SPOLIA MENTAWIENSIA.

Mantidae, or Praying Insects.

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With an Introduction by C. BODEN KLOSS,
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Introduction.

The Mentawi Group, to the west of Sumatra, consists of the islands of Siberut, Sipora, and North and South Pagi. The first and northernmost is larger than the other three (which are fairly equal in size) put together.

Little was known of their entomology until I visited Siberut and Sipora during September — November 1924, accompanied by Mr. N. Smedley, Assistant Curator of the Raffles Museum, Singapore, and Dr. H. H. Karny, Assistant Entomologist, Zoological Museum, Buitenzorg, Java, with a party of native collectors. I have, as usual, to thank the Government of Netherlands India for the assistance and facilities afforded.

The islands are not very pleasant collecting grounds: they are mostly swamp out of which rise hills nowhere more than 500 metres high and generally difficult to get at, being surrounded by soft ground. The sago palm is common. The native villages are situated on the banks of rivers some distance upstream, and there are scarcely any paths except those made by the Dutch military posts: these are generally through flat land and are often untraversable owing to floods. There is much rain throughout the year. The islands are unhealthy: in spite of systematic employment of quinine and other precautions, all the members of a party of fifteen, except myself, suffered from malaria either on the islands or soon after leaving them.

The group lies parallel to the west coast of Sumatra and about 90 — 110 kilometres distant. Siberut is about seventy miles long and about thirty broad, and its northern extremity is on Lat. 1° South.

The islands are apparently connected with each other by a sea-bottom of less than 200 metres, and most bathygraphical charts show a connection with Sumatra, via the Batu Islands to the north-east, by a narrow ridge of similar soundings; but I am inclined to doubt that this ridge is unbroken as indicated, for the faunas of the groups differ greatly; while, though the Mentawi Islands possess a much richer mammalian fauna than the undoubtedly deep-water islands of Simalur and Engano at the extremities of the West Sumatran chain of islands, the fauna is much more peculiar and differentiated than that

of Nias Island, also represented as being within the one hundred fathom line. Whatever the depths may be, they certainly are not those of the shallow Sunda shelf (less than 75 metres) on which stand almost all the land-masses of Malaysia, i.e., the Peninsula, Sumatra, Java, Bali, Borneo, etc.

Apart from the doubtful connecting ridge the group is surrounded by depths of 200 — 1000 metres of water; further, everywhere directly between it and Sumatra lies the long Mentawi Basin with depths of 1000 — 2000 metres. Such conditions render several of the West Sumatran Islands, in spite of small size and lack of height, zoologically quite as distinct from each other and from the rest of Malaysia as the larger areas of that sub-region are from each other.

The islands are forested all over save for the natives' plantations, and our material was obtained from varied localities near the Government stations of Siberut, in the island of that name, and Sioban in Sipora: it came from the sea-shore, low-lying ground, the swamps, cultivated areas, and from such hills as were accessible.

During the journey to and from the islands we also made small collections of insects at Padang, West Sumatra; on Pulau Tello, one of the shallow-water Batu Group to the north of Siberut; and on the Pagi Islands where Dr. Karny spent several days.

As reports on the various collections obtained are prepared they will be published in various journals under the general title „Spolia Mentawiensia!."

The following have appeared to date:

Spolia Mentawiensia: Flora. H. N. RIDLEY, Kew Bulletin of Miscellaneous Information, No. 2, 1926, pp. 56 — 94.

Spolia Mentawiensia: Birds. F. N. CHASEN and C. BODEN KLOSS, Ibis, April 1926, pp. 269 — 305. Plate III and fig. 10.

Spolia Mentawiensia: Reptiles and Amphibians. Malcolm A. SMITH, Ann. & Mag. Nat. Hist. (9) 18, 1926, pp. 76 — 81.

Spolia Mentawiensia: Zoraptera. H. H. KARNY. Antea.

etc.

Amongst the material collected by the Mentawi-Expedition of the Raffles Museum, Singapore, in 1924, there were represented these rapacious insects which are so extremely various in shape as well as in coloration and size. They were forwarded to me by my friend Dr. H. H. KARNY of the Zoological Museum, Buitenzorg. The specimens belong to nine families (according to GIGLIO-TOS), ten genera and twelve species, three of which are certainly characteristic of the Islands, as well as three further species, represented only by larvae and therefore not described here. The number of collected larvae is twice as great as the number of imagines (30 against 15); 5 species are only represented by winged specimens, 5 by larvae only, 3 by imagines as well as by larvae. This may be due to the time of collecting, in October not all species being fully developed; but as well it may be possible that the winged specimens more easily escape attention than larvae, due to the fact that in the warmer parts

of the earth the larval and imaginal times are not so strictly separated as we are accustomed to see in Central Europe. Even in Southern Europe and North Africa, we find regularly larvae of different ages together with imagines of Mantids; as also hibernating winged specimens with young larvae in spring and as newly developed with advanced larvae in summer and autumn.

Iridopteryginae.

Hapalopeza tigrina WESTW.

