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# New Culicidae from Sumatra,

by

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The mosquitoes described below were found during an investigation of the carrier of *Filaria malayi* in the villages Dermajoe and Air Prioekan near Benkoelen (Sumatra). *Mansonioides* species were found to be the carriers of the worm. When looking for the breeding places of these species, many other mosquito, but no *Mansonioides* were detected, although the imagines were abundant in the villages.

I have to thank Mr. EDWARDS of the British Museum (Natural History) very much for kind help and useful advice during the study of the mosquitoes.

## **Heizmannia pilosa** n. sp.

Male. Vertex with broad flat black scales, metallic blue in some positions; anteriorly between the eyes some few white scales. Eye separated by about half a torus breadth. Antennae pilose, consisting of torus, followed by eleven short segments and two long ones; the penultimate segment about as long as six short ones; the apical segment twice as long as the penultimate one. Basal segments at least twice as long as broad. Palpi very short, exceeding the clypeus by about its length. Proboscis shorter than fore femur. Antennae, palpi and proboscis black.

Prothoracic lobes touching, covered with broad flat scales, which usually appear black, but are metallic bluish green in some lights. Mesonotum and scutellum with similar scales. Metanotum black with a conspicuous tuft of bristles on the posterior end. Legs dark brown with a coppery hue. Second

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and third hind tarsal with outstanding scales, forming a comb, which is most conspicuous on the third tarsal (fig. 1). Wing scales dark brown, ligulate; both fork-cells  $1\frac{1}{2}$  times as long as their stems, their bases level.

Abdominal tergites with black scales with a bluish green metallic hue; white lateral spots over all the length of the first, second and third segments and basal lateral white spots on the succeeding three segments. The lateral spots on the second and third segments are basally broader than apically.

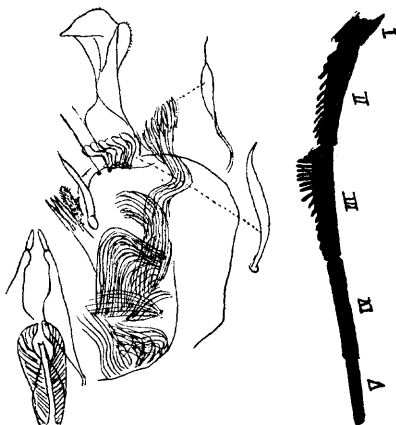


Fig. 1. *Heizmannia pilosa*: Hypopygium and hind tars of male.

Abdominal sternites I--III all white, IV--VI basally white and apically black, VII all black.

Hypopygium (fig. 1) much resembling that of *H. indica* and that of *H. covelli*, but distinguished from both by a greater number of hairy tufts and by the presence of a tuft of scales on the side piece near the base of the clasper.

Described from three males, bred from larvae found in a rot hole in a tree in Dermajoe, about at sea level.

A female caught in virgin forest near the same village might belong to this species. Color markings as in the male. Antennae and hind tarsi normal. First forkcell about twice as long as its stem, second one about  $1\frac{3}{4}$  times as long, base of the first one a little bit nearer the base of the wing.

Larva and Pupa described from the larval and pupal skins of two of the males mentioned above. The two males

apparently showed no difference; the two larval skins differed in many respects and so did the pupal skins, be it in a lesser degree. The differences are shown in fig. 2.

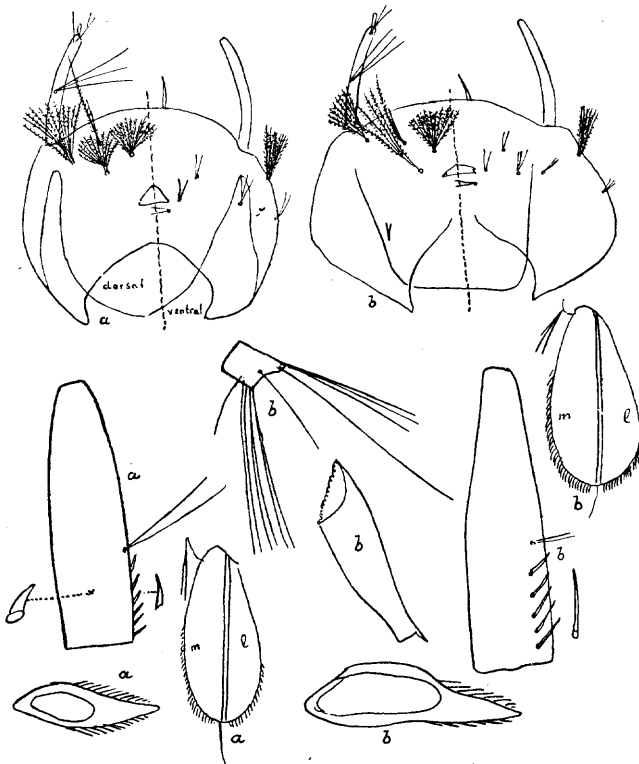


Fig. 2. *Heizmannia pilosa*: Heads, scales on 8<sup>th</sup> segment, siphons of two larval skins, paddles of two pupal skins of same specimens *a* and *b*; anal segment and pupal trumpet of one specimen (*b*).

specimen <i>a</i> .	specimen <i>b</i> .
Larva:	Larva:
inner post-antennal hair short with ten branches;	long with five branches;
16 relatively small scales on VIII <sup>th</sup> abdominal segm.;	10 (and on the other side 12) larger scales;
siphon with rounded edges;	more or less bottle-shaped;
hair on siphon fairly large;	much shorter and thinner;
teeth of pecten short and thick (6 + 6).	long and slender (5 + 7).
Pupa:	Pupa:
paddles narrow;	paddles broader;
fringe of paddles short and scanty.	longer and denser.

