

## Summary

A discussion of a number of rarer beetles found in the Amsterdamse Bos, a young artificial wood in the immediate neighbourhood of the Dutch capital. Up to the present only very few typical wood species are found here.

Amstelveen, Da Costalaan 48.

× Psalis africana (Lymantriidae), a New African Moth ✕  
 by  
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A few months ago, I was engaged in examining material for the twelfth part of my "*Recherches sur les organes tympaniques des Lépidoptères*", dealing with the family Lymantriidae. Among more than eighty genera available for study, *Psalis* Hübner, 1823, was represented by its typical species, viz. *Psalis pennatula* Fabricius, 1793. The species is a rather common one, and it is very widely distributed, occurring in most of the Indo-Australian and of the Ethiopian regions, and even reaching the Palearctic region in parts of China.

Although easily recognizable, *P. pennatula* varies to some extent, so that it has been given several names. Here is the list of them, kindly supplied by C. L. COLLENETTE :

- Psalis pennatula* Fabricius, 1793 (India). Type in Copenhagen.
- „ *securis* Hübner, 1823 (Java). Location of type unknown.
- „ *antica* Walker, 1855 (Java). Type British Museum.
- „ *falcata* Walker, 1865 (Ceylon and Java). Type *ibid.*
- „ *approximata* Walker, 1865. The type bears a label inscribed "N.I.", probably North India. Type *ibid.*
- „ *tacta* Walker, 1865 (Australia). Type *ibid.*
- „ *praeusta* Felder, 1874 (Amboina). Type *ibid.*

I dissected for my paper two specimens: one from Dalhousie, India, received from the British Museum (Natural History), the other from Elisabethville, Belgian Congo, collected by Ch. SEYDEL. The tympanic structures proved to be very similar, with the exception of the relation true tympanum : counter-tympanum. In the Asiatic specimen the relation was 1 : 1.125, in the African one 1 : 4. The difference is fully a specific one, even in the family Lymantriidae, where the relative size of the counter-tympanum varies somewhat more than it is the case with several related (phalenoid) families. The question arose, however, whether one of the specimens was aberrant in that respect, or if possibly the variability of the counter-tympanum in *P. pennatula* were unusually broad, although the latter alternative was not supported by the very abundant evidence available. Mr. COLLENETTE, whom I as usually informed about the case, kindly sent me a number of specimens from various localities, both Asiatic and African. He moreover examined the male genitalia, also Africans versus Asiatics, and informed me that they were identical, which I was not surprised at. It is indeed known that, in the Lymantriidae, the genitalic criterion often breaks down. So I had to work on tympanic characters only.

The dissection of the additional specimens gave the following results, viz.:

<i>Asiatic.</i>		<i>African.</i>	
Bangalore	1 : 1.5.	W. Pondoland	1 : 4.
Shillong	1 : 2.	Angola	1 : 3.5.
Ceylon	1 : 1.75.	So. Africa	1 : 5.
Darjeeling	1 : 1.8.	Transvaal	1 : 4.
Kulu dist.	1 : 1.6.	(Elisabethville)	1 : 4.
Java	1 : 1.4.		
(Dalhousie)	1 : 1.125.		
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Average	1 : 1.6.	Average	1 : 4.1.

These results fully confirmed those of the first investigation. In other words, the specific duality of *P. pennatula* became rather obvious.

In the meantime, W. H. T. TAMS has had a look at the female genitalia, both of African and of Asiatic specimens. These showed some marked differences, as results from the following, kindly supplied by Mr. TAMS through Mr. COLLENETTE :

<i>Asiatic.</i>	<i>African.</i>
Anal papillae large.	Anal papillae smaller.
Ostium of oviduct with long, narrow lobes.	Ostium of oviduct with short, conical lobes.
Ostium bursae with fore edge somewhat emarginate.	Ostium bursae with fore edge deeply emarginate.
Ostial funnel longer than wide.	Ostial funnel wider than long.

That settled the question. Mr. COLLENETTE agreed that there were two species, one Oriental, the other African. The latter not having already got a name, Mr. COLLENETTE kindly selected in the collections of the British Museum a series to serve for the holotype and the paratypes.

