairs. Leaves oblong or ovate-oblong, 8.5—14 cm × 4—6 cm, at the base acute, at the top shortly but obtusely acuminate, coriaceous, on the underside densely and coarsely covered with rufous, papillose short hairs or with small scales, 3-nerved, nerves very thick, sometimes provided with 2 marginal ones. Petiole 5—7 mm long, flattened, densely covered with rufous, papillose short hairs. Flowers either 3 or 5 in an up to 1.5 cm long cyme, whose peduncle is 2—5 mm long, quadrangular and rufous or flowers solitary. Bracts oblong, 5—6 mm × 2.5—3 mm, outside rufously papillose, inside subglabrous. Pedicel 10 mm long. Calyx tube broadly campanulate, (calyptra included) 12 mm long, at the base rounded, densely covered with rufous, minute hairs and with up to 5 mm long, subulate, rufously pilosellous bristles and, rarely, with a few glochidiate prickles, which in some cases occur only on the border between the calyx tube and calyptra; calyptra broadly ovate, deciduous, acuminate, in the middle part provided with a whirl of bristles. Petals obovate, 9—10 mm × 7—8 mm, obtuse or retuse, veined, white. Filaments 2 mm long, flat and widened; anthers broadly elliptic, 2—2.5 mm long, obtuse, yellow. Style 3—4 mm long; stigma narrowly conical, 2 mm long, grooved. Berry hemispherical, 10—12 mm long; stalk 10 mm long. Seeds flattened-cylindrical, 1 mm long, smooth.

Distribution: endemic.

BORNEO. WESTERN PART. S i n g k a w a n g: Sei Sambas (Hallier nr. 1037 [BZ], L). NO LOCALITY KNOWN [prob. S. and E. part]: (de Vriese s.n. L, typus). BRITISH PARTS.

2. **Kibessia azurea (Bl.) D.C.** De Candolle, Prodr. III (1828) p. 196; Blume in Flora XIV (1831) p. 524 and in Bijdr. Nat. Wet. VI (1831) p. 264; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 259; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 8; Naudin in l.c. XVIII (1852) p. 262; Junghuhn, Java (1853) p. 512; Miquel, l.c. (1855) p. 570; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 152; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1106; Kuntze, Revis. Gen. Plant. (1891) p. 247; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten. Java nr. 5] p. 196; van Eeden, Houtsoorten Ned. Ind. (1905) p. 144; Koorders, Exkurs. Flora Java II (1912) p. 700; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Hochreutiner in Candollea II (1925) p. 478; Ruys in Ann. Jard. Bot. Buitenzorg XXXIV (1925) p. 76; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1205; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III Vol. XIII livr. 1 (1933) p. 12; Backer, Manuscr. Fl. Java, Melast. (1941) p. 30; *Kibessia azurea (Bl.) D.C.* var. *typica Hochr.* in Candollea II (1925) p. 478; *Kibessia sessilis Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 8; Naudin in l.c. XVIII (1852) p. 262; Miquel, l.c. (1855) p. 570; Triana in l.c. (1871) p. 152; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1106; Krasser in l.c. (1893) p. 195; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten Java] p. 198; Koorders, Exkurs. Flora Java II (1912) p. 698; *Melastoma azureum Bl.*, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1079; *Melastoma echinata Reinw.*; Blume, Catal. Buitenzorg (1823) p. 70 [nomen]; *Pternandra azurea (Bl.) Burkill* in Kew Bull. (1935) p. 319; idem in Dict. Econ. Prod. Mal. Penins. II (1935) in observ. Kibessia azurea (Bl.) D.C.; *Pternandra echinata Jack*; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 11.

Tree, 5—12 m high. Adult branches terete, the young ones subquadrangular, glabrous. Leaves elliptic, oblong, lanceolate, ovate or ovate-oblong, equal or, rarely, unequal, 6—14 cm × 3.5—6 cm, at the base acute or, rarely, slightly rounded, at the top long but obtusely acuminate, subcoriaceous, on both sides glabrous, 3-nerved or 3-plinerved, often with 2 marginal nerves, cross-venules prominent, mostly reticulate. Petiole 4—6 mm long, flattened, glabrous. Flowers

either terminal and solitary, whose peduncle is either 3—5 mm long, subpilose or glabrous and subquadrangular or is nearly absent or flowers axillary and 3 or 5 together, whose peduncle is either 8—15 mm long, sub-quadrangular and minutely pilose or is nearly absent. Bracts and bracteoles narrowly triangular, 1—1.5 mm long. Pedicel 17—19 mm long, subterete, brown pilosellous, provided with 2 bracteoles in the middle part. Calyx tube semiovate, 9—12 mm long, densely covered with minute, brown hairs and with 2—2.5 mm long, glochidiate prickles, which are in turn densely but minutely pilose; calyptra narrowly conical, rostrate, in the middle part provided with a whirl of glochidiate prickles. Petals obovate or broadly ovate, 6—9 mm × 3—6 mm, obtuse or retuse, mucronate, glabrous, mid-vein strong, venulate, blue-purple. Filaments 1.5—3 mm long; anthers dolabriform, 2 mm long, obtuse, yellow; connective dorsally ending in a short spur or inappendiculate. Style 7—14 mm long, widened at the base, subterete or subquadrangular, subglabrous; stigma narrowly conical, 3—4 mm long, grooved. Berry semiovate, 8—10 mm long, covered with brown, minute hairs, subglabrescent; stalk 10—12 mm long.

Observ: differing from allied species by its glabrous leaves, which are mostly acute at the base and by the glochidiate prickles, covering the calyx tube. K. sessilis Bl. is entirely identic with K. azurea (Bl.) D.C. It is based on specimens of which the branchlets, petioles and berries are converted into long-haired galls. These galls are by Blume erroneously interpreted as sessile fruits. Backer l.c., is the first to recognize those "fruits" as galls. Very difficult to disentangle is the question whether Pternandra echinata Jack is a true Pternandra or a Kibessia. Cogniaux identified Jack's plant with K. simplex Korth.; other authors a.o. Miquel, identified it with K. azurea (Bl.) D.C. In my opinion however Pternandra echinata Jack is an up to now unknown species of that genus. Jack namely described the genus Pternandra with the type P. coerulescens in sô much detail, that confusion with the wholly different Kibessia must be regarded as impossible. Judging from the short diagnosis P. echinata Jack must be allied to P. coerulescens Jack.

Distribution: restricted to the localities quoted below.

SUMATRA. Tapanoeli:? Opper Angkola, 300—1000 m (Junghuhn s.n. L). West Coast: „Aneh kloof", near G. Singgalang, 600 m(Schiffner nr. 2309,L). Locality unknown: (Junghuhn s.n. U); (Korthals s.n. L); (de Vriese s.n. L).

JAVA. Bantam: S. coast of Bantam (Junghuhn s.n. L; v.n. „kiborou"); Tjibadak, foot G. Halimoen, 600 m (Bakhuizen van den Brink nr. 3124 [BZ], L, U, fr. Jan.; v.n. kibeusi). Batavia: G. Wiroe, S. W. of Leuwiliang, 800 m (Bakhuizen van den Brink nr. 7756 [BZ], L, fl. Dec.; v.n. ipis koelit);

Nangèla, along the Tjiteureup, S. W. of Poerasèda, 450 m (idem nr. 7069 [BZ], L, fl. Febr.; v.n. kibeusi); G. Salak (Backer nr. 36506, PAS, fr. June); G. Gede, 1300—2000 m (Junghuhn s.n. L, fr. Aug.); G. Paniisan, E. of Buitenzorg, 700 m (van Steenis nr. 2328 [BZ], L, fl. Oct.); idem, 700 m (Docters van Leeuwen nr. 7546 [BZ], L, ster.). Preanger Regencies: Tjëmpaka, near G. Karang, S. of Tjibëbër, 1000 m (Smith nr. 814 [BZ], L, U, fl. June); Tjadas Malang, near Tjidadap (Winckel s.n. [BZ], L, fl. May; v.n. kibeusi); idem, 1000 m (idem nr. 1415β [BZ], L, fl. June; v.n. kibeusi); Pasir Loetoeng, near Tjidadap, 1000 m (idem nr. 97 [BZ], L, U, fr. March; v.n. kibeusi, kidjambè); Tjidadap (Bakhuizen van den Brink fil. nr. 179, U, fl. July/Aug.); idem, 1000 m (Bakhuizen van den Brink nr. 3904 [BZ], L, ster.; v.n. kibeusi); G. Pangerango (Blume s.n. L, typus, sub *Melastoma azureum Bl.*, fl. July); idem (Junghuhn s.n. L, sub K. sessilis Bl.); G. Salak („Goenoeng Tjisalak" nr. 33, L; v.n. kibeusi); Takoka (Koorders nr. 12044β [BZ], L, fl. March). Locality unknown: (Zollinger nr. 1576, L); (Blume s.n. L, type of *K. sessilis Bl.*); (idem s.n. L); (Junghuhn s.n. U); (Kuhl and van Hasselt s.n. L); (Reinwardt s.n. L, sub Melastoma muricata R.); (idem s.n. L, sub Melastoma echinata R.); (Ploem s.n. L); (Forbes nr. 1221a and 1993 [BZ], L).

var. **subalata (Bl.) Miq.** Miquel, l.c. (1855) p. 570; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1106; *Kibessia subalata Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 8; Naudin in l.c. XVIII (1852) p. 262; Triana in l.c. (1871) p. 152 [sphalm., K. subulata]. Tree. Young branches quadrangular, shortly but distinctly sinuate-alate. Leaves oblong, 6—13 cm × 3—5 cm, at the base acute, at the top obtusely acuminate. Petiole 3—5 mm long. Flowers terminal and axillary, solitary, on a 2—5 mm long peduncle. Bracts narrowly triangular, 1—1.5 mm long. Pedicel 6—8 mm long, in the middle part provided with 2 minute bracteoles. Calyx tube 9 mm long. Adult flowers unknown to me.

Distribution: endemic.

SUMATRA. West Coast: Ajer mantjoer, near Padang, 360 m (Beccari nr. 688, L); G. Singgalang (Korthals s.n. L, typus).

3. **Kibessia cordata Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 253 and tab. 66; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 8; Naudin in l.c. XVIII (1852) p. 262; Miquel, l.c. (1855) p. 570; Triana in l.c. (1871) p. 152; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1107; Krasser in l.c. (1893) p. 196 and tab. 81 D-G; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III vol. XIII livr. 1 (1933) p. 47; *Kibessia tetraptera Miq.*, l.c. (1855) p. 571; Triana in l.c. (1871) p. 152; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1107; *Pternandra cordata (Korth.) Baill.*, l.c. (1880) p. 23.

Tree, (according to Korthals) 2—4 m high. Branches subquadran-

gular or subterete, the adult ones sinuate-alate, the younger ones hardly alate, pilosellous, glabrescent. Leaves ovate-oblong, ovate-lanceolate, oblong or lanceolate, 5.5—13 cm × 2.5—5 cm, at the base cordate, subcordate or rounded, at the top long but obtusely acuminate, subcoriaceous, the very young leaves submembranaceous, on both sides between the nerves glabrous, on the nerves pilosellous, 3-nerved or 3-plinerved, cross-venules not prominent, slightly reticulate. Petiole 2—3.5 mm long, covered with brown, short hairs. Flowers either terminal and solitary or in triads, whose peduncle is absent or flowers axillary and either 3 or 5 together in a 2—5 cm long inflorescence, whose peduncle is nearly absent to 3 cm long or flowers solitary. Bracts linear, 1 mm long. Bracteoles linear, 1—4 mm long. Pedicel 7—10 mm long, subterete, pilosellous. Calyx tube campanulate, (calyptra incl.) 8—10 mm long, densely covered with pilosellous bristles or, rarely, with glochidiate prickles or provided both with bristles and prickles; the border between top of calyx tube and calyptra covered with up to 2.5 mm long, glochidiate prickles. Petals broadly ovate or obovate, 4—7 mm × 3.5—4 mm, shortly acuminate, unguiculate, venulate, blue. Filaments 2 mm long; anthers dolabriform, 2 mm long, subobtuse. Style 6 mm long; stigma narrowly conical. Berry hemispherical, 6—8 mm long; stalk 15 mm long. Seeds narrowly triangular or irregular, 0.5—0.8 mm long.

Observ: Easily to distinguish by its mostly cordate leaves. K. cordata Korth. is with regard to the consistency of the leaves a variable species. Therefore I do not hesitate to consider K. tetraptera Miq. identic with this species.

Distribution: restricted to the localities quoted below.

SUMATRA. Tapanoeli: Opper Angkola (Junghuhn s.n. U, type of *K. tetraptera Miq.*, dupl. in L). West Coast: Sikoeriman, Lkoto, 980 m (Bünnemeyer nr. 3443 [BZ], L, fl. June); N. of Taloe, 950 m (idem nr. 89 [BZ], L ,buds Apr.); G. Malintang (Korthals s.n. L, typus, dupl. in U). Palembang: Rawas 150 m (Grashoff nr. 1127 [BZ], L; v.n. kajoe kětam); idem, 80 m (Dumas nr. 1576 [BZ], L, buds May; v.n. těmbras kětam). Benkoelen: Redjang, 800 m (Endert nr. E. 1086 [BZ], L, buds June; v.n. kětam ka). Locality unknown: (Reinwardt s.n. L).

BORNEO. WESTERN PART. Singkawang: Sebalau (Teysmann s.n. [BZ], L). Sintang: G. Lianggagang (Hallier nr. 2740 [BZ], L); Sanggau (idem nr. 864 [BZ], L); Sei Kenepai (idem nr. 1419 [BZ], L); G. Kenepai (idem nr. 1601 [BZ], L, U). Locality unknown. (de Vriese s.n. L).

4. **Kibessia simplex Korth.** Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 253; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 9; Naudin in l.c. XVIII (1852) p. 262; Miquel, l.c. (1855) p. 571; Triana in l.c. (1871) p. 152; *Kibessia echinata*

(*Jack*) *Cogn.* (pr. p.) in Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 536 [nomen]; idem in l.c. (1891) p. 1108.

Small tree. Branches terete, the young ones subterete or subquadrangular and glabrous, the very young ones puberulous. Leaves elliptic, oblong or lanceolate, 8.5—12 cm × 4—5.5 cm, at the base rounded or subacute, at the top obtusely acuminate, on both sides glabrous, on the nerves sparsely pilosellous, glabrescent, 3-nerved, the 2 marginal nerves very thin or absent, cross-venules thin, reticulate. Petiole 2.5—5 cm long, glabrous. Flowers terminal or axillary, solitary, only seen by me before anthesis. Bracts linear, 1 mm long. Pedicel 4—5 mm long, in the middle part bibracteolate. Calyx tube broadly campanulate, (calyptra incl.) 9—12 mm long, covered with brown, short hairs or with lanceolate or linear, pilosellous bristles, which are at the base mammiform swollen and are triangular or quadrangular in diameter; calyptra ovoid, rostrate, in the middle part provided with a whirl of small bristles. Petals ovate, acute, blue-grey. Anthers deltoid, 1.5—2 mm long, obtuse and (according to Rutten) yellow. Style violet (Rutten). Berry hemispherical, 8—10 mm long.

Observ: Sterile specimens resemble K. azurea (Bl.) D.C., but differing by their rounded leaf base. This species is in my opinion not identic with Pternandra echinata Jack. (see under K. azurea [Bl.] D.C.).

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang (Korthals s.n. L, typus). Samarinda: Bontang, along the coast (Rutten nr. 442, U, fl. March); G. Roentoe near Bontang (idem nr. 489, U). Exact locality unknown: Hajoep (Winkler nr. 2311, L, fl. June).

5. **Kibessia pachyphyllum Bakh. f.** spec. nov.

Arbor. Rami teretiusculi glabri. Folia anguste elliptica vel oblonga, 3.2—4.5 cm × 1.8—2.4 cm, basi apiceque rotundata obtusa, valde coriacea, utrinque glabra, in sicco pallido-brunnea, supra nitida, 3-nervia costa crassissima. Petiolus 1—2 mm longus compressiusculus glaber. Inflorescentia mihi ignota. Flores ante anthesin solum vidi. Calycis tubus anguste campanulatus 5—6 mm longus squamulis planis obtectus; calyptra ovata nuda. Petala ovata breviter acuminata. Filamenta 1 mm longa; antherae caliguliformes 1.5 mm longae acutiusculae; connectivum ecalcaratum. Stylus filiformis Bacca ignota.

Observ: A remarkable form on account of its mostly elliptic. extremely coriaceous, obtuse, very small leaves. With regard to the,

floral features this species has its nearest alliance with K. acuminata Decne.

Distribution: endemic.

BORNEO. WESTERN PART. Sintang: Sei Kenepai (Hallier nr. 2223, L, typus, dupl. in [BZ]).

6. **Kibessia acuminata Decne.** Decaisne in Ann. Sc. Nat. sér III. V (1846) p. 316; Triana in l.c. (1871) p. 153; Cogniaux in l.c. (1891) p. 1108.

Tree. Branches terete, the younger ones covered with rubiginous short hairs. Leaves lanceolate, 7—7.5 cm × 2—2.5 cm, at the base acute, at the top acute or shortly acuminate, subcoriaceous, ciliate, on the underside on the nerves pilosellous, 3-plinerved, cross-venules distinct, reticulate. Petiole 4—5 mm long, covered with rubiginous short hairs. Inflorescence and adult flowers are unknown to me. Calyx tube campanulate, (calyptra incl.) 12 mm long, covered with patent, triangular, small scales, on the border between calyx tube and calyptra covered with larger scales; calyptra ovate, ending in a long rostrum, pubescent, nude. Petals ovate, subacute. Anthers broadly deltoid, obtuse; connective dorsally ending in a triangular appendage. Berry widened at the top, 6 mm long.

Observ. The material examined by me is incomplete. Differing from all species mentioned in this paper, by its small, lanceolate leaves and by the rubiginous-pilosellous branches.

Distribution.

RIOUW ARCHIPELAGO. P. Dompak: 50 m (Bünnemeyer nr. 6424, L, fr. June).

BORNEO. WESTERN PART. Exact locality unknown: Amai Ambit (Hallier nr. 3113, L).

FURTHER DISTRIBUTION: Malay Peninsula and Singapore.

7. **Kibessia Korthalsiana Cogn.** Cogniaux in Boerl., Handl. Flor. Ned. Ind. I (1890) p. 537 [nomen]; idem in l.c. (1891) p. 1111; Krasser in l.c. (1893) p. 196; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 257; *Ewyckia cordata Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 255; *Macroplacis cordata* (*Korth.*) *Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 7 and fig. III; Naudin in l.c. XVIII (1852) p. 260; Miquel, l.c. (1855) p. 569; *Rectomitra cordata* (*Korth.*) *Triana* in l.c. (1871) p. 153.

Tree, (according to Winkler) 7—8 m high. Branches terete, glabrous. Leaves cordate-oblong, 13—26 cm × 7—13 cm, at the base subcordate, at the top acute or obtusely acuminate, subcoriaceous, on both sides glabrous, 7-nerved, the 3 central nerves very thick, the

2 marginal ones very thin, cross-venules distinct, irregularly branched. Petiole 4—5 mm long, flattened, glabrous. Flowers in axillary, up to 1 cm long fascicles; fascicles on the adult branches bearing up to 30 flowers, those on the young branches bearing about 10 flowers. Bracteoles narrowly triangular, 1 mm long. Pedicel 2—3 mm long, in the middle part bibracteolate. Calyx tube, (calyptra incl.) 4—6 mm long, when very young subcylindrical with an ovoid, entirely closed, nude calyptra, but after dehiscing of the calyptra into 4 triangular lobes, the calyx tube is widened at the top, glabrous and densely covered with triangular, small warts. Petals obovate, 3—3.5 mm × 2.5 mm, obtuse, pink. Filaments 2—2.5 mm long; anthers dolabriform, 2 mm long, obtuse, opening introrsely by a single slit; connective inappendiculate. Style 7—8 mm long, glabrous; stigma capitate, grooved. Berry globose, 6—7 mm long, at the top ending in a short neck; stalk 3—5 m long. Seeds triangular or irregular, 0.5 mm long, shining, when dry often crimson.

Observ. Easily to recognize from all here mentioned species by its large, cordate, 7-nerved leaves. Described as belonging to the genera Ewyckia, Macroplacis and Rectomitra, this plant is yet a true Kibessia. Very closely allied to K. Korthalsiana Cogn. is K. Elmeri Merr. from British Borneo, which may even be identic with our species. The small differences in the features of the leaves and calyx tube, are in my opinion of no specific value.

Distribution: endemic.

BORNEO. WESTERN PART. Sintang: G. Kenepai (Hallier s.n. [BZ], L, fl. March); Sanggau near Tanggi river (idem s.n. [BZ], L, fl. Oct.); locality unknown (idem nr. 1559 [BZ], L). Locality unknown: (Teysmann s.n. L). SOUTHERN AND EASTERN PART. Exact locality unknown: G. Rantau (Korthals s.n. L, typus, sub *Ewyckia cordata Korth.*); idem (idem s.n L, sub Ewyckia erythrocarpa Korth.). Locality unknown: (Korthals s.n. L); (de Vriese s.n. L). BRITISH BORNEO: a.o. Mt. Kinabaloe.

8. **Kibessia galeata (Korth.) Cogn.** Cogniaux in Boerl., Handl. Flor. Ned. Ind. I (1890) p. 537 [nomen]; idem in l.c. (1891) p. 1110; *Ewyckia galeata Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 254 and tab. 67; Miquel, l.c. (1855) p. 569; *Ewyckia Korthalsiana Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 321 and 124 [nomen]; *Pternandra Forbesii Baker f.* in Journ. Bot. LXII Suppl. I (1924) p. 41; *Pternandra galeata (Korth.) Ridley*, Flor. Mal. Penins. I (1922) p. 808; *Rectomitra galeata (Korth.) Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 6 and fig. I; Naudin in l.c. XVIII (1852) p. 261; Triana in l.c. (1871) p. 153.

Tree, (according to Korthals) 8—10 m high. Branches terete, glabrous, pallid. Leaves ovate-oblong or ovate-lanceolate, 6.5—14cm × 3.5—8 cm, at the base acute or subacute, at the top obtusely acuminate, subcoriaceous, on both sides glabrous, on the upperside pale-green, on the underside, pale-brown, somewhat shining, 3-nerved, with 2 thin marginal nerves, cross-venules distinct, not reticulate. Petiole 5—11 mm long, flattened, glabrous. Flowers either 3 or 5 together in axillary pseudo-fascicles or flowers solitary; peduncle up to 2 mm long. Bracts and bracteoles narrowly triangular, up to 1 mm long. Pedicel 2—5 mm long, in the middle part bibracteolate. Calyx tube campanulate, (calyptra incl.) 6—8 mm long, tesselate, glabrous; calyptra broadly conical, short, nude, first closed, finally dehiscing into 4 broadly triangular lobes. Petals obovate, 3 mm × 2.5 mm, obtuse and (according to Ridley) blue .Filaments geniculate (length unknown to me); anthers oblong, 2 mm long. Style 7—13 mm long, glabrous, often subpersistent; stigma capitate, quadrifid, 1 mm wide. Berry subglobose or ovoid, 9 mm long, ending in a short cylindrical neck; stalk 5 mm long. Seeds narrowly triangular, 1—1.3 mm long, shining.

Observ. A remarkable form on account of its habit. Sterile specimens may be confused with Pternandra. Pternandra Forbesii Baker f. is wholly identic with our species. The statement of Baker f. that the plant is a large climber must be a mistake, for both Kibessia and Pternandra contain exclusively trees or shrubs. Allied to K. galeata (Korth.) Cogn. is K. affinis Merr. from British Borneo, differing especially by its narrowly oblong stigma; this species is perhaps only a variety of K. galeata (Korth.) Cogn. and may even be identic with it.

Distribution.

SUMATRA. Palembang: Bigin Telok, R. Rawas, 100 m (Forbes nr. 3219, type of *Pternandra Forbesii Baker f.*, dupl. in L). Lampong districts: Manggala (Teysmann s.n. U; v.n. obie-obie); locality unknown. (idem s.n. L).

BANKA: Soengai liat. (Teysmann s.n. U); Soengai selan, 25 m (Bünnemeyer nr. 2090 [BZ], L, buds Sept.); Bt. Beboeloe near Perlang, Koba, 70 m (idem nr. 2150 [BZ], L, fl. Nov.; v.n. mětang); locality unknown (Teysmann s.n. U; v.n. měmětang).

BORNEO. WESTERN PART. Sintang: Sei Tanggi (Hallier nr. 988 [BZ], L); Sanggau (idem nr. 823 and 847 [BZ], L); Sei Kenepai (idem nr. 1915 [BZ], L); Soeka Lanting (idem nr. 203 [BZ], L). Exact locality unknown: Sei Landak, Ngabang (Teysmann s.n. [BZ], L); Sei Samak (idem s.n. [BZ], L). SOUTHERN AND EASTERN PART. Bandjermasin: Martapoera (Korthals s.n. L, typus, sub *Ewyckia galeata Korth.*); lake Kalahien (idem s.n. L). Hoeloesoengai: Moeara Koearo (Korthals s.n. L, sub Ewyckia polyantha Korth.). Exact localitty unknown: Hajoep (Winkler nr. 2564, L, fl. June); Beraoe Inaran, 50 m (Boschwezen nr. bb. 12084 [BZ], L, fl. Oct.; v.n. oeboer-oeboer). Locality un-

known: (Korthals s.n. L; v.n. kramoenting danau); (de Vriese s.n. L). BRITISH BORNEO.

FURTHER DISTRIBUTION: Malay Peninsula and New Guinea (vide Mansfeld in l.c.; K. galeata (Korth.) Cogn. var. pluriflora Mansf.).

9. **Kibessia tuberculata (Korth.) Hook. f. ex Clarke.** Clarke in Hook. f., Flor. Brit. India II (1879) p. 553; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1110; Krasser in l.c. (1893) p. 196; *Ewyckia tuberculata Korth.* in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 255; Miquel, l.c. (1855) p. 569; *Pternandra Griffithii King* in Journ. As. Soc. Bengal LXIX part II (1900)p. 70; *Rectomitra tuberculata (Korth.) Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 7; Naudin in l.c. XVIII (1852) p. 261; Triana in l.c. (1871) p. 153.

A small tree. Branches terete, glabrous. Leaves ovate or ovate-oblong, 5—8 cm × 2.5—4 cm, at the base acute, at the top obtusely acuminate, subcoriaceous, on both sides glabrous, on the underside pale brown when dry, 3-plinerved, with 2 thin marginal nerves, cross-venules mostly hardly conspicuous. Petiole 4—5 mm long, flattened, glabrous. Flowers axillary, either 3 or 5 together on a 4—5 mm long, glabrous peduncle or flowers solitary. Bracts and bracteoles linear, 1—2 mm long. Pedicel 7—8 mm long. Calyx tube campanulate, (calyptra incl.) 4—5 mm long, densely covered with triangular, flat scales, which are outside often provided with ridges; calyptra ovoid, nude, first closed, finally dehiscing in ovate, acuminate lobes. Petals elliptic, 4 mm × 3 mm, subacute. Filaments 3 mm long; anthers subreniform, 2 mm long; connective dorsally ending in a short spur. Style 7 mm long, subterete; stigma cylindrical, 1—1.5 mm long, grooved. Berry widened at the top. Seeds narrowly triangular, 1—1.5 mm long, shining.

Observ. Easily to recognize by its mostly ovate leaves and flat, when young, recurved scales of the calyx tube. Griffith's specimen nr. 2272/1 from Malacca with a slightly different shape of the leaf and which King considered a new species of Pternandra, is in my opinion surely K. tuberculata (Korth.) Hook. f. ex Clarke.

Distribution.

SUMATRA. West Coast: G. Koerintji [G. Indrapoera] (Korthals s.n. L, typus, sub *Ewyckia tuberculata Korth.*).

FURTHER DISTRIBUTION: Malay Peninsula (Griffith nr. 2272/1) and Penang.

var. **grandifolia Bakh. f.** var. nov.

Arbor parva. Rami tereti glabri. Folia oblonga vel ovato-oblonga 12—13.5 cm × 6.5—7 cm, basi cuneata vel acuta, apice breviter

sed acute acuminata, subcoriacea, utrinque glabra 3-nervia venulis transversis distinctis. Petiolus 7—9 mm longus glaber. Inflorescentia ignota. Flores ante anthesin solum vidi. Calycis tubus late campanulatus 4 mm longus squamulis planis brevibus munitus; calyptra late conica brevis nuda. Petala ovata acutiuscula. Filamenta 1 mm longa; anthereae late deltoideae 1.5 mm longae (in alabastro adulto). Stylus filiformis. Bacca late campanulata 8 mm longa. Semina irregularia 0.5 mm longa nitida.

Observ. Differing from the type species by its pro specie very large leaves and deltoid anthers. This plant may even be a new species of Kibessia, but as the material examined by me is far from complete, I think it better to consider at present this plant a variety of K. tuberculata (Korth.) Hook. f. ex Clarke.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Boeloengan-Beraoe: Boengaloen, 100 m. (Rutten nr. 537, U, typus, buds Nov.).

Species unknown to me, not mentioned in the key.

1. **K. gracilis Cogn.**; Schwartz in Mitt. Inst. Bot. Hamburg Bd. 7 Heft 3 (1931) p. 256. — W. Borneo.
2. **K. Teysmanniana Cogn.** in l.c. (1891) p. 1109. — Borneo.

45. Pternandra Jack.

Jack in Malay Misc. II (1822) nr. VII p. 60; idem (reprint of „Malay Misc.") in Hooker's Comp. Bot. Magaz. I (1835) p. 157; idem (idem) in Calcutta Journ. Nat. Hist. V. nr. XV (1843) p. 309; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 771; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 153; Baillon, Hist. d. plant. VII (1880) p. 62; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 527; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1102; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 196; *Apteuxia Griff.*, Not. IV (1854) p. 672; *Ewyckia Bl.* in Flora XIV (1831) p. 524 and in Bijdr. Nat. Wet. VI (1831) p. 265; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 5; Naudin in Ann. Sc. Nat. sér. III. XVIII (1852) p. 260, 261; Miquel, Flor. Ned. Ind. I (1855) p. 568 [pr. p.].

Shrubs or small trees. Branches terete, glabrous. Leaves opposite, oblong, ovate, ovate-oblong or, rarely, lanceolate, equal, at the base acute or subrotundate, at the top acuminate, subcoriaceous, entire, on both sides glabrous, 3- or 5-nerved, cross-venules very thin, not always distinct, petiolate. Inflorescence axillary, either a few- or many-flowered panicle or a fascicle, bearing at most 20 flowers,

glabrous; peduncle branched or undivised; ramifications of the first order opposite. Flowers hermaphrodite, 4-merous. Bracteoles and pedicel present. Calyx tube campanulate, subterete, tesselate or, rarely, nearly smooth, glabrous; limb truncate or shortly 4-dentate. Petals 4, ovate, acute or subobtuse, glabrous, blue or purple. Stamens 8, equal; filaments well developed; anthers dolabriform, at the top obtuse or shortly bidentate, opening introrsely with 2 slits; all stamens perfect or but a few ones imperfect („staminodes"); connective not produced at the base, dorsally ending in a short spur or inappendiculate, ventrally inappendiculate. Ovary fully concrescent with the calyx tube; septs and exterovarial chambers absent; ovary itself 4-celled; its toppart slightly sunken, glabrous; style filiform, glabrous; stigma conical or subcylindrical, provided with 4 grooves. Berry subglobose, ending in a short cylindrical „neck". Seeds many, narrowly triangular, straight, minute.