The description of this delicate little mantis fits well to a female specimen from Pulau Tello, Batu Islands (No. 256) (H. H. KARNY collector, 10. XI. 1924), which is, on the other hand, perfectly identical with a specimen from Perak in my collection.

Tropidomantis tenera STÅL.

Male and female from Siberut Island, Sept. 1924 (C.B.K. and N.S. collectors), quite typical.

Amelinae.

Amantis reticulata DE HAAN.

This species is represented in the collection by several specimens:

♂ from Muara Siberut, (124) 28. IX. 1924, H. H. KARNY collector.

♀ from Muara Siberut (119) 26. IX. 1924, H. H. KARNY collector.

♂ from South Pageh, near Bukatmunga (187) 17. X. 1924, H. H. KARNY collector.

♂ ♀ from Siberut, Sept. 1924, C.B.K. and N.S. collectors.

The last named male is very small in comparison with the others, but otherwise quite similar.

Thespinae.

Euchomenella sp. n. ?

There is a number of larval specimens of different stages before me which are certainly not identical with any of the described species.

The eyes are very large and prominent, their distance from each other equal to their own diameter; clypeus pentagonal, twice as broad as high. Pronotum long, with a triangular dilatation at either side above the insertion of the anterior limbs, with minute spinules in the anterior part. Abdomen somewhat dilated at the end in more advanced larvae. Cerci reaching very distinctly beyond the apex of abdomen. Limbs very thin and slender; anterior coxae with extremely small spinules, visible only with the aid of a good lens. Outer spines of anterior femora rather different in size; the fourth and last smaller than first, third largest; inner spines 15, the last much enlarged; discoidal spines as in *E. heteroptera*.

The colour is very distinctive. Eyes brown, anterior part of head up to the clypeus and the three basal segments of the antennae yellowish white, the remaining segments dark. Pronotum brown, spotted with darker, margined yellowish in the anterior half. Limbs light brown dotted with darker, at the inner side a dark spot covering the apex of the coxa, but much smaller than in *heteroptera*; some more larger spots on the femora, but no transverse bands; besides these spots some dark spots; the largest discoidal and the last spine of the inner row of anterior femur dark; median and last pair of limbs minutely and densely dotted with darker brown. Prosternum with a median row of dark spots.

This species is represented in the collection by three larvae, the largest of which has served me for the description above [1]). It is from North Pageh, between Sawang Tungku and Kaote (191) and collected by H. H. KARNY, 18. X. 1924. Total length 53 mm., pronotum 26 mm.

The two others, from South Pageh, near Bukatmunga (188) 17. X. 1924 and North Pageh, Sawang Tungku (145) 6. X. 1924, collected likewise by Dr. KARNY agree with the description except that the head and the bases of the antennae are darker and that the spinules of the pronotum and of the anterior coxae are quite invisible.

Euchomenella heteroptera DE HAAN.

1 ♂, quite typical. Total length 75, pronotum 33, anterior wings 41 mm.; anterior femora 17.5 mm. Sipora Island, 24. Oct. 1924, C.B.K. and N.S. collectors. Four larvae of different age belong to the same species (9. XI., 3, XI., 13. X., 26. X., 30. X. 1924) and are characterized by the banded inner side of the anterior femora, the large dark spot at the apex of anterior coxae, which are uniform yellowish brown on the remaining part of the inner face, annulated middle and hind limbs and the unicolor prosternum. The dimensions of a larva of this species of the same pronotal length are quite as in the preceeding species.

It seems, that two different species of *Euchomenella* occur on the Mentawei group, one of them restricted to Sipora, the other to North and South Pageh.

Caliridinae.

Hebardiella rehni n. sp.

2 ♀♀, Sipora Island, Oct. 1924, C.B.K. and N.S. collectors; and South Pageh, near Bukatmunga (188), 17. X. 1924, H. H. KARNY collector. — ♂ Larva, Siberut Island, Sept. 1924, C.B.K. and N.S. collectors.

The first is the type; the specimens differ, however, in no essential point.

Head broader than high. Clypeus band-like, much broader than high; pronotum about four times as long as broad, with perfectly smooth lateral margin and a very distinct keel in the metazonal part; supracoxal dilatation not very strong; abdomen parallel-sided, depressed; cerci long, more or less strongly curved, strongly pilose.

[1]) See: KARNY, Natur (Leipzig), XVII, 4, p. 82, fig. 38.

Wings hyaline, reaching to or beyond tip of abdomen ; otherwise like *H. karnyi* WERNER (Treubia, Vol. V, Livr. 1 — 3, 1924, p. 262).

Anterior coxae spineless ; anterior femora with four large, mostly straight and nearly erect outer and 13 inner spines, the 10th and 13th much larger than the others, which are closely set ; anterior tibiae with 9 outer and 12 inner spines ; metatarsus as long as tibia without terminal claw, much longer than the other tarsal joints together, the proximal of which is again longer than the others. Middle and hind feet slender, tibiae ciliated.

Total length 23 mm. ; pronotum 5.5 mm. long, 1.4 mm. broad ; anterior wings 14.5 mm.

Uniform light green ; hind wings perfectly hyaline, colourless.