The male of this species can at once be distinguished from any other *Heizmannia* by the particular scales on the third hind tarsal.

Type specimen (male, with larval and pupal skins) in the British Museum.

***Culex (Culex) sumatranus* n. sp.**

Male. Vertex with small curved dirty creamy colored scales, black forked scales and flat dark grey scales laterally. Antennae, relation of length of apical segment, subapical one and the remaining ones together 6 : 5 : 9; segments II—VI thicker and shorter than the succeeding ones, about as broad as long. Proboscis  $2\frac{1}{2}$  times as long as the palpi. Palpi, antennae and proboscis black.

Mesonotum: Integument black with curved black scales. Scutellum with pale brown integument and small brown

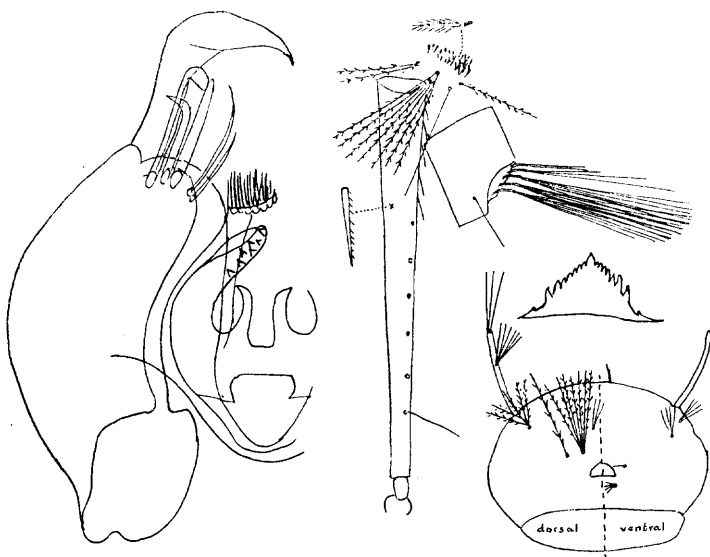


Fig. 3. *Culex (C.) sumatranus*. Hypopygium, Head, mental plate and posterior end of larva.

curved scales. Pleurae: Upper border dark, gradually paler toward coxae. Wings with dark greyish brown scales; first fork-cell twice as long as its stem, second one a little bit

longer than its stem; base of first fork-cell nearer the base of the wing. Legs dark brown.

Abdomen dorsally all dark brown, ventrally dirty creamy yellow.

Hypopygium: fig. 3.

Larval skin: fig. 3.

Described from one male, bred from a larva found in a pitcher plant in a swamp in a virgin forest near Dermajoe, and its larval skin. Type specimen in the British Museum.

The male of this species can be distinguished from any other *Culex* by the length of its palpi.

***Aedes (Aedes) prioekanensis* n. sp.**

Male. Head gone at the moment of description. I remember that the palpi were very short. Mesonotum with brown integument and brown curved scales. Wings with dark brown

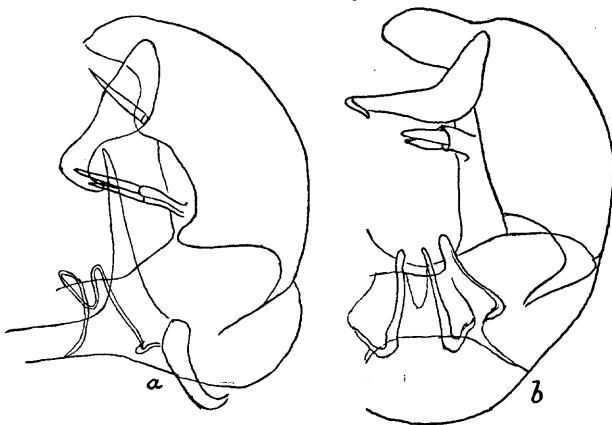


Fig. 4. *Aedes (Aedes) dermajoensis* (a) and *A. (A.) prioekanensis* (b): Hypopygium.

scales; upper fork-cell as long as its stem, their bases level. Lower part of mesepimeron not hairy. Legs all dark brown. Abdomen brown with dirty creamily colored, basal, lateral patches. Hypopygium fairly simple (fig. 4b).

Described from one specimen bred from a larva found in a swamp in a virgin forest near Air Prioekan. Type specimen in the British Museum.

**Aedes (Aedes) dermajoensis** n. sp.

Male. This mosquito differs from the preceding one mainly by the structure of the hypopygium (fig. 4a), the projections of the ninth sternite being much longer, as well as the two spines on the inner surface of the side piece; also the latter are inserted more basally. There is a subapical lobe with a spine to the side piece, these structures are absent in *A. (A.) prioekanensis*.

Type specimen in the British Museum. The specimen was bred from a larva found in a pool near Dermajoe in the same forest where *A. (A.) prioekanensis* was found.

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