Distribution: A few species have been described, but in my opinion there exists only a single species with 2 or perhaps a few more varieties, all Asiatic: Malay Peninsula, Andamans, French Indo-China and the Malay Archipelago (incl. the Philippine Islands).

Key to the varieties of Pternandra coerulescens Jack.

1*a*. Inflorescence a fascicle.
1*a*. **P. coerulescens Jack** var. **capitellata (Jack) King**
b. Inflorescence a panicle, with a long or very short, but distinct peduncle 2
2*a*. Inflorescence 4—8 cm long, bearing many flowers; ramifications up to 4 cm long . . . . . 1*b*. **P. coerulescens Jack. s.s.**
b. Inflorescence 0.5—2.5 cm long, bearing rather abundant flowers, but the number of flowers is less than in the type; ramifications very short. 1*c*. **P. coerulescens Jack** var. **cyanea (Bl.) Cogn.**

1. **Pternandra coerulescens Jack.** Jack in Malay. Misc. II (1822) nr. VII p. 61; idem (reprint of „Malay Misc.") in Hooker's Comp. Bot. Magaz. I (1835) p. 157; idem (idem) in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 309; Triana in l.c. (1871) p. 153; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1103; Krasser in l.c. (1893) p. 196; *Pternandra coerulescens Jack* var. *paniculata (Benth.) King* in Journ. As. Soc. Bengal LXIX part II (1900) p. 69; *Pternandra paniculata (Miq.) Triana* in l.c. (1871) p. 153; *Pternandra paniculata Benth.* in Wall. Cat. nr. 4080; Clarke in Hooker's Flor. Brit. India II (1879) p. 551; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1104; *Apteuxis trinervis Griff.* in l.c. (1854) p. 672;

Ewyckia Jackiana Walp., Repert. V (1845—1846) p. 724; *Ewyckia paniculata Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 321; *Kibessia? angustifolia Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 9; Naudin in l.c. XVIII (1852) p. 262; Miquel, l.c. (1855) p. 571; Triana in l.c. (1871) p. 153; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1109; *Kibessia simplex Korth.* var. *„foliis angustioribus", Miquel*, l.c. (1855) p. 571; *Kibessia simplex Korth.* var. *oblonga Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 9.

A small tree (King). Leaves oblong, ovate-oblong or in abnormal cases lanceolate or linear, 6—13 cm × 3.5—7.5 cm, at the base acute, at the top long acuminate, 5-nerved, the 3 central ones thick, cross-venules mostly hardly conspicuous, not reticulate. Petiole 5—7 mm long, flattened, glabrous. Inflorescence a terminal or axillary, many-flowered, 4—8 cm long panicle; peduncle branched or undivised, 1—2 cm long, quadrangular or subterete; ramifications long, up to 4 cm long. Flowers only seen by me before anthesis. Bracts and bracteoles narrowly triangular, 1—1.5 mm long. Pedicel 3—4 mm long bibracteolate. Calyx tube 2—2.5 mm long, slightly tesselate or, rarely, covered with triangular, short scales; limb truncate. Petals ovate, 3 mm × 2.5 mm ,subobtuse, pale-blue; bud conical, shortly but obtusely acuminate. According to King in l.c., there are from the 8 anthers, 4 or 5 perfect ones, the other 3 or 4 are imperfect; the latter are of the same length as the perfect anthers, but they are much narrower; connective dorsally ending in a short spur. Style 7 mm long; stigma narrowly cylindrical. Berry 4—5 mm long; stalk 5 mm long.

Observ. One finds in this species often witch-brooms with lanceolate to linear, minute to normal-sized leaves. Easily to distinguish from its two varieties by the long inflorescences. Sterile specimens resemble Kibessia species. Pternandra paniculata Benth. is in my opinion wholly identic with P. coerulescens Jack; it is founded on witch-broom like difformed specimens. Clarke, King and others are of the same opinion, but they nevertheless retain those forms as a true species or as a variety of P. coerulescens Jack.

Distribution.

SUMATRA. East Coast: Masihi Forest Reserve, Asahan (Krukoff nr. 4028, L, fl. Oct.-Nov.). Palembang: Banjoeasin and Koeboe lands, 25 m (Dorst nr. $\frac{22T-2P}{25}$ [BZ], L, fl. Dec.; v.n. sĕmoebi gadjah).

P. SIMEULOEË: Tapah, Dèfajan (Achmad nr. 147 [BZ], L, U, fl. Oct.; v.n. marapoejan alafai); locality unknown (idem nr. 560 [BZ], L, fl. Aug; v.n. awa lihai lihai, sima dali); idem (idem nr. 872 [BZ], L, fl. Jan.; v.n. marapoejan falah); idem (idem nr. 997 [BZ], L, fl. Dec.; v.n. marapoejan pajo); idem (idem nr. 1471 [BZ], L, fl. May; v.n. toetoen mara poejan pajo).

BANKA: Soengai liat, Bakan, 60 m (Bünnemeyer nr. 1732 [BZ], L, fl. Oct.); locality unknown (Teysmann s.n. U, type of *Ewyckia paniculata Miq.*); idem (idem s.n. U; v.n. mĕmĕtang).

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unknown: G. Rantau (Waitz s.n. L, type of *Kibessia simplex Korth.* var. *oblonga Bl.*); Hajoep (Winkler nr. 2249, L, fl. May); idem (idem nr. 2408, L, fl. June). Locality unknown: (Jaheri s.n. [BZ], L); (Waitz s.n. L, type of *Kibessia ? angustifolia Bl.*).

NO LOCALITY KNOWN: (on the label is written „Ladi", „Begendong", „West Java"; Boerlage s.n. L).

FURTHER DISTRIBUTION: Burma, Andamans, Malay Peninsula, Penang (Jack, type) and French Indo-China (Guillaumin).

var. **capitellata (Jack) King.** King in Journ. As. Soc. Bengal LXIX part II (1900) p. 69; *Pternandra capitellata Jack* in Malay Misc. II (1822) p. 60 and app. 3; idem (reprint of „Malay Misc.") in Calcutta Journ. Nat. Hist. V nr. XV (1843) p. 310; Miquel, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 124, 321; Triana in l.c. (1871) p. 153; Boerlage, l.c. (1890) p. 536; Cogniaux in l.c. (1891) p. 1103; Krasser in l.c. (1893) p. 196; *Ewyckia capitellata (Jack) Walp.*, Repert. V (1845—1846) p. 724; Miquel, l.c. (1855) p. 568;*Ewyckia medinilliformis Naud.* in l.c. XVIII (1852) p. 261.

A small tree. Leaves elliptic or oblong, 7.5—15.5 cm × 4—8 cm, at the base acute, at the top obtusely acuminate, 3- or 5-nerved, often subglaucous. Petiole 5—10 mm long, flattened, glabrous. Inflorescence an axillary, 5- to 10-flowered fascicle; peduncle up to 3 mm long. Bracteoles linear, 0.5 mm long. Pedicel 3 mm long, bibracteolate. Calyx tube 2.5—3 mm long, tesselate or nearly smooth; limb truncate or minutely 4-dentate. Petals ovate, 2 mm × 1.5 mm, subacute; bud narrowly conical, acute or very acute. Filaments 2 mm long; anthers dolabriform, 1.5—2 mm long; connective dorsally ending in a short spur or inappendiculate. Style 4—6 mm long; stigma subcylindrical, quadrifid. Berry unknown to me.

Observ: Closely allied to P. coerulescens Jack var. cyanea (Bl.) Cogn., but differing by its fasciculate inflorescence.

Distribution.

SUMATRA. Tapanoeli: Siboga, along the coast (Teysmann s.n. U; v.n. badjoh poeti). Palembang: Banjoeasin and Koeboelands, 20 m (Grashoff nr. 852 [BZ], L, fl. Nov.; v.n. kajoe obi). Lampong Districts: Manggala (Teysmann s.n. U; v.n. obie-obie). Locality unknown: (Teysmann s.n. L).

Lingga Archipelago. P. Bakong: 5 m (Bünnemeyer nr. 7584 [BZ], L, fl. Aug.).

BORNEO. SOUTHERN AND EASTERN PART. Kapoeas-Barito: Loeé Katjang, Moera Teweh, 50 m (Boschwezen nr. bb. 10918 [BZ], L, fl. March; v.n. mampoeloe).

FURTHER DISTRIBUTION: Malay Peninsula, Penang, Singapore and New Guinea (vide Mansfeld in Engl. Bot. Jahrb. 60 [1926] p. 137).

var. **cyanea (Bl.) Cogn.** Cogniaux in l.c. (1891) p. 1104; idem in Boerl. Handl. Flor. Ned. Ind. I (1890) p. 536; *Pternandra cyanea* (*Bl.*) *Triana* in l.c. (1871) p. 153; Krasser in l.c. (1893) p. 196 and tab. 81J; *Pternandra coerulescens Jack* var. *Jackiana Clarke* in Hooker's Flor. Brit. India II (1879) p. 551; *Pternandra Jackiana* (*Clarke*) *Ridley*, Flor. Mal. Penins. I (1922) p. 808; *Pternandra Korthalsiana* (*Miq.*) *Triana* in l.c. (1871) p. 153; *Pternandra latifolia* (*Bl.*) *Triana* in l.c. (1871) p. 153; *Ewyckia coerulea* (*Jack*) *Naud.* in l.c. XVIII (1852) p. 261; *Ewyckia cyanea Bl.* in Flora XIV (1831) p. 525 and in Bijdr. Nat. Wet. VI (1831) p. 265; idem in Rumphia I (1835) p. 24 and tab. 8; idem in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 6 and fig. I; Naudin in l.c. XVIII (1852) p. 261; Miquel, l.c. (1855) p. 568; *Ewyckia cyanea Bl.* var.; Korthals in Temminck, Verhand. Nat. Gesch. (1839—1842) Bot. p. 254; Blume in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 6; *Ewyckia cyanea Bl.* var. *latifolia* (*Bl.*) *Miq.*, l.c. (1855) p. 568; *Ewyckia Korthalsiana Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 321 and 124 [nomen]; *Ewyckia latifolia Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 6; Naudin in l.c. XVIII (1852) p. 261; *Ewyckia latifolia Bl.* var. *membranacea Bl.* in Mus. Bot. Lugd.-Bat. I nr. 1 (1849) p. 6.

Tree. Young branches slightly flattened. Leaves oblong, ovate, ovate-oblong or ,rarely, lanceolate, 8.5—11.5 cm × 2.5—7.5 cm, at the base rounded or subacute, at the top long acuminate, 3-nerved, the 2 marginal nerves absent or hardly conspicuous. Petiole 4—6 mm long, glabrous. Inflorescence an axillary, 0.5—2.5 cm long cyme, bearing few or rather abundant flowers; peduncle 5—10 mm long, subquadrangular or subterete, glabrous. Bracteoles cucullate, 0.8 mm long. Pedicel 3—6 mm long, bibracteolate. Calyx tube narrowly campanulate or broadly elliptic, 3—3.5 mm long, slightly tesselate or nearly smooth; limb truncate or minutely dentate. Petals ovate, 3 mm × 2 mm, acuminate or subacute, (according to Rutten) pale violet; bud narrowly conical, acute or acuminate. Filaments geniculate, 2—2.5 mm long; anthers dolabriform, 1—2 mm long, at the top bidentate. Style 7 mm long; stigma subulate. Berry 5—6 mm long; stalk 6—8 mm long. Seeds narrowly triangular, about 1 mm long.

Observ. An extremely variable form.

Distribution: restricted to the localities quoted below.

SUMATRA. East Coast: Masihi Forest Reserve, Asahan (Krukoff nr. 4021, L fr. Oct.-Nov.). Palembang: Rawas, 100 m (Grashoff nr. 1033 [BZ] L, fl. March; v.n. tĕmbras djantong). Locality unknown: (Waitz s.n. L, sub Ewyckia latifolia Bl.).

LINGGA ARCHIPELAGO. P. L i n g g a: Kp. Panggak, 50 m (Bünnemeyer nr. 7025 [BZ], L, U, fl. July).

RIOUW ARCHIPELAGO. P. K a r i m o e n: (Boschwezen nr. b.b. 17579 and 17580 [BZ], L, fl. Aug.).

BANKA: Soengailiat (Teysmann s.n. [BZ], U, sub Ewyckia Korthalsiana Miq. var. angustifolia Miq.); idem (idem s.n. U, sub Ewyckia Korthalsiana Miq.).

BORNEO. WESTERN PART. S i n t a n g: G. Kenepai (Hallier nr. 1647 [BZ], L); Sanggau (idem nr. 901 [BZ], L); Sei. Semitau (idem nr. 1288 [BZ], L). P o n t i a n a k: Olak olak, 4 m (Boschwezen nr. b.b. 12639 [BZ], L, fl. June; v.n. benaoen). SOUTHERN AND EASTERN PART. B a n d j e r m a s i n: Pelampai [„ P. Lampei"] (Korthals s.n. L, sub Ewyckia glabra Korth. var. coerulea Korth.); G. Pamatton (idem s.n. L, type of *Ewyckia latifolia Bl*, sub *Ewyckia cyanea Bl.* var. *Korth.*). S a m a r i n d a: Bontang, Sei Berbas (Rutten nr. 205, U, fl. May); West Koetei (Boschwezen nr. b.b. 16590 [BZ], L, ster.). E x a c t l o c a l i t y u n k n o w n: Doessoen lands (Korthals s.n. L, type of *Ewyckia latifolia Bl.* var. *membranacea Bl.*). L o c a l i t y u n k n o w n: (Korthals s.n. L); (idem s.n. L, sub Ewyckia azurea Korth., fl. Aug.). BRITISH PARTS.

CELEBES. G v t. C e l e b e s a n d d e p e n d e n c i e s: Malili, Oesoe, 5 m (Boschwezen nr. Cel./III 24 [BZ], L, fl. Oct.; v.n. paha paha).

MOLUCCAS. A m b o n: Laha (Forsten s.n. L); S. of Roetoem, 0—300 m (Kornassi nr. 1154 [BZ], L, U, fl. Apr.); locality unknown. (Zippel s.n. L, typus, sub *Ewyckia cyanea Bl.*); idem (Robinson nr. 2025, 2026, L, PNH). C e r a m: Afang, 0 m (Kornassi nr. 912 [BZ], L, U, fl. Jan.); W. of Piroe, 0—100 m (Rutten nr. 1648 [BZ], L, U, fl. Sept.).

NO LOCALITY KNOWN [? Sumatra]: (Forbes nr. 2998a, L).

C. Subfamilia Memecyloideae

Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 144 (subfamilia); *Blakeae*, Bentham and Hooker; Baillon, Hist. d. plant VII (1880) p. 32 (pr. p.; typo excl.); *Memecyleae*, De Candolle, Prodr. III (1828) p. 5. (ordo); Blume in Mus. Bot. Lugd.-Bat. I (1851) p. 353 (ordo); Naudin in Ann. Sc. Nat. sér. III. XII (1849) p. 202 (subordo) and XVIII (1852) p. 262 (subordo); Miquel, Flor. Ned. Ind. I (1855) p. 571 (subordo); Bentham and Hooker, Gen. Plant. I 2 (1865) p. 727 (subordo); Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 4 (subordo; „Memecylées"); Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 506 (subfamilia); Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1112 (subordo).

Shrubs or trees. Ovary 1- to 6-celled, wholly concrescent with the calyx tube; septs and exterovarial „chambers" absent; ovules per cel 1 to 3 or, rarely, more; when 1-celled, the ovary contains 5 to 12 or, very rarely, 20 ovules, which are inserted either on a central placenta or at the base of the cel. Fruit a berry or a capsule. Seeds 1 to 5, globose, rather large. Embryo rather large, thick. Cotyledons large, either foliaceous or plan-convex and thick.

Trib, X. **Axinandreae**

Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 142, 196 (tribus); *Blakeae*, Bentham and Hooker; Baillon, Hist. d. plant VII (1880) p. 65 (pr. p.; typo excl.); *Lythrarieae*, Bentham and Hooker, Gen. Plant I 2 (1865) p. 784 (pr. p.; typo excl.); *Memecyleae* D.C.; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 506; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1113; Oliver in Hook. f. Icon. Plant (1895) tab. 2351.

Trees. Flowers 4- to 6-merous, hermaphrodite or, by abortion, unisexual. Calyx limb dentate or shortly lobed. Stamens 5 or 6, equal; anthers equal, dolabriform or hemispherical, opening with 2 slits; connective not produced at the base, inappendiculate. Ovary 4- to 6-celled; its toppart glabrous; ovules 1 to 3 per cel. Capsule dehiscing apically with 2 to 6 valves. Seeds few, linear, alate.

Distribution: All Asiatic: Ceylon, Malay Peninsula and Malay Archipelago (Borneo).

46. **Dactylocladus Oliv.**

Oliver in Hook. f. Icon. Plant. (1895) tab. 2351; Gilg in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7. Nachtr. I (1897) p. 267;

Trees. Branches quadrangular, dichotomously branched, glabrous. Leaves opposite, equal, elliptic, obovate or obovate-oblong, at the base acute, at the top subacute or subobtuse, coriaceous, entire, glabrous, 1-nerved, petiolate. Inflorescences terminal, often 3 together, 3- to 5-furcate-spicate, glabrous; peduncle present. Flowers anisomerous, hermaphrodite or, rarely, by abortion unisexual. Bracteoles and pedicel present. Calyx tube broadly campanulate, pilosellous; limb 4- or 5-dentate. Petals 4 or 5, suborbicular, unguiculate, fimbriate, on the outside tomentellous. Stamens 5, equal, oppositipetalous; filaments well developed; anthers hemispherical, opening with 2 slits; connective not produced at the base, inappendiculate. Ovary half as long as the calyx tube, wholly concrescent with the calyx tube, 3-, 4- or 5-celled; style narrowly cylindrical, tomentellous; stigma capitate. Capsule strongly widened at the top, provided with the persistent calyx teeth, dehiscing at the top with 4 or 5 valves; valves arcuately connate with the upper parts of the (imperfect) style and stigma. Seeds oblong, alate, straight, exalbuminous.

Distribution: a single species, only known from Borneo.

1. **Dactylocladus stenostachys Oliv.** Oliver in Hook. f. Icon.

Plant. (1895) tab. 2351; Diels. u. Hackenberg, Engl. Bot. Jahrb. 60 (1926) p. 298.

Trees. Leaves 1-nerved, cross-venules hardly conspicuous, slanting, quasi-penninerved, 5—8 cm × 2.5—5.2 cm. Petiole 3—5 mm long, glabrous. Inflorescence up to 14 cm long; peduncles quadrangular, glabrous; the central one 2—5 cm long, the lateral ones 1—3 cm long; racemes up to 7 cm long, quadrangular. Flowers irregularly arranged in 3 to 5 rows. Bracts and bracteoles subulate, up to 1 mm long. Calyx tube 2—2.5 mm long, terete, very slightly ribbed; teeth triangular, 0.5 mm long. Petals only seen before anthesis. Filaments 0.8 mm long, pilosellous; anthers 0.3 mm long. Ovary $^1/_3$ to $^1/_2$ as long as the calyx tube; its toppart convex, glabrous; style 2.5 mm long, densely tomentellous, subglabrescent; stigma capitate, 0.3 mm in diameter. Capsule 2.5—3 mm long; its valves narrowly triangular, 1—1.5 mm long, subulate-acuminate, on the outside pilosellous; stalk 1 mm long. Seeds (according to Oliver) white.

Distribution: endemic.

BORNEO. WESTERN PART. Pontianak: Sekadau (Boschwezen nr. bb.7032 [BZ], L, fl. July; v.n. entiboe); Batoelajang (idem nr. b.b. 9673 [BZ], L, fl. Febr.; v.n. medang beladi); Sintang: locality unknown (Teysmann s.n. L). SOUTHERN AND EASTERN PART. Boeloengan-Beraoe: Tidoeng lands, 20 m (Boschwezen nr. b.b. 17726 [BZ], L, fl. June). BRITISH BORNEO: Sarawak.

47. **Axinandra Thw.**

Thwaites in Hook, Kew Journ. Bot. VI (1854) p. 669 idem, Enum. Plant. Zeylan (1864) p. 122; Baillon, Hist. d. plant. VII (1880) p. 65; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 528; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1113; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 196. *Axinandra Thw. sect. Naxiandra Baill.*, in Adansonia XII (1876) p. 85; idem in Bull. Soc. Linn. Paris (1877) p. 127, idem, Hist. d. plant VII (1880) p. 28 and p. 65; *Naxiandra Krasser* in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 197 and fig. 82a.

Trees. Branches acutely or obtusely quadrangular or, rarely, terete, glabrous. Leaves opposite, equal, elliptic to lanceolate, at the base acute or obtuse, at the top acuminate, coriaceous, entire, on both sides glabrous, subtriplinerved, cross-venules prominent, confluent with the 2 sinuate lateral nerves, mostly strongly reticulate, petiolate. Inflorescences solitary or 3 to more together, axillary or terminal, many-flowered; racemes shortly pedunculate. Flowers 5- or 6-merous, hermaphrodite. Pedicel present. Calyx tube campanulate, terete or

subquadrangular, often ribbed, glabrous or furfuraceous; limb 5- or 6-dentate. Petals 5 or 6, contorted in the bud (sect. Eu-Axinandra) or induplicate-valvate (sect. Naxiandra), narrowly triangular, elongated into a rather long fimbriate acumen, deciduous before the bud opens. Stamens 10 or 12, equal; filaments short; anthers dolabriform, basifixed, obtuse at both ends, (in sect. Naxiandra, the anthers are before the buds open, enveloped by the top of the elongated parts of the petals); connective not produced at the base, inappendiculate. Ovary at the top depressed, glabrous, 5- or 6-celled, wholly concrescent with the calyx tube; ovules per cel either 1 (sect. Eu-Axinandra) or 2 (sect. Naxiandra), arising from the base of the cel, anatropous; style columnar, very short; stigma hardly conspicuous. Capsule broadly campanulate, terete or subangular, woody, its surface exsculpted; its toppart conical, dehiscing in 2 to 6 valves, valves narrowly triangular, thick, on the inside acutely 1-angled. Seeds trapezoid, large; chalaza elongated in a wide membranous wing.

Distribution: About 5 species, all Asiatic: Ceylon, Malay Peninsula and Borneo.

Key to the species.

1*a*. Petals contorted in the bud. Ovules per cel 1. Capsule 2—2.5 cm long . . . . . 1. **A. zeylanica Thw.**

b. Petals induplicate-valvate in the bud. Ovules per cel 2. Capsule 1.5 cm long . . . . . 2. **A. borneensis Bakh. f.**

1. **Axinandra** (sect. Eu-Axinandra) **zeylanica Thw.** Thwaites in Hook. Kew Journ. Bot. VI (1854) p. 67 and pl. 1c fig. 1; idem, Enum. Plant. Zeylan (1864) p. 122; Cogniaux in l.c. (1891) p. 1113; Krasser in l.c. (1893) p. 197.

Tree, 15—20 m high. Adult branches subterete or subquadrangular, the young ones acutely quadrangular; the nodes strongly thickened. Leaves elliptic, oblong or, rarely, broadly lanceolate, 7—10 cm × 3—5.5 cm at the base acute or rounded, at the top abruptly acuminate, coriaceous, shining. Petiole 5—7 mm long, glabrous. Inflorescences axillary and terminal, up to 5 cm long, bearing 12 to 20 flowers; peduncle subterete. Flowers 5-merous. Bud subglobose. Pedicel 1.5 mm long. Calyx tube campanulate-subcyathiform, 1—1.5 mm long, subterete, furfuraceous; teeth broadly triangular. Petals contorted in the bud, triangular 0.5 mm long, elongated in a long, broad and obtuse acumen. Filaments 0.5 mm long; anthers dolabriform-elliptic, 0.8 mm long, at both ends obtuse. Ovary 5-celled; 1 ovule per cel; style 0.5 mm long, glabrous. Capsule

campanulate, 2—2.5 cm × 1.5—1.8 cm (the valves included), subterete or subquadrangular, at the top dehiscing in 3 valves; valves exceeding the calyx limb by about 1 cm, outside with a rough surface, inside acutely angular, at maturity widely opened; stalk 3 mm long, mostly thick. Seeds 7 mm × 3.5 mm, flattened; its wing 12 mm × 4.5 mm.

Distribution.

BORNEO. WESTERN PART. Sintang: G. Lianggagang (Hallier nr. 2683 [BZ], L).

FURTHER DISTRIBUTION: Ceylon (Thwaites nr. 2668, type specimen in PDA, dupl. in L).

2. **Axinandra** (sect. Naxiandra) **borneensis Bakh. f.** spec. nov.

An arbor? Rami adulti teretes, juveniles teretiusculi, ad nodos valde incrassati. Folia oblongo-lanceolata 6—8 cm × 3—3.5 cm, basi cuneata, apice breviter obtuso-acuminata, subcoriacea. Petiolus glaber 4—6 mm longus. Inflorescentia axillaris terminalisque, ad 7 cm longa, submultiflora; pedunculus brevissime compresso-quadrangularis, furfuraceus; racemi plerumque 3. Flores 5-meri (perianthium mihi ignotum). Alabastrum subglobosum. Pedicellus 1 mm longus. Calycis tubus campanulatus 1.5 mm longus, teres costatus glabriusculus; dentes late triangulares. Filamenta 0.8 mm longa; antherae dolabriformes vel elliptico-oblongae 0.8 mm longae. Ovarium 5-loculare, ovulis 2 per loculum; stylus 1.5 mm longus glaber. Capsula late campanulata 1.5 cm longa (valvae incl.) teres extus venata et exsculpta; valvae 3, anguste triangulares acutae, intus acute angulatae, extus exsculptae limbo 8—9 mm excedentes, primo clausae deinde late apertae; pedicellus 3—4 mm longus. Semina ignota.

Observ: Allied to A. Beccariana Baill. and A. Maingayi Clarke. Although the differences are but small and also the material is incomplete, I nevertheless consider this plant a new species.

Distribution: restricted to the localities quoted below.

BORNEO. SOUTHERN AND EASTERN PART. Locality unknown: (Jaheri s.n. L, typus, dupl. in [BZ]).

BILLITON: (Teysmann s.n. [BZ], L).

Tribus XI. Memecyleae

Chamisso in Linnaea X (1835) p. 217 (tribus); Triana in Bull. Congr. Bot. d'Amsterdam (1865) p. 457, 461; Bentham and Hooker, Gen. Plant. I 2 (1865) p. 727, 772 (tribus); Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 506 (tribus); Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1112; Krasser in Engl. u. Prantl, Die Nat.

Pfl. Fam. III 7 (1893) p. 197; *Mouririeae,* Triana in Trans. Linn. Soc. XXVIII (1871) p. 4 and 153 (tribus).

Shrubs or trees, mostly glabrous. Flowers 4- or 5-merous, hermaphrodite or, rarely, by abortion unisexual. Calyx limb mostly subtruncate or minutely dentate or, rarely, forming a calyptra. Stamens 8 or 10, equal or subequal; filaments ± medifixed; anthers dolabriform or linear, opening with 2 slits; its thecae mostly minute; connective dorsally ending in a broad appendage. Ovary, wholly concrescent with the calyx tube, 1- to 5-celled; top of the ovary sunken, glabrous; ovules 2- to 12 or, rarely, up to 20, rather large, on central or axillary placentas. Berry at the top crowned by an epigynous disc, which is provided with radiating ribs. Seeds 1 to 5, mostly globose, large.

Distribution: South America, the Antills, tropical Africa, Asia, Australia and the Pacific region.

48. Memecylon L.

Linnaeus, Spec. Plant I (1753) p. 349; De Candolle, Prodr. III (1828) p. 5; Blume in Mus. Bot. Lugd.-Bat. I nr. 23 (1851) p. 353; Naudin in Ann. Sc. Nat. sér. III. XVIII (1852) p. 264; Miquel, Flor. Ned. Ind. I (1855) p. 572; Bentham and Hooker, Gen. Plant I 2 (1865) p. 773; Triana in Trans. Linn. Soc. XXVIII part I (1871) p. 155; Baillon, Hist. d. plant. VII (1880) p. 65; Boerlage, Handl. Flor. Ned. Ind. I (1890) p. 529; Cogniaux in De Candolle, Monogr. Phanerog. VII (1891) p. 1130; Krasser in Engl. u. Prantl, Die Nat. Pfl. Fam. III 7 (1893) p. 198; *Lyndenia Moritzi* in Moritzi, Zollingers Syst. Verz. (1845—1846) p. 10.

Shrubs or trees, 1.5—20 m high. Adult branches terete or quadrangular, the younger ones terete, subterete, subquadrangular, acutely or alate-quadrangular, glabrous or, very rarely, pilosellous. Leaves opposite, equal, elliptic to lanceolate, ovate or obovate, at the base acute, cuneate, obtuse or cordate, at the top acute, acuminate or obtuse, entire, coriaceous, subcoriaceous or submembranaceous, on both sides glabrous, subtrinerved (i.e. midnerve prominent and the 2 marginal nerves thin but distinct, sinuate) or 3-nerved (i.e. the 2 marginal nerves as strong as the midnerve), 3-plinerved or 1-nerved (i.e. midnerve prominent, the 2 marginal nerves absent); the midnerve is always prominent, cross-venules strong („penninerved") to absent; leaves petiolate or sessile. Inflorescences axillary umbels, cymes or heads, few- to many-flowered or, rarely, (only in African forms) terminal panicles; peduncles absent or well developed; solitary or more than one from each leaf axil, subterete or subquadrangular, mostly

glabrous or rarely, pilosellous; ramifications of the first order quaternate, simple or divised, normally in 2 to 4 rows. Flowers 4-merous, hermaphrodite or? unisexual (M. dioicum [Naud.] Cogn.). Bracts and bracteoles often present. Pedicel present. Petals 4, ovate, orbicular, subcordate or oblong, minute, glabrous, mostly blue or, rarely, white. Stamens 8, equal; filaments medifixed, mostly short; anthers dolabriform; thecae minute, opening with 2 slits; connective dorsally ending in a thick appendage, which is often as long as the thecae or twice as long as them and dorsally provided with a sessile, hollow gland; ventrally the connective is inappendiculate. Ovary wholly concrescent with the calyx tube, 1-celled; its toppart swollen or depressed, glabrous, provided with an epigynous disc, having inside 8 radiating ribs, between which the anthers are hided in the bud; ovules 5 to 20, arising from a central placenta; style filiform, glabrous; stigma hardly conspicuous or, rarely, conical. Berry subglobose, ellipsoidic or oblong, provided with the persistent calyx limb, at the base sometimes lumped; its pericarp thin or thick. Seeds 1 or 2, only a little smaller than the berry itself. Embryo convolute, exalbuminous. Cotyledons thick or foliaceous, acute; radicle terete.

Distribution: About 320 species have been described from Africa, Asia, Australia (and the Pacific region): West coast of Africa, South Africa, Madagascar, the Seychelles, Ceylon, British India, Andamans, Malay Peninsula, Siam, French Indo-China, Malay Archipelago (incl. the Philippine Islands), tropical Australia and the Fiji Islands.

