

## The description of a new *Aedes* mosquito of the subgenus *Skusea* from the Seychelles

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### SYNOPSIS

Descriptions are given of the male, female, pupa and larva of a new species of *Aedes* from the islands of the Seychelles, and notes on its habitat and behaviour are included.

Among collections of mosquitoes sent to me by Dr F.L. Lambrecht from the Seychelles were some larvae and adult females, which were identified as *Aedes* (*Skusea*) *pembaensis* Theobald. Later I had the opportunity to see a male of this mosquito, the terminalia of which differed considerably from those of *Ae. pembaensis*. Dr Mattingly, British Museum (Natural History), London, kindly re-examined specimens of *Skusea* from the Seychelles recorded as *Ae. pembaensis* in Mattingly & Brown (1955) and confirmed that they were the same as my specimens from Dr Lambrecht. Taking into account the differences between this mosquito and *Ae. pembaensis*, there appears ample evidence on which to base a new name. It is described below, with respect, for Dr Lambrecht as:

### *Aedes* (*Skusea*) *lambrechtii* sp. n.

#### *Female*

*Head*.—Decumbent scales all broad and pale creamy-white except for a small patch of dark scales in the middle in front and a narrow dark lateral band on either side. Palpi and proboscis dark; palpi about one-sixth length of proboscis and with a few pale scales at tip. *Thorax*.—Integument dark brown; dorsocentral, achrostichal, pre-alar and scutellar bristles long and stout. Scutum covered with narrow scales, mainly dark brown but with a band of pale creamy-white scales round the front margin, round bare space and on each side a line of pale scales above wing roots. Scales on scutellum broad, pale and usually with a patch of dark scales medianly on all lobes. Pleurae with anterior and posterior pronotal lobes covered with moderately broad but pointed pale scales; pre- and post-spiracular areas with patches of broad, rounded, white scales with two patches of similar scales on sternopleurae; upper half of mesepimeron covered with broad white scales. One lower mesepimeral bristle present. *Legs*.—Coxae pale with patches of creamy-white scales and a small patch of dark scales on front coxae above. Fore and mid-femora dark in front, largely pale below and behind, but with apical third dark all round. Hind femora dark

above and pale below for the full length with anterior and posterior surfaces pale except for apical third, which is dark. Tibiae and tarsi all dark except for narrow white rings at base of first tarsal segment of mid and hind legs; sometimes second hind tarsal segment also with a narrow basal pale ring. Claws simple. *Abdomen*.—Dorsally dark blackish-brown with basal lateral white spots on all tergites and usually with narrow white basal bands joining the spots on segments 3-5. Sternites white with narrow dark apical bands. *Wing* scales dark, with a short line of white scales at base of costa.

### Male

Colouring as in female, but head scales predominantly pale and whiter; dark markings when present very much reduced. Palpi not much longer than proboscis and with last two segments slightly hairy; ultimate segment about three-quarters length of penultimate; shaft with two white bands, one at about the middle and the other slightly removed from

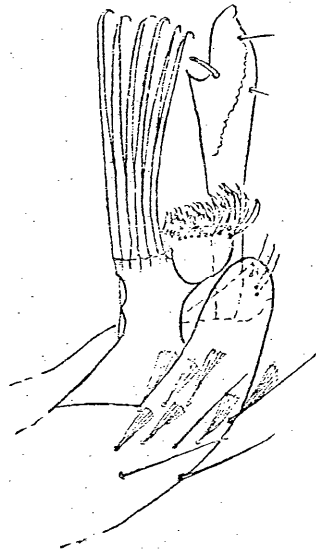


Fig. 1. *Aedes lambrechtii* sp. n., male terminalia.

base; narrow white bands also present at base of the last two segments. *Terminalia* (fig. 1).—Very like those of *Ae. pembaensis*, with a much enlarged eighth segment, a very small ninth, poorly developed paraprocts and phallosomes, and with coxites short and broad with a double apical lobe carrying a row of long stout bristles, protecting the style. Differing mainly by shape of style, which is blunt tipped, and by inner division of apical lobe, which bears a dense patch of curved leaflets, the lower ones being short and the upper longer and broader.

