

MISCELLANEOUS NOTES ON LORANTHACEAE 7-8

by

B. H. DANSER.

Botanical Laboratory of the University,
Groningen, Holland.

7. Loranthaceae from Mount Kinabalu, collected by Joseph and Mary Strong Clemens in 1931, 1932, and 1933.

Together with Richards' collections from Mt. Dulit (cfr. Rec. trav. bot. néerl., 31, p. 237—247), those of Mr. and Mrs. Clemens from Mt. Kinabalu represent so interesting a completion of our knowledge of the North Borneo *Loranthaceae* since my revision of 1931 (Bull. Jard. Bot. Buitenz., ser. 3, 11, p. 233—519), that they deserve a separate publication.

The herbarium numbers enumerated in the following I all received from the Herbarium of the Buitenzorg Botanic Gardens. Few of them, representing new species, have already been published in no. 4 of these notes (Rec. trav. bot. néerl., 31, p. 229—235).

The specimens of each species have been arranged after their collecting number, or, by lack of this, after the date of collecting. Of few specimens the date was probably wrong, as it did not agree with the succession of the collecting numbers.

Loxanthera loxanthera (D. C.) Dans.; 31485, 7 II 1933, Penibukan, 4—5,000 ft, detached flowers only, „red

with yellow anthers, fallen from an impossible jungle tree"; s.n., 7 III 1933, Penibukan, W. ridge, 4,500 ft, detached flowers only, „pinkish red”.

Lepeostegeres Beccarii (King) Gamble; 29559, 5 V 1932, Tenempok, trail to Tomis, 5,600 ft, „flower salmon brown, green base, corolla &c. red”; 33783, 29 VI 1933, Colombon River basin, Minatuban spur, near Lobang, 7,000 ft, „flower red, fruit red”.

Lepeostegeres centiflorus (Stapf) Van Tiegh.; 26153 bis, 23 VIII 1931, Dallas, 3—4,000 ft, „flowers bright red”; 26790, 20 X 1931, Dallas, 3,000 ft, „flowers scarlet”; s.n., 27 I 1932, Tenempok, 5,000 ft, „flower purple”; s.n., 5 I 1933, Penibukan, 4,000 ft, „flower red”; 30907, 10 I 1933, Penibukan, top Table Rock, left ridge, 4—5,000 ft, „flower bright red”; 32364, 27 V (prob. III) 1933, Marai Parai, 6—7,000 ft, „fruit bright red”; 35066, 19 V 1933, Marai Parai above Kamburanga, M.P., 8—10,000 ft, „flower bright red”.

The number 26790 has extraordinarily long corollas that are up to 65 mm long. The leaves of this plant are also uncommonly large but do not exceed the extreme dimensions known. These dimensions, abusively omitted in my revision, are: 7—18 cm by 2.5—8.5 cm. The number 30907 has well-developed fruit, adult according to the note on the label. In the dry state they are up to 7 mm long and 4.5 mm in diameter; they are crowned by the cupuliformous calyx limb, that is membranous and irregularly lacerated at the margin. The fruit-bearing pedicels are dilated at their apex to a flat orbicular disc 3.5 mm in diameter. There is no beak-shaped style rudiment on the fruit.

Macrosolen. From Mt. Kinabalu there was not known any *Macrosolen* at the time of my revision. I now can mention 4 species, 3 of which, being new to science, have been published in no. 4 of these notes. Among these 4 species, *M. flammeus* is readily distinguished by its small

regular leaves and rather long corollas. Also *M. splendidus* may easily be distinguished by its long corollas if flowers are extant, this being the case in only 3 of the numbers mentioned below; the other ones are somewhat doubtful. The remaining two species are well distinguishable in their typical forms, as *M. cochinchinensis* has leaves usually less shining above and not with impressed veins, and corollas at most 15 mm long and more yellow, whereas *M. floridus* has thicker, more shining leaves with veins impressed above, and corollas about 18 mm long and red. There are, however, specimens not distinguishable from *M. floridus*, but with corollas 15 mm long, or partly yellow, and there are specimens similar to *M. cochinchinensis* but with partly red corollas. Materials without flowers, are, of course, still more doubtful.