Key to the species.

1*a*. Leaves distinctly trinerved. . . . 1. **M. oligoneurum Bl.**
b. Leaves subtrinerved or 1-nerved 2
2*a*. Flowers in dense, sessile or very shortly (1—2 mm long) pedunculate clusters 3
b. Flowers arranged in a distinctly pedunculate cyme or panicle. 8
3*a*. Young branches alate-quadrangular. Lateral nerves on the upperside of the leaves rather distinct.
2. M. depokkense Bakh. f.
b. Young branches subterete or subquadrangular. Lateral nerves on the upperside of the leaves hardly conspicuous 4
4*a*. Calyx limb dentate; its teeth triangular 5
b. Calyx limb truncate or, sometimes, apiculate 7
5*a*. Leaves obovate-oblong. Calyx limb slightly dentate.
3. M. glomeratum Bl.
b. Leaves elliptic or oblong. Calyx limb distinctly dentate . . 6
6*a*. Leaves at the base acute, coriceous. Flowers rather abundant.

Pedicel 2 mm long. . . 4. **M. bracteolatum Bakh. f.**

b. Leaves at the base cuneate, subcoriaceous. Flowers very numerous. Pedicel 1—1.5 mm long. 5. **M. myrsinoides Bl.**

. . *a.* Leaves elliptic, 3—3.5 cm × 1.6—1.8 cm. Style 25 mm long. . . . . 5*a*. **M. myrsinoides Bl. s.s.**

b. Leaves broadly oblong, 5.5—10 cm × 3—4 cm. Style 5 mm long. 5*b*. **M. myrsinoides Bl. var. lilacinum (Zoll. et Mor.) King**

7*a*. Calyx limb ending in sinuate and rounded lobes. Petals subcordate. Pericarp thin. Petiole robust, thick, 5—12 mm long. 6. **M. multiflorum Bakh. f.**

b. Calyx limb ending in distinctly apiculate lobes. Petals oblong. Pericarp very thick. Petiole slender, thin, 4—6 mm long. 7. **M. laevigatum Bl.**

8*a*. Leaves on both sides subtrinerved 9

b. Leaves on both sides 1-nerved 19

9*a*. Young branches acutely quadrangular 10

b. Young branches terete or subquadrangular 11

10*a*. Leaves ovate-linear, 14—18 cm × 3—4 cm. Inflorescence slender, 28 × 75 mm long. Calyx tube terete. 8. **M. La-Ruei Merr.**

b. Leaves oblong or broadly lanceolate, 13—24 cm × 5—10 cm. Inflorescence robust, 5—35 mm long. Calyx tube 8-ribbed. 9. **M. costatum Miq.**

11*a*. Leaves narrowly lanceolate, 4 to 5 × as long as wide. 10. **M. subtrinervium Miq.**

b. Leaves oblong or broadly lanceolate, at most 3 × as long as wide 12

12*a*. Leaves at the base distinctly but shortly cordate. 11. **M. subcordifolium Bakh. f.**

b. Leaves at the base acute or subobtuse 13

13*a*. Peduncle 2—3 mm long 14

b. Peduncle 12—35 mm long or, rarely, also 6 mm long . . 16

14*a*. Inflorescence bearing 1 to 3 flowers. Top of the berry bulging. 12. **M. protrusum Bakh. f.**

b. Inflorescence bearing more than 3 flowers. Top of the berry flat 15

15*a*. Inflorescence a fascicle. Peduncles 5—10 arising from each leaf axil. Calyx tube campanulate, at the base slightly acute. Petiole 3—4 mm long . . . . . 13. **M. heteropleurum Bl.**

b. Inflorescence not a fascicle. Peduncles 2 to 4 arising from each

leaf axil. Calyx tube obconical, at the base rounded. Petiole 5—10 mm long . . . . . 14. **M. excelsum Bl.**

16*a*. Leaves very large, 17.5—26.5 cm × (5.5)—8—10 cm . . 17
b. Leaves medium-sized, 8—14 cm × 3.5—5.5(—6) cm . . 18

17*a*. Leaves ovate-lanceolate, at the base rounded. Berry ellipsoidic. 15. **M. acuminatissimum Bl.**
b. Leaves oblong, at the base cuneate. Berry elliptic, at both ends very acute. Pericarp very thin, less than 0.5 mm in diameter. 16. **M. acrocarpum Bakh. f.**

18*a*. Petiole 10—15 mm long. Berry subglobose. Pericarp very thick, 1 mm in diameter. . . . . 17. **M. sumatrense Bakh. f.**
b. Petiole 3—6 mm long. Berry pyriform, at the base lumped. Pericarp very thin, less than 0.5 mm in diameter. 18. **M. ambiguum Bl.**

19*a*. Leaves on both sides with thin, prominent lateral nerves. 20
b. Leaves on both sides without prominent lateral nerves; cross venules absent or hardly conspicuous 26

20*a*. Young branches acutely quadrangular 21
b. Young branches terete or subquadrangular 22

21*a*. Petiole 4—6 mm long. Leaves narrowly oblong, at the top acutely acuminate . . . . . 19. **M. minutiflorum Miq.**
b. Petiole absent. Leaves obovate-oblong, at the top very abruptly long acuminate; its acumen subfalciform. 20. **M. marginatum Bl.**

22*a*. Inflorescence subumbellate (i.e. ramifications ± absent), at most 1 cm long 23
b. Inflorescence paniculiform (i.e. ramifications distinct and either short or rather long), 2- to 4 cm long 25

23*a*. Petiole 4—5 mm long, rather wide, gradually narrowed to the lamina. Leaves narrowly oblong, subcoriaceous. 21. **M. hepaticum Bl.**
b. Petiole 7—9 mm long 24

24*a*. Leaves coriaceous, oblong, at the top shortly but obtusely acuminate. Bracts present, fleshy. Bud subglobose. 22. **M. globosum Bakh. f.**
b. Leaves rather thin, elliptic-oblong, at the top rather long but acutely acuminate. Bracts absent. Bud mammiform. 13. **M. Steenisii Bakh. f.**

25*a*. Berry subglobose. Leaves long acuminate, red-brown when dry, mostly ovate-oblong. Pedicel of the berry 5—6 mm long. Inflorescence few-flowered. . . . . 24. **M. oleaefolium Bl.**

a. Bud 1—1.5 mm long, mammiform.
24*a.* **M. oleaefolium Bl. s.s.**

β. Bud 5 mm long, subglobose. 24*b.* **M. oleaefolium Bl. var. laurinum (Bl.) Bakh. f.**

b. Berry ellipsoidic. Leaves shortly acuminate, green when dry, oblong. Pedicel of the berry 2—3 mm long. Inflorescence many-flowered. . . . . 25. **M. rhodophyllum Bakh. f.**

26*a.* Inflorescences simple or compound umbels (i.e. the peduncle not continued by the main axis). 27

b. Inflorescences cymes or panicles (i.e. peduncle, continued by the main axis, which is 1 to 5 mm long or more) 30

27*a.* Pedicel bibracteolate in the mid, very thick. Leaves very coriaceous. Inflorescence mostly a compound many-flowered umbel. Berry obovate or ellipsoidic, with an unequal base.
26. **M. floribundum Bl.**

b. Pedicel not bibracteolate in the mid, slender. Leaves subcoriaceous 28

28*a.* Peduncle 7—15 mm long. Leaves long but acutely acuminate. Inflorescence many-flowered, 12—20 mm long.
27. **M. garcinioides Bl.**

b. Peduncle 2—4 mm long. Leaves shortly but obtusely acuminate. Inflorescence few-flowered, 5—7 mm long. . . . 29

29*a.* Inflorescence a simple umbel. Calyx tube terete, 1.5 mm long. Leaves small, 4—6 cm × 2—2.5 cm. 28. **M. pauciflorum Bl.**

b. Inflorescence distinctly a compound umbel. Calyx tube 8-ribbed, 0.5—0.7 mm long. Leaves rather large, 6.5—7.8 cm × 3.3—4 cm. . . . . 29. **M. ceramense Bakh. f.**

30*a.* Main axis 1—1.5 mm produced beyond the peduncle. Flowers subcapitellate 31

b. Main axis 3—10 mm produced beyond the peduncle. Flowers distinctly not capitellate. 32

31*a.* Peduncle 3—4 mm long. Leaves elliptic-oblong, 4—7.3 cm long. Petiole 5 mm long. 30. **M. pseudo-nigrescens Bl.**

b. Peduncle 8—10 mm long. Leaves oblong-lanceolate, 9—12 cm long. Petiole 7—9 mm long. 31. **M. ochroleucum Bakh. f.**

32*a.* Inflorescence corymbose. Calyx limb consisting of acute teeth.
32. **M. intermedium Bl.**

b. Inflorescence not corymbose. 33

33*a.* Peduncle acutely quadrangular. Leaves obtusely apiculate.
33. **M. lampongum Miq.**

b. Peduncle subterete or quadrangular. Leaves acute, acuminate

or subobtuse, not apiculate. Pericarp very thick 34

34*a*. Leaves lanceolate, both at the base and at the top gradually narrowed, acute, very coriaceous. Petiole 2—3 mm long. 34. **M. celebicum Bakh. f.**

b. Leaves oblong, shortly acuminate or retuse, subcoriaceous or coriaceous 35

35*a*. Berry at the base lumped. Leaves on both sides without cross-venules . . . . . 35. **M. gibbosum Bakh. f.**

b. Berry at the base not lumped. Leaves on both sides with hardly conspicuous cross-venules 36

36*a*. Leaves 12—15 cm × 5.5—7 cm. Petiole thick, 7—10 mm long. Bracts lanceolate, 2—3 mm long. 36. **M. crassifolium Bakh. f.**

b. Leaves 4.5—9.5 cm × 2—5 cm. Petiole thin, 5—7 mm long. Bracts linear, 0.5—1 mm long or absent. 37. **M. edule Roxb.** var. **ovatum (Smith) Clarke**

1. **Memecylon oligoneurum Bl.** Blume in l.c. (1851) p. 353; Miquel, l.c. (1855) p. 574; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1132; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 201 [Bijdr. nr. 5, Boomsoorten Java]; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1206; Backer, Manuscr. Flor. Java, Melast. (1941) p. 31; *Memecylon laurinum* (*Zoll. et Mor.*) *Kds.*, Exkurs. Flora Java II (1912) p. 701; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); *Memecylon trinerve Hassk.* (non D.C.), Cat. Plant. Hort. Bot. Bog. (1844) p. 259 [nomen]; *Myrtus oligoneura Herb.* Korth., Blume in l.c. (1851) p. 354 (nomen).

Tree, up to 20 m high. Young branches subterete, slightly flattened, glabrous. Leaves broadly elliptic to oblong, 5—12 cm × 3.5—6.5 cm, often with a broad base, rapidly narrowed towards the petiole, at the top often rounded and than abruptly but acutely acuminate, coriaceous, glabrous, on the upperside trinerved or subquintuplinerved, the 3 central nerves very distinct, grooved, cross-venules hardly conspicuous, few, on the underside trinerved or subquintuplinerved, the 3 central ones thick, slightly prominent, often subsinuate, cross-venules distinct, few, longitudinal venules hardly conspicuous, on the upperside green when dry, on the underside pallid. Petiole gradually narrowed into the lamina, 3—10 mm long. Inflorescence a fasciculate, umbellate cluster, up to 5 mm long, many-flowered. Peduncles many arising from each foliate leaf axil, 1—2 mm

long, thick. Bud subglobose. Pedicel 2—2.5 mm long. Calyx tube subglobose-cyathiform, 1—1.5 mm long; limb wide, slightly dentate. Petals ovate-oblong, 1.5 mm × 0.8 mm, unguiculate, at the top acute, white. Filaments 1.5 mm long; anthers dolabriform-ovoid, 0.8 mm long; thecae large, more than ½ × the whole length of the anthers; connective broadly triangular, subacute. Toppart of the ovary swollen; style 4.5 mm long, its base not connate with the disc-grooves; stigma hardly conspicuous. Berry ovoid, 5 mm long, at the base rounded, at the top provided with the persistent, short calyx limb; stalk 5 mm long.

Observ. Most authors write „oligoneuron" instead of „oligoneurum". Differing from all species known by its distinct trinerved, Kibessia-like leaves.

Distribution.

SUMATRA. East Coast: locality unknown. (Yates nr. 1216, L); P. Roepat, 2 m (Bruinier nr. 3 [BZ], L, fl. Apr.; v.n.: delik). Palembang: Moeara doewa (Teysmann s.n. U; v.n. geah); Lematang Oeloe (Lambach nr. 1250 [BZ], L, fl. Oct.; v.n. tĕmbras itam). Lampong Districts: G. Raté, Telangaran, 400 m (Iboet nr. 63 [BZ], L, fl. Nov.).

BANKA: Soengai liat, G. Ribo, 295 m (Bünnemeyer nr.1885 [BZ], L, fl. Nov.).

JAVA. Bantam: Tjemara (Koorders nr. 4642 [BZ], L, ster); Batavia: Djasinga, 100 m (Beumée nr. A. 509 [BZ], L); G. Paroengpoeng, 750 m (Bakhuizen van den Brink nr. 7702 [BZ], L); Locality unknown: (Blume s.n. L, typus).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang (Korthals s.n. L, sub Myrtus oligoneura Korth.). EXACT LOCALITY UNKNOWN (? in W. part): P. Lemoehoetan (Hallier s.n. L). BRITISH BORNEO.

FURTHER DISTRIBUTION: Malay Peninsula, P. Penang and the Philippine Islands.

2. **Memecylon depokkense Bakh. f.** spec. nov. *Memecylon appendiculatum Bl.*; Koorders en Valeton, in Meded. 's Lands Plant. tuin XXXIII (1900) p. 203, 204 [Bijdr. nr. 5, Boomsoorten Java]; Koorders, Exkurs Flora Java II (1912) p. 601; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); *Memecylon nudum Bl.*; Backer in Trop. Nat. Jrg. 7 (1918) p. 179; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III. Vol. VII livr. 2 (1932) p. 172.

Frutex vel arbor parva, 1—6 m alta. Rami adulti obtuso-subquadrangulares, juveniles acute alato-quadrangulares glabri. Folia ovato-lanceolata 6.5—12.5 cm × 2.5—4.5 cm basi rotundata apice acuto-acuminata subcoriacea glabra, supra obscura, subtrinervia, venulis transversis subprominentibus, subtus trinervia costa gracile, venulis transversis haud conspicuis. Petiolus 1—3 mm longus non in laminam transgrediens. Inflorescentia umbelliformis, dense capitata multiflora

fere 1 cm longa. Pedunculi solitarii vel bini ex axilla foliata enati, quadrangulares robusti 1—3 mm longi. Alabastrum anguste mammiforme apiculatum. Pedicellus 3.5—4 mm longus quadrangularis, calycis tubus anguste campanulato-subcyathiformis 1—1.5 mm longus; limbus truncatus vel sinuatus. Petala ovata 2 mm × 1.5 mm, acutiuscula, subvenulata, vena mediana crassa. Filamenta 2.5—3 mm longa; antherae dolabriformi-reniformes 1 mm longae; connectivum acutiusculum thecis aequilongum. Stylus 3—3.5 mm longus, basi elatus, sulcis disci connatus. Bacca subglobosa 7 mm longa, basi gibbosa apice obtusiuscula; pedicellus 4 mm longus. Pericarpus tenuis minus quam 0.5 mm in diametro. Semen unum.

Observ: Allied to M. costatum Miq. with regard to the shape of the leaves, but differing from all related species by its densely clustered inflorescences and acutely alate twigs. Often confused with M. nudum Bl. and M. appendiculatum Bl.

Distribution: restricted to the localities quoted below.

JAVA. Bantam: G. Boentoeng, Tjimara (Koorders nr. 46563 [BZ], L, ster.; v.n. kitĕmbaga); Batavia: Tjiteureup, N. of Buitenzorg, 250 m (Bakhuizen van den Brink nr. 7607 [BZ], L, ster.; v.n. kisarèboe, daoen sarèboe); Depok (Backer nr. 26289 and 26302 [BZ], L, fr. Oct.); idem (idem nr. 31229 [BZ], L); idem (Bakhuizen van den Brink fil. nr. 898, U, fr. Nov.); idem (Beumée nr. 6841, L, typus, dupl. in [BZ], fl. Aug.); idem (idem s.n. [BZ], L); idem (Burck and de Monchy s.n. [BZ], L); idem (Hallier s.n. L, fl. Aug.). Natoena Islands (W. of Borneo). P. Boengoeran (Great Natoena): G. Ranai, 275 m (van Steenis nr. 1178 [BZ], L, U, fl. Apr.; v.n. maro toelang).

3. **Memecylon glomeratum Bl.** Blume in l.c. (1851) p. 356; Triana in l.c. (1871) p. 157; Boerlage l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1160; *Memecylon nigrescens Hook. et Arn.*; Miquel, l.c. (1855) p. 578; idem, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 125.

Shrub. Adult branches subterete, the young ones subquadrangular, glabrous. Leaves obovate-oblong, 5—7.5 cm × 2.5—3.5 cm, at the base very acute, at the top abruptly but obtusely acuminate, retuse, pergamentaceous, glabrous, on the upperside with hardly conspicuous cross-venules or venules absent, on the underside subtriplinerved, cross-venules hardly conspicuous. Petiole 5—8 mm long, slender. I have no flowers seen, but according to Blume, densely glomerulate, subsessile. Calyx limb slightly dentate. Berry subglobose, 5—6 mm long, smooth, shortly stalked. Pericarp thin. Seeds 1 or 2.

Observ: Insufficient known species, closely allied to M. laevigatum Bl., but probably not identic with it, differing by its less coriaceous leaves and subdentate calyx limb.

Distribution: restricted to the localities quoted below.

SUMATRA. Locality unknown: (Blume s.n. L, typus).
BORNEO. SOUTHERN AND EASTERN PART. Samarinda: W. Koetei (Boschwezen nr. b.b. 16542 [BZ], L, fr. March).

4. **Memecylon bracteolatum Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, juveniles teretiusculi glabri. Folia anguste oblonga, 8.5—11.5 cm × 3.7—4.8 cm, basi acuta apice breviter acutiusculo-acuminata, uninervia, venulis transversis absentibus. Petiolus 6—8 mm longus. Inflorescentia dense umbellata aggregata ad 8 mm longa, subsessilis. Pedunculus acute quadrangularis 1.5—2 mm longus. Flores maturi ignoti. Alabastrum ovatum acuminatum. Bracteae oblongae obtusae 1.5 mm longae; bracteolae oblongae numerosae. Pedicellus 2 mm longus gracilis. Calycis tubus campanulatus subquadrangularis, basi acutus, 1—1.5 mm longus, limbo subdentato, dentibus acutis. Petala late ovata. Bacca ignota.

Observ. Allied to M. myrsinoides Bl. var. lilacinum (Zoll. et Mor.) King, but having a more robust habit and the flowers are in less dense clusters.

Distribution: endemic.

MOLUCCAS. Ceram: W. of Bolifar, 100—200 m (Rutten nr. 2147, L, typus, dupl. in (BZ), U, fl. Oct.).

5. **Memecylon myrsinoides Bl.** Blume in l.c. (1851) p. 358; Miquel, l.c. (1855) p. 577; Triana in l.c. (1871) p. 158; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1160; Koorders en Valeton, in Meded. 's Lands Plant.tuin XXXIII (1900) p. 212, 213 [Bijdr. nr. 5, Boomsoorten Java]; van Eeden, Houtsoorten Ned. Ind. (1905) p. 144; Koorders, Exkurs. Flora Java II (1912) p. 702; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Henderson in Bull. Jard. Bot. Buitenzorg sér III. Vol. XII livr. 2 (1932) p. 187 [if correct!]; Backer, Manuscr. Fl. Java, Melast. (1941) p. 33; *Memecylon capitellatum L.*; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1094.

Shrub or tree, up to 4 m high. Adult branches obtusely quadrangular or subterete, the young ones quadrangular, glabrous; internodes many and closely together. Leaves elliptic, 3—3.5 cm × 1.6—1.8 cm, at the base cuneate, at the top very shortly but obtusely acuminate, subcoriaceous, glabrous, when dry yellowish, on the upperside with hardly conspicuous cross-venules or venules absent, on the underside 1-nerved, cross-venules absent. Petiole 4—5 mm long, slender. Inflorescences cymose, very densely clustered, bearing rather abundant flowers, up to 5 mm long. Peduncle 1—1.5 mm long, subquadrangular; ramifications umbellate. I have seen no mature flowers; data given according to Backer, l.c. Pedicel 1—1.5 mm long, terete.

Calyx tube campanulate, 1—1.5 mm long, at the base acute, at the top widened, terete, slightly ribbed, smooth; limb wide and distinct, about $^1/_3$ × as long as the calyx tube, its teeth narrowly cylindrical. Petals ovate-oblong, 2 mm long, acuminate, purple. Filaments about 3 mm long. Anthers dolabriform. Style terete, 2.5 mm long, at the base not widened, slightly connate with the disc-grooves; stigma subulate. Berry subglobose, 7—9 mm long. Seeds 1 or 2.

Observ: Not allied to the little known species M. capitellatum L. and M. ramiflorum Lam., as in Blume's opinion. Differing by its very short peduncle.

Distribution.

JAVA. Batavia: G. Parang (Blume s.n. L, typus, sub M. capitellatum L.); Locality unknown: (Blume s.n. L, sub Eugenia sulcata Bl.); (idem s.n. L); (collector unknown, L).

FURTHER DISTRIBUTION: Malay Peninsula, P. Penang, Siam.

var. **lilacinum (Zoll. et Mor.) King.** King in Journ. As. Soc. Bengal, Vol. LXIX part II (1906) p. 81; *Memecylon lilacinum Zoll. et Mor.*, in Moritzi, Zollinger's Syst. Verz. (1845—1846) p. 9; Naudin in l.c. XVIII (1852) p. 281; Miquel, l.c. (1855) p. 575; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243.

A small tree. Adult branches obtusely quadrangular or subterete; the internodes many, short, mostly a little longer than those of the type. Leaves broadly oblong, 5.5—10 cm × 3—4 cm, at the base cuneate, at the top obtusely acuminate or, rarely, in forms with feeble cross-venules, acutely acuminate, subcoriaceous, glabrous, when dry yellowish, on the upperside with hardly conspicuous cross-venules or venules absent, on the underside 1-nerved, cross-venules often present. Petiole 5—12 mm long, slender. Inflorescence as in the type species up to 7 mm long; peduncle minute. Bud conical, acuminate. Pedicel 1 mm long, terete. Calyx tube campanulate, 1,5 mm long, subterete, slightly 4-ribbed, at the base subobtuse or subacute, at the top subdilatate; limb shortly dentate, its teeth narrowly triangular or sub cylindrical. Petals 1.5 m × 1 mm (in mature bud!). Filaments 1.5—1.8 mm long; connective dorsally shortly but acutely produced. Style 5 mm long, at the base not widened, slightly connate with the discgrooves.

Observ: This is a form with much larger leaves and flowers. Some authors consider it a different species.

Distribution.

JAVA. Bantam: Tjikoja (Zollinger nr. 187, L, typus, dupl. in U, fl. June).

FURTHER DISTRIBUTION: According to King in l.c. also occurring in the Malay Peninsula (Perak), P. Penang and Singapore.

6. **Memecylon multiflorum Bakh. f.** spec. nov.

Frutex. Rami adulti teretiusculi, juveniles obtuso-quadrangulares, glabri. Folia elliptico-oblonga 6.5—12.5 cm × 3.5—6.5 cm, basi acuta vel cuneata apice obtuso-acuminata, coriacea glabra, supra venulis transversis haud conspicuis, subtus uninervia, venulis transversis haud conspicuis. Petiolus 5—12 mm longus. Inflorescentia fasciculata umbellata dense aggregata, praecipue in axilla defoliata, ad 1 cm longa; pedunculi numerosi aggregati 1—2 mm longi, apice minute bracteati. Alabastrum ovoideum acutum. Pedicellus 1—2 mm longus. Calycis tubus late ovoideus teres 1.5—2.5 mm longus; limbus patens late sinuatus, sinubus rotundatis. Petala subcordata 1.7—2 mm longa. Filamenta 4—5 mm longa, antheris dolabriformibus 1 mm longis, thecis plus quam $^1/_2$ × antheris, connectivo late sed obtuse caudato. Stylus 3.5 mm longus, basi non elatus, sulcis disci non connatus; stigma subulata. Bacca subglobosa 7 mm longa, apice calycis limbo persistente munita; pedicellus 2.5 mm longus.

Distribution: restricted to the localities quoted below.

SUMATRA. Palembang: Lematang Ilir, 75 m (Boschwezen nr. T. 83 [BZ], L, fl. Nov.) Banjoeasin and Koeboe lands, 15 m (idem nr. 93. T 1. P. 83 [BZ], L, ster.); Bajoeng lintjir, Koeboe lands, 15 m (Dorst nr. T 1, P. 83 [BZ], L, fr. Oct., Nov.; v.n. tĕmbĕras nasi).

P. SIMEULOEË: Tapah, Dèfajan (Achmad nr. 1504 [BZ], L, fr. Nov.; v.n. lioeh fatoeh); locality unknown (idem nr. 1191, L, typus, dupl. in [BZ], fl. June; v.n. lioeh fatoeh).

7. **Memecylon laevigatum Bl.** Blume in l.c. (1851) p. 358; Miquel, l.c. (1855) p. 576; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 125; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1159; *Memecylon myrsinoides Bl.*; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 42; *Memecylon myrtilli Bl.* [M. myrtillus] in l.c. (1851) p. 357; Miquel, l.c. (1855) p. 578; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 125; *Memecylon Vosmaerianum Scheff.* in Observ. Phytogr. II (1868—1869) p. 44; idem in Flora (1870) p. 249.

Tree, up to 8 m high (Forbes). Adult branches subterete, the young ones quadrangular, glabrous. Leaves elliptic, oblong or ovoid, 5.5—10.5 cm × 2.5—4.7 cm, at the base rounded or acutely cuneate, towards the top gradually narrowed, than obtusely acuminate, very coriaceous, glabrous, when dry opaque, on both sides without cross-venules or, rarely, venules hardly conspicuous, 1-nerved. Petiole 4—6 mm long. Inflorescence a shortly pedunculate, many-flowered, umbellate cluster, up to 1 cm long; peduncle 1—2 mm long, subterete, solid. Bracts and bracteoles linear, minute. Pedicel 1—1.5 mm

long. Calyx tube globose-cyathiform, 1—1.5 mm long; limb broadly funnel-shaped, subtruncate, apiculate. Petals oblong, 1.5 mm × 0.7 mm, acuminate, with thick midvein, according to Forbes, blue. Stamens unknown to me. Style 2.5—3 mm long, connate with the disc grooves, at the base not widened; stigma subulate. Berry subglobose, 6—7 mm long, near the base 4-sulcate, surface rather rough; stalk 2—2.5 mm long. Pericarp very thick, 1.5—2 mm in diameter. Seed 1, 5 mm long, pale brown and shining.

Observ: Differing from all allied species by its very coriaceous leaves. By Koorders given up for Java, but I am doubtful whether the plant occurs there.

Distribution.

SUMATRA. Tapanoeli: Tobing, Opper ankola (Junghuhn s.n. L); Palembang: Soeka radja, R. Roepit, 160 m (Forbes nr. 2953, L). Locality unknown: (? Blume s.n. L).

BANKA: near Muntok (Teysmann s.n. U, type of *M. Vosmaerianum Scheff.*).

BORNEO. WESTERN PART. Exact locality unknown: Djihi (Winkler nr. 3316, L, fl. Aug.). SOUTHERN AND EASTERN PART. Bandjermasin: Pematang landjar, Asem asem (Abd. Rasjid nr. 2451 [BZ], L, fl. Nov.; v.n. timbaroe). Locality unknown: (Blume s.n. L, type of *M. Myrtilli Bl.*); (Blume s.n. L, typus). BRITISH PARTS.

KARIMATA ISLANDS. P. Seroetoe: (Mondi nr. 197 [BZ], L, fl. March).

CELEBES. Gvt. Celebes and dependencies: Tjempaga (Rachmat nr. 157 [BZ], L, fr. July; v.n. pea pea).

FURTHER DISTRIBUTION: British India (Burma), Malay Peninsula, Singapore, Siam, (according to Guillaumin) French Indo-China, the Philippine Islands.

8. **Memecylon La-Ruei Merr.** Merrill in Philipp. Journ. Sc. XIV (1919) Bot. p. 247; Bartlett in Papers Michigan Acad. Sc., etc. VI (1926) p. 56 [„reprint"].

Shrub. Branches minutely alate-quadrangular, glabrous. Leaves ovate-linear, 14—18 cm × 3—4 cm, at the base rounded, subcordate, at the top very acute or acutely acuminate, subcoriaceous, glabrous, on the upperside hardly conspicuously trinerved, cross-venules feeble, on the underside distinctly trinerved, the lateral nerves with undulate margin, cross-venules distinct, slightly prominent, costa thick. Petiole 2—4 mm long, thick. Inflorescence paniculiform, 5—13 cm long, many-flowered; peduncle solitary in each foliate leaf axil, 28—75 mm long, quadrangular, slender; ramifications of the first order quadrangular, in 3 or more rows above each other, quaternate, in each crown 2 ramifications are much shorter than the 2 others. Pedicel 2.5—3 mm long, terete. Bud mammiform, apiculate. Bracts and bracteoles linear, up to 2 mm long. Calyx tube narrowly tubular-cyathiform 1—1.5 mm long, at the base slightly acute,

ribbed; limb large, wide and patent, provided with acute teeth. Petals broadly ovoid, 2 mm × 1.5 mm, at the top rounded and apiculate. Further details of the flower are unknown to me.

Observ.: A remarkable form by its long ovate-linear leaves.

Distribution: endemic.

SUMATRA. East Coast: Soesoek, Liang-ndate, in Karoland [not in Asahan as abusively mentioned by Merrill!) (Bartlett and La Rue nr. 236, L, PNH).