I dedicate this delicate species to Mr. JAMES REHN, of the Museum of the Philadelphia Academy of Natural Sciences, whose valuable publications on Mantids have much aided me in my work, and I am glad that I can unite in the name of one species the names of the excellent Mantidological Dioscures of America.

Deroplatinae.

Deroplatys desiccata WESTWOOD.

A female larva, fullgrown [1]), from South Pageh, near Bukatmunga, Mentawi (188) 17. X. 1924 (H. H. KARNY). Further smaller larvae are from Sipora Island (3 ♀♀ of different stages, 28. X., and 1 ♂, 2. XI. 1924) and from N. Pagi, 6. XI. 1924 (2 ♂♂ 2 ♀♀). They are all fairly well to ascertain and all collected by C. B. K. and N. S.

Deroplatys rhombica DE HAAN.

A male from Siberut, Mentawi (112), surrounding Muara Siberut, 25. IX. 1924, and a female from the same locality and date have been collected by H. H. KARNY. Two smaller larvae (one from Sipora, 27. X., and one from Pulau Tello, Batu Islands 10. XI.) and a male one from Pulau Tello, Batu Islands resemble (10. X.) sòmewhat *D. horrifica* WESTW. from Burma and are really not easily to be distinguished.

There are some more larvae, from Sipora, Siberut and N. Pagi, with rather narrow supracoxal dilatation which I am unable to identify, as well as another one, very small, from Siberut, with very much dilated pronotum which does not strictly resemble the shape in any species of *Deroplatys* I am acquainted with.

Mantinae.

Hierodula siporana GIGLIO-TOS.

The description of this species is based on a male specimen from Port Blair, Andaman Isl., and a female one from Sipora, Mentawi Isl. I have before

[1]) Figured by KARNY, Natur (Leipzig) XVII, 4, p. 83, fig. 39.

me a male rather fullgrown larva from the typical locality (203, Sioban, Sipora Isl., 25. X. 1924, H. H. KARNY collector), and another one from the same island (C. B. K. and N. S. collectors, Sept. 1924). The former one has the anterior half of the pronotum densely spotted with blackish, on a greenish ground ; the elytral flaps are green, the hind wings purplish, lighter at the bases and with darker dots. Abdomen reddish. The other specimen has the pronotum, the elytra and the posterior two thirds of the abdomen reddish, limbs and hind wings green. The spot on the trochanter of the anterior limbs is distinct in both specimens, the teeth on the anterior coxae rather inequal ; discoidal spines and the stronger ones on the inner side of the anterior femora black, but green with brown tips externally. Total length 52 mm. A small larva from North Pagi Isl., near Sawang Tungku, (6. X. 1924, H. H. KARNY coll.) is not in good condition but seems to belong to the same species.

To this species may also belong three cocoons, two brown ones and a bright green one, which have been found attached to laeves (the brown ones to dry leaves of the same color), are resembling much those of other species of the genus.

Archimantinae.

A small larva from Siberut Isl., near Muara Siberut (25), 10. IX. 1924 (H. H. KARNY collector) has some resemblance to *Archimantis* by the deplanated cerci which are, however, strongly pilose and the last segments broader than the penultimate, oval, as long as the two preceeding ones and very little emarginate behind.

Head much broader than pronotum, with prominent eyes. Pronotum long, feebly dilated above the insertion of the coxae, perfectly devoid of spines laterally. Abdomen distinctly carinate. Anterior coxae spineless ; anterior femora with five outer and 12 inner spines, the latter alternating curved and straight. Anterior tibiae with seven rather inequal outer and eleven inner spines, becoming larger distally ; unguel claw very large. Metatarsus shorter than tibia without claw, longer than the other tarsal joints together, all very slender ; middle and hind limbs very thin, femora somewhat thickened proximally and distally. Greenish, cerci blackish, middle and hind limbs yellow. Total length 31 mm.

Acromantinae.

Acromantis siporana GIGLIO-TOS.

A female of this species described by GIGLIO-TOS from specimens from Sipora, Mentawi Isl. (♀) and Sumatra (♂) has been collected by C.B.K. and N.S. at Siberut Island, Sept. 1924. It agrees fairly well with the description, also in length.

Hymenopodinae.

Odontomantis javana SAUSS.

A female from Siberut Island, Sept. 1924 (C.B.K. and N.S collectors), indistinguishable from specimens from the typical locality.

Genus novum ? species nova ?

A very small larva with acutely triangular, erect, compressed and serrated process of vertex, non-lobate limbs, blackish with yellowish tarsi, is quite unknown to me and may belong to a new genus. It is from Sipora Isl., Oct. 1924 (C.B.K. and N.S. collectors).

DISTRIBUTION OVER THE ISLANDS OF THE MENTAWI GROUP.

Species :	Pagi	Sipora	Siberut	Pulau Tello
Hapalopeza tigrina				+
Tropidomantis tenera			+	
Amantis reticulata	+		+	
Euchomenella heteroptera		+		
„ sp. n.?	+			
Hebardiella rehni	+	+	+	
Deroplatys desiccata	+	+		
„ rhombica		+	+	+
Hierodula siporana	+	+		
Acromantis siporana		+	+	
Odontomantis javana			+	