### Pupa

Trumpets short and not much widened at tip, with surface reticulose on apical half and smooth basally; meatus not very oblique and with an almost square opening. Cephalic hairs 1 and 2 short and with 2-3 and 3-5 branches respectively; hair 3 long and bifid or trifid; hair 5 longer than 3 and single or bifid; 4 and 7 of moderate length with 5-6

and 3-6 branches respectively; hair 6 very short and single or with 2-3 branches; hairs 8 and 9 of moderate length and with 2 or 3 branches. *Metanotum* with hairs 10 and 11 about equal in length, 10 a tuft of 7-10 fine branches and 11 stout with 3-5 branches arising some distance from base; 12 shorter and with 4 or 5 branches. *Abdominal tergites and paddles* as illustrated (fig. 2) with hair 4 usually bifid but sometimes trifid on one or more

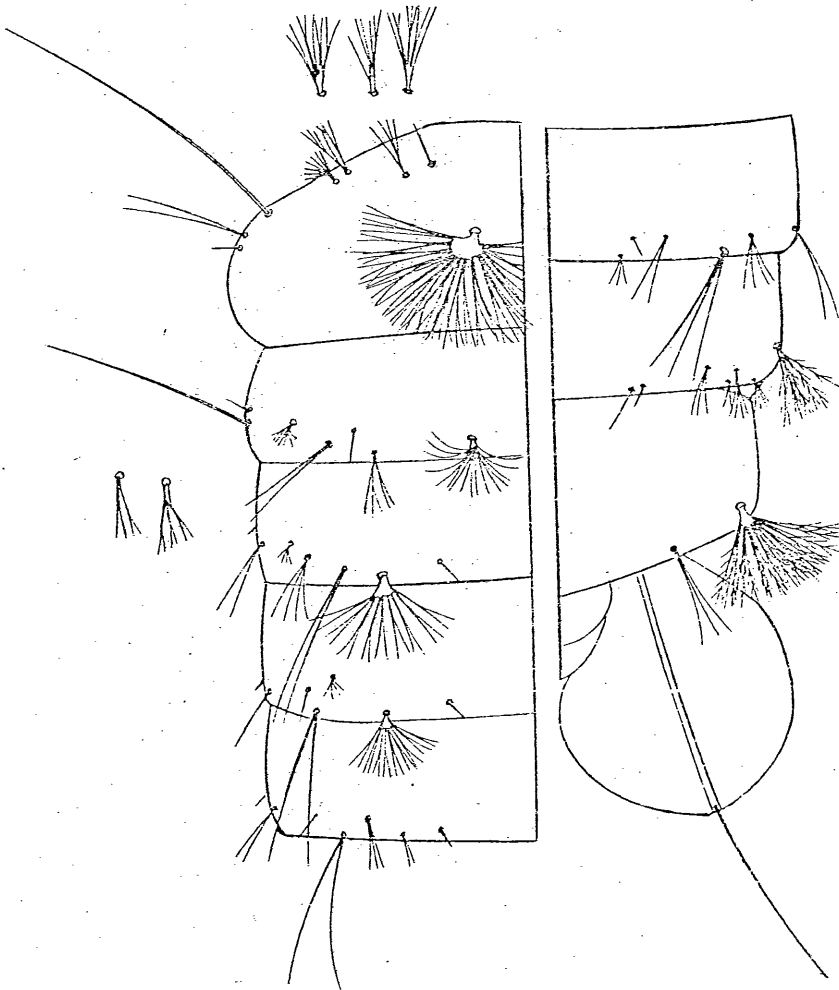


Fig. 2. *Aedes lambrechtii* sp. n., pupa.

segments. Hair 7 on segment VII with 4-6 and on VIII 10-17 coarsely plumose branches. *Sternites* with hair 8 short and with 4-5 branches; 10 short on segment III but a little longer on the other segments, multi-branched (5-6) on segment III and V, single or bifid on IV and bifid and trifid respectively on segments VI and VII; hair 11 a single short seta, sometimes bifid on VII and mesad to 12 except on segments VI and VII where it is external; hair 12 of moderate length and bifid or trifid; 13 a very short spine-like seta.

*Larva*

*Head*.—Pale and slightly broader than long. Antenna smooth and about half length of head, with a short seta of 4–6 branches at about a fourth. Seta A short, simple and with 4–7 branches; B single, about half length of head and simple or very slightly frayed; C slightly longer than B with, in mature larvae, usually 3 plumose branches but sometimes trifid on one side and bifid on the other (immature larvae usually have this seta 2-branched); *d* minute with 2 forked branches, *e* single and about same length as A with *f* slightly shorter and bifid. Mentum with 10 teeth on either side, last 2 widely separate. *Abdomen*.—Comb a patch of between 70 and 80, or more, teeth, proximal teeth shorter and broader than distal teeth which are bifid, or more often trifid, with the ends of each prong irregularly frayed. Siphon pale with an index of 3.1 to 4.0, usually about 3.5, and with a short, fine subventral tuft of 3–5 branches, at about three-fourths; pecten of 10–16 pale coloured spines, not quite reaching a half, with basal 2–6 simple and the rest with 1 or sometimes 2 small basal denticles. Anal segment with a small lightly chitinised saddle, bearing on its apical edge a patch of broad, coarsely fringed scales; lateral hair placed below saddle, very short and single. Upper caudal seta with 8–11 branches, lower single. Ventral brush with 13–15 many branched setae. "Gills" very short and rounded, less than half length of saddle.