9. **Memecylon costatum Miq.** Miquel in Verhand. Kon. Nederl. Inst. (1850) p. 29; Blume in l.c. (1851) p. 360; Junghuhn, Java I (1853) p. 506; Miquel, l.c. (1855) p. 573; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 125; Bisschop Grevelink, Plant. Ned. Ind. (1883) p. 164; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1136; Krasser in l.c. (1893) p. 198; Koorders en Valeton in Meded. 's Lands Plant. tuin XXXIII (1900) p. 202 [Bijdr. nr. 5, Boomsoorten Java]; van Eeden, Houtsoorten Ned. Ind. (1905) p. 144; Koorders, Exkurs. Flora Java II (1912) p. 701; Koorders-Schumacher, Syst. I Java, Melast. (1912); Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1205; Backer, Manuscr. Fl. Java, Melast. (1941) p. 32; Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 220; *Memecylon costatum Miq.* var. *ellipsoideum Bl.*, in l.c. (1851) p. 361; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1136; *Memecylon costatum Miq.* var. *flabellatum Bl.*, in l.c. (1851) p. 361; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1136; *Memecylon appendiculatum Bl.* in l.c. (1851) p. 361; Triana in l.c. (1871) p. 158; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1135; *Memecylon appendiculatum Bl.* var. *nuda (Bl.) Miq.*, l.c. (1855) p. 574; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1136; *Memecylon caloneuron Miq.*, Flor. Ned. Ind. Suppl. I. Sumatra (1860) p. 321 and 125 [nomen]; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1137; *Memecylon confine Bl.* var. *Bunggang Bl.* in l.c. (1851) p. 357; *Memecylon grande Retz.*; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1095; Junghuhn, Java I (1853) p. 506; *Memecylon Minahassae Kds.* in Meded. 's Lands Plant. tuin nr. XIX (1898) p. 633 and 468 [nomen]; Koorders- Schumacher, Syst. Verz. III. Celebes (1914) p. 98; *Memecylon nudum Bl.* in l.c. (1851) p. 361; Triana in l.c. (1871) p. 158; *Memecylon nudum Bl.* var. *ligustrinum Bl.* in l.c. (1851) p. 361; *Memecylon paniculatum Jack*; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 9; Naudin in l.c. XVIII (1852) p. 272; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1136; *Memecylon spec.*; Koorders in Meded. 's Lands Plant. tuin nr. XIX (1900) p. 468; Koorders-Schu-

macher, Syst. Verz. III. Celebes (1914) p. 98; *Eugenia pterocaulis Miq.* in Verhand. Kon. Nederl. Inst. (1850) p. 18; *Jambosa appendiculata Bl.* in l.c. (1851) p. 361 [nomen].

Tree, 10—20 m high. Adult branches subterete or obtusely quadrangular, the young ones mostly acutely alate-quadrangular, their wings forming at the nodes a falcate appendage, which is deciduous, glabrous. Leaves oblong or broadly lanceolate, 13—24 cm × 5—10 cm, at the base rounded, at the top acuminate, glabrous, the adult ones coriaceous and pale brown, the young ones papyraceous, subtrinerved, cross-venules very distinct, at least 10, confluent near the margin with the 2 distinct, sinuate, marginal nerves, subreticulate. Petiole 2—5 mm long, robust. Inflorescence axillary, paniculiform, up to 7 cm long, bearing very numerous flowers; peduncle 5—35 mm long, acutely quadrangular, brown furfuraceous, glabrescent; ramifications of the first order opposite or the lowest only, quaternate, undivised or branched, the terminal branchlets umbelliform, more or less in clusters, thickened at the base. Bracts linear or narrowly triangular, up to 2.5 mm long. Pedicel 2—2.5 mm long, ebracteolate. Calyx tube campanulate, 1—1.5 mm long, quadrangular, 8-ribbed; limb cupuliform and quadrangular, either subtruncate or minutely subdentate. Petals broadly ovate, 1.5—2 mm × 1.5 mm, blue-purple (Backer) or ? pale yellow (Ridley). Filaments 2 mm long; anthers dolabriform-lanceolate, 1 mm long, curved, the thecae about half as long as the anthers; connective acute. Toppart of the ovary sunken; style 3—4 mm long, glabrous; stigma subulate. Berry subglobose or ellipsoid, 6—9 mm long, provided with the persistent calyx limb; its pericarp strongly venulated; stalk 3—5 mm long.

Observ: A very variable species having many transitional forms. The diameter of the leaves and the number of cross-venules are very inconstant. M. appendiculatum Bl. and M. nudum Bl., appeared to be young twigs of M. costatum Miq. only.

Distribution.

SUMATRA. West Coast: Sidjoengjoeng, Tanah Badantoeng, 200 m (Boschwezen nr. b.b. 6457 [BZ], L, ster.; v.n. kamilik); Pariaman (Diepenhorst s.n. U; v.n. toelang toelang). Palembang: Rawas. 200 m (Dumas nr. 1640 [BZ], L, fr. July; v.n. těmbras djantong); Batoe radja (Teysmann s.n. L, type of *M. caloneuron Miq.*, dupl. in U; v.n. „temughas djamboe"); Lematang Oeloe, 150 m (Lambach nr. 1201 [BZ], L; v.n. těmbras abäng); Lematang ilir, 75 m (Boschwezen nr. T 3. P 366 [BZ], L, fr. Oct., fl. July; v.n. těmbras); Benkoelen: Tambang rawah, Lebong mine, 500 m (Boschwezen nr. b.b. 9587 [BZ], L, fr. Dec.). Locality unknown: (collector unknown L, type of *M. costatum Miq.* var. *ellipsoideum Bl.*).

P. SIMEULOEË. Locality unknown: (Achmad nr. 90 [BZ], L, fr. Nov.; v.n. awa lioeh); idem (idem nr. 379 [BZ], L; v.n. djčro); idem (idem nr. 942

[BZ], L, ster.; v.n. lioeh pajo); idem (idem nr. 1175 [BZ], L, fr. June; v.n. toetoen lioeh pajo).

P. ENGGANO: Koho ahepea, 200 m (Lütjeharms nr. 4614, L, ster.; v.n. eèpô, toemeras djantoeng).

JAVA. Batavia: G. Salak (collector unknown, L); G. Tjibodas near Tjiampea, 80—300 m (Backer nr. 25428 [BZ], L, U, fl. July); Depok, 93 m (Koorders nr. 43969 β [BZ], L, U, fl. June; v.n. gowokan); Exact locality unknown: „Tjihideung" (collector unknown, L; v.n. kitjalar), „Pasir Toejoe". (Blume s.n. L, type of *M. confine Bl.* var. *Bunggang Bl.*; v.n. bunggang); idem (idem s.n. L, sub M. nudum Bl.; v.n. kiboeroe); „Tjibokber" (Hasskarl s.n. L, type of *M. nudum Bl.*; v.n. kopo lalar); Locality unknown: (Blume s.n. L); (idem s.n. L, sub M. grande Retz.; v.n. kidjambè); (Zollinger nr. 443, L).

BORNEO. WESTERN PART. Pontianak: Sei Landak (Teysmann nr. 11246 [BZ], L); SOUTHERN AND EASTERN PART. Bandjermasin: Lake Kalahien (Korthals s.n. L, type of *M. appendiculatum Bl.*, sub Syzigium cymosum Bl.); Kapoeas-Barito: Doesoen lands (Korthals s.n. L); Sei Malian, Kp. Baroe, distr. Boentoek (Mantri Lot: Obi nr. Z.O.B. 2401 [BZ], L; v.n. mambadji); Samarinda: D. Parei, Mahakam river, 300 m (Boschwezen nr. b.b. 20692 [BZ], L, fr. Febr.); Exact locality unknown: „Hajoep" (Winkler nr. 2566, L, fl. June); Locality unknown: (Korthals s.n. L, type of *M. costatum Miq.* var. *flabellatum Bl.*); (collector unknown, U). BRITISH BORNEO.

KARIMATA ISLANDS. P. Karimata besar: (Mondi nr. 213 [BZ], L, ster.; v.n. bangas).

CELEBES. Manado: Malili, Tabarano, 600 m (Boschwezen nr. b.b. 9709 [BZ], L, fl. Apr.; v.n. goroe doewano); Minahassa, 50 m (Koorders nr. 17885β, 17886β, 18268β, 18275β, 19581β [BZ], L).

TALAUD ISLANDS. P. Karakelong: E. of Lobo, 200 m (Lam nr. 2917 [BZ], L, fl. May; v.n. tatimbakas'a).

SOELA ISLANDS. P. Mangolé: G. Bia (Atje nr. 241 [BZ], L); P. Kano (idem nr. 3041 [BZ], L).

MOLUCCAS. Ambon: (Robinson nr. 2020, L, PNH). Ceram: N. of Piroe, 0—400 m (Rutten nr. 1906 [BZ], L, fr. Sept.).

FURTHER DISTRIBUTION: ? Malay Peninsula, ? Siam, the Philippine Islands.

10. **Memecylon subtrinervium Miq.** Miquel, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 322, 125 [nomen]; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1143.

?Tree. Adult branches terete, young ones subterete, glabrous. Leaves narrowly lanceolate, 16.5—22 cm × 4.5—7 cm, at the base acute or subobtuse, at the top long but obtusely acuminate, pergamentaceous, glabrous, on the upperside hardly conspicuously trinerved, cross-venules faint, not prominent, on the underside pallid, trinerved, transverse venules rather distinct. Petiole 5 mm long, flattened, wide. I have seen no flowers; the following records are all according to Miquel, l.c. Inflorescence few-flowered; peduncle 2½ lines long. Young berry ovoid, constricted at the top, provided with the persistent 4-lobed calyx limb.

Distribution: endemic.

SUMATRA. West Coast: Pajakoembo (Teysmann s.n., U, typus; v.n. dalèh).

11. **Memecylon subcordifolium Bakh. f.** spec. nov.

Frutex. Rami adulti juvenilesque teretes, glabri, ad nodos compressi. Folia ovato-oblonga vel ovato-lanceolata, 10—13.5 cm × 4.5—5.5 cm, basi distincte breviter cordata, apice acutissima, subcoriacea, glabra, subtus subtrinervia, venulis transversis haud conspicuis non prominentibus. Petiolus 2.5 mm longus. Inflorescentia paniculiformis 2—3 cm longa, submultiflora; pedunculi 2 ex axilla enati 7—14 mm longi, acute quadrangulares, rami quaternati acute quadrangulares. Alabastrum late conicum, breve. Pedicellus 3—3.5 mm longus, teretiusculus. Calycis tubus campanulatus 1.5 mm longus, teres basi rotundus; limbus truncatus. Petala ovato-oblonga 2 m × 1 mm , acuta venulata. Filamenta 1.5 mm longa, antheris anguste dolabriformibus 1.3 mm longis, thecis linearibus 0.5 mm longis, connectivo dorso appendice crasso 0.8 mm longo munito. Stylus 4 mm longus anguste cylindricus, basi non elatus, non sulcis disci connatus, apice augustatus; stigma subulata. Bacca immatura ellipsoidea 7 mm longa, subcostata basi acutiuscula; pedicellus 2—3 mm longus.

Distribution: restricted to the localities quoted below.

P. SIMEULOEË: Tapah, Dèfajan (Achmad nr. 1367, L, typus, dupl. in [BZ], fl. Sept.; v.n. lioeh oeding).

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unknown: Sei Bloe-oe (idem nr. 1114 [BZ], L); Sei Sak (Jaheri nr. 1757 [BZ], L).

12. **Memecylon protrusum Bakh. f.** Bakhuizen van den Brink fil. in Blumea V nr. 1 (1942) p. 220.

Tree, 4 m high. Young branches terete, glabrous, grey-brown; the nodes strongly thickened. Leaves oblong, 25 cm × 11—13 cm, at the base rounded, subcordate-subamplexicaulous, at the top shortly but obtusely acuminate, very coriaceous, glabrous, on the upperside bright brown and shining, on the underside pallid, subtrinerved, cross-venules on both sides distinct and prominent, midnerve very thick. Petiole very wide, up to 5 mm long. Inflorescence axillary, bearing 1 or 3 flowers; peduncle, 2—3 mm long, subterete. Flowers unknown. Berry ellipsoid, 14—16 mm long, at the base subacute and unequal, at the top provided with the quadrangular, truncate calyx limb; top of the ovary strongly bulging, equalling the height of the calyx limb or even exceeding it; stalk 2—3 mm long.

Observ: A remarkable form on account of the striking cha-

racters of its inflorescence and berry. Allied to M. costatum Miq., M. excelsum Bl. and M. gigantifolium Elm. from the Philippine Islands, but certainly not identic with them.

Distribution: endemic.

MOLUCCAS. P. Morotai: near Goegoeti, 60 m (Lam nr. 3470, L, typus, fr. June).

13. **Memecylon heteropleurum Bl.** Blume in l.c. (1851) p. 362; Miquel, l.c. (1855) p. 579; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 125; Triana in l.c. (1871) p. 157; Boerlage l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1140.

Tree, (according to Krukoff) up to 6 m high. Adult and young branches terete, the adult ones often striate, pallid when dry. Leaves oblong-lanceolate, 17.5—27 cm × 6.5—12.5 cm, at the base subobtuse and subauriculate, at the top acute or obtusely acuminate, coriaceous, glabrous, on the upperside subtrinerved, cross-venules many and hardly conspicuous, on the underside trinerved, cross-venules prominent, midnerve very thick. Petiole 3—4 mm long. Inflorescence a few-flowered fascicle; peduncles 5—10 from each defoliate leaf axil, often bifid, 2 mm long. Bud broadly ovoid, subacute. Bracts minute. Pedicel 6 mm long, terete. Calyx tube campanulate, at the base subacute, 2—2.5 mm long; limb truncate. Petals ovate, acute, (Rutten) violet or (according to Iboet) white or pink. Stamens only seen in the bud; anthers dolabriform. Style 4 mm long, at the base not widened, connate with the disc-grooves; stigma hardly conspicuous. Berry ellipsoid, 15—19 mm long, at the base subacute, at the top provided with the erect, wide and rather long rest of the calyx limb; stalk 6 mm long. Pericarp thick, 1—1.5 mm in diameter. Seed 1, elliptic.

Observ. Instead of „heteropleurum" often is written „heteropleuron". Allied to M. excelsum Bl., but differing a.o. by its fasciculate inflorescence.

Distribution.

SUMATRA. East Coast: Masihi Forest Reserve, Asahan (Krukoff nr. 4058, L, fr. Oct.-Nov.); W. of Bandarbaroe, 850 m (Lörzing nr. 7015 [BZ], L, buds Nov.); Locality unknown: (Korthals s.n. L, typus); (? Blume s.n. L).

P. SIMEULOEË: Tapah, Dèfajan (Achmad nr. 779 [BZ], L, fr. Dec.; v.n. lioeh falah); idem (idem nr. 981 [BZ], L, ster.; v.n. lioeh pajo); idem (idem nr. 1532 [BZ], L, fr. Dec.; v.n. lioeh alafai); idem (idem nr. 1777 [BZ], L, fr. Apr.; v.n. lioeh pajo boengo);

MENTAWAI ISLANDS. P. Siberoet: Siberoet (Iboet nr. 341 [BZ], L, fl. Oct.; v.n. bloei labei); P. Sipora: Sioban (Iboet nr. 441 [BZ], L, fl. Oct.).

BORNEO. SOUTHERN AND EASTERN PART. Boeloengan-Beraoe: river Sadjan, Boelongan (Rutten nr. 103, U).

FURTHER DISTRIBUTION: Malay Peninsula (King).

14. **Memecylon excelsum Bl.** Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1094; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 259; Blume in l.c. (1851) p. 362; Miquel, l.c. (1855) p. 579; Teysmann et Binnendijk, Cat. Plant. Hort. Bot. Bog. (1866) p. 243; Triana in l.c. (1873) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1141; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 207, 208 [Bijdr. nr. 5, Boomsoorten Java]; Koorders, Exkurs. Flora Java II (1912) p. 701; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Backer, Manuscr. Fl. Java, Melast. (1941) p. 32.

Tree, 8—15 m high. Adult and young branches terete, glabrous. Leaves oblong or lanceolate, 13—21.5 cm × 5.5—10 cm, at the base slightly obtuse or broadly cuneate, at the top abruptly, shortly but obtusely acuminate, strongly coriaceous, glabrous, on the upperside hardly conspicuously trinerved, cross-venules rather distinct, on the underside pallid when dry, subtrinerved or, rarely, trinerved, margin sinuate, cross-venules distinct and slightly prominent, midnerve very thick and prominent. Petiole 5—10 mm long, wide and thick. Inflorescence cymose, few-flowered, up to 1 cm long; peduncles 2 to 4 from each leaf axil, 3 mm long; ramifications of the first order nearly absent, consisting of knots, which are placed in two rows closely together. I have seen no mature flowers. The following records are according to Backer, l.c. Bud ovoid, obtuse. Pedicel 2.5—3 mm long, terete. Calyx tube subobconical, 4—4.5 mm long, at the base rounded; limb truncate, entire. Petals ovoid, subobtuse. Filaments 4 mm long; anthers dolabriform. Style 6 mm long, at the base not connate with the disc-grooves. Berry ellipsoid, 13—20 mm long, at the base subacute, at the top provided with the shortly umbilically outgrown calyx limb; stalk short. Pericarp fleshy, 1—1.5 mm in diameter. Seeds 1, elliptic and shining.

Observ: Allied to M. heteropleurum Bl.

Distribution: endemic.

JAVA. Preanger Regencies: Tapos near Tjimonjet, 600 m (Bakhuizen van den Brink nr. 3092 [BZ], L, U, fr. Dec.); Locality unknown: (Blume s.n. L, typus; v.n. kidjambè awèwè); (Hasskarl s.n. L; v.n. kidjambè).

15. **Memecylon acuminatissimum Bl.** Blume in l.c. (1851) p. 360; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1141; *Memecylon paniculatum Jack*; Miquel, l.c. (1855) p. 572; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 125.

Tree. Adult and young branches, terete, glabrous. Leaves ovate-lanceolate, 17.5—26 cm × 5.5—12 cm, at the base rounded or obtuse, at the top acutely acuminate, subcoriaceous, glabrous, on the upperside hardly conspicuously subtrinerved, cross-venules faint, subreticulate, on the underside trinerved, cross-venules distinct, subprominent, midnerve thick. Petiole 5—7 mm long, not confluent to the lamina. Inflorescence paniculiform, 5—6 cm long, many-flowered; peduncles 1 or 2 from foliate leaf axils, 1.5—2.5 cm long (when branched, 0.8 cm long), single or branched, subterete, slender, glandular-puberulous; ramifications of the first order in 3 or 4 rows above each other at a distinct distance, quaternate; each whirl consisting of 2 long and 2 short ramifications. Bud very acute. Bracts and bracteoles linear, 1—1.5 mm long. Pedicel 3.5 mm long, terete, glandulose. Calyx tube campanulate, 1—1.5 mm long, terete, at the base rounded; limb subpatent, subtruncate. Petals suborbicular, apiculate, 2 mm × 2.5 mm. Filaments 1.5—2 mm long; anthers dolabriform, 1.5 mm long; connective acute, 1.5 times as long as the thecae. Style 3 mm long; stigma hardly conspicuous. Berry ellipsoid, at the top provided with the truncate calyx limb (Blume).

Observ: Allied to M. excelsum Bl., but differing o.a. by its much longer peduncle.

Distribution: endemic.

SUMATRA. West Coast: Agam, Brani, 850 (Bünnemeyer nr. 3196 [BZ], L, fl. June); Locality unknown: (Korthals s.n. L, typus).

16. **Memecylon acrocarpum Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, juveniles teretiusculi glabri. Folia oblonga 18—26.5 cm × 8.5—10 cm, basi cuneata apice acuto-acuminata coriacea glabra supra in sicco obscura subtrinervia nervis lateralibus sinuatis, venulis transversis distinctis et saepe prominentibus, subtus in sicco pallida trinervia nervis lateralibus sinuatis, venulis transversis distinctis. Petiolus 5—7 mm longus non in laminam transgrediens. Inflorescentia cymosa 7—8 cm longa submultiflora; pedunculus 2.5—3.5 cm longus solitarius ex axilla foliata enatus teretiusculus; rami oppositi in seriebus 3 remotis dispositi. Flores ignoti. Bacca elliptica 10—12 mm longa basi apiceque acutissima rugosa apice limbo truncato munita; pedicellus teres 3 mm longus. Pericarpus tenuis multo minus quam 0.5 mm in diametro. Semen unicum subglobosum laeve.

Observ: Allied to M. excelsum Bl., differing a.o. by the shape of its berries (acute at both ends).

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Exact locality unknown: Bt. Milie (Amdjah nr. 376, L, typus); idem (idem nr. 92, 163, L); Sei Oetoeng (idem nr. 359, L); Seleboelan, Tepoetoei (Jaheri nr. 875, L); Bt. Drapan (idem nr. 1373, L).

17. **Memecylon sumatrense Bakh. f.** spec. nov.
Memecylon garcinioides Bl.; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 42; *Memecylon oleaefolium Bl.*; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 42.

Arbuscula 2 m alta. Rami adulti teretiusculi juveniles subquadrangulares compressiusculi glabri. Folia oblongo-lanceolata 9—14 cm × 3—6 cm basi acutiuscula apice acuto-acuminata coriacea glabra supra venulis transversis distinctis subtus subtrinervia venulis transversis distinctis et saepe prominentibus. Petiolus 10—15 mm longus. Inflorescentia paniculiformis 4—5.5 cm longa multiflora; pedunculi solitarii vel bini ex axilla foliata enati robusti quadrangulares 12—22 mm longi, novelli densi rubiginoso-glandulosi glabrescentes; rami in seriebus 2 vel 3 dispositi, serie infima quaternata seriebus ceteris quaternatis vel oppositis, internodis longis. Alabastrum mammiforme apiculatum. Pedicellus 1 mm longus quadrangularis. Calycis tubus campanulatus 1 mm longus subquadrangularis vel teretiusculus glandulosus; limbus dentatus dentibus anguste triangularibus. Petala suborbicularia 0.8 mm longa venulata. Filamenta 1.8 mm longa, antheris dolabriformibus 0.5—0.8 mm longis, connectivo acutiusculo fere dimidio minus quam antherae. Stylus 2—2.5 mm longus, basi non dilatatus sulcis disci non connatus; stigma subulata. Bacca subglobosa 7—8 mm longa rugosa apice calycis limbo truncato brevissimo munita; pedicellus subtriangularis 2.5—3 mm longus. Pericarpus crassissimus 1 mm in diametro intus reticulatus. Semen 7 mm longum laeve.
Distribution: endemic.

SUMATRA. West Coast: Sajoer matinggi, Angkola, 300 m (Boschwezen nr. b.b. 6149 [BZ], L, fr. Oct.; v.n. djilak); Palembang: Lematang Ilir, 75 m (Boschwezen nr. T. 535, L, typus floris, dupl. in [BZ], fl. Apr., May, fr. Aug., Dec.); Tandjong ning, R. Bliti 230 m (Forbes nr. 2735, L, typus fructus); Soeka radja, R. Roepit, 260 m (idem nr. 2990, L); Banjoeasin and Koeboelands (Grashoff nr. 611 [BZ], L, ster.; v.n. tembras).

18. **Memecylon ambiguum Bl.** Blume in l.c. (1851) p. 359; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1143; Koorders en Valeton, in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 206, 207 [Bijdr. nr. 5, Boomsoorten Java]; Koorders, Exkurs. Flora Java II (1912) p. 701; *Memecylon luteolum Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 323, 125

[nomen]; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1137; *Memecylon micranthum Bl.* in l.c. (1851) p. 360; *Memecylon oleaefolium Bl.*; Miquel, l.c. (1855) p. 579; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 125; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 42; *Memecylon paniculatum Jack*; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 206 [Bijdr. nr. 5, Boomsoorten Java]; Koorders, Exkurs. Flora Java II (1912) p. 701.

A small tree. Adult branches terete, the young ones subterete, glabrous, often whitish when dry. Leaves oblong, broadly lanceolate or ovate-lanceolate, 8—12.5 cm × 3.5—5 cm, at the base obtuse, subacute or, rarely, subcordate, at the top acutely acuminate, subcoriaceous, glabrous, on the upperside subtrinerved, cross-venules faint, on the upperside subtrinerved, cross-venules often distinct and prominent. Petiole 3—6 mm long, slender, not confluent to the lamina. Inflorescence paniculiform, 2—5 cm long, many flowered; peduncles 1 or 2 from each defoliate leaf axil, 10—30 mm long (when branched 6 mm long), quadrangular; ramifications of the first order in 2 to 4 rows, closely above each other, the lowest quaternate, the others opposite; the nodes strongly thickened. Bud ovate, apiculate. Bracts narrowly triangular, 1.5 mm long. Pedicel 2.5—3 mm long. Calyx tube campanulate 1.5 mm long, at the base rounded; limb slightly patent, sinuate or subtruncate. Petals broadly ovate, 2—2.5 mm × 1.8—2 mm, acute, (Forbes) white. Filaments 1.5 mm long; anthers dolabriform-subreniform, 0.5—0.8 mm long, (Forbes) yellow; connective acute, a little longer than the thecae. Style 3.5—4.5 mm long, not widened, at the base not connate with the disc-grooves. Berry pyriform, 9—12 mm long, its base subobtuse, to one side lumped, sparsely verruculose and ribbed, at the top provided with the subtruncate calyx limb; stalk 4—5 mm long, subterete. Pericarp very thin, less than 0.5 mm in diameter. Seed 1, pyriform, smooth and shining.

Distribution: restricted to the localities quoted below.

SUMATRA. Palembang: Tandjong ning, R. Bliti, 200 m (Forbes nr. 3213 a, L); Lampong Districts: Siring kebau (Teysmann s.n U, type of *M. luteolum Miq.*; v.n. geah anda).

JAVA. Batavia: G. Salak (Koorders nr. 24271β [BZ], L, fr. Sept.); Depok, 90 m (Bakhuizen van den Brink nr. 6259 [BZ], L, PAS, U, fl. Dec.). Locality unknown: (Blume s.n. L, typus); (idem s.n. L, type of *M. micranthum Bl.*).

19. **Memecylon minutiflorum Miq.** Miquel, Flor. Ned. Ind.

Suppl. I (1860) p. 323; Triana in l.c. (1871) p. 158; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1169.

Shrub. Adult branches terete, the young ones acutely quadrangular, glabrous, on the nodes thickened. Leaves mostly narrowly oblong, 7—8.5 cm × 2.7—3.4 cm, at the base acute or cuneate, at the top acutely acuminate, subcoriaceous, glabrous, on the upperside with very thin cross-venules, on the underside cross-venules hardly conspicuous, subtrinerved, pale yellow. Petiole 4—6 mm long. Inflorescence a few-flowered cyme; peduncle, 1 or 2 from defoliate leaf axils or, rarely, from the angle of a bifurcation; ramifications of the first order few. Flowers and berries unknown to me. According to Miquel, l.c., the calyx tube is urceolate-campanulate, equally long as the pedicel or even a little longer, slightly 4-dentate.

Distribution.

SUMATRA. West Coast: Pariaman (Diepenhorst s.n. U, typus; v.n. kalet boenga tandjong).

FURTHER DISTRIBUTION: (according to King in l.c.) Malay Peninsula and P. Penang.

20. **Memecylon marginatum Bl.** Blume in l.c. (1851) p. 363; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1138; *Memecylon intermedium Clarke* (*non Bl.*); Boerlage, l.c. (1890) p. 537. [nomen].

Shrub. Adult branches subterete, the young ones acutely quadrangular, glabrous. Leaves obovate-oblong, 6.5—7.2 cm × 3—3.4cm at the base very acute, at the top very abruptly long but obtusely acuminate, acumen subfalcate, subcoriaceous, glabrous, on both sides subtrinerved, cross-venules faint, not prominent, sessile. Flowers and fruit unknown.

Observ.: A remarkable form on account of the peculiar shape of its leaves. This species may be allied to M. pseudo-nigrescens Bl.

Distribution: endemic.

BORNEO. SOUTHERN AND EASTERN PART. Kapoeas-Barito: Doessoenlands (Korthals s.n. L, typus).

21. **Memecylon hepaticum Bl.** Blume in l.c. (1851) p. 357; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1151.

Shrub. Adult branches terete, the young ones subterete to slightly flattened, glabrous. Leaves narrowly oblong, 7—10.5 cm × 2.5—3.5 cm, at the base acute, lamina confluent to the petiole, at the top abruptly and rather long but acutely acuminate, subcoriaceous,

glabrous, on the upperside, when dry, dark, cross-venules faint, on the underside, when dry, brown, 1-nerved, cross-venules faint. Petiole 4—5 mm long, rather wide. Inflorescence a cyme, at most 1 cm long and (according to Blume) many-flowered; peduncles 2 from each foliate leaf axil, 1.5—3 mm long; ramifications of the first order knot-shaped, disposed in 2 rows closely above each other, opposite or quaternate. Flowers unknown. Style slightly connate with the disc-grooves. Young berry subglobose, 2—3 mm long, provided with the patent, short, truncate calyx limb; stalk 2—3 mm long, subquadrangular.

Distribution.

SUMATRA. Locality unknown: (Blume s.n. L, typus).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: Martapoera (? Korthals s.n. L, sub Myrtus memeciloides).

FURTHER DISTRIBUTION: ? New Guinea. (vide Mansfeld in Engl. Bot. Jahrb. 60 [1926]. p. 140).

22. **Memecylon globosum Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, juveniles teretiusculi glabri, ad nodos compressi. Folia oblonga, 10.5—13.5 cm × 4—6.5 cm, basi cuneata, apice breviter obtuso-acuminata, coriacea glabra, utrinque subtrinervia venulis transversis haud conspicuis. Petiolus 7—9 mm longus crassiusculus. Inflorescentia (juvenilis) umbella simplex ad 7 cm longa pauciflora; pedunculus 4 mm longus teretiusculus. Flores ante anthesin solum vidi. Alabastrum subglobosum. Bracteae anguste triangulares 2 mm × 1 mm carnosae. Bracteolae lanceolatae 1 mm longae. Pedicellus 1—2 mm longus teres. Bacca ignota.

Observ.: Allied to M. oleaefolium Bl., differing a.o. by its umbellate inflorescence.

Distribution: endemic.

NATOENA ISLANDS (W. of Borneo). P. Boengoeran: G. Ranai, 200 m (van Steenis nr. 1265, L, typus, dupl. in (BZ], buds Apr.; v.n. tĕlor).

23. **Memecylon Steenisii Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, juveniles teretiusculi vel compressiusculi glabri candicantes. Folia elliptica vel oblonga, 9.5—12 cm × 4.5—6.3 cm, basi cuneata vel sensim angustata acuta, apice abrupte longiuscule acuto-acuminata, pergamentacea glabra, supra venulis transversis tenuissimis, subtus uninervia venulis transversis haud conspicuis. Petiolus 7—9 mm longus gracilis. Inflorescentia cymosa ad 1 cm longa pauciflora; pedunculus 3—7 mm longus compresso-quadrangularis; rami tuberculiformes quaternati in seriebus duobus dispositi. Alabastrum mammiforme apiculatum. Pedicellus 2.5—3mm

longus teretiusculus. Calycis tubus late campanulatus 2 mm longus basi rotundatus teres subquadricostatus; limbus truncatus vel subsinuatus. Petala late ovata 1.5—2 mm × 1.5 mm apiculata. Stamina stylus et bacca ignoti.

Observ. Allied to M. oleaefolium Bl.

Distribution: restricted to the localities quoted below.

SUMATRA. Benkoelen: Talang totong, between Sepatoehoe and Simpang, N. of lake Ranau, 600 m (van Steenis nr. 3373, L, typus, dupl. in [BZ], fl. Oct.).

P. SIMEULOEË: Tapah, Dèfajan (Achmad nr. 1387 [BZ], L, fr. Sept.; v.n. poewi oeding).

24. **Memecylon oleaefolium Bl.** Blume in l.c. (1851) p. 359; Miquel, l.c. (1855) p. 579; Triana in l.c. (1871) p. 137; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1150.