Macrosolen cochinchinensis (Lour.) Van Tiegh.; 27274, 26 XI 1931, 3 Ms. W. of Dallas, 3,000 ft, „flower dull purple and green cream; pink tip to pistil; tips of petals purple”; 29894, 13 VI 1932, Tenompok, 5,000 ft, „flower red buds on green and purple”; 30033, 7 XII 1931 (prob. 1932), Dallas, 3,000 ft, color of flower not indicated, style 13—14 mm long; 31122, 16 I 1933, Penibukan, 4—5,000 ft, „flower from base up cream, purple, green, pink tipped”; 31854, 5 III 1933, Penibukan, 4,000 ft, „flower yellow, small, fruit pinkish”, flowers not present in the specimen seen; 32053, 10 III 1933, Penibukan, 4,000 ft, with young flower buds and unripe fruit; 33911, 14 VII 1933, head Colombon River, below Lobang, Keebamban tributary, 4—5,000 ft, „base of tube yellow, also apex, below which is green, then a circle of wine or maroon”.

Macrosolen flammeus Dans. (cfr. Rec. trav. bot. néerl., 31, p. 230); 29807, 31 V 1932, below Paka, 10,000 ft, „flower brilliant red”.

Macrosolen floridus Dans. (cfr. Rec. trav. bot. néerl., 31, p. 232, 239); 28246, 24 II 1932, Tenompok, 5,000 ft,

„flower buds cream, purple middle, green tip”; 30027, 30 XI 1931 (prob. 1932), Dallas, 3,000 ft, no flowers, leaves dull, very doubtful; 30983, 16 I 1933, Penibukan, near Table Rock, 5,000 ft, „inflorescence pink, fruit yellow”, corolla 15 mm long; 31411, 7 II 1933, Penibukan, spur of Kinataki River, 4—5,000 ft, „flower pink, green tip”; 31601, 15 II 1933, Penibukan, 4—5,000 ft, quite sterile, very doubtful; 32046, 21 II 1933, Upper Kinataki River, 7,000 ft, mossy forest, „flower pinkish red”, corolla 15 mm long; 32231, 21 III 1933, Marai Parai, 5,000 ft, „flower pink”; s.n., 10 IV 1933, Marai Parai, 5,000 ft, no flowers nor fruit, very doubtful; 32085, 5 V 1933, headwaters of Sadikan River, 5,000 ft, only unripe fruit, very doubtful.

Macrosolen splendidus Dans. (cfr. Rec. trav. bot. néerl., 31, p. 234); 26893, X—XI 1931, Dallas—Tenompok trail, 3,500 ft, „flower scarlet, gray brown tips; 27824, 7 I 1932, above Lumu, 7,000 ft, „puplish fruit”, no flowers; 28530, 23 II 1932, Tenompok, 5,000 ft, „fruit orange”; 31613, 15 II 1933, Penibukan, 4—5,000 ft, „fruit orange”, no flower; 31718, 26 II 1933, upper Kinataki River, 6,000 ft, young buds only; 31726, 2 III 1933, head of Kinataki River, 8,000 ft, „fruit bright red”, no flowers; 43409, 29 III 1933, Marai Parai, Kinataki forest, 5,000 ft, „as large as the 25 ft host, flower cream, fruit pale green, no flowers, only young flower buds”; 32433, 29 III 1933, Marai Parai, upper gorge of Kinataki, 5,000 ft, „fruit purple”, no flowers; 32602, 5 IV 1933, Marai Parai spur, 5—6,000 ft, „fruit orange”, no flowers; 32662, 11 IV 1933, Marai Parai, upper Kinataki River gorge, near margin, 6,000 ft, „fruit orange to wine purple”, no flowers; s.n., 28 VI 1933, Colombon River basin, Minatuban spur—Lobang, „fruit red”, no flowers; 40359, 9 IX 1933, Penibukan, 4,000 ft, „flower scarlet with black and white tips”.