*Holotype* ♂, 24 ♀, 6 ♂ *paratypes*, 4 pupae and a number of larvae, SEYCHELLES: (F. L. Lambrecht).

The holotype and a representative collection of paratypes and early stages will be deposited in the British Museum (Natural History), London.

*Ae. lambrechtii* is in all stages very like *Ae. pembaensis*, but the male is easily recognised on the character of the terminalia, and the females, pupae and larvae on a combination of characters set out in the following table:

	<i>Ae. pembaensis</i>	<i>Ae. lambrechtii</i>
Adult	Broad flat scales of vertex and scutellum predominantly dark. Abdomen usually all dark above, rarely with the lateral white spots extended towards the middle on segments 3–5.	Broad flat scales of vertex and scutellum predominantly pale. Lateral white abdominal spots usually joined by narrow white bands on tergites 3–5.
Pupa	Trumpet with meatus very oblique; opening rectangular. Hair 12 on metanotum with 5–7 branches. Hair 3 on tergite II with 3–5 bifid or trifid branches.	Trumpet with meatus not very oblique; opening square. Hair 12 on metanotum with 4–5 branches. Hair 3 on tergite II with 2–3 bifid branches.
Larva	Antennal hair at one-third. Siphonal index about two and a half. Mature larvae, head seta C usually 2-branched.	Antennal hair at one-fourth. Siphonal index about three and a half. Mature larvae, head seta C usually 3-branched.

*Distribution*

Islands of the Seychelles. Collected by Dr F.L.Lambrecht from—MAHE ISLAND: Port Launay, Anse Soleil, Anse la Mouche, Anse Royal, Anse Boileau, Anse Takamaka, Anse Etoile, Anse aux Pins, Grand'Anse, Port Glaud, Port Victoria, Beolicre, Cap Ternay;

PRASLIN ISLAND: Vallee de Mai, Anse Kerlan, Baie St. Anne; LA DIGUE ISLAND: Grand' Anse, Anse la Reunion; SILHOUETTE ISLAND: La Passe, Grande Barbe. Mattingly & Brown (1955) (as *Ae. pambaensis*)—MAHE: Port Victoria; PRASLIN: Vallee de Mai, Grande Anse, St. Sauveur, Baie St. Anne. Probably also Harper (1947)—MAHE: Port Victoria.

*Habitat and behaviour*

Dr Lambrecht informs me that larvae are common in crabholes in tidal swamps and estuaries, and that they were never taken outside the crabhole habitat. In the laboratory it was noted that the larvae took a long time to mature. On rare occasions other species were found in the crabholes, sometimes in association with *Ae. lambrechtii*. These were *Aedes albopictus* (Skuse), *Ae. albocephalus* (Theobald) and *Culex simpsoni* Theobald. To ascertain whether this species, like *Ae. pambaensis*, lays its eggs on crabs, 35 live crabs were examined. No mosquito eggs were found, but it is not known what species or genera of crabs were examined. The eggs of *Ae. pambaensis* have so far only been found on crabs of the genus *Sesarma* and *Cardisoma*. The crabs living in the swamps are *Sesarma intermedium* and *S. quadratum* and the larger *Cardisoma carnifex*, *C. histipes* and *Varuna littorata*.

Adults, both males and females, are readily collected in the early morning inside houses and outside in the areas where the larvae breed. Females are predominant in the hand catches (82 per cent. inside and 99 per cent. outside). Eleven out of 200 wild caught females dissected contained fresh mammalian blood and two out of 436 contained microfilaria in the stomach blood; one had a mature, unidentified filarial larva in the proboscis.

Brown, in Mattingly & Brown (1955), records that adults (as *Ae. pambaensis*) were abundant in the coastal marsh areas of Praslin and that they were frequently seen hovering in the entrances of crabholes. Of the biting habits, he says that it is largely restricted to marshy, rather than saline areas, where it is sometimes extremely abundant and that it is predominantly an outside biter, principally attacking the legs but frequently also the arms. Although it may be taken biting from early morning until dusk, peak biting activity occurs in the late afternoon, starting at about 3 or 4 p.m.

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