Shrub. Adult and young branches terete, glabrous. Leaves oblong, 6.5—13 cm × 3.5—6 cm, at the base acute, lamina confluent in the petiole, at the top long but obtusely acuminate, coriaceous, glabrous, on the upperside with thin cross-venules, on the underside 1-nerved, cross-venules hardly conspicuous. Petiole 10—12 mm long. Inflorescence a 2—2.5 cm long, few-flowered cyme; peduncles 1 or 2 from each foliate leaf axil, 7—12 mm long (when branched, the peduncle is rather stout and only 3 mm long), slender, subterete or subquadrangular; ramifications of the first order opposite or, rarely, quaternate, disposed in 2 rows closely above each other. Bud mammiform, long apiculate. Pedicel 2—2.5 mm long. Calyx tube broadly campanulate, 1—1.5 mm long, at the base truncate; limb truncate, sinuate. Petals broadly ovate, 2 mm × 2 mm, apiculate. Filaments 1.5 mm long; anthers dolabriform, 1.3 mm long; thecae minute; connective lanceolate, about 4× the length of the thecae, obtuse. Style 3 mm long, not thickened at the base, connate with the disc grooves; stigma hardly conspicuous. Berry elliptic, 8—9 mm long, provided with the persistent calyx limb, smooth; stalk 2—3 mm long, terete. Pericarp thin, less than 0.5 mm in diameter. Seed 1.

Observ.: Allied to M. garcinioides Bl., but the leaves are much more coriaceous.

Distribution.

SUMATRA. East Coast: Masihi Forest Reserve, Asahan (Krukoff nr. 4242, L, fr. Oct.-Nov.); Hoeta Padang, Asahan (idem nr. 4283, L, fl. Nov.-Dec.); Locality unknown: (Korthals s.n. L, typus); (Forbes nr. 3213, L).

SOEMBA: Kananggar (Iboet nr. 517 [BZ], L, fr. May; v.n. poendah).

FURTHER DISTRIBUTION: (according to Ridley) Malay Peninsula, P. Penang and Singapore.

var. **laurinum (Bl.) Bakh. f.** comb. nov. *Memecylon laurinum Bl.* in l.c. (1851) p. 359; Miquel, l.c. (1855) p. 579; Triana in l.c. (1871) p. 157; Baillon, l.c. (1880) p. 28, fig. 44—45; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1150.

Shrub. Adult and young branches terete or slightly flattened. Leaves ovate-oblong or narrowly oblong, 9.5—11 cm×3.8—5 cm, at the base acute, at the top obtusely acuminate, 1-nerved, on both sides with faint cross-venules. Petiole 5—9 mm long, not confluent in the lamina. Inflorescence umbelliform, few-flowered; peduncle from foliate leaf axil, 3—5 mm long, stout. Flowers only seen by me before anthesis. Bud subglobose, 5 mm long, apiculate. Pedicel 3 mm long.

Observ.: differing from the type species by its large buds and its leaves, which are not confluent into the petiole. An insufficiently known form. It may be a distinct species.

Distribution: restricted to the localities quoted below.

SUMATRA. Locality unknown: (Korthals s.n. L, typus, sub *M. laurinum Bl.*); (collector unknown, L).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang (Korthals s.n. L, sub Memecylonopsis flavescens Korth.).

25. **Memecylon rhodophyllum Bakh. f.** spec. nov.

An frutex? Rami adulti teretes, juveniles teretiusculi vel compressiusculi, in sicco albicantes. Folia oblonga vel ovato-oblonga, 7—10 cm × 4.3—6 cm, basi subrotundata acuta vel acutiuscula, apice breviter acuminata, coriacea, glabra, supra in sicco viridia venulis transversis tenuissimis, subtus in sicco rubro-brunnea 1-nervia venulis transversis haud conspicuis. Petiolus 10—12 mm longus. Inflorescentia cymosa 2—4 cm longa submultiflora; pedunculi 2 vel 3 ex axilla defoliata enati, 6—25 mm longi; rami quaternati in seriebus 2 vel 3 dispositi, breves quadrangulares ad nodos incrassati. Flores mihi ignoti. Bacca subglobosa 5—7 mm longa laevis apice calycis limbo truncato infundibuliformi brevissimo munita; pedicellus 5—6 mm longus teres substriatus. Pericarpus tenuis. Semen unum subglobosum fere 5 mm longum laeve nitidum.

Observ.: resembling slightly M. edule Roxb. var. ovatum (Smith) Clarke.

Distribution: endemic.

MOLUCCAS. Halmahera: (de Vriese s.n. typus, dupl. in U).

26. **Memecylon floribundum Bl.** Blume in l.c. (1851) p. 361; Junghuhn, Java (1853) p. 324; Triana in l.c. (1871) p. 158; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1162; Koorders en Vale-

ton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten Java] p. 211, 212; Koorders, Exkurs. Flora Java II (1912) p. 702; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Hallier in Meded. Rijks Herb. Leiden nr. 12 (1912) p. 28; Boldingh, Zakflora Landb. streken Java (1916) p. 133; Ruys in Ann. Jard. Bot. Buitenzorg XXXIV (1925) p. 75; van Steenis in Bull. Jard. Bot. Buitenzorg sér. III livr. 2 (1932) p. 178; Backer, Manuscr. Fl. Java, Melast. (1941) p. 32; *Memecylon coeruleum Jack*; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 42; *Memecylon ferreum Bl.* (pr. p.; typo excl.), Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1095; *Memecylon laurifolium Naud.* in l.c. XVIII (1852) p. 277; Miquel, l.c. (1855) p. 576; *Memecylon tinctorium Willd.*; Blume, Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1094; Hasskarl, Cat. Plant. Hort. Bot. Bog. (1844) p. 259; Moritzi in Zollingers Syst. Verz. (1845—1846) p. 9.

Shrub, 3—5 m high. Adult and young branches subterete, slightly flattened, glabrous, on the nodes strongly thickened. Leaves oblong, ovate-oblong or broadly lanceolate, 6—17.5 cm × 2.5—8 cm, at the base subobtuse or subacute, at the top obtuse, acute or retuse, strongly coriaceous, glabrous, on the upperside with hardly conspicuous cross-venules, on the underside 1-nerved, cross-venules hardly conspicuous or, rarely, faint, when dry yellowish. Petiole 3—7 mm long, not confluent into the lamina. Inflorescence a compact, simple or compound umbel, 1.5 cm long, many-flowered; peduncles 2 to 5 or more, from each foliate leaf axil, 2.5—3 mm long, acutely quadrangular. Bracts cucullate, 3—4 mm long, persistent. Bud broadly mammiform, acute. Pedicel 3—4 mm long, very stout, in the middle part bibracteolate. Calyx tube broadly inflate-campanulate, 3—4 mm long, at the base rounded; limb sinuate or subtruncate. Petals broadly obovate, 2.5 mm × 3 mm, acute, fleshy, violet or dark-purple. Filaments 1.5—2 mm long; anthers dolabriform, 1.5 mm long; connective subacute, 1.5—2 times the length of the thecae. Style 3.5—4.5 mm long, not widened at the base, connate with the disc grooves; stigma hardly conspicuous. Berry narrowly obovate or ellipsoid, 10—12 mm long, at the base unequal, at the top provided with the long tubular rest of the calyx limb; stalk 7—9 mm long. Pericarp thin. Seed 1, obovoid, 9 mm long, obtuse.

Observ.: Easily to recognize by the distinctly bibracteolate pedicel and by the peculiar shape of the berry.

Distribution.

SUMATRA. Lampong Districts: Kota djawa, 100 m (Forbes nr. 1352, L).

JAVA. Batavia: Batavia, Weltevreden (Junghuhn s.n. L); Buitenzorg, 250 m (Bakhuizen van den Brink nr. 3810 [BZ], L, ster.); idem (Bakhuizen

van den Brink fil. nr. 448 U, fl. Sept.): idem, Kampoeng Sĕmpoer (Bakhuizen van den Brink nr. 5998 [BZ], L, U, fl. fr. Sept.); Preanger Regencies: Pelaboean ratoe (Koorders nr. 34620β [BZ], L, fr. Apr.); idem (Boerlage s.n. L, fr. July); Karang Haoe, 20 m (Beumée nr. A. 568 [BZ], L; Banjoemas: Noesa Kambangan (Blume s.n. L, typus, sub M. tinctorium Willd.); idem (Koorders nr. 22152 [BZ], L, fl. Jan.); idem (idem nr. 9996β, 24680β and 26928β [BZ], L); idem (native collector s.n. [BZ], U, fr. June); Madioen: Pandan, 400—900 m (Elbert nr. 488, L); Besoeki: Poeger (Koorders nr. 30014β [BZ], L, fr. March); Petjaron, W. of Panaroekan (Backer nr. 24707 [BZ], L, fr. June); Locality unknown: (de Vriese s.n. L); (Blume s.n. L, sub M. ferreum Bl.); (idem s.n. L; v.n. kidjambè); (idem s.n. L); (Junghuhn s.n. L); (Ploem s.n. L); (collector unknown, L).

P. Bawean: Tandjoeng andjar (Dorgelo s.n. PAS, fl., fr. June); G. Toenggangan (Karta nr. 32 [BZ], L, U, fr. May).

Karimoendjawa Islands. P. Karimoendjawa: G. Bandera, 250 m (Dammerman nr. 12 [BZ], L, fl. May).

Madoera: N. of Soemenep, 50 m. (Backer nr. 20728 [BZ], L, U, fl. May).

Borneo. Exact locality unknown: Bt. Blitong. (Teysmann s.n. L).

Anambas Islands. P. Tandjoeng Soeka: 2 m (van Steenis nr. 975 [BZ], L, fr. Apr.).

New Guinea. Locality unknown: (collector unknown [BZ], U).

Exact locality unknown: „Tamba bisa" (herb. Houttuyn s.n. L).

Further distribution: Siam, P. Condor and French Indo-China.

27. **Memecylon garcinioides Bl.** Blume in l.c. (1851) p. 358; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 537; Cogniaux in l.c. (1891) p. 1152; Baker f. in Journ. Bot. LXII Suppl. I (1924) p. 42; Heyne, Nutt. Plant. Ned. Ind. II (1926) p. 1206; *Memecylon garcinioides Bl.* var. *elongatum Bl.* in l.c. (1851) p. 358; *Memecylon eurhynchum Miq.*, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 322; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1161; *Memecylon Heyneanum Benth.*; Miquel, l.c. (1855) p. 576; idem, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 125; *Memecylon intermedium Bl.*; Triana in l.c. (1871) p. 157; Cogniaux in l.c. (1891) p. 1159 [pr. p.].

Tree, (according to Forbes) up to 13 m high Adult and young branches terete. Leaves elliptic, oblong or, rarely, ovate-oblong, 5.5—13 cm × 2.5—5.5 cm, at the base acute, cuneate or rounded, at the top rounded or gradually narrowed and then long but acutely acuminate, subcoriaceous, glabrous, 1-nerved, cross-venules on both sides faint. Petiole 2—7 cm long, confluent into the lamina. Inflorescence a compound umbel, 1.2—2 cm long, many-flowered; peduncles 1,2 or 3 from each foliate leaf axil, 7—15 mm long, slender, subquadrangular. Bud mammiform, shortly acuminate. Pedicel 3.5 mm long, rather slender, terete. Calyx tube subglobose, 1—1.5 mm long (limb. incl.); limb dilatate, very shortly dentate or, rarely, subtruncate. Petals broadly subcordate, 1 mm × 1.7 mm, apiculate, mid

vein thick, purple or lilac (Forbes). Filaments 1—1.3 mm long; anthers broadly ovoid, 0.5 mm long; thecae $^2/_3$ × the length of the anthers; connective obtuse, much shorter than the thecae. Style 3 mm long, at the base not widened nor connate with the disc grooves; stigma hardly conspicuous or narrowly conical. Young berry subglobose, 6 mm long; stalk 2—3 mm long.

Observ.: Allied to M. intermedium Bl., but the leaves are as a rule much larger and the inflorescence is not corymbose.

Distribution.

SUMATRA. West Coast: Ajer mantjoer, 360 m (Beccari nr. 536, L); Loeboe aloeng (Teysmann s.n., U, type of *M. eurhynchum Miq.*); Djambi: Djambi, 180 m (Posthumus nr. 709 [BZ], L, fl. Aug.); Palembang: Rawas, 150 m (Grashoff nr. 1102 [BZ], L; v.n. timbras kĕmoening); Moeara Roepit, R. Rawas (Forbes nr. 3108, L; v.n. v.n. koemang); Banjoeasin and Koeboelands, 20 m (Grashoff nr. 832 (BZ], L, fl. Nov.; v.n. tĕmbras talang); Locality unknown: (Korthals s.n. L, typus); (idem s.n., L, type of *M. garcinioides Bl.* var. *elongatum Bl.*, sub Myrtus glabrata Korth.).

JAVA. Batavia: Tjianten, S. of Leuwiliang, 800 m (Backer nr. 25984 [BZ], L, U, fl. Sept.); G. Kendeng, along the Tjianten, 1000 m (idem nr. 25872 [BZ], L; fl. Sept.; v.n. kikawat); G. Kembang, near Poerasèda, 750 m (Bakhuizen van den Brink fil. nr. 3415 [BZ], L, U, fr. June); G. Paroengpoeng, S. W. of Leuwiliang, 500 m (Bakhuizen van den Brink nr. 7290 [BZ], L, fl. Jan.); idem, 750 m (idem nr. 7695 [BZ], U, fl., fr. Dec.).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: Doessoenlands. (Korthals s.n. L); Pelampai [„P. Lampei"] (idem s.n. L); Exact locality unknown: Hajoep (Winkler nr. 2369, L, fl. June). BRITISH PARTS. Sarawak.

KARIMATA ISLANDS. P. Penebangan: (Mondi nr. 85 [BZ], L, fl. March; v.n. mata bĕras).

FURTHER DISTRIBUTION: ? Malay Peninsula, ? Singapore, ? Siam.

28. **Memecylon pauciflorum Bl.** Blume in l.c. (1851) p. 356; Miquel, l.c. (1855) p. 578; Triana in l.c. (1871) p. 158; Boerlage, l.c. (1890) p. 338; Cogniaux in l.c. (1891) p. 1169; *Memecylon capitellatum L.*; Spanoghe in Linnaea XV (1841) p. 203; *Memecylon pauciflorum Bl.* var. *pisocarpum Bl.* in l.c. (1851) p. 356.

Shrub. Adult branches subterete or obtusely quadrangular, the young ones acutely quadrangular, glabrous, when dry whitish. Leaves narrowly oblong, 4—6 cm × 2—2.5 cm, at the base acute, at the top shortly but obtusely acuminate, subcoriaceous, glabrous, on the upperside with faint or hardly conspicuous cross-venules, on the underside 1-nerved, cross-venules hardly conspicuous. Petiole 2—3 mm long, not confluent into the lamina. Inflorescence a simple umbel, up to 7 mm long, few-flowered; peduncle 2—4 mm long, slender, quadrangular. Bud mammiform, apiculate or subacute. Pedicel 2.5—3 mm long. Calyx tube subglobose-cyathiform, 1.5 mm

long; limb minutely dentate. Petals ovate, 1.5 mm × 1 mm, shortly acuminate. Stamens and style unknown to me. Berry subglobose, 5 mm long, sometimes lumped at the base, at the top provided with small rests of the calyx limb.; stalk short. Pericarp thin, less than 0.5 mm in diameter. Seeds either 2, planconvex and smooth or 1 and globose.

Observ.: This species is not allied with M. myrsinoides Bl. as is Blume's opinion, but M. australe F. v. Muell. ex Triana from Australia is probably identic with M. pauciflorum Bl.

Distribution.

TIMOR [? Dutch part]: (Spanoghe s.n. L, typus).

NEW GUINEA. Locality unknown: (collector unknown L, type of *M. pauciflorum Bl.* var. *pisocarpum Bl.*).

FURTHER DISTRIBUTION doubtful: ? Andamans, ? Burma, ? Siam, ? French Indo-China, ? Hainan (Guillaumin), ? Australia.

29. **Memecylon ceramense Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, juveniles teretiusculi vel compressiusculi glabri ad nodos compresso-incrassati. Folia oblonga, 6.5—7.8 cm × 3.3—4 cm, basi cuneata, apice abrupte obtuso-acuminata, pergamentacea glabra 1-nervia utrinque venulis transversis haud conspicuis, costa gracili. Petiolus 2—4 mm longus. Inflorescentia umbella composita 12 mm longa pauciflora; pedunculus 5 mm longus teretiusculus. Pedicellus 2.5—3.5 mm longus. Calycis tubus campanulatus subcyathiformis 0.5—0.7 mm longus quadrangularis 8-costatus basi acutus; dentes late triangulares acutiusculi. Petala ovato-lanceolata 1 mm longa acuta venulata. Filamenta 1—2 mm longa; antherae anguste dolabriformes 0.5 mm longae; thecae angustae minutae; connectivum acute caudatum thecis multo longius. Stylus 2—2.5 mm longus anguste cylindricus quadrangularis, basi pyramidaliter dilatatus, sulcis disci connatus. Bacca ignota.

Distribution: endemic.

MOLUCCAS. Ceram: G. Loemoeti, 400—800 m (Rutten nr. 2036, L, typus, dupl. in [BZ], fl. Febr.).

30. **Memecylon pseudo-nigrescens Bl.** Blume in l.c. (1851) p. 357; *Memecylon confine Bl.* in l.c. (1851) p. 357; *Memecylon glomeratum Bl.*; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1160 [pr. p.]; *Memecylon nigrescens Hook. et Arn.*; Miquel, l.c. (1855) p. 578.

Shrub. Adult branches subterete, the young ones subquadrangular or acutely quadrangular, glabrous, on the nodes strongly thickened. Leaves elliptic or broadly oblong, 4—7.3 cm × 2.5—3 cm, at the base acute, at the top obtusely acuminate, subcoriaceous, glabrous, 1-nerved, on both sides with cross-venules or, rarely, on the upper-

side with hardly conspicuous cross-venules. Petiole 5 mm long, gradually narrowed into the lamina. Inflorescence cymose, many-flowered; peduncles 2 or more from each foliate leaf axil, 3—4 mm long, rather slender, subterete or subquadrangular; ramifications disposed closely above each other. Bracts and bracteoles linear, up to 1 mm long. Bud very acute. Pedicel 1 mm long. Calyx tube campanulate, 1—1.5 mm long, rounded at the base; teeth triangular, acute. Filaments 1.5—2 mm long; anthers dolabriform, 0.8 mm long, at the base acute, at the top subacute; thecae half the length of the anthers. Berry subglobose, 4—5 mm long, 8-ribbed, provided with the very short rests of the calyx limb; stalk 3—3.5 mm long, subquadrangular.

Distribution: restricted to the localities quoted below.

SUMATRA. East Coast: Sibaulangit, 500 m (Lörzing nr, 10163 [BZ], L, U, fl. Sept.); Benkoelen: Lebong Air Poetih, 500 m (Boschwezen nr. b.b. 9573 [BZ], L, fr. Dec.; v.n. tĕmĕnges); Exact locality unknown: „Pattay" (Blume s.n. L, typus).

JAVA. Pekalongan: Margasari, 100 m (Boot nr. 3337a [BZ], L, fl. June; v.n. kĕmoening batoe).

LOMBOK: G. Sepi, 0—300 m, calcareous forest. (Elbert nr. 2469, L, fr. July).

BORNEO. SOUTHERN AND EASTERN PART. Bandjermasin: G. Sakoembang (Korthals s.n., L, sub M. pseudo-nigrescens Bl. var. acuminatum Bl.); Kapoeas-Barito: Doessoenlands, river Poensen (Korthals s.n. L, type of *M. confine Bl.*); idem, Pattai (idem s.n. L, sub Myrtus avenis Korth.); Exact locality unknown: Sei Kambat. (Korthals s.n. L).

31. **Memecylon ochroleucum Bakh. f.** spec. nov.

Frutex. Rami adulti teretiusculi, juveniles subquadrangulares glabri. Folia oblonga lanceolata ovato-oblonga vel ovato-lanceolata 9—12 cm × 3—4.5 cm, basi acute cuneata, apice acutissima vel obtuso-acuminata, subcoriacea, glabra, utrinque in sicco pallida, venulis transversis haud conspicuis 1-nervia. Petiolus 7—9 mm longus gracilis. Inflorescentia cymosa fere 1 cm longa multiflora; pedunculi 2 ex axilla foliata enati 8—10 mm longi quadrangulares; rami brevissimi. Flores in verticillis duobus contractis dispositi. Bracteae anguste triangulares 1.5 mm longae. Pedicellus 1.5—2 mm longus teres. Calycis tubus anguste campanulatus 2.5 mm longus basi acutiusculus teretiusculus; limbus subtruncatus. Petala anguste ovata 2 mm × 1.5 mm longa apiculata. Filamenta 2 mm longa; antherae subreniformes 1 mm longae; connectivum linguatum apice acuminato-triangulare. Stylus 3.5 mm longus, basi non dilatatus, sulcis disci subconnatus; stigma haud conspicua. Bacca immatura subglobosa 5 mm longa; pedicellus 2.5 mm longus.

Distribution: endemic.

SUMATRA. P a l e m b a n g: Lematang Ilir, 50—100 m (Thorenaar nr. T 3. P 108, L, typus, dupl. in [BZ], fl. Oct.; v.n. těmběras djantoeng); idem 75 m (Boschwezen nr. 87. T 3. P 108 [BZ], L, fl. June; v.n. těmběras djantoeng).

32. **Memecylon intermedium Bl.** Blume in l.c. (1851) p. 358; Junghuhn, Java (1853) p. 506; Triana in l.c. (1871) p. 157; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1158; Koorders en Valeton in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten Java] p. 208, 210; Koorders, Exkurs. Flora Java II (1912) p. 702; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Backer, Manuscr. Fl. Java, Melast. (1941) p. 34; *Memecylon intermedium Bl.* var. *longipes Bl.* in l.c. (1851) p. 359; *Memecylon umbellatum Bl.* (*non Burm. f.*, 1768), Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1094; Miquel, l.c. (1855) p. 575.

Shrub, up to 4 m high. Adult and young branches terete, glabrous. Leaves elliptic or oblong, 3.5—6.5 cm × 2—3 cm, at the base rounded, cuneate or acute, at the top gradually narrowed, next long but acutely acuminate, subcoriaceous, glabrous, on the upperside with faint cross-venules, on the underside venules hardly conspicuous. Petiole 2—3 mm long. Inflorescence a many-flowered, 2—6 cm long corymb; peduncles 1 or 2 from each foliate leaf axil, 4.5—17 mm long, slender, subterete. Bud mammiform and obtuse or calyptriform and acute. Pedicel 3—3.5 mm long, terete. Calyx tube campanulate, 1.5—2 mm long, slightly inflate, at the base rounded, at the top dilatate, subterete, slightly 4-ribbed; teeth short and acute. Petals broadly ovate, 1.5—2 mm × 1.5—2 mm, acute or subobtuse, (according to Kuhl and van Hasselt) violet. Adult stamens unknown to me. Filaments blue-purple (Backer). Anthers apiculate (Cogniaux). Style 3 mm long, not widened at the base, connate with the disc grooves; stigma hardly conspicuous. Berry unknown to me.

D i s t r i b u t i o n: restricted to the localities quoted below.

SUMATRA. P a l e m b a n g: Pg. lebar, Marga Lb. Boenta Boenta, Pasem lands, 100 m (Boschwezen nr. T.B. 216 [BZ], L, ster.; v.n. kětam); B e n k o e l e n: G. Raja, lake Ranau, 1500 m (van Steenis nr. 3531 [BZ], L, fl. Nov.).

JAVA. B a t a v i a: G. Salak (Blume s.n. L, sub Melastoma enervis Bl.); P r e a n g e r R e g e n c i e s: Tjidadap, 1200 m (Bakhuizen van den Brink nr. 587 [BZ], L, fl. June; v.n. kidjankar); G. Limoes, G. Boerangrang, 1250 m (van Slooten nr. 451 [BZ], L, fl. July); L o c a l i t y u n k n o w n: (Blume s.n. L, typus, sub *M. umbellatum Bl.*); (Kuhl and van Hasselt s.n. L, type of *M. intermedium Bl.* var. *longipes Bl.*; v.n. kikadjeroe); (Horsfield s.n. L; v.n. kiribadoe).

33. **Memecylon lampongum Miq.** Miquel, Flor. Ned. Ind. Suppl. I Sumatra (1860) p. 321 end 125 [nomen]; Triana in l.c.

(1871) p. 157; Scheffer, Bijdr. Flor. Ind. Arch. (1874) p. 74; Kurz in Journ. As. Soc. Bengal (1871) p. 54; *Memecylon Griffithianum Naud.*; Cogniaux in l.c. (1891) p. 1145 [pr. p.].

? Shrub. Adult branches terete, the young ones subterete, glabrous, whitish, on the nodes flattened. Leaves oblong, 9—11.5 cm × 4.5—6 cm, towards the base gradually narrowed, at the top obtusely apiculate, subcoriaceous, glabrous, on the upperside with faint cross-venules, shining, on the underside, when dry, yellowish, cross-venules hardly conspicuous, mid-nerve thick and (in vivo) reddish. Petiole 4—6 mm long. Inflorescence paniculiform, 2—3 cm long (young specimen), many-flowered; peduncles 2 from each foliate leaf axil, 5—10 mm long, quadrangular, when dry, ferrugineous; ramifications quaternate, disposed in 2 or more rows above each other. Flowers only seen before anthesis. Bud ovoid-subglobose, closed, (in vivo) flavescent. Pedicel subterete. Berry unknown.

Observ: An insufficiently known species. It may be allied to M. ambiguum Bl.

Distribution: endemic.

SUMATRA. Lampong Districts: G. Batin (Teysmann s.n. U, typus; v.n. kajoe lapie).

34. **Memecylon celebicum Bakh. f.** spec. nov.

Frutex. Rami teretes glabri, internodiis multis contractis 1.5 cm longis. Folia lanceolata, 5.5—8.5 cm × 1.9—2.7 cm, basi apiceque angustata acutiuscula, valde coriacea glabra, utrinque avenia. Petiolus 2—3 mm longus. Inflorescentia cymosa 2 cm longa pauciflora; pedunculus solitarius ex axilla foliata 3 mm longus teretiusculus; rami oppositi in seriebus duobus dispositi ad 2 mm longi. Flores ignoti. Stylus 5 mm longus, basi dilatatus, sulcis disci connatus; stigma subulata. Bacca ovoidea 4 mm longa teres in parte apicali in tubum brevem dilatatum producta; pedicellus 2.5—3 mm longus teres. Pericarpus crassissimus.

Observ: Allied to M. hepaticum Bl., differing a.o. by the very coriaceous leaves.

Distribution: endemic.

CELEBES. Manado: Malili, Lampia, 5 m (Boschwezen nr. b.b. 19711, L, typus, dupl. in [BZ], fr. June).

35. **Memecylon gibbosum Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, juveniles teretiusculi vel compressiusculi glabri. Folia oblonga, 5—7.5 cm × 2.7—3.5 cm, basi cuneata apice breviter obtuso-acuminata, coriacea glabra. Petiolus 5 mm longus. Inflorescentia paniculiformis 2—2.5 cm longa submultiflora;

pedunculus solitarius ex axilla foliata 11—14 mm longa robusta subquadrangularis; rami quaternati in seriebus duobus contractis dispositi subquadrangulares. Flores ignoti. Bacca subglobosa-elliptica 6 mm longa, basi gibbosa venulis radiatis munita; pedicellus 4—5 mm longus teretiusculus. Pericarpus intus rubiginosus. Semen unum 5.5 mm longum laeve nitidum.

Observ: Allied to M. edule Roxb. var. ovatum (Smith) Clarke, but differing a.o. by its gibbose berries.

Distribution: endemic.

JAVA. Pekalongan: Proepoek, 100 m (Wind nr. 21, L, typus, dupl. in [BZ], fr. July; v.n. kalak).

36. **Memecylon crassifolium Bakh. f.** spec. nov.

Frutex. Rami adulti teretes, juveniles teretiusculi, glabri, ad nodos valde incrassati. Folia oblonga vel ovato-oblonga, 12—15 cm × 5.5—7 cm, basi sensim angustata acuta vel cuneata, apice breviter acuto-acuminata, coriacea glabra, 1-nervia, supra subavenia, subtus avenia in sicco lutescentia. Petiolus 7—10 mm longus crassus. Inflorescentia paniculiformis 1—1.5 cm longa, pedunculis 2 vel 3 ex axilla foliata enatis vel subfasciculata 4—6 mm longa submultiflora; rami quaternati in seribus duobus contractis dispositi. Bracteae bracteolaeque lanceolatae 2—3 mm longae acutissimae. Alabastrum ovoideum acutum apice fissum. Pedicellus 3—3.5 mm longus teretiusculus. Calycis tubus campanulatus 3—3.5 mm longus basi obtusiusculus teretiusculus; limbus truncatus. Flores ante anthesin solum vidi. Petala ovata acuta. Bacca subglobosa 10 mm longa sublaevis, apice calycis limbo lato munita; pedicellus 5—6 mm longus. Pericarpus crassus 1 mm in diametro. Semen unum.

Distribution: endemic.

CELEBES. Manado: Malili, Oesoe bay, 100 m (Boschwezen nr. Cel./II—452, L, typus, dupl. in [BZ], fr. Dec.; v.n. kosodoewana); idem, 250 m (idem nr. Cel./II—135 [BZ], L, ster.); idem (idem nr. Cel./II—496 [BZ], L, fl. Nov.; v.n. kosodowana maéto); idem, Laroea (idem nr. b.b. 1849 [BZ], L); Minahassa, 200 m (Koorders nr. 17887β [BZ], L, ster.).

37. **Memecylon edule Roxb.** var. **ovatum (Smith) Clarke.** Clarke in Hook. f., Flor. Brit. India II (1879) p. 564; Triana in l.c. (1871) p. 159; Boerlage, l.c. (1890) p. 538; Cogniaux in l.c. (1891) p. 1156; Kuntze in Revis. Gen. Plant. (1891) p. 247; Koorders en Valeton, in Meded. 's Lands Plant. tuin nr. XXXIII (1900) [Bijdr. nr. 5, Boomsoorten Java] p. 211; Backer, Manuscr. Fl. Java, Melast. (1941) p. 34; *Memecylon edule Roxb.*; Scheffer, Observ. Phytogr. II (1868—1869) p. 44; Miquel, l.c. (1855) p. 573; Triana in l.c. (1873)

p. 158; Koorders-Schumacher, Syst. Verz. I Java, Melast. (1912); Ruys in Ann. Jard. Bot. Buitenzorg XXXIV (1925) p. 74; *Memecylon ferreum Bl.* (pr. p.; typo incl.), Bijdr. Flor. Ned. Ind. nr. 17 (1826) p. 1095; *Memecylon ovatum Smith* in Rees Cyclop. XXIII (1816) nr. 13.

Tree, 10—15 m high. Adult branches terete, the young ones subterete or subquadrangular, glabrous. Leaves oblong, 4.5—9.6 cm × 2.5—5 cm, at the base cuneate, at the top shortly but obtusely acuminate, retuse or subobtuse, coriaceous, glabrous, 1-nerved, on both sides with faint cross-venules or venules hardly conspicuous. Petiole 5—7 mm long, often gradually narrowed into the lamina. Inflorescence a panicle, 0.5—2 cm long, few- or many-flowered; peduncles 1,2 or more from each foliate or defoliate leaf axil, 2—5 mm long (after anthesis up to 10 mm long), quadrangular; ramifications opposite or quaternate, in 3 or 4 rows closely above each other. Bracts and bracteoles linear, 0.5—1 mm long. Bud ovate, acute. Pedicel 0.8—1.2 mm long. Calyx tube broadly campanulate, 1.5 mm long, at the base rounded, subterete, slightly 4- to 8-ribbed; teeth very short. Petals ovate, 1.3 mm × 1 mm, acuminate. Filaments 2 mm long; anthers subcylindrical, 1.3 mm long, curved; connective narrowly triangular, 2½ × the length of the thecae. Style 2.5—3 mm long, at the base not widened, connate with the disc grooves; stigma hardly conspicuous. Berry subglobose or ovoid, 7—8 mm long, rugose, sometimes slightly 5-nerved; stalk 2—2.5 mm long. Pericarp very thick, 1 mm in diameter, inside rufous, reticulate. Seeds 1 or 2, terete or plan convex, subrugose.