Elytranthe albida (Blume) Blume; 28180, 1 II 1932, Tenompok, 5,000 ft, „flower pink to purple”.

Lepidaria sabaënsis (Stapf) Dans.; 26945, 14 XI 1931, above Paka, 11,500 ft, „plant 4 ft, flower purplish red”; same number, supplementary materials, 29 III 1932, „shrub 2.5—3 m, flower pale yellow, in the axils of purple bracts”; 27814, I—V 1932, Paka, 10,000 ft, „flower reddish to purple”; 33144, 24 V 1933, Marai Parai, 8—11,000 ft, „flower pink with white top and yellow tip”; supplementary material, 8 V 1933, 8—9,000 ft, „flower pale yellow, base red”.

Amyema Beccarii (Van Tiegh.) Dans.; 26593, 24 IX 1931, Dallas, 2,500 ft, „flower dark red and green”; 26954, 25 X 1931, Dallas, 3,000 ft, „flowers cream, tips purple”; 32121 & 32210, III 1933, Canon W. of Penibukan, 4,000 ft; cfr. also *Viscum articulatum*, p. 758.

Helixanthera cylindrica (Jack) Dans.; 33776, 28 VI 1933, Colombon River basin, at Lobang, 7,000 ft, „reddish flower buds”; s.n., 30 VIII 1933, between Lobang and Wauria River, „flower red” (detached petals with stamens and few calyces only).

The above materials differ from ordinary *H. cylindrica* by the flowers sessile for the greater part, the inferior ones of the racemes usually shortly pedicelled, and by the harder and thicker leaves and corollas, though for the rest there is no resemblance with *H. crassipetala* or *H. dura*.

Helixanthera maxwelliana (Gibbs) Dans.; 28836, 14 III 1932, Tenompok 5,000 ft, „flowers red, fruit pink”; 29345, 20 IV 1932, Tenompok, Pony trail, 5,000 ft, „flower bright red”; 29410, 26 IV 1932, Tenompok, below Lumu trail, 5,000 ft, flower red in totum; 31353, 24 I 1933, Penibukan, 4—5,000 ft; 33051, 1 V 1933, Mumungan River, crest of ridge N.W. of Lobang, 5,500 ft, „flower deep red”.

The above abundant materials allow us to complete and to extend the description of this species in the following way: Leaves up to 20 cm long and 6 cm broad; racemes

up to 20 cm long, many-flowered; fruit up to 8 mm long, 4 mm in diameter, oblong-ovate, crowned by the calyx limb 0.5—0.75 mm long.

Helixanthera spicata Dans. (cfr. Bull. Jard. Bot. Buitenz., ser. 3, 11, p. 389); 30720, 4 I 1933, Penibukan, above Dahobang River, 4—5,000 ft, „fruit purplish”.

Dendrophthoë constricta (Korth.) Dans.; 28508, 20 II 1932, Tenompok, 5,000 ft, „flower cream with pink tips”; 29414, 26 IV 1932, Tenompok, below Lumu trail, 5,000 ft, „flower cream to red”; 31619, 15 II 1933, Penibukan, 4—5,000 ft, „flower yellow, fruit brown”.

Of the above very typical materials, the number 31619 is somewhat aberrant by leaves very little curvinervous and partly acute-acuminate. The fruit of all numbers are up to 7 mm long, 5 mm diameter, not constricted below the calyx limb.

Dendrophthoë longituba (Elm.) Dans.; 34484, 10 VIII 1933, Colombon River, 5—6,000 ft, very young flower buds only, but leaves typical and hardly doubtful, 40031, 17 VIII 1933, Numeruk Ridge, mossy forest, 4—5,000 ft, detached flowers, „yellow”.