***Psalis africana* sp. nov.**

Nearest to *P. pennatula* Fabricius from India, from which it is not distinguishable externally. Differences in the relation true tympanum : counter-tympanum and in the female genitalia, as above. Ethiopian region.

Holotype: male, Kibwezi, Kenya, Dec. 1921 (reared), W. FEATHER; allotype female, and paratypes, one male, two females, from the same locality.

Represented in the British Museum (Natural History) by specimens from "South Africa", Cape Province, Orange River Col., Natal, Transvaal, Mozambique, Rhodesia, Nyasaland, Tanganyika, Kenya, Angola, N. Nigeria and Gold Coast (information kindly supplied by C. L. COLLENETTE).

Distribution in the Belgian Congo: Congo Ubangi, Stanleyville, Tshuapa, Bas Congo, Sankuru, Maniema, Lualaba, Haut Katanga, Ruanda, Kivu, Kibali-Ituri (from material in the Musée Royal du Congo Belge, information kindly supplied by L. A. BERGER).

The interest of the above lies far less in the discovery of a new species — new species from Africa are being described by dozens by workers on African

fauna — than in the fact that it is the first instance of a new species being differentiated and described on the tympanic characters. It was generally thought that those characters, unlike the genitalia, were of a superspecific value, and of use for generic and supergeneric differentiation only. The case of *Psalis africana* shows that it is not so, and it opens new perspectives for the students of the Lepidoptera.

There is, however, a second point of interest, although it is not supported by positive evidence. The larva of *P. pennatula* (including *P. africana*) is polyphagous, feeding on various plants and grasses. Mr. COLLENETTE kindly sought out for me the following informations:

"Larva feeds on a variety of cultivated plants, including cereals, grasses and cruciferous plants" (H. MAXWELL LEFROY, 1909, *Indian Insect Life*, p. 460). "Grasses" (SEVASTOPULO, 1946, *Journ. Bombay N. H. Soc.*, 46 : 62). "Various grasses" (TOWNSEND, 1942, *E. Afr. N. H. Soc.*, 16 : 200).

The larva feeding on a number of cereals, there is more than a bare possibility of its being introduced into Africa by man together with e.g. rice culture. The eventuality has been mentioned to me by Mr. COLLENETTE who in turn had been told by someone that an artificial spread of the species appeared likely. As Mr. COLLENETTE points out, this is not evidence. It seems to me, however, that the case deserves a more close investigation — if possible. For, if positive evidence of artificial distribution could be found, that would mean that the "tempo" of the evolutionary process can at times be truly amazing: just a few centuries would suffice to differentiate the tympanic structures of the new populations in the way described above, not to speak of the smaller yet distinct genitalic differences. Could it be that the selective value of the size of the counter tympanum is so high? Or is it just the other way: that this character has a small or negligible selective value, but that it is dominant, which assures a quick spread in favourable environmental and other conditions. That such a spread can occasionally be very quick, we know from the calculations by LUDWIG; but, as in so many cases, concrete instances thereof are rather scanty. Anyway, I thought the possibility worth mentioning.

Acknowledgments are due to C. L. COLLENETTE, for kind help in this and many other instances; to W. H. T. TAMS, for having kindly compared the female genitalia of African v. Asiatic specimens; and to L. A. BERGER, for having kindly made up the list of the Belgian Congo localities.

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Vroege (of late?) aanwezigheid van *Pyrrhocorus apterus* L. Op 3 januari 1956 inspecteerde ik bij zonnig koud weer ( $\pm 0^\circ$ ) een mij bekend terreintje, waar *P. apterus* L. voorkomt. Dit terreintje, waarop ik het vorige jaar langvleugelige exemplaren aantrof, ligt op 't oosten onder Halsteren N.B. Tot mijn verrassing behoefde ik niet naar overwinterende exemplaren te graven. Eén zat open en bloot, negen andere zaten zichtbaar dicht bijeen in de rand van een graspol. Zij konden zich alle voortbewegen.

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