Observ: From M. edule Roxb. many varieties have been described, which are but partially belonging to this species, the others are more related to M. myrsinoides Bl.

Distribution.

SUMATRA. East Coast: Pantjaitjermin, Medan (Docters van Leeuwen nr. 3131 [BZ], L fr. Febr.); Serdang, near Pantjaitjermin, 1 m (Lörzing nr. 9294 [BZ], L, fl. Nov.); P. Berhala: (van der Meer Mohr nr. 41 [BZ], L, fl. Aug.); idem, 8 m (Lörzing nr. 6971 [BZ], L, fl. Nov.).
BANKA: Blinjoe (Teysmann s.n. U).
BILLITON: (herb. Billiton nr. 10, L).
JAVA. Batavia: Depok (Koorders nr. 31007 [BZ], L). Banjoemas: Tjilatjap (de Haan nr. 4 [BZ], L, fr. Febr.); Locality unknown: (Korthals s.n. L); (Blume s.n. L, type of *M. ferreum Bl.*).
KARIMOEN DJAWA ISLANDS. Locality unknown: (Karta nr. 315 [BZ], L, fr. Nov.).
BORNEO. WESTERN PART. Sintang: Semitau (Boschwezen nr. b.b.17077 [BZ], L, ster.); Locality unknown: Bt. Blitong (Teysmann s.n. L).
KARIMATA ISLANDS. P. Panebangan: (Mondi nr. 228 [BZ], L, U, fr. March).

NO LOCALITY KNOWN: (collector unknown, L, sub M. Hosfieldii Miq.); (Junghuhn s.n. L; v.n. kitjampèh).
FURTHER DISTRIBUTION: Andamans, Malay Peninsula, Singapore and Siam.

Species unknown to me, not mentioned in the key.

1. **M. confertiflorum Cogn.** in l.c. (1891) p. 1151. — Borneo.
2. **M. dioicum (Naud.) Cogn.** in l.c. (1891) p. 1172. — Java
3. **M. hepaticum Bl.** var. **grandifolia Cogn.** in l.c. (1891) p. 1151. — New Guinea.
4. **M. Horsfieldii Miq.** in l.c. (1855) p. 572. — Java
5. **M. intermedium Bl.** var. **latifolia K. et V.** in Meded. 's Lands Plant. tuin nr. XXXIII (1900) p. 213. — E. Java.
6. **M. longifolium Cogn.** in l.c. (1891) p. 1150. — New Guinea)
7. **M. Monchyanum Back.**, Manuscr. Fl. Java, Melast. (1941. p. 34. — Java
8. **M. myrsinoides Bl.** var. **quadrialata Miq.**, l.c. (1855) p. 577. — Java.
9. **M. novoguinense Baker f.** in Ridley, Bot. Rep. Woll. Exped. (1916) p. 57. — New Guinea
10. **M. paniculatum Jack** in Malay Misc. vol.? (1820—1822); idem in Hooker's Comp. Bot. Mag. I (1835) p. 219. — Sumatra.
11. **M. pusilliflorum Cogn.** in l.c. (1891) p. 1165. — Celebes.
12. **M. sphaerothyrsum Schwartz** in Mitt. Inst. Bot. Hamburg Bd. 7. Heft 3 (1931) p. 257. — W. Borneo.
13. **Lyndenia laurina Z. et M.** in Moritzi, Zollingers Syst. Verz. (1845—1846) p. 9. — Java.

V. COLLECTORS' NUMBERS

The collectors' numbers are printed in *italics*; the numbers in parentheses are the pages on which the concerning collectors' numbers are cited.

s.n.: unnumbered specimens. *: data only known to me from literature.

page

Achmad *90* (346); *147* (325); *231* (229); *355* (177); *356* (129); *379* (346); *527* (126); *560* (325); *604* (304); *779* (349); *859* (82); *872* (325); *942* (346); *981* (349); *997* (325); *1075* (108); *1114* (348); *1175* (347); *1191* (343); *1197* (229); *1367* (348); *1387* (356); *1471* (325); *1504* (343); *1532* (349); *1580* (304); *1757* (146); *1777* (349); *1794* (229).

Admin. of Moedjoer s.n. (119).

Amdjah *92* (352); *163* (352); *359* (352); *376* (352); *893* (285).

Atasrip *28* (170); *128* (69); *204* (176); *224* (158); *236* (195).

Atjè *86* (130); *120* (130); *228* (71); *241* (347); *257* (261); *318* (202); *360* (130); *3041* (347).

Backer s.n. (67 [2 ×]); *2354* (48); *5398* (184); *6305* (203); *7231* (48); *11194* (189); *13832* (68); *14797* (304); *16028* (184); *20728* (359); *21038* (130); *22617* (157); *22853* (164); *22891* (144); *22973* (183); *23019* (183); *23391* (48); *24707* (359); *25428* (347); *25680* (67); *25794* (212); *25863* (126); *25872* (360); *25939* (190); *25947* (*130*); *25951* (161); *25984* (360); *26289* (340); *26302* (340); *31229* (340); *36232* (68; 87); *36256* (253); *36258* (114); *36506* (316); *36652* (190); *36724* (50); *36935* (190); *37221* (111).

Bakhuizen van den Brink *(272); *60a* (74); *587* (363); *818* (161); *1858* (212); *2731* (139); *2790* (144); *2798* (114); *2904* (111); *3092* (350); *3124* (315); *3156* (139); *3664* (157); *3810* (358); *3839* (139); *3892* (146); *3904* (316); *3922* (139); *3997* (259); *4156* (77); *4200* (256); *4207* (190); *4366* (189); *4484* (184); *4502* (188); *4557* (124); *4788* (68); *4860* (49); *4890* (49); *5229* (134); *5264* (202); *5332* (67); *5524* (310); *5659* (253); *5667* (84); *5958* (359); *5973* (253); *6165* (200); *6214* (48); *6259* (353); *6401* (134); *6548* (67); *6606* (182); *6854* (202); *7033* (212); *7068* (304); *7069* (315); *7290* (360); *7313* (77); *7550* (202); *7607* (340); *7641* (139); *7650* (272); *7695* (360); *7696* (212); *7702* (339); *7751* (315).

Bakhuizen van den Brink fil. *1* (114); *129* (139); *157* (111); *179* (316); *368* (48); *448* (359); *488* (259); *615* (309); *680* (126; 272); *853* (134); *898* (340); *912* (67); *1262* (126); *1272* (84); *1286* (353); *1305* (223); *1306* (304); *1314* (183); *1707* (247); *1756* (114); *2328* (202) *2591* (144); *3108* [3110] (162); *3284* (130); *3287* [3289] (144); *3293* [3295] (256); *3336* (223); *3410* (212); *3415* (360); *3716* [3722] (183).

Bakhuizen van den Brink, K. J. *24* (68).

Bartlett and la Rue *4* (82); *236* (345); *252* (245); *359* (82); *435* (139).

Beccari *s.n. (51); *10* (182); *31* (253); *32* (246); *164* (67); *190* (217); 214 (180); *264* (254); *369* (222); *511*

page
(164); *536* (360); *688* (316); *690* (81); *747* (181); *799* (164); *824* (304); *913* (133); *934* (133).
Beguin *427* (167); *439* (251); *460* (67); *465* (286); *692* (302); *1573* (305); *2311* (302).
Den Berger *496* (180).
Berkhout s.n. (285).
Beumée s.n. (340); A. *509* (339); A *568* (539); *822* (182); *6729* (212); *6841* (340).
Bidin *105* (139).
Binnendijk s.n. (300).
Blume s.n. (48; 67; 68 [4×]; 73 [2×]; 77; 78 [2×]; 84; 119; 126; 130 [2×]; 133; 134; 137 [2×]; 139; 144 [3×]; 146 [2×]; 157; [2×]; 161; 162; 168; 177 [2×]; 180 [2×]; 182 [2×]; 184; 189 [2×]; 192; 200 [2×]; 212 [5×]; 222 [2×]; 224 [2×]; 226; 234 [2×]; 253; 256; 259; 286; 301 [3×]; 309; 310 [3×]; 316 [3×]; 339; 341; 342 [3×]; 344 [3×]; 347 [4×]; 349; 350; 353 [2×]; 355; 359 [4×]; 362; 363 [2×]; 363; 366).
Boerlage s.n. (55; 67; 68 [2×]; 77; 78 [2×]; 82; 114 [2×]; 130; 139 [3×]; 144; 164; 183; 184; 188 [2×]; 202; 212; 222; 224; 256; 259; 262; 264; 326; 359); *263* (196); *454* (300); *455* (196).
Boot *337a* (362).
Boschwezen *65* (68); *1950* (68); *12639* (328); *17580* (328); b.b *1849* (365); b.b. *1868* (304); b.b. *4999* (69); b.b. *6149* (352); b.b. *6457* (346); b.b. *7032* (330); b.b. *9573* (362); b.b. *9587* (346); b.b. *9673* (330); b.b. *9709* (347); b.b. *10918* (326); b.b. *12084* (321); b.b. *13764* (304); b.b. *15367* (304); b.b. *16542* (341); b.b. *16590* (328); b.b. *17077* (366); b.b. *17579* (328); b.b. *17726* (320); b.b. *18080* (68); b.b. *19711* (364); b.b. *20692* (347); cel./II-*135* (365); cel/II-452 (365); cel./II-*496* (365); cel./III-*24* (328); cel./V-*291* (302); T. *83* (343); T. *535* (352); T.B. *216* (363); *93* T. *1.* P. *83* (343); *87* T. *3* P. *108* (363); T. *3* P. *366* (346).

page
Branderhorst *87* (48); *331* (122); *339* (162).
Brinkman *603* (111).
Bruinier *3* (339); *195* (286).
Bünnemeyer *89* (317); *155* (291); *210* (48); *609* (162); *652* (253); *663* (259); *802* (87); *802a* (87); *907* (182); *960* (209); *965a* (183); *1031* (258); *1043* (263); *1043a* (258); *1053* (234); *1066* (83); *1070* (194); *1084* (291); *1088* (126); *1141* (275); *1195* (81); *1198* (251); *1210* (126); *1239* (67); *1516* (67); *1591* (67); *1635* (114); *1723* (326); *1780* (51); *1820* (67); *1885* (339); *1986* (74); *1989* (208); *2089* (286); *2090* (321); *2107* (190); *2112* (251); *2150* (321); *2121* (67); *2173* (251; 256); *2456* (67); *2512* (70); *2639* (182); *2791* (70); *2877* (178); *2961* (70); *3003* (253); *3015* (139); *3026* (97); *3092* (101); *3094* (202); *3099* (194); *3102* (251); *3144* (126); *3196* (351); *3199* (139); *3200* (209); *3205* (183); *3206* (275); *3208* (283); *3297* (67); *3299* (126); *3400* (97); *3443* (317); *3467* (139); *3468* (119); *3502* (67); *3561* (126); *3587* (141); *3625* (267); *3762* (258); *3763* (83); *3892* (290); *3929* (259); *3945* (290); *4000* (259); *4091* (259); *4104* (290); *4140* (258); *4225* (119); *4263* (119); *4276* (246); *4335* (258); *4373* (290); *4381* (259); *4461* (67); *4476* (184); *4480* (164); *4514* (119); *4582* (182); *4695* (182); *4879* (126); *4941* (182); *4942* (191); *5004* (182); *5092* (258); *5117* (246); *5118* (246); *5177* (182); *5361* (276); *5465* (259); *5513* (87); *5650* (70); *5662* (193); *5740* (259); *5741* (179); *5745* (179); *5796* (260); *5896* (260); *6114* (141); *6117* (67); *6163* (101); *6165* (67); *6210* (130); *6211* (67); *6390* (67); *6416* (208); *6424* (319); *6752* (251); *6755* (251); *6774* (67); *6956* (67); *7025* (328); *7026* (285); *7065* (210); *7096* (227); *7170* (215); *7187* (215); *7260* (72); *7425* (67); *7493* (67); *7519* (286); *7557* (67); *7584* (326); *7691* (67); *7710* (67); *7789* (67); *8074* (224); *8120* (189); *8227* (258); *8347* (267); *8466* (258); *8693*

page
(189); *8698* (83); *9091* (83); *9131* (182); *9209* (182); *9230* (224); *9329* (83); *9379* (224); *9468* (94); *9675* (87); *9798* (87); *9818* (87); *10331* (182); *10476* (76); *10477* (224); *10564* (69); *10598* (53); *10678* (53); *11017* (53); *11043* (53); *11044* (69); *11429* (257); *11595* (53); *11596* (63); *11765* (89); *11803* (188); *12092* (53); *12287* (53); *12403* (53); *12452* (53); *12640β* (53).
Burck s.n. (119); *8* (108).
Burck and de Monchy s.n. (340).
Buysman s.n. (184); *220* (164); *3042* (68).

Collector unknown s.n. (49; 52; 53; 67; 68; 69; 77 [2×]; 81; 101; 107; 108; 113; 119; 126 [3×]; 130; 139; 144; 157; 161 [3×]; 164; 169; 180; 184 [4×]; 188 [2×]; 194 [2×]; 200; 212; 213; 224; 226; 256 [2×]; 259 [3×]; 285; 286; 287; 300; 310; 342; 346; 347]3×]; 357; 359 [2×]; 361; 367); *12* (63); *54* (139).
Cramer s.n. (139; 239).
Curtis *(191).

van Daalen *60** (169); *83* (246).
Dakkus *193* (146); *234* (119).
Dammerman *12* (359).
Denker *36* (184); *903* (68).
Diepenhorst s.n. (119; 189; 346; 354).
Dihm s.n. (55; 115).
van Dillewijn s.n. (91; 184; 301).
Docters van Leeuwen *1730* (69); *3130* (82); *3131* (366); *3273* (70); *3943* (126); *7546* (316); *7751* (290); *7904* (119); *7907* (212).
Dorgelo s.n. (359).
Dorst $\frac{22T-2P}{25}$ (325); T*1*—P.*83* (343).
Dumas *1576* (317); *1634* (304); *1640* (346).
Durand s.n. (162).

Elbert *190* (304); *191* (168); *192* (82); *193* (301); *488* (359); *858* (102); *859* (102); *916* (50); *984* (47); *987* (50); *1419* (50); *1458* (50); *1460* (97); *1561* (50); *2121* (164); *2151* (87); *2259* (164); *2283* (301); *2296* (164); *2316* (87); *2326* (87); *2432* (87); *2436* (164); *2469* (362); *2761* (69); *2856* (68); *3146* (69); *3295* (276(; *3482* (99); *3992* (161); *4025* (107); *4047* (107); *4184* (68); *4187* (88); *4300* (95); *4392* (68); *10817* (69).
Endert E. *1086* (317).

Feuilletau de Bruyn *70* (158); *143* (130); *146* (162); *152* (172); *367* (130); *380* (69); *385* (171); *388* (167); *400* (130).
Forbes *212* (129);? *246* (168); *722* (259); *725* (188); *755* (180); *908* (301); *986* (188); *986a* (301); *988* (78); *1142* (73); *1221a* (316); *1352* (358); *1860* (187); *1865* (259); *1988* (157); *1993* (316); *2064* (187); *2159* (256); *2292a* (183); *2295* (180; 187); *2320* (164); *2342* (178); *2414a* (182); *2407* (83); *2735* (352); *2783* (316); *2808a* (126); *2853* (214); *2882a* (119); *2894a* (161); *2953* (344); *2990a* (352); *2998a* (328); *3007* (304); *3008* (152); *3034* (283); *3062* (291); *3094* (186); *3108* (360); *3108a* (190); *3213* (356); *3213a* (353); *3219* (321); *3506* (63); *3822* (63).
Forsten s.n. (48; 69; 109; 126; 172; 186; 236 [4×] 300; 328); *305* (142).
de Fretes s.n. (300).

Gibbs **5512* (279); *6275* (171).
Gjellerup *5* (155); *218* (158); *536* (167); *764* (159); *778* (158); *919* (173); *1088* (279).
Grashoff *611* (352); *683* (285); *832* (360); *852* (326); *1033* (327); *1102* (360); *1127* (317).
Greshoff *896* (190).
Groenhart *164* (87).

de Haan 4 (366).
Hallier s.n. (320 [2×]; 339; 340); *25* (191); *47* (183); *47a* (183); *103b* (114); *203* (321); *584* (296); *823* (321); *847* (321); *864* (317); *901* (328); *988* (321); *1037* (314); *1067* (285); *1288* (328); *1419* (317); *1559* (320); *1601* (317); *1647*

page
(328); *1732* (269); *1915* (321); *2013* (142); *2223* (319); *2683* (332); *2740* (317); *3113* (319).
van Harreveld s.n. (49).
van Hasselt s.n. (67; 137; 184; 256; 286).
Hasskarl s.n. (90; 347; 350).
Herb. Billiton *10* (366).
Herb. Hasskarl s.n. (88).
Herb. Houttuyn s.n. (359).
Herb. Kolon. Instit. s.n. (67).
Herb. Var. Bot. s.n. (304).
van Heutz Jr. *803* (68).
Hochreutiner *1102* (114); **1951* (247).
Horsfield s.n. (130; 188; 189; 213; 363).
Houtsoorten v. d. Gede *305* (77).
Huitema *23* (67).

Iboet *12* (231); *40* (73); *46* (144); *63* (339); *82* (177); *251* (189); *276* (134); *305* (130); *320* (53); *341* (349); *423* (200); *432* (234); *441* (349); *452* (67); *517* (356); *558* (85).

Jack *(81); *(119); *(129); *(133); *(139); *(207 [2×];) *(217); *(253); *(267).
Jacobson *77* (258); *93* (271); *149* (262); *384* (276); *440* (183); *2426* (141).
Jaheri s.n. (126; 326; 332); *875* (352); *1373* (352); *1757* (348).
Janowsky *38* (170); *117* (170); *128* (109); *132* (203); *161* (254); *190* (79); *190a* (79); *324* (173); *335* (173); *374* (109); *386* (69); *598* (172); *617* (105).
Junghuhn s.n. (48; 52; 67; 68 [6×] 77; 78 [2×]; 80; 81; 84 [2×]; 87 [2×]; 101 [6×]; 108 [2×]; 119; 126; 139 [2×]; 144 [4×]; 162; 164 [3×]; 168; 184 [3×]; 187; 188; 200; 212; 222 [2×]; 234; 252; 253; 259; 300 [2×]; 310; 315 [3×]; 316 [3×]; 317; 344; 358; 359; 367).
Junghuhn or Horsfield s.n. (184).

Karsten *49* (111); *53* (68); *66* (222).
Karta *32* (359); *181* (68); *315* (366).
Kaudern *6* (202); *9* (109); *22* (68); *172* (127); *213* (69); *263* (68); *422* (69); *423* (109).
Koch s.n. (69).
Kloss, C. B. **6238* (109).
Koch *34* (195); *88* (130).
Koorders *4611β* (301); *4642* (339); *9996β* (359); *12044β* (316); *13284* (77); *15293ß* (77); *15560* (188); *17845β* (304); *17846β* (304); *17847β* (304); *17849β* (304); *17851β* (306); *17854β* (172); *17856β* (160); *17857β* (165); *17858β* (236); *17859β* (165); *17860β* (154); *17861β* (154); *17862β* (191); *17863β* (162); *17865β* (236); *17867β* (69); *17868β* (109); *17869β* (70); *17871β* (236); *17872β* (70); *17875β* (70); *17879β* (78); *17880β* (70); *17881β* (196); *17882β* (109); *17883β* (78); *17885β* (347); *17886β* (347); *17887β* (365); *18268β* (347); *18275β* (347); *19581β* (347); *19865β* (94); *20881β* (68); *22152* (359); *23226β* (68); *24252β* (164); *24270β* (119); *24271β* (353); *24680β* (359); *25925β* (301); *25976β* (87); *26467β* (78); *26593β* (68); *26928β* (359); *30014β* (359); *31007* (366); *34620β* (359); *37678β* (91); *37679β* (78); *37681β* (91); *37685β* (91); *40616β* (184); *43150β* (50); *43151β* (50); *43157β* (189); *43969β* (347); *46563* (340).
Kornassi *47* (69); *49* (107); *480* (185); *511* (159); *519* (300); *537* (107); *812* (130); *864* (300); *912* (328); *955* (106); *1070* (48); *1154* (328); *1174* (69); *1229* (172); *1233* (300); *1387* (172 [2×]); *1462* (174); *1578* (69).
Korner s.n. (87).
Korthals s.n. (48; 68 [9×]; 82 [3×]; 87; 96; 99; 100 [2×]; 108 [2×]; 117; 119; 126]9×]; 129; 130; 133 [2×]; 134; 139]2×]; 141; 144; 146 [2×]; 157 [2×]; 162; 164 [2×]; 166 [2×]; 180; 182; 183; 189 [2×]; 190; 194; 200; 202; 207 [2×]; 208; 216; 217 [4×]; 223 [2×]; 226; 232; 234; 239; 242; 251; 256; 262; 267; 269; 285; 287; 295; 304 [2×]; 315; 316; 317; 318; 320[3×]; 321 [4×]; 322;

page
328 [5×]; 339; 347 [3×]; 349; 351; 354; 355; 356; 357 [2×]; 360 [4×]; 362 [4×]; 366; *1230* (126).
Kramer *172* (184).
Krukoff *4000* (82); *4021* (327); *4028* (325); *4040* (72); *4058* (349); *4242* (356); *4283* (356).
Kuhl s.n. (74; 258).
Kuhl and van Hasselt s.n. (48; 77; 83 [2×]; 84 [2×]; 119; 126 [2×]; 127; 130; 134; 139 [5×]; 144; 146 [2×]; 161; 162; 168; 183; 187; 188 [2×]; 189 [4×]; 190 [2×]; 194 [2×]; 202; 212 [3×]; 222; 223; 224 [4×]; 234; 253; 259; 304; 309 [2×]; 310; 316; 363).

Lahaie *(214).
Lam *141* (144); *495* (172); *662* (158); *663* (176); *856* (106); *883* (185); *935* (143); *1004* (106); *1064* (288); *1221* (130); *1340* (173); *1383* (173); *1397* (280); *1412* (174); *1443* (185); *1450* (195); *1558* (185); *2120* (83); *2201* (164); *2205* (146); *2405* (109); *2551* (69); *2666* (157); *2695* (304); *27755* (157); *2773* (172); *2917* (347); *2979* (304); *3011* (157); *3100* (69); *3320* (304); *3435* (48); *3470* (349); *3581* (302); *3594* (159); *3729* (90).
Lambach *1201* (346); *1250* (339).
de Leeuw *1* (190).
Lörzing s.n. (84); *4296* (70); *4314* (101); *4434* (304); *4580* (267); *4607* (119); *4648* (108); *4731* (189); *5198* (200); *5203* (276); *5333* (207); *5627* (124); *5666* (276); *5724* (200); *5970* (290); *5975* (182); *5995* (87); *5996* (178); *6125* (87); *6144* (178); *6175* (48); *6571* (101); *6810* (234); *6869* (253); *6880* (192); *6971* (366); *7015* (349); *7122* (253); 7990 (263); *8292* (182); *8444* (83); *9121* (82); *9294* (366); *10163* (362).
Lutjeharms *3762* (67); *4041* (73); *4350* (73); *4469* (165); *4517* (162); *4614* (347); *5199* (285).

Maingay *783* (268).
Mantri Lot: Obi nr. Z. O. B. *2401* (347).

page
Van der Meer Mohr s.n. (67); *41* (366).
Molengraaff s.n. (70).
de Monchy s.n. (169; 183; 224; 253).
Mondi *52* (68); *58* (191); *60* (285); *85* (360); *197* (344); *213* (347); *228* (366); *252* (232).
Monterie *12* (164); *54* (78).

Native collector s.n. (200; 359)
New Guinea Exped. Koch 1904—1905, *26* (170); *1070* (48).
Noerkas *123* (53); *341* (48); *493* (191).

Ouwehand s.n. (234).

Piepers s.n. (67).
Plant. Jungh. Ined. *193* (49); *194* (301); *196* (222); *198* (222); *199* (184); *200* (188); *210* (144).
Ploem s.n. (67; 87; 101; 114; 139; 184; 202; 234; 316; 359).
Posthumus *513* (67); *687* (141); *709* (360); *715* (212) *927* (215); *937* (202); *950* (256); *958* (129); *987* (133).
Praetorius s.n. (67).
Pringo Atmodjo *60* (162; 178); *69* (276); *314* (264); *338* (81); *376* (267); *388* (81); *525* (268); *534* (290).
Pulle *120* (280); *247* (156); *275* (109); *301* (157); *357* (157); *472* (279); *480* (175); *554* (69); *619* (175); *684* (237); *703* (195); *713* (185); *736* (185); *740* (175); *824* (185); *1089* (193); *1124* (238); *1125* (155); *1178* (278); *3183* (184); *3213* (259); *4006* (184); *4073* (224); *4097* (188).

Raap *6* (68); *158* (224); *260* (188); *270* (259); *550* (114); *556* (68); *665* (183); *667* (222); *695* (234).
Rachmat *50* (286); *69* (53); *150* (68); *157* (344); *397* (142); *507* (184); *585* (243); *607* (196).
Rant *237* (48); *774* (155).
Rappard *70* (87).
Abd. Rasjid *2451* (344).
Reinwardt s.n. (69; 70; 87; 90; 107; 130; 139; 144 [2×]; 146; 157; 159; 164; 172; 182; 183; 188 [2×]; 189; 200; 212 [2×]; 217; 234; 253;

page
256; 259; 304; 316 [2×]; 317).
Riedel *(286).
Robinson *508* (69); *511* (107); *512* (107); *514* (300); *569* (159); *774* (155); *2020* (347); *2021* (78); *2023* (48)o *2024* (231); *2025* (328); *2026* (328); *2027* (69).
von Römer *57* (122); *91* (195); *280* (185); *290* (195); *390* (79); *424* (176); *425* (173); *437* (176); *439* (122); *471* (173); *515* (109); *516* (109); *545* (157); *562* (109); *677* (157); *759* (123); *760* (122); *761* (123); *762* (279); *799* (69); *833* (122); *887* (195); *901* (122); *909* (69); *915* (254); *972* (195); *1032* (185); *1040* (279); *1104* (170); *1123* (79); *1148* (123); *1149* (167).
Rutten *18* (181); *33* (68); *51* (130); *68* (191); *86* (140); *89* (278, 286); *103* (117; 349); *127* (68); *147* (287); *155* (130); *162* (172); *170* (141); *205* (328); *278* (107); *349* (260); *353* (176); *442* (318); *477* (130); *489* (318); *526* (295); *527* (191); *535* (211); *537* (323); *547* (139); *561* (68); *580* (142); *581* (169); *670* (256); *703* (191); *1579* (107); *1632* (164); *1648* (328); *1704* (300); *1729* (69); *1904* (202); *1906* (347); *1940* (300); *1943* (159); *1953* (159); *1958* (159); *2036* (361); *2147* (341).
Rutten-Kooistra *26* (256); *78* (177).

Sapiin *26* (183); *69* (77).
Sarip *51* (85); *84* (161); *219* (119); *234* (189); *271* (164); *316* (184); *391* (301); *409* (75); *489* (164).
de la Savinière **96* (109).
Schiffner *2205* (184); *2291* (222; 224); *2292* (48); *2293* (146); *2294* (130); *2295* (67); *2296* (87); *2297* (184); *2298* (55); *2301* (68); *2302* (114); *2303* (164); *2304* (259); *2306* (259); *2308* (78); *2309* (315); *2311* (245; 246).
Schouten s.n. (78; 184).
Scortechini s.n. (268).
van Slooten *451* (363); *2282* (200).
Smith *719* (222); *732* (126); *814* (316); *822* (146).
Smith and Rant *125* (222); *293*

page
(188); *592* (301).
Soegandiredja *253* (184); *296* (184).
Sonnerat s.n. (68).
Spanoghe s.n. (361).
van Steenis *680* (68); *945* (126); *975* (359); *1111* (239); *1155* (239); *1166* (273); *1178* (340); *1265* (355); *1339* (130); *1388* (305); *2300* (119); *2328* (316); *2978* (77); *3325* (67); *3373* (356); *3467* (129); *3521* (187); *3522* (214); *3525* (189); *3531* (363); *3538* (139); *3722* (190); *4163* (78); *5275* (48); *6283* (276); *6470* (246); *7753* (49).
Steup *31* (119).
Stresemann *8* (169); *11* (196); *17a* (107).
Sum. Exped. 1877—1878. s.n. (253; 258; 263).
Swart s.n. (81).

Teysmann s.n. (51; 53; 69; 75; 82; 101; 107 [3×]; 109 [2×]; 134; 141; 159 [2×]; 165; 172; 186; 189; 200; 202; 208 [2×]; 212; 215; 217; 225; 230; 236 [2×]; 242; 251; 258; 259; 267; 282 [2×]; 285 [4×]; 286 [4×]; 287 [2×]; 291; 300 [3×]; 301; 304; 309; 310; 317; 320; 321 [6×]; 326 [5×]; 328 [2×]; 330; 332; 339; 344; 346; 348; 353; 359; 360; 364; 366 [2×]; *(259); *5711* (77); *11246* (347).
Thorenaar T. 3 P. *108* (363).
Thwaites *2668* (332).
G. Tjisalak *20* (139); *33* (316); *249* (119).
Toxopeus *114* (196); *195* (261); *200* (196); *217* (71); *218* (181); *251* (172); *545* (107); *554* (196).
Treub s.n. (300 [2×]); *567* (107).

Versteeg *1004* (123); *1060* (157); *1109* (185); *1110* (122); *1250* (195); *1313* (176); *1325* (173); *1361* (176); *1379* (254); *1520* (173); *1563* (123); *1583* (109); *1598* (79); *1602* (69); *1636* (122); *1807* (157); *1923* (69).
Visser A *23101* (67); A *23102* (77).
de Voogd *123* (164); *584* (268); *1483* (108); *1510* (256); *1519* (129); *1839* (75).

page
de Vriese s.n. (68; 82; 96; 101; 109; 114; 119 [2×]; 137; 139; 144; 146 [2×]; 155; 157; 159 [3×]; 162; 164 [2×]; 168; 172; 180; 184; 186; 188; 189 [2×]; 200 [2×]; 202; 207; 212 [2×]; 222 [2×]; 223; 226; 230; 234; 242; 259; 285; 300 [2×]; 304 [2×]; 309; 310; 314; 315; 317; 320; 322; 357; 359); *168* (85).
de Vriese and Teysmann s.n. (84; 87; 107 [2×]; 109; 253).