Dendrophthoë aff. *magnae* Dans. (cfr. Bull. Jard. Bot. Buitenz., ser. 3 11, p. 416); 28693, Tenompok, above Pony Trail, 5,000 ft, 17 III 1932.

This specimen would agree with a fruit-bearing *D. magna*, if not the fruit were shortly pedicelled; racemes 6—7 cm long, strongly thickened at the insertions of the pedicels, which are 2—3 mm long, 2 mm thick; flowers up to more than 20 in number; fruit ellipsoidal, slightly ovate, up to 10 mm long (the calyx excepted), 6 mm diameter, somewhat constricted below the calyx limb which is erect in the young state, inflexed later.

Dendrophthoë pentandra (Linn.) Miq.; 26031, 7 VIII 1931, Dallas, 3,000 ft, „flower dull rose pink, apex dull yellowish”; 26103, 17 VIII 1931, Dallas, 3,000 ft,

„flower red, segments green yellow”; 26508, 21 IX 1931, Dallas, 3,000 ft, flower purple; 27413, 5 XII 1931, Dallas, 3,000 ft, „flower purple”.

Trithecanthera superba Dans. (cfr. Rec. trav. bot. néerl., 31, p. 245, ic. p. 242); 31304, 16 I 1933, Penibukan, ridge W. of camp, 4,000 ft, heavy vine on limb fallen from great tree; 33190, 19 V 1933, Marai Parai, Kamburanga M.P., 8—10,000 ft, „flower red, stamens purple to darker”.

The characters of the fruit of the number first-mentioned I already added to the original description; the second specimen bears flower-buds, on inflorescences that are inserted on leafless nodes of older twigs.

Scurrula ferruginea (Jack) Dans.; s.n. 28 XII 1931, Kabayo.

Scurrula parasitica Linn.; 31099, 16 I 1933 and 31367, 24 I 1933, both Penibukan, 4—5,000 ft.

Taxillus estipitatus (Stapf) Dans.; 26267, 29 VIII 1931, Dallas, 3—4,000 ft; 26853, 28 X 1931, Tenompok, 5,000 ft; 29542, 4 V 1932, Tenompok divide, 5,000 ft; 31118, 16 I 1933, Penibukan, 4,000 ft; 32599, 4 VIII 1933, divide Panataran headwaters, Muratura ridge, 5—6,000 ft; 33119, 19 V 1933, Marai Parai, Kamburanga M.P., 8—10,000 ft; 33775, 28 VI 1933, Colombon River basin, Minatubang spur — Lobang, 7,000 ft.

Ginalloa arnottiana Korth.; 27263, 25 XI 1931, Dallas, 3—4,000 ft; 28589, 29 II 1932, Tenompok, 5,000 ft; 40146, 31 VIII 1933, Penataran Basin, head of Lobang Creek, 6,000 ft.

Ginalloa nuda Dans. (cfr. Rec. trav. bot. néerl., 31, p. 229); 31538, 7 II 1933, Penibukan, 4—5,000 ft, fruit red.

Korthalsella geminata (Korth.) Engl.; 33902, 11 VIII 1933, head of Colombon River, mossy forest below 2,000 ft wall, 8—9,000 ft, on *Garcinia*.

After Korthals, in 1836, collected the specimens on which he based this species on the top of Mt. Sakoembang

in south-eastern Borneo, the species had not been collected again.

Korthalsella Opuntia (Thunb.) Merr.; 34383, 11 VIII 1933, Colombon Basin, 4,500 ft, on *Symplocos*.

First record for Borneo.

Notothixos Curranii Merr.; 40005, 19 VIII 1933, Colombon basin, Numeruk ridge forest, 5,000 ft, flower cream green, petals pink, fruit green.