Waitz s.n. (164; 188; 326 [2×]; 327).
Weber s.n. (52).
Went s.n. (67; 139; 222; 253).
Winckel s.n. (74; 77; 164; 212 [2×]; 316); *97* (316); *1176*ß (146); *1302*ß (212); *1394*ß (73); *1415*ß (316); *2310*ß (126).
Wind *21* (365); *2517* (68).
Winkler *(272 [2×]); **275*a (269); **596* (293); **596*a (293); **733* (293); **908* (276); *2249* (326); *2287* (126); *2311* (318); *2369* (360); *2408* (326); *2564* (321); *2566* (347); *2619* (126); *2627* (142); *2809* (146); *3033* (228); *3079* (286); *3262* (191); *3272* (134); *3316* (344); *3320* (287); *3384* (68); *3444* (285).
Wollaston Exped. *(122); *(156); *(170).

Yates *1207* (207); *1261* (339); *1271* (139); *1403* (290); *1493* (178).

Zippelius (Zippel) s.n. (107; 130; 159; 188; 238; 304; 328); *73b* (95).
Zollinger s.n. (*53; 68; 101; 180; 183; 188); *5* (68); *186* (48); *187* (342); *225* (49); *443* (347); *763* (263); **879b* (264); *880* (247); *881* (253); *951* (68); *1008* (126); *1361* (126); *1490* (194); *1496* (256); *1501* (180); *1576* (316); *1591* (130); *1705* (301); *1938* (87); *2125* (68); *2495* (91); *3009* (309); *3223* (98); *3302* (53); *3511* (234); *II *3699* (114); *3936* (68); *3951* (49).

VI. VERNACULAR NAMES

page

akar gameh 119
akar kĕkowak 230
akar kĕmoenting 141
akar penangil 208
akar pojang 67
akar sendoedoek 230
andjoeng kĕboekĕm. 285
andjong 190
areuj gameh 119
areuj harèndong 184
areuj harèndong badak 212
asĕm bantai 182
asĕm loengko 129
awa lihai lihai 325
awa lioeh 346
awa loedang loedang 304
badjoh poeti 326
„batigodo" 188
bĕdoedoek 75
benaoen 328
berék berék tjadi 53
beri beri 69
bindaloe rimboe 189
bindaloe silarai. 126
bindoe'a. 157
biraroe 48
biri biri 53
biroro. . . . . 53 (4 ×)
biroro poetih 107
bloei labei. 349
boenggah slokan 286
boengoetji goetji 161
boerô 73
bongkol 190
bowithia 52
„bunggang" 347
„dadurah akar" 217
dalèh 348
dandila 157
daoen molèh. 273
daoen sarèboe 340
daoen sĕtodok 67
daoen slokan 251
dedoegoe 67
delaing 304

page

delik 339
djalimampan 169
djari sotong 251
djĕro 346
doedoerô badak 101
doeloeg doeloeg 82
doeloeng doeloeng oeding . . . 108
doerô 73; 285
doeroe 67
eèpô 347
entiboe 330
geah 339
geah anda 353
goela goela 68
gogoan manoempang 162
gohora 302
goroe doewano. 347
gowokan 347
harèndong 67 (3×); 68; 74 (3×); 77 (2×); 78; 84 (2×); 119; 126; 134; 139; 146; 164
harèndong areuj 139; 144; 212; 223; 234
harèndong areuj mèra . . 164; 310
harèndong areuj poetih 310
harèndong badak 184
harèndong besar 164
harèndong bĕtoel. 83
harèndong boeloe 114
harèndong bokor 126; 164
harèndong bokor areuj 146
harèndong dioek 164
harèndong gede 77
harèndong goenoeng 84
harèndong kadakka . . . 126; 164
harèndong ojod 119
harèndong tangkal 304
harèndong tapok 130
„harundang" 139
ipis koelit 315
kadoedoe 67; 202
kadoedoe besar 133
kadoedoek ajer 258
kajoe biroro 53
kajoe kĕdĕbie 67

page

kajoe kětam 317
kajoe lapan 304
kajoe lapie 364
kajoe obi 326
kajoe parang. 301
kajoe wolok 236
kalak 365
kalet boenga tandjong 354
kamilik 346
karamoenting 68
karamoenting akar 134
katjambang areuj 139
„kaykapal" 77
kědĕbie 286
kědoedoe 68
kĕmoening batoe. 362
kĕmoenting . . . 76; 74; 285; 286
kĕmoenting akar . 141; 210; 230
kĕmoenting djawa 287
kĕmoenting goenoeng . . . 51; 67
kĕmoenting soengai. 286
kemoetoela . . . . . 107 (2×)
kĕnoedoe 67
kĕnoedoe ajer 286
kĕtam 363
kĕtam ka 317
kibeusi . . . . . 315; 316 (6×)
kiboeroe. 347
„kiborou" 315
kidaroe 215
kidjambè . . . 316; 347; 350; 359
kidjambè awèwè 350
kidjankar 363
kiharèndong 301
„kihariendung" 304
kikadjĕroe 363
kikawat 360
kiribadoe 363
kirilimbé 69
kisarèboe 340
kitĕmbaga 340
kitjalar 347
kitjampèh 367
kletta 67
koemang 360
kopo lalar 347
kosodoewana. 365
kosodoewana maéto. 365
kostoekoea. 159
kramoenting 322
kramoenting danau 322
krimoenting 68
laliean 184

page

laloeti. 164
ligoerô 90
lingkodo klido 232
lioeh alafai 349
loeh falah 349
lioeh fatoeh 343
lioeh oeding 348
lioeh pajo 347; 349
lioeh pajo boengo 349
lobi-lobi. . . . . 203 (2×); 305
loehoe loehoe gadjah 101
mambadji 347
mampoeloe 326
mangandoek 126
marapoejan alafai. . . . 325 (2×)
marapoejan falah 325
marapoejan pajo . . . . . .
maro toelang 340
medang beladi. . . . . .
mĕloekan 286
mĕmĕtang 321; 326
mĕtang 321
ngara-ngarad. 177
obie-obie 321; 326
oeboer-oeboer 321; 322
olor lawang dotan 177
olor sigĕpoe balah oejal . . . 229
olor sitabing dotan. 146
paha paha 328
pandan doeloe enim 203
„parit joddo" 188
pea pea. 344
piladang rimboe 258
plawan 67
poeloetoe 234
poendah. 356
poeterandji 267
poewi oeding 356
pohon bĕlalang 67
„paritjoto" 184
pridjati 119
raèka raèka manoe 191
sandoedoe. 101
sandoedoek 67
sedoedoe tanah 251
sedoedoeh ajer 212
sĕmoebi gadjah 325
sĕmoerot 239
sĕndoedoek . . . . . 82 (2×)
sengganie . . . 68 (4×); 87 (2×)
sĕroeboe 141
sibilantih 189
sidodo akar 202

page
sidoedoek . . . . . 67 (2×)
sigĕpoe balah oejoel 229
sigĕpoe dotan 229
sikadoedoek 67 (2×); 70; 83 (2×); 87 (2×); 97 (2×); 258
sikadoedoek ajoen 94
sikadoedoek badak 83
sikadoedoek rimboe. . . . 83; 282
sima dali 325
simassan gĕdang 282
simbaoe doerô 165
sinoedoek . . . . . 67 (8×)
sinoedoek gadjah 101
sinoedoek oetan 72;
sipitoe aroes 139
tatimkas'a 347
tĕlor 355
tĕmbras 346
tĕmbĕras nasi 343
tĕmbras abang 346
tĕmbras djantong 327; 346; 363 (2×)
tĕmbras itam 339
tĕmbras kĕtam 317
tĕmbras talang 360
tĕmĕnges 362
„temughas djamboei". 346
tengtaramiséan . . . . 304 (2×)
tengtaramiséan èsaka 69
timbaroe 344
timbras kĕmoening 360
tjaloentjoeng beureum 212
„tjaluntjung" 310
tjĕngkodo 68
tjingkodo air. 285
„tjodjok buwu" 253
toelang toelang. 346
toemĕras djantoeng 347
toetoen koelit ladang balah . . 304
toetoen lioeh pajo 347
toetoen marapoejan pajo . . . 325
„tontjang kĕtjil" 81

VII. INDEX NOMINUM

New subtribes, sections, subsections, species, varieties and combinations are printed in **bold face** type; synonyms in *italics*; previously published names in ordinary type. *: nomen nudum.

page

Allomorphia Bl. 228; 32; 43; 279
Allomorphia Bl. sect. Hollrungiophyta. 276
Allomorphia asperifolia Mansf. . . 278
Allomorphia exigua Bl. 290
Allomorphia magnifica (Miq.) Guill. 290
Allomorphia parviflora Mansf. . . 280
Allomorphia **racemosa** (Ridley) Bakh. f. 289
Allomorphia robusta Mansf. . . . 278
Allomorphia Römeri Mansf. . . . 279
Allomorphia **sagittata** Bakh. f. 291
Allomorphia sumatrana Boerl. et Kds. 292
Anerincleistus Korth . . . 293; 43
Anerincleistus **borneensis** Bakh. f. 295
Anerincleistus hirsutus Korth. 294
Anerincleistus **macrophyllus** Bakh. f. 295
Anerincleistus setulosus Schwartz 296
Anerincleistus suffruticosus Schwartz 296
Anplectrum A. Gray 24; 27; 198; 218
Anplectrum biligulatum (Korth.) Triana 140
Anplectrum confine (Bl.) Triana 134
Anplectrum cyanocarpum (Bl.) Triana 199
Anplectrum divaricatum (Willd). Triana 200
Anplectrum divaricatum (Willd.) Triana var. *anceps (Naud.) Cogn.* 201
Anplectrum glaucum (Jack) Triana 201
Anplectrum Korthalsii Triana . 234
Anplectrum ligulatum (Bl.) Triana 143
Anplectrum nodosum (Korth.) Triana 232
Anplectrum pallens (Bl.) Triana 133
Anplectrum papuanum Mansf. . . 202
Anplectrum reformatum (Bl.) Triana 216
Anplectrum rostratum (Bl.) Triana 134
Anplectrum stipulare(Bl.) Triana 132
Anplectrum viminale (Jack) Triana 133
Aplectrum Bl. . . . 131; 27; 218
Aplectrum confine Bl. 134
Aplectrum myrtiforme Naud. . . 196
Aplectrum nodosum (Korth.) Bl. 232
Aplectrum pallens Bl. 133
Aplectrum pallens Bl. var. *confinis Miq.* 134
Aplectrum pallens Bl. var. ß *lata Miq.* 133
Aplectrum rostratum (Bl.) Bl. . 134
Aplectrum stipulare (Bl.) Bl. .132
Aplectrum viminale (Jack) Bl. . 133
Apteuxis Griff. 323
Apteuxis trinervis Griff. . . . 324
Asterostoma Bl. 45
Asterostoma asperum (L.) Bl. . 51
Astrocalyx Merr. 297; 43
Astronia Bl. 297; 33; 43
Astronia concolor Zipp. ined. .*303
Astronia **gracilis** Bakh. f. . . 302
Astronia intermedia Bl. . . . 301
Astronia macrophylla Bl. . . . 303
Astronia macrophylla Bl. var. ß 303
Astronia macrophylla Bl. var. *concolor Bl.* 303
Astronia macrophylla Bl. var. ß *discolor G. Don.* 303
Astronia papetaria Bl. 299

page
Astronia papetaria Bl. var. ß . 299
Astronia **papetaroides** Bakh. f. 304
Astronia papuana Cogn. . . . 306
Astronia smilacifolia Triana . . 305
Astronia spec. 303
Astronia spectabilis Bl. 300
Astronia spectabilis Zipp. ined. 299
Astronia spectabilis Bl. var. *intermedia (Bl.) Miq.* 301
Astronia Stapfii Kds. 305
Astronia **Steenisii** Bakh. f. . . 305
Astronia ternatana Bakh. f. . . 302
Astronia triplinervia Cogn. . .*303
Astronieae . 296; 33; 43; 306; 310
„Astroniées" 296
Astroniinae 297; 43
Astronioideae 296; 39; 43
Axinaea bracteata Zipp. ex Bl. *237
Axinandra Thw. . . . 330; 34; 43
Axinandra Thw. sect. Eu-Axindra Baill. 331
Axinandra Thw. sect. Naxiandra Baill. 330
Axinandra **borneensis** Bakh. f. 332
Axinandra zeylanica Thw. . . 331
Axinandreae 329; 34; 43

Backeria Bakh. f. . . 130; 23; 41
Backeria stipularis (Bl.) Bakh. f. 132
Backeria viminalis (Jack) Bakh. f. 133
Backeria viminalis (Jack) Bakh. f. var. **rostrata** (Bl.) Bakh. f. 134
Beccarianthus Cogn. . 306; 33; 43
Bellucia Neck 111; 40
Bellucia Axinanthera Triana . 112
Blastus Lour. 274; 30; 42; 241; 283; 293
Blastus Cogniauxii Stapf . . . 275
Blastus **tomentosus** Bakh. f. . 276
Bertolonia Raddi 239; 41
Bertolonia hybrida Hort. . . . 240
Bertolonieae 239; 39; 41
„Bertoloniées" 239; 240
Blakeae 328; 329
Boerlagea Cogn. 199; 40
Brittenia Cogn. apud Boerl. 272; 30; 42

Campimia Ridley 28
Carionia Naud. 203; 41
Cassebeeria Dennst 247

page
Cassebeeria magnifica (Miq.) Krasser 290
Casseeria obliqua (Korth.) Krasser 250
Cassebeeria papuana (Cogn.) Kuntze 254
Cassebeeria tuberculifera (Cogn.) Kuntze 253
Cassebeerieae 247; 240
Cephalomedinilla Merr. 147
Charianthea 296; 310
Clidemia D. Don . . 113; 30; 103
Clidemia hirta (L.) D. Don . . 113
Clidemia hirta (L.) D. Don var. elegans (Aubl.) Griseb. . . 114
Creagiella Stapf 296; 43
Creochiteae 306
Creochiton Bl. 307; 33; 43
Creochiton bibracteata (Bl.) Bl. 308
Creochiton emarginata Miq. . . 309
Creochiton pudibunda (Bl.) Bl. 309
Creochiton pudibunda (Bl.) Bl. var. *coriacea Naud.* 309
Creochiton superbum Naud. . . 308
Creochitoninae 306; 43
Cyanandrium Stapf . . 272; 30; 42

Dactyliota Bl. 234; 24
Dactyliota bracteata (Bl.) Bl. . 237
Dactyliota setigera Bl. 238
Dactylocladus Oliv. . 329; 34; 43
Dactylocladus stenostachys Oliv. 329
Dalenia Korth. . . . 116; 23; 40
Dalenia Korthalsii Bl. 117
Dalenia pulchra Korth. . . . *117
Dalenia speciosa Korth. . . . 117
Dicerospermum Bakh. f. 279; 31; 42
Dicerospermum parviflorum (Mansf.) Bakh. f. 280
Diplectria Reichenb. 198; 26; 41; 131; 307
Diplectria annulata (Hook. f. ex Triana) O.K. 230
Diplectria bibracteata (Bl.) O.K. 308
Diplectria biligulata (Korth.) O.K. 140
Diplectria confinis (Bl.) O.K. . 134
Diplectria **conica** Bakh. f. . . 202
Diplectria cyanocarpa (Bl.) O.K. 199
Diplectria divaricata (Willd.) O.K. 200

page

Diplectria Korthalsii (Triana) O.K. 234
Diplectria ligulata (Bl.) O.K. . . 143
Diplectria myrtiformis (Naud.) O.K. 196
Diplectria **papuana** (Mansf.) Bakh. f. 202
Diplectria pudibunda (Bl.) O.K. 309
Diplectria reformata (Bl.) O.K. 216
Diplectria rostrata (Bl.) O.K. . . 134
Diplectria stipularis (Bl.) O.K. 132
Diplectria tetrandra (Roxb.) O.K. 200
Diplectria viminalis (Jack) O.K. 133
Dissochaeta Bl. 218; 27; 41; 116; 117; 135; 198; 307
Dissochaeta Bl. sect. 2 Diplectriae 198
Dissochaeta Bl. sect. 1 Dissochaeteae. 218
Dissochaeta Acmura Stapf et Green 227
Dissochaeta anceps Naud. 201
Dissochaeta anceps Bl. fl. rosaceis T. et B. 118
Dissochaeta annulata Hook. f. ex Triana 230
Dissochaeta annulata Hook. f. ex Triana var. **Robinsonii** (Merr.) Bakh. f. 231
Dissochaeta annulata Hook. f. ex Triana var. **setosa** Bakh. f. . 231
Dissochaeta astrosticta Miq. . . 229
Dissochaeta bancana Miq. 141
Dissochaeta bibracteata (Bl.) Baill. 208
Dissochaeta biligulata Korth. . 140
Dissochaeta bipulvinata Korth. 218
Dissochaeta **borneensis** Bakh. f. 231
Dissochaeta bracteata (Jack) Bl. 225
Dissochaeta bracteata Korth. . 225
Dissochaeta calothyrsa Miq. . . 221
Dissochaeta celebica Bl. 141
Dissochaeta cinnamomea Bl. . . . 143
Dissochaeta cyanocarpa (Bl.) Bl. 199
Dissochaeta decipiens Bl. 222
Dissochaeta Diepenhorstii Miq. 118
Dissochaeta divaricata (Willd.) Naud. 201
Dissochaeta fallax (Jack) Bl. . . 118
Dissochaeta fusca Bl. 136
Dissochaeta fusca Bl. var. *ferruginea Bl.* 137; 144

page

Dissochaeta fusca Bl. var. *obtuso-acuminata Bl.* 137
Dissochaeta glauca (Jack) Bl. . 201
Dissochaeta gracilis (Jack) Bakh. f. 137; 222; 233
Dissochaeta hirsuta Hook. f. ex Triana 262
Dissochaeta inappendiculata Bl. 144
Dissochaeta inappendiculata Bl. var. *fusca (Bl.) Miq.* 137
Dissochaeta inappendiculata Bl. var. *purpurascens Bl.* 143
Dissochaeta intermedia Bl. . . 223
Dissochaeta intermedia Bl. var. 223
Dissochaeta Korthalsii Miq. . . 225
Dissochaeta leprosa (Bl.) Bl. . 221
Dissochaeta ligulata Bl. 142
Dissochaeta monticola Bl. . . . 223
Dissochaeta nodosa Korth. . . 232
Dissochaeta palembanica Miq. . 201
Dissochaeta pallida (Jack) Bl. 229; 225
Dissochaeta punctulata Hook. f. ex Triana 224
Dissochaeta reformata Bl. 216
Dissochaeta Reinwardtiana (Bl.) Hochr. 118; 143
Dissochaeta reticulata Bl. . . . 143
Dissochaeta Robinsonii Merr. . 231
Dissochaeta rostrata Korth . . 234
Dissochaeta sagittata Bl. . . . 233
Dissochaeta **simalurensis** Bakh. f. 228
Dissochaeta stipularis (Bl.) Back. *132
Dissochaeta Schumannii Cogn. 142
Dissochaeta subviridis Elmer. . 141
Dissochaeta vacillans (Bl.) Bl. . 145
Dissochaeta vacillans (Bl.) Bl. var. *b.* 145
Dissochaeta velutina Bl. . . . 145
Dissochaeteae . 115; 23; 39; 40; 306
Dissotis Benth. 53; 40
Dissotis decumbens (Beauv.) Triana 54
Dissotis plumosa (D. Don) Benth. 55
Dissotis rotundifolia (Smith) Triana 55
Driessenia Korth. 241; 28; 40; 42
Driessenia axantha Korth. . . 242
Driessenia **ferox** Bakh. f. . . . 242
Driessenia microthrix Stapf . . 243
Driessenia minutiflora Schwartz 243

page
Driessenia Teysmanni Cogn. . 243
Driessenia Winkleri Cogn. . . . 271
Echinophora maderaspatana Pluk. 48
Enaulophyton v. Steenis 272; 30; 42
Enaulophyton lanceolatum v. Steenis 273
Eugenia pterocaulis Miq. . . . 346
Eugenia sulcata Bl. *342
Eumélastomées 44
Everettia Merr. . . . 306; 33; 43
Ewyckia Bl. 323; 311
Ewyckia azurea Korth. *328
Ewyckia capitellata (Jack) Walp. 326
Ewyckia coerulea (Jack) Naud. 327
Ewyckia cordata Korth. . . . 319
Ewyckia cyanea Bl. 327
Ewyckia cyanea Bl. var. . . . 327
Ewyckia cyanea Bl. var. *latifolia (Bl.) Miq.* 327
Ewyckia galeata Korth 320
Ewyckia glabra Korth. var. *coerulea Korth.* *328
Ewyckia Jackiana Walp. . . . 325
Ewyckia Korthalsiana Miq. 320; 327
Ewyckia Korthalsiana Miq. var. *angustifolia Miq.* *328
Ewyckia latifolia Bl. 327
Ewyckia latifolia Bl. var. *membranacea Bl.* 327
Ewyckia medinilliformis Naud. 326
Ewyckia paniculata Miq. 325
Ewyckia polyantha Korth. . . .*321
Ewyckia tuberculata Korth. . . 322

Hederella Stapf 25; 41
Heeria Schlecht 110
Heeria rosea (A. Braun et Bouché) Triana 110
Heterocentron Hook. et Arn. 110; 40
Heterocentron roseum A. Braun et Bouché 110
Heterotis Benth. 53
Heterotis plumosa (D. Don) Benth. 55
Huberia annulata (Vent.) D.C. 213
Hylocharis Miq. 281
Hylocharis macrophylla Miq. . 282
Hypenanthe Bl. . . . 234; 27; 41
Hypenanthe **bracteatum** (Bl.) Bakh. f. 237
Hypenanthe **Pulleanum** (Mansf.) Bakh. f. 236
page
Hypenanthe **setigerum** (Bl.) Bakh. f. 238
Hypenanthe **venosum** (Bl.) Bl. 236

Jambosa appendiculata Bl. . .*346
Kibessia D.C. 311; 34; 43
Kibessia acuminata Decne. . . 319
Kibessia? angustifolia Bl. . . . 325
Kibessia azurea D.C. 314
Kibessia azurea (Bl.) D.C. var. subalata (Bl.) Miq. 316
Kibessia azurea (Bl.) D.C. var. *typica Hochr.* 314
Kibessia celebica Kds 196
Kibessia cordata Korth. . . . 316
Kibessia echinata (Jack) Cogn. 318
Kibessia galeata (Korth.) Cogn. 320
Kibessia galeata (Korth.) Cogn. var. pluriflora Mansf. . . . 322
Kibessia gracilis Cogn. 323
Kibessia hirtella Cogn. 313
Kibessia Korthalsiana Cogn. . 319
Kibessia **pachyphyllum** Bakh. f. 318
Kibessia sessilis Bl. 314
Kibessia simplex Korth. 317
Kibessia simplex Korth. var. „*foliis angustioribus*" *Miq.* . 325
Kibessia simplex Korth. var. *oblonga Bl.* 325
Kibessia subalata Bl. 316
Kibessia subulata [Bl.] 316
Kibessia tetraptera Miq. 316
Kibessia Teysmanniana Cogn. 323
Kibessia tuberculata (Korth.) Hook. f. ex. Clarke. 322
Kibessia tuberculata (Korth.) Hook. f. ex Clarke var. **grandifolia** Bakh. f. 322
Kibessieae 310; 34; 43
Krassera Schwartz . . 292; 22; 43
Krassera ciliata Schwartz . . . 292
Krassera dajakorum Schwartz . 293

Lachnopodium Bl. 103
Lachnopodium bracteatum (Korth.) Bl. 107
Lachnopodium rubro-limbatum Bl. 108
Lasiandrales 44
Lavoisiereae 239
Lyndenia Z. et M. . . . 333; 35
Lyndenia laurina Z. et M. 367; 9

page
Lythrarieae . . . . . , 329

Macrolenes Naud. . . . 203; 26; 41
Macrolenes annulata (Vent.) Naud. 213
Macrolenes **bipulvinata** (Korth.) Bakh. f. 218
Macrolenes **ciliatiloba** (Baker f.) Bakh. f. 215
Macrolenes **echinulata** (Naud.) Bakh. f. 209
Macrolenes **horrida** Bakh. f. 208
Macrolenes **magnibracteata** Bakh. f. 209
Macrolenes **muscosa** (Bl.) Bakh. f. 210
Macrolenes **nemorosa** (Jack) Bakh. f. 206
Macrolenes **nemorosa** (Jack) Bakh. f. var. **bancana** (Scheff.) Bakh. f. 207
Macrolenes **nemorosa** (Jack) Bakh. f. var. **leprosa** (Korth.) Bakh. f. 208
Macrolenes **reticulata** (Bl.) Bakh. f. 215
Macrolenes **Ruttenii** Bakh. f. 210
Macrolenes **stellulata** (Jack) Bakh. f. 216
Macrolenes **submembranacea** Bakh. f. 214
Macrolenes **zeylanica** (Bl.) Bakh. f. 212
Macroplacis Bl. 34
Macroplacis cordata (Korth.) Naud. 319
Maieta Aubl. 203
Maieta annulata Vent. 213
Marumia Bl. (non Reinwardt) 203; 26
Marumia affinis Korth. 206
Marumia annulata (Vent.) Triana 213
Marumia bancana Scheff. . . . 207
Marumia bipulvinata (Korth.) Triana 218
Marumia ciliatiloba Baker f. . 215
Marumia echinulata Naud. . . 209
Marumia hirsuta Cogn. . . . 218
Marumia Horsfieldii Miq. . . 212
Marumia Jackii Korth. 216
Marumia Korthalsiana Miq. . 210
Marumia leprosa Korth. . . . 208
Marumia muscosa (Bl.) Bl. . . 211

page
Marumia nemorosa (Jack) Bl. . 206
Marumia nemorosa (Jack) Bl. var. *verrucosa (Cogn.) Ridley* 207
Marumia oligantha Naud. . . 216
Marumia pachygyna Korth. . . 216
Marumia reticulata Bl. 215
Marumia rhodocarpa Cogn. . . 218
Marumia stellulata (Jack) Bl. . 216
Marumia stellulata Korth. . . 216
Marumia sumatrana Kds. . . . 218
Marumia verrucosa Cogn. . . . 207
Marumia vulcanica Korth. . . 216
Marumia Zeylanica Bl. 212
Medinilla Gaud. 147; 24; 41; 120; 127; 203; 234
Medinilla Gaud. sect. 4 Dactyliota 234
Medinilla Gaud. sect. **Eu-Medinilla** Bakh. f. 148; 154
Medinilla Gaud. sect. **Hetero-Medinilla** Bakh. f. . 148; 162
Medinilla Gaud. sect. 3. Hypenanthe 234
Medinilla **aggregata** Bakh. f. . 169
Medinilla alata Baker f. . . . 196
Medinilla alpestris (Jack) Bl. . 196
Medinilla alternifolia Bl. 176; 177
Medinilla amplexicaulis Bl. . . 191
Medinilla **angusto-acuminata** Bakh. f. 167
Medinilla auriculata Lauterb. . 174
Medinilla arfakensis Baker f. . 196
Medinilla **barbata** Bakh. f. . . 176
Medinilla **bisetosa** Bakh. f. . 177
Medinilla Bornensis Bl. 181
Medinilla bracteata Bl. 237
Medinilla **Bünnemeyeri** Bakh.f. 192
Medinilla caudatifolia Schwartz 197
Medinilla celebica Bl. 185
Medinilla **ceramensis** Bakh. f. 173
Medinilla Clarkei King 178
Medinilla coccinea Baker f. . . 197
Medinilla Cogniauxii Merr. . . 238
Medinilla **compacta** Bakh. f. . 184
Medinilla corallina Schwartz . 197
Medinilla corallina Korth. . . *194
Medinilla crassifolia (Reinw. ex Bl.) Bl. 188
Medinilla crassifolia (Reinw. ex Bl.) Bl. var. *diaphana (Bl.) Bl.* 188; 190
Medinilla crassifolia (Reinw. ex Bl.) var. **Hasseltii** (Bl.) Bakh. f. 189

page
Medinilla crassinervia Bl. . . . 158
Medinilla crassinervis Bl. . . . 154
Medinilla crispata (L.) Bl. . . 155
Medinilla Cumingii Naud. . . 197
Medinilla Curtisii Hook. f. . . 191
Medinilla cuspidata Bl. 188
Medinilla dajakorum Schwartz. 197
Medinilla **driessenioides** Bakh. f. 186
Medinilla **engganensis** Bakh. f. 164
Medinilla eximia (Jack) Bl. . . 197
Medinilla floribunda Cogn. . . 180
Medinilla Forbesii Baker f. . . 197
Medinilla Hasseltii Bl. . 189; 188
Medinilla Hasseltii (haud. Bl.) var. *latifolia Herb. Korth.* . .*188
Medinilla Hasseltii Bl. var. subsessilis Schwartz 197
Medinilla Hellwigiana Mansf. . 123
Medinilla Hellwigii Mansf. . . 123
Medinilla hexamera Baker f. . 156
Medinilla Horsfieldii Miq. . . 187
Medinilla Horsfieldii Miq. var. *ovalis Miq.* 187
Medinilla humilis T. et B. . . 197
Medinilla hypericifolia (Bl.) Bl. 179
Medinilla inaequalis Miq. . . . 188
Medinilla intermedia Bl. . . . 167
Medinilla intermedia Bl. var. **Sieboldiana** (Planch.) Bakh. f. 168
Medinilla involucrata Merr. . . 238
Medinilla javanensis (Bl.) Bl. 182; 181
Medinilla javanensis (Bl.) Bl. var. *majoriflora Hochr.* . . . 182
Medinilla javanensis (Bl.) Bl. var. *petiolata Hochr.* 182
Medinilla javensis (haud Bl.) Herb. Korth. *181
Medinilla javanica [Bl.] . . . 182
Medinilla Korinchensis Ridley 197
Medinilla Korthalsii Bl. 193; 180
Medinilla Kuhlii Bl. 182
Medinilla laurifolia (Bl.) Bl. 186; 179
Medinilla laurifolia (Bl.) Bl. var. 187
Medinilla Lauterbachiana Mansf. 175(2×)
Medinilla longifolia Cogn. . . 169
Medinilla Lorentziana Mansf. . 172
Medinilla Lorentziana Mansf. var. *suffruticosa Mansf.* . . . 172
Medinilla macrocarpa Bl. . . . 158
page
Medinilla macrophylla Bl. . . 180
Medinilla Maidenii F. v. Muell 122
Medinilla **malaboensis** Bakh. f. 184
Medinilla **Mansfeldii** Bakh. f. 175
Medinilla micrantha Ridley . . 197
Medinilla Minahassae Kds. . . 161
Medinilla monantha Merr. var. papuana (Baker f.) Mansf. . 194
Medinilla montana Cogn. . . . 197
Medinilla Motleyi Hook. f. ex Triana 197
Medinilla **mucronata** Kds. . 159
Medinilla muricata Bl. 165
Medinilla musofo Schum. et Lauterb. 154
Medinilla myrtiformis (Naud) Triana 196
Medinilla myrtiformis (Naud.) Triana var. *papuana Baker f.* 194
Medinilla **napiformis** Bakh. f. 173
Medinilla Naudinii Triana . . 197
Medinilla nervulosa Baker f. . 197
Medinilla novoguinensis Baker f. 197
Medinilla pallida Cogn. . . . 179
Medinilla papuana Scheffer . . 197
Medinilla patens Ridley . . . 197
Medinilla polyantha Korth. . . 161
Medinilla porphyrandra Ridley. 197
Medinilla pterocaula Bl. . . . 156
Medinilla pterocaula Bl. var. . 156
Medinilla Pulleana Mansf. . . 236
Medinilla quadrifolia (Bl.) Bl. . 161
Medinilla quintuplinervis Cogn. 157
Medinilla radicans (Bl.) Bl. . . 160
Medinilla radicans (Bl.) Bl. var. **quadrifolia** (Bl.) Bakh. f. . 161
Medinilla ramiflora Merr. . . 195
Medinilla rhodorhachis Baker f. 170
Medinilla **robusticaulis** Bakh.f. 192
Medinilla rosea Gaud. . 154; 178
Medinilla rubicunda (Jack) Bl. 197
Medinilla rubrifolia Mansf. . . 185
Medinilla rubrovenia Baker f. . 121
Medinilla(?) salicifolia Bl. . . 197
Medinilla schraderbergensis Mansf. 170
Medinilla Schumanniana Mansf. 193
Medinilla septuplinervia Cogn. . 181
Medinilla setigera (Bl.) Miq. . 238
Medinilla Siebold(t)iana Planch. 168
Medinilla sogeriensis Baker. f. 197
Medinilla speciosa Bl. . 162, 165

page

Medinilla speciosa Bl. var. *genuina Hochr.* 163
Medinilla speciosa Bl. var. *genuina Hochr. forma rubriflora Hochr.* 163
Medinilla,speciosa Bl. var. *minoriflora Hochr.* 163
Medinilla speciosa Bl. var. *minoriflora Hochr. forma albiflora Hochr.* 163
Medinilla subalata Baker f. . . 197
Medinilla succulenta (Bl.) Bl. . 193
Medinilla succulenta (haud Bl.) Herb. Korth. *194
Medinilla sumatrana Baker f. . 181
Medinilla tenuicaule Ridley . . 197
Medinilla tenuipedicellata Baker f. 197
Medinilla ternatensis Miq. . . 165
Medinilla Teysmanni Miq. 171; 172; 173
Medinilla umbellata Korth. . .*157
Medinilla **varingoidea** Bakh. f. 178
Medinilla venosa (Bl.) Bl. . . 236
Medinilla verrucosa Baker f. . . 183
Medinilla verrucosa (Bl.) Bl. 181; 183
Medinilla Versteegii Mansf. . . 122
Medinilla Versteegii Mansf. var. *tetragona Mansf.* 122
Medinilla vulcanica Ridley . . 198
Medinilla warica Mansf. . . . 166
Medinilleae 115
Medinillopsis Cogn. 116
Melastoma L. 55; 22; 40; 45; 103; 118; 120; 127; 131; 135; 198; 204 219; 234; 265; 307; 311
Melastoma L. sect. **Hetero-Melastoma** Bakh. f. 57; 93
Melastoma L. sect. **Eu-Melastoma** Bakh. f. 56; 62
Melastoma L. sect. **Eu-Melastoma Bakh.** f. subsect. **Magnibracteatae** Bakh. f. . . . 57
Melastoma L. sect. **Eu-Melastoma** Bakh. f. subsect. **Parvibracteatae** Bakh. f. 57
Melastoma L. sect. **Eu-Melastoma** Bakh. f. subsect. **Robustidentatae** Bakh. f. . . 57
Melastoma L. sect. **Eu-Melastoma** Bakh. f. subsect. **Teneridentatae** Bakh. f. 57
*Melastoma achynocarpon Korth.**285

page

Melastoma **aculeolatum** Bakh. f. 62
Melastoma adpressum Wall. ex Triana 65
Melastoma affinis D. Don . . 102
Melastoma alba Reinw. ined. .*138
Melastoma alpestris Jack . . . 183
Melastoma annulatum Poir. ex Triana *213
Melastoma arborea W.(illd.) . .*303
Melastoma aspera [asperum] L (non Blume). 51; 85
Melastoma asperum Bl. . . . 65; 90
Melastoma **atrofuscum** Bakh. f. 90
Melastoma **aureum** Bakh. f. . 97
Melastoma azureum Bl. . . . 314
Melastoma **balinense** Bakh. f. 75
Melastoma **bancanum** Bakh. f. 74
Melastoma Barbeyanum Cogn. 102
Melastoma Baumianum Naud. 65
Melastoma bibracteatum Bl. . . 308
Melastoma **borneense** Bakh. f. 84
Melastoma Boryanum Korth. . 99
Melastoma brachyodon Naud. . 65
Melastoma brachyodon Naud. var. *rubescens T. et B.* . . . *65
Melastoma bracteata Jack. . . 225
Melastoma **Bünnemeyeri** Bakh. f. 91
Melastoma **caesium** Bakh. f. . 88
Melastoma candida D. Don . 102
*Melastoma carneum Zipp. ex Bl.**187
Melastoma celebicum Bl. . . . 70
Melastoma ceramense Naud. . 102
Melastoma coerulea Reinw. . . 200
Melastoma constrictum Bl. . . 125
Melastoma crassifolia Reinw. .*187
Melastoma crassifolium Herb. Reinw. *188
Melastoma crispatum L. . . . 135
Melastoma **curvisepalum** Bakh. f. 101
Melastoma **curvisepalum** Bakh. f. var. **crinitum** Bakh.f. 102
Melastoma cyanocarpon Bl. . . 199
Melastoma cyanoides Smith . . 106
Melastoma decemfidum Roxb. ex Jack. 100
Melastoma decemfidum Roxb. 94; 99; 100
Melastoma decemfidum Roxb. var. *Boryanum (Korth.) Bl.* . 99

page

Melastoma decemfidum Roxb. var. *javanicum Back.* *101
Melastoma decemfidum Roxb. var. *pulcherrimum (Korth.) Guill.* 95
Melastoma **decipiens** Bakh. f. 85
Melastoma decumbens Beauv. . 54
Melastoma diaphanum Bl. . . 188
Melastoma diffusa Reinw. . . .*118
Melastoma divaricata Willd. . 201
Melastoma dodecandra Roxb. . 103
Melastoma echinata Reinw. . .*314
Melastoma **Elbertii Bakh. f.** . 96
Melastoma elegans Aubl. . . . 115
Melastoma enervis Bl. *363
Melastoma epidendra Reinw. ex Bl. *183
Melastoma erecta Jack. 103
Melastoma eximium Bl. (non Jack) . . . . . .
Melastoma eximium Siebold . .*168
Melastoma fallax Jack . 118; 223
Melastoma ferruginea Reinw. .*211
Melastoma Francavilleanum Cogn. 91
Melastoma furcata Roxb. . . . 103
Melastoma glauca Jack 201
Melastoma gracilis Jack . . . 138
Melastoma grandifolium Schwartz . . . . . : 103
Melastoma hirta L. 114
Melastoma **horridum** Bakh. f. 63
Melastoma hypericifolium Bl. . 179
Melastoma imbricatum Wall. ex Clarke 71; 83
Melastoma imbricatum Wall. ex Clarke var. **laeve** Bakh. f. . . 72
Melastoma impuber Roxb. . . 103
Melastoma Jackianum Korth. . . 81
Melastoma Jackianum Korth. var. *gymnanthum Korth.* . . 81
Melastoma javanense Bl. . . . 183
Melastoma **Koordersii** Bakh. f. 94
Melastoma lanuginosum Bl. . 73
Melastoma laurifolium Bl. . . 187
Melastoma leprosum Bl. . 221; 118
*Melastoma linearis Reinw. ined.** 47
Melastoma macrocarpa D. Don 100
Melastoma **magnificum** Bakh.f. 71
Melastoma malabathricum L. 65; 79; 82
Melastoma malabathricum Reinw. ined. *89

page

Melastoma malabathricum L. flore albo Reinw. ined. . . . *86
Melastoma malabathricum L. var. adpressum Clarke . . . 103
Melastoma malabathricum L. var. **javanum** Bakh. f. . . . 82
Melastoma malabathricum L. var. *nitidum (Zoll.) Back* . . *91
Melastoma malabathricum L. var. *normale (D. Don) King* 73; 89
Melastoma malabathricum L. var. **obvolutum** (Jack) Bakh. f. 80
Melastoma malabathricum L. var. *perakensis King* 73
Melastoma malabathricum L. var. *polyanthum (Bl.) Benth.* 65
Melastoma malabathricum L. var. subcordata Mansf. . . 103
Melastoma Minahassae Kds. . 70
Melastoma Molkenboerii Miq. . 77
Melastoma molle (Wall. ex Clarke) Ridley 163
Melastoma moluccanum Bl. . . 106
Melastoma muricata Reinw. . .*316
Melastoma muricatum Hunter ex Ridley 100
Melastoma muscosum Bl. . . . 211
Melastoma muscosum Bl. var. . 211
Melastoma nemorosa Jack. . . 206
Melastoma nitidum Korth. . . 98
*Melastoma nodosum Zipp. ex Bl.*158
Melastoma normale D. Don. 83; 89; 91
Melastoma obovatum var. *oblongum Bl. ex Triana* *71
Melastoma obvoluta Jack . . . 80
Melastoma obvolutum Jack var. *elongatum Bl.* 80
Melastoma obvolutum Jack var. *gymnanthum (Korth.) Bl.* . . 80
Melastoma obvolutum Jack var. *oblongum Bl.* 81
Melastoma oliganthum Naud. . 65
Melastoma **ovalifolium** Bakh.f. 75
Melastoma pallida Jack . . . 229
Melastoma perakense (King) Ridley 103
Melastoma plumosa D. Don . . 55
Melastoma polyanthemum [Bl.] G. Don (sphalm) 65
Melastoma polyanthum Bl. . . 64
Melastoma polyanthum Korth. . *64

page

Melastoma polyanthum Bl. var. ß and var. γ 65
Melastoma polyanthum Bl. var. *albiflorum T. et B.* *64
Melastoma polyanthum Bl. var. *albo-strigosum T. et B.* . . . *64
Melastoma polyanthum Bl. var. *angustifolium Bl.* 64
Melastoma polyanthum Bl. var. *angustifolium Ridley* (*non Blume*) 69
Melastoma polyanthum Bl. var. **celebicum** (Bl.) Bakh. f. . . 70
Melastoma polyanthum Bl. var. *collinum Bl.* 64
Melastoma polyanthum Bl. var. *contractum Bl.* 64
Melastoma polyanthum Bl. var. *ellipticum Bl.* 64
Melastoma polyanthum Bl. var. *erosulum Bl.* 64
Melastoma polyanthum Bl. var. *Korthalsii Bl.* 64
Melastoma polyanthum Bl. var. **linearifolium** Bakh. f. . . 69
Melastoma polyanthum Bl. var. *micranthum T. et B.* 64
Melastoma polyanthum Bl. var. *molle Bl.* 64
Melastoma polyanthum Bl. var. **mollissimum** Bakh. f. . . 70
Melastoma polyanthum Bl. var. *β. pallens Bl.* 64
Melastoma polyanthum Bl. var. *Pulleana Mansf.* 64
Melastoma polyanthum Bl. var. *riparium Bl.* 64
Melastoma polyanthum Bl. var. *Royeni* (*Bl.*) *Miq.* 65
Melastoma polyanthum Bl. var. *ternifolia Miq.* 65
Melastoma polyanthum Bl. var. *tondanensis* (*Bl.*) *Miq.* . . . 65
Melastoma polyanthum Bl. var. *velutinosum Bl.* 65
Melastoma porphyratum Korth. *99
Melastoma porphyreum Zipp. ex Bl. 94
Melastoma **pubescens** Bakh. f. 86
Melastoma pudibunda Bl. 309
Melastoma pulcherrimum Korth. 95; 100
Melastoma pulverulenta Jack. . . 129

page

Melastoma punctatum Korth. (*non aliorum*) 86
Melastoma pusillum Bl. 65
Melastoma pusillum Bl. var. *longifolium Cogn.* 84
Melastoma quadrifolum Bl. . . . 161
Melastoma radicans Bl. 160
Melastoma reflexa Reinw. ined. *129
Melastoma Reinwardtianum Bl. 119
Melastoma **robustum** Bakh. f. 92
Melastoma Roemeri Mansf. . . . 78
Melastoma rostratum Bl. 134
Melastoma rotundifolia Jack . 266
Melastoma Royeni Bl. 66
Melastoma **rufosetosum** Bakh. f. 97
Melastoma sanguine(a)um D. Don 95; 100
Melastoma sanguineum Sims . 100
Melastoma setigerum Bl. 66, 76; 78
Melastoma setigerum (*haud. Bl.*) *Herb. Korth.* 238
Melastoma setigerum Bl. var. *angusto-bracteatum Bl.* 76
Melastoma setigerum Bl. var. *lato-bracteatum Bl.* 76
Melastoma setigerum Bl. var. **Molkenboerii** (Miq.) Back. 77
Melastoma setigerum Bl. var. *typica Back* *76
Melastoma silvaticum Bl. var. *uniflorum Bl.* 83
Melastoma speciosa Reinw. . . *163
Melastoma stellulata Jack . . . 217
Melastoma stipulare Bl. 132
Melastoma succulentum Bl. . . *194
Melastoma **sumatranum** Bakh. f. 93
Melastoma **sumatranum** Bakh. f. var. **lanatum** Bakh. f. . . 93
Melastoma sylvaticum Bl. . . 82
Melastoma sylvaticum Bl. var. **permultiflorum** Bakh. f . 84
Melastoma Tidorense Bl. 89
Mwlastoma tondanense Bl. . . . 66
Melastoma **suave** Bakh. f. . . 74
Melastoma Teysmanni Miq. 95; 100
Melastoma trachycaulon Miq. . 81
Melastoma **trachyphyllum** Back 85
Melastoma **trachyphyllum** Back. var. **ochraceum** Bakh. f. 87

page
Melastoma vacillans Bl. . . . 145
Melastoma vacillans Bl. var. a 145
Melastoma vacillans Bl. var. *b* . 145
Melastoma vacillans Bl. var. *C.* 137
Melastoma vacillans Bl. var. *d. pallens Bl.* 138
Melastoma varingiaefolium Bl. . 127
Melastoma venosum Bl. 236
Melastoma **vile** Bakh. f. . . . 88
Melastoma velutinosum Ridley 103
Melastoma verrucosa Bl. . . . 181
Melastoma viminalis Jack . . . 133
Melastoma vulcanicum Ridley . 103
Melastoma Zollingeri Naud. . . 90
Melastomaceae 37
Melastomacées proprement dites . 44
Melastomataceae 37
Melastomatoideae 39; 44
Melastomeae 44
Memecyleae 332; 35; 43; 328; 329
„Memecylées" 328
Memecyloideae . . . 328; 39; 43
Memecylon L. 333; 35; 43
Memecylon **acrocarpum** Bakh. f. 351
Memecylon acuminatissimum Bl. 350
Memecylon ambiguum Bl. . . . 352
Memecylon appendiculatum Bl. 345; 339
Memecylon appendiculatum Bl. var. *nuda (Bl.) Miq.* 345
Memecylon **bracteolatum** Bakh. f. 341
Memecylon caloneuron Miq. . . 345
Memecylon capitellatum L. 341; 360
Memecylon **celebicum** Bakh. f. 364
Memecylon **ceramense** Bakh. f. 361
Memecylon coeruleum Jack . . 358
Memecylon confertiflorum Cogn. 367
Memecylon confine Bl. 361
Memecylon confine Bl. var. *Bunggang Bl.* 345
Memecylon costatum Miq. . . . 345
Memecylon costatum Miq. var. *ellipsoideum Bl.* 345
Memecylon costatum Miq. var. *flabellatum Bl.* 345
Memecylon **crassifolium** Bakh. f. 365
Memecylon **depokkense** Bakh. f. 339

page
Memecylon dioicum (Naud.) Cogn. 367
Memecylon edule Roxb. 365
Memecylon edule Roxb. var. ovatum (Smith) Clarke . . . 365
Memecylon eurhynchum Miq. . 359
Memecylon excelsum Bl. 350
Memecylon ferreum Bl. . 366; 358
Memecylon floribundum Bl. . 357
Memecylon garcinioides Bl. 359; 352
Memecylon garcinioides Bl. var. *elongatum Bl.* 359
Memecylon **gibbosum** Bakh. f. 364
Memecylon gigantifolium Elm. 349
Memecylon **globosum** Bakh. f. 355
Memecylon glomeratum Bl. 340; 361
Memecylon grande Retz. . . . 345
Memecylon Griffithianum Naud. 364
Memecylon hepaticum Bl. . . 345
Memecylon hepaticum Bl. var. grandifolia Cogn. 367
Memecylon heteropleurum Bl. 349
Memecylon Heyneanum Benth. 359
Memecylon Horsfieldii Miq. . 367
Memecylon intermedium Bl. 363; 359
Memecylon intermedium Clarke (non Bl.) 354
Memecylon intermedium Bl. var. latifolia K. et V. . . . 367
Memecylon intermedium Bl. var. *longipes Bl.* 363
Memecylon laevigatum Bl. . . 343
Memecylon lampongum Miq. . 363
Memecylon La-Ruei Merr. . . 344
Memecylon laurifolium Naud. . 358
Memecylon laurinum Bl. . . . 357
Memecylon laurinum (Z. et M.) Kds. 338
Memecylon lilacinum Z. et M. . 342
Memecylon longifolium Cogn. 367
Memecylon luteolum Miq. . . 352
Memecylon marginatum Bl. . . 354
Memecylon micranthum Bl. . . 353
Memecylon Minahassae Kds. . 345
Memecylon minutiflorum Miq. 353
Memecylon Monchyanum Back. *367
Memecylon **multiflorum** Bakh. f. 543
Memecylon myrsinoides Bl. 341; 343
Memecylon myrsinoides Bl. var. lilacinum (Z. et M.) King . . 342
Memecylon Myrtilli(us) Bl. . . 343

page
Memecylon nigrescens Hook. et Arn. 340; 361
Memecylon novoguinense Baker f. 367
Memecylon nudum Bl. 345
Memecylon nudum Bl. var. *ligustrinum Bl.* 345
Memecylon **ochroleucum** Bakh. f. 362
Memecylon oleaefolium Bl. 356; 352 353
Memecylon oleaefolium Bl. var. **laurinum** (Bl.) Bakh. f. . . 357
Memecylon oligoneurum Bl. . 338
Memecylon ovatum Smith . . 366
Memecylon paniculatum Jack. 367; 353; 345
Memecylon pauciflorum. Bl. . 360
Memecylon pauciflorum Bl. var. *pisocarpum Bl.* 360
Memecylon protrusum Bakh. f. 348
Memecylon pseudo-nigrescens Bl. 361
Memecylon pseudo-nigrescens Bl. var. *acuminatum Bl.* *362
Memecylon pusilliflorum Cogn. 367
Memecylon **rhodophyllum** Bakh. f. 357
Memecylon spec. 345
Memecylon sphaerothyrsum Schwartz 367
Memecylon **Steenisii** Bakh. f. 355
Memecylon **subcordifolium** Bakh. f. 348
Memecylon subtrinervium Miq. 347
Memecylon **sumatrense** Bakh. f. 352
Memecylon tinctorium Willd. . 358
Memecylon trinerve Hassk. (*non D.C.*) *338
Memecylon umbellatum Bl. (*non Burm. f.*) 363
Memecylon Vosmaerianum Scheff. 343
Miconiales subtr. Dissochaeteae. 273
Miconieae 111; 39; 40; 115; 240; 274; 306
Mouririeae 333
Myrtus avenis Korth. *362
Myrtus glabrata Korth. *360
Myrtus memeciloides Korth. . .*355
*Myrtus oligoneura Herb. Korth.*338

page
Naxiandra Krasser 331
Neodissochaeta Bakh. f. 134; 24; 41
Neodissochaeta biligulata (Korth.) Bakh. f. 140
Neodissochaeta celebica (Bl.) Bakh. f. 141
Neodissochaeta compressa Bakh. f. 146
Neodissochaeta fusca (Bl.) Bakh. f. 136
Neodissochaeta gracilis (Jack) Bakh. f. 137
Neodissochaeta Lamiana Bakh. f. 142
Neodissochaeta magnibracteata Bakh. f. 142
Neodissochaeta puberula Bakh. f. 139
Neodissochaeta reticulata (Bl.) Bakh. f. 143
Neodissochaeta vacillans (Bl.) Bakh. f. 144

Ochthocharis Bl. . . . 283; 31; 42
Ochthocharis **attenuata** Bakh.f. 286
Ochthocharis buruensis T. et B. 284
Ochthocharis bornensis Bl. . . 284
Ochthocharis javanica Bl. . . . 285
Ochthocharis javanica (*haud Bl.*) *herb. Korth.* 284
Ochthocharis megalophylla Mansf. 287
Ochthocharis paniculata Korth. 287
Ochthocharis parviflora Cogn. 275
Omphalodes [*Naud.*] 118
Omphalopus Naud. . 117; 23; 40
Omphalopus fallax (Jack) Naud. 118
Omphalopus fallax [Jack] Naud. var. novoguinensis Mansf. . 119
Omphalopus leprosus (*Bl.*) *Naud.* 118
Osbeckia L. 45; 22; 40
Osbeckia aspera (L.) Bl. . . . 51
Osbeckia angustifolia D. Don . 47
Osbeckia chinensis L. . . 47; 48
Osbeckia chinensis L. var. *pusilla* (*Z. et M.*) *Triana* 48
Osbeckia chinensis L. var. *typica Hochr.* 47
Osbeckia dolichophylla Naud. . 52
Osbeckia dolichophylla Naud. var. **abrupta** Bakh. f. . . . 53
Osbeckia **ericoides** Bakh. f. . . 51
Osbeckia linearis Bl. 47

page

Osbeckia linearis Bl. var. *moluccana Bl.* 47
Osbeckia **melastomacea** Bakh. f. 51
Osbeckia ovata Zoll. 246
Osbeckia papuana Cogn. . . . 50
Osbeckia pusilla Z. et M. . . . 48
Osbeckia Royeni (Bl.) Miq. . . . 66
Osbeckia zeylanica L. f. . . . 47
Osbeckia zeylanica L. f. var. **attenuata** Bakh. f. 49
Osbeckiae 44
Osbeckieae 22; 39; 44
Osbeckieae ser. Gerontogeae . . 44
Otanthera Bl. 103; 23; 40
Otanthera adpressa Mansf. . . . 109
Otanthera bracteata Korth. 107; 105
Otanthera celebica Bl. 108
Otanthera crinita Naud. var. major Cogn. 110
Otanthera cyanoides (Smith) Triana 106; 109
Otanthera gracilis Naud. 106
Otanthera Lamii Mansf. . . . 105
Otanthera **macrochiton** Bakh.f. 105
Otanthera moluccana (Bl.) Bl. 106
Otanthera novoguinensis Baker f. 109
Otanthera **subrostrata** Bakh. f. 106
Oxyspora D.C. . . 280; 31; 42; 288
Oxyspora macrophylla (Miq.) Triana 282
Oxyspora racemosa Ridley. . . . 289
Oxyspora **robusta** Bakh. f.. . 282
Oxyspora **robusta** Bakh. f. var. **laxiflora** Bakh. f. 283
Oxyspora stellulata King . . . 282
Oxysporeae 273; 30; 39; 42

Pachycentria Bl. 23; 40. 120; 23; 40
Pachycentria constriata (Bl.) B . 124
Pachycentria cordata Herb. Korth. *124
Pachycentria elliptica Bl. . . . 124
Pachycentria elliptica Bl. var. *subcordata Bl.* 124
Pachycentria glauca Triana . . 127
Pachycentria **Hellwigii** (Mansf.) Bakh. f. 123
Pachycentria javanensis Hochr. 124
Pachycentria Junghuhniana Miq. 124
Pachycentria lanceolata Schwartz 127
Pachycentria laxiflora Bl. . . . 124

page

Pachycentria microsperma Becc. 123
Pachycentria oligosperma Schwartz 127
Pachycentria rigida Bl. 124
Pachycentria **rubrivenia** (Baker f.) Bakh. f. 121
Pachycentria scandens Ridley . *Pachycentria tuberculata Korth.* 125
Pachycentria tuberculata Korth. var. *obtusifolia Bl.* 125
Pachycentria varingiaefolia (B.) Bl. 126; 125
Pachycentria **Versteegii** (Mansf.) Bakh. f. 122
Pachycentria Zollingeriana Naud. 125
Pharmacum Rumph. 298
Pharmacum papetarium Rumpf. 299
Phyllagathis Bl. . . . 265; 29; 42
Phyllagathis **decipiens** Bakh. f. 267
Phyllagathis gymnantha Korth. 269
Phyllagathis Johannis Winkleri Schwartz 270
Phyllagathis Johannis Winkleri Schwartz var. glaberrima Schwartz 270
Phyllagathis lanceolata Schwartz 270
Phyllagathis **nymphaeifolia** Hall. f. 269
Phyllagathis pallida Schwartz . 270
Phyllagathis rotundifolia (Jack) Bl. 266; 267
Phyllagathis **sumatrana** Bakh. f. 268
Plethiandra Hook. f. . . . 115; 40
Plethiandra Beccariana (Cogn.) Merr. 116
Plethiandra Mottleyi Hook f. . 116
Pogonanthera Bl. . . . 127; 23; 40
Pogonanthera hexamera Baker f. 130
Pogonanthera latifolia Schwartz. 130
Pogonanthera pauciflora Becc. 130
Pogonanthera pulverulenta (Jack) Bl. 128
Pogonanthera pulverulenta (Jack) Bl. var. ß *grandiflora T. et B.* 130
Pogonanthera pulverulenta (Jack) Bl. var. *grandifolia Miq.* . . 128
Pogonanthera pulverulenta (Jack) Bl. var. *lanceolata Baker f.* . 125
Pogonanthera reflexa Bl. . . . 128
Pogonanthera reflexa Bl. var. *squamulata Bl.* 129

page
Pogonanthera spec. 130
Pogonanthera squamulata Herb. Korth. *129
Poikilogyne Baker f. 277; 30; 42;279
Poikilogyne arfakensis Baker f. 278
Poikilogyne **biporosa** Bakh. f. . 277
Poikilogyne parviflora Mansf. . 280
Poikilogyne robusta Mansf. . . 278
Poikilogyne Roemeri Mansf.. . 279
Ptelandra (sine auctore). . . .*204
Pternandra Jack 323; 34; 43; 311
Pternandra azurea (Bl.) Burkill 314
Pternandra capitellata Jack . . 326
Pternandra coerulescens Jack . 324
Pternandra coerulescens Jack var. capitellata (Jack) King . 326
Pternandra coerulescens Jack var. cyanea (Bl.) Cogn. 327
Pternandra coerulescens Jack var. *Jackiana Clarke* 327
Pternandra coerulescens Jack var. *paniculata (Benth.) King* . . 324
Pternandra cordata (Korth.) Baill 316
Pternandra cyanea (Bl.) Triana 327
Pternandra echinata Jack . . . 314
Pternandra Forbesii Baker f. . 320
Pternandra galeata (Korth.) Ridley 320
Pternandra Griffithii King . . 322
Pternandra Jackiana (Clarke) Ridley 327
Pternandra Korthalsiana (Miq.) Triana 327
Pternandra latifolia (Bl.) Triana 327
Pternandra paniculata Benth. . 324
Pternandra paniculata (Miq.) Triana 324

Rectomitra Bl. 311; 34
Rectomitra cordata (Korth.) Triana 319
Rectomitra galeata (Korth.) Bl. 320
Rectomitra tuberculata (Korth.) Bl. 322
Rhexiae 274
„*Rousseauxiées*" 274

Sarcopyramis Wall. . 243; 28; 42
Sarcopyramis delicata Robins. . 244
Sarcopyramis gracilis Schwartz 247
Sarcopyramis javanica Z. et M. 246
Sarcopyramis lanceolata Wall. ex Bennett 245

page
Sarcopyramis napalensis Wall . 246
Sarcopyramis napalensis Wall. var. javanica (Z. et M.) Hochr. 246
Sarcopyramis nepalensis Wall. ex Bennett . . . . . 246(2x)
Sonerila Roxb. . . . 247; 28; 42
Sonerila Roxb. sect. III *Oxycentria*. 288
Sonerila **amoena** Bakh' f. . . 261
Sonerila Beccariana Cogn. . . 264
Sonerila begoniaefolia Bl. . . . 254
Sonerila begoniaefolia Bl. var. ß 254
Sonerila begoniaefolia Bl. var. *pilosiuscula Bl.* 254
Sonerila begoniaefolia Bl. var *pilosula [Bl.]* 254
Sonerila biflora Z. et M. . . . 263
Sonerila biflora Z. et M. var. minor Cogn. 264
Sonerila brachyandra Naud. . 256
Sonerila **buruensis** Bakh. f. . 260
Sonerila **Daalenii** Bakh. f. . . 264
Sonerila **decipiens** Bakh. f. . . 260
Sonerila exacoides Ridley. . . 264
Sonerila heterophylla Jack . . 252
Sonerila heterostemon Naud. . 250
Sonerila insignis Bl. 257
Sonerila Junghuhniana Miq. . 251
Sonerila laeviuscula Z. et M. ex Miq. 262
Sonerila laeviuscula Z. et M. ex Miq. var. grandifolia Cogn.. 264
Sonerila magnifica Miq. . . . 290
Sonerila margaritacea Lindl. . 264
Sonerila moluccana Roxb. . . 255
Sonerila moluccana Roxb. var. *pilosula (Triana) Stapf* . . . 255
Sonerila Naudiniana Miq. . . 247
Sonerila Naudiniana Miq. var. pilosissima T. et B. *264
Sonerila obliqua Korth. . . . 250
Sonerila obovata Schwartz . . 264
Sonerila pallida Stapf et King 259
Sonerila papuana Cogn. . . . 254n
Sonerila paradoxa Naud. . . . 255
Sonerila pauciflora Bl. 252
Sonerila pedunculata Schwartz 264
Sonerila picta Korth. 261
Sonerila picta Korth. var. maculata Ridley 264
Sonerila Reinwardtii Korth. . .*269
Sonerila repens Stapf et King . 264
Sonerila rubro-villosa Schwartz 264

page
Sonerila **Ruttenii** Bakh. f. . . 256
Sonerila Ruttneri Ridley . . . 265
Sonerila stricta Hook 265
Sonerila tenera Royle 265
Sonerila tenuifolia Bl. 258
Sonerila tenuifolia Bl. var. *albiflora Hochr.* 258
Sonerila tenuifolia Bl. var. *Cogniauxii Hochr.* 258
Sonerila Teysmanniana Miq. . 250
Sonerila tuberculifera Cogn. . 253
Sonerila velutina Cogn. . . . 265
Sonerila virgata Schwartz . . . 265
Sonerileae . . 240; 28; 39; 41; 239
Sonerileae sér. **III** *Americanae* . 239
Syzigium cymosum Bl. *347

Tamoneae 111
Tibouchineae 110; 39; 40
Tibouchinées 110
Tristemma Juss. 45
Tristemma angustifolium Bl. . 47
Triuranthera Back . . 270; 30; 42
Triuranthera Bakhuizenii Back. 271
Triuranthera **brevipedunculata** Bakh. f. 270
Triuranthera Winkleri (Cogn.) Back 271