In 1932 Richards discovered the genus *Notothixos* for the first time in Borneo, collecting beautiful specimens of the Philippine *Notothixos sulphureus* Merr. on Mt. Dulit, Sarawak (cfr. Rec. trav. bot. néerl., 31, p. 257); this is the second record of this genus, and the second Philippine species for Borneo. The Borneo specimens of *N. Curranii* have more distinctly ovate leaves than the Philippine ones, and inflorescences up to 20 mm long when in fruit; the indumentum of the young parts is more sulphureous, growing gray later; these differences are, however, insufficient for specific distinction.

Viscum articulatum Burm. f.; 28791, 17 III 1932, Tenompok, 5,000 ft, on *Amyema Beccarii*.

Viscum orientale Willd.; 26371, 1 IX 1931, Dallas, Tenompok trail, 3—4,000 ft; 26953, 6 XI 1931, Dallas, 3,000 ft; 28465, 18 II 1932, Tenompok, 5,000 ft.

8. The genus *Korthalsella* in the Dutch East Indies.

In my revision of the *Loranthaceae* of the Dutch East Indies I could mention two species of *Korthalsella* and one of *Arceuthobium*. At the time of my composing the manuscript I had only scanty herbarium materials of the latter at my disposal, and I could not verify the correctness of the systematic place of *Arceuthobium Dacrydii*, about which, however, I was somewhat in doubt, as I could not distinguish, among the materials at hand, male and female specimens. When, some months later, I received alcohol

materials of this species from Java, my doubt increased, as not only male and female specimens could not be distinguished, but also the inflorescence proved to agree entirely with that of the *Korthalsella* species known to me, whereas that of *Arceuthobium* is described as quite different. On my request my assistant Dr. J. C. Meekel soon began an anatomical investigation of the alcohol materials above mentioned. An account of these investigations will probably be published by Dr. Meekel before long, but I may say here that they already proved the species to be a *Korthalsella*.

The species of this genus collected up to the present in the Dutch East Indies are:

Korthalsella Dacrydii (Ridl.) Dans., comb. nov.; *Arceuthobium Dacrydii* Ridl., Journ. F. M. S. Mus., 6, p. 170 (1916); Fl. Mal. Pen., 3, p. 163 (1924); Dans., Bull. Jard. Bot. Buitenz., ser. 3, 11, p. 455 (1931).

Distribution: Malay Peninsula, Java.

Korthalsella Opuntia (Thunb.) Merr.; *Viscum opuntia* Thunb., Fl. Jap., p. 64 (1784). Cfr. Bull. Jard. Bot. Buitenz., ser. 3, 11, p. 453 (1931).

Distribution: Himalaya to Japan, Philippine Islands, Malay Peninsula, Java, and Borneo (cfr. note 7).

Korthalsella geminata (Korth.) Engl.; *Viscum geminatum* Korth., Verh. Batav. Genootsch., 17, p. 212, 233, 259 (1839). Cfr. Bull. Jard. Bot. Buitenz., ser. 3, 11, p. 453 (1931).

Distribution: Borneo (cfr. note 7).

The three species mentioned are not very closely allied, as they belong to 3 different genera (*Korthalsella*, *Bifaria*, *Heterixia*) according to Van Tieghem, and to as many sections of the genus *Korthalsella* (*Eukorthalsella*, *Bifaria*, *Heterixia*) according to Engler and most of authors.

The transfer of Ridley's *Arceuthobium Dacrydii* to the genus *Korthalsella* sect. *Eukorthalsella* induces the following remarks.

The sect. *Eukorthalsella* was only known, up to the present, from New Caledonia and New Zealand to the Sandwich Islands. The area of the section is now enlarged westward to a remarkable extent.

None of the species of *Korthalsella* was known as to be parasite on Conifers. *K. Dacrydii* is the first species of that kind.

The discovery of *Arceuthobium Dacrydii* in Java made us consider the genus *Arceuthobium* to be spread to the southern hemisphere. For the present it appears to be restricted to the northern hemisphere, and to be absent from the Malay Archipelago.