Research on the Mosquitoes of Angola. VII - Redescription of the Larva of *Aedes durbanensis durbanensis* (Theo., 1903) and Description of *Aedes durbanensis angolae* subsp. nov.

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We have been long aware that the Angolan *Aedes durbanensis* did not agree satisfactorily with known descriptions of both larvae and male genitalia. The simultaneous occurrence of *Ae. durbanensis* and *Ae. natronius* along the Angolan coast, however, made arriving at a taxonomic decision a difficult task, to be only based on the examination of male genitalia. Following the comparison of Angolan material with type and East African material recently carried out, it became clear not only that the description of the larva, given by Rebelo and Pereira (1) and taken by Hopkins (2), was not a satisfactory one but also that a subspecific treatment might be given to the angolan population of *Ae. durbanensis*.

1 - Redescription of the Larva of *Aedes durbanensis durbanensis* (Theobald, 1903).

Material examined - 2 whole fourth stage larvae plus 7 associated larval pelts, from Oslo Beach, Natal, South Africa (Dr. B. M. McIntosh collected and identified).

Length (mounted specimens) about 8 mm. Head moderately dark, siphon and saddle pale brown. Head capsule covered with strong, mostly rounded, dark brown spicules, much as in *Ae. fowleri*. Body skin also densely spiculate; differently from *fowleri*, however, the spicules, on thorax and on most of the abdominal segments are uncoloured and, thus, much less conspicuous.

Head (Fig. 2) - Antenna: spiculate, slightly less than half length of head; markedly infuscated on about the distal half; tuft at about 2/5, with 8 (5-13) sparsely plumose branches. Head setae: A with 6 or 7 (5-8) plumose branches; B and C single; d minute, with 4 (3-5) branches; e and f single. Mentum with 11-13 teeth each side the median tooth.

Abdomen (Fig. 3) - Comb with 7 or 8 (6-10) spines always arranged in a single row. Siphonal index: 2.6 in both (somewhat flattened) whole larvae examined; about 2.4 (2.2-2.5) when measured in the more flattened larval pelts. Pecten: reaching to about 3/5 length of siphon, with 14 (12-17) spines; a large gap between the most distal pecten spine and the preceding spine, and another gap, usually smaller, between this one (sometimes 2) and the proximal group of spines; longest pecten spines 5 or 6 times as long as wide at base, finely pointed. Subventral tuft at about 3/4, always distal to most distal pecten spine, with 7 or 8 (6-11) simple branches much shorter than diameter of siphon.

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Anal segment: saddle incomplete (though almost complete), short, with markedly spiculate distal margin; lateral seta single, shorter than saddle; upper caudal seta with 5 or 6 branches, lower caudal seta single; ventral brush with 7 or 8 pairs of multiple setae and 2-4 tufts beyond barred area; anal papillae short, slightly longer than saddle, with round lanceolate apices.

2 - Description of *Aedes durbanensis angolae* subsp. nov.

Material examined - 2 ♂, 22♀, 16 larvae, from Moçâmedes, at about 15° 12' S lat., 12° 09' E long., sea coast, collected during October 1967 and April-May 1969.

Holotype: ♂ No. E 8295, *ex* larva, 3.V.1969; allotype: ♀ No. E 8296, 29.IV.1969; pedotype: larva No. E 8319, from the same biotype and same date as holotype; 1 ♂, 21 ♀, 15 larvae, paratypes.

All type-material is in the Department of Entomology of the Instituto de Higiene e Medicina Tropical, Lisboa.

2.1 - Adult (♂♀) - Adults of *Aedes durbanensis angolae* subsp. nov. show no reliable differences from those of the nominate subspecies on the only ground of the external morphology.

As it was pointed out by Theobald (3), though not mentioned by Edwards (4), the apical yellow patches on abdominal tergites may come into contact and form a complete, narrowed in middle, yellow distal band, at least on some of the segments. The same occurs in *Ae. natronius* though, at least in some segments, such apical yellow bands are produced forwards in middle, reaching the basal bands. In males, another distinction between *durbanensis* and *natronius*, not mentioned by former authors, is the presence of scattered yellowish scales along the dorsal surface of 2nd segment of palp, beyond the basal pale band, in *natronius*, absent in *durbanensis*. Finally, we shall note that the costal fringe of *durbanensis* is whitish at apex, a character also not mentioned by Theobald (3) nor by Edwards (4).

Male terminalia (Fig. 4) - Basal lobe of coxite with a regular row of 10-12 long setae along the gently curved distal margin; all setae along the lateral surface of style relatively short, about the same length; in other respects, terminalia much as in the nominate subspecies.

2.2 - Fourth stage larva - Very similar to that of the nominate subspecies, though differing significantly in a few respects.

Length (mounted specimens) about 6.5 mm. Head capsule, siphon and saddle moderately dark. Spicules on head, body skin, siphon and saddle much as in the nominate subspecies.

Head - Antenna: spiculate; slightly less than half length of head; variably infuscated, more often uniformly and not markedly so; tuft at 2/5 -1/2, with about 7(4-10) sparsely plumose branches. Head setae: A with 8 (6-11) plumose branches; B single, occasionally double; C single, sometimes double; d minute, with 3(2-4) branches; e and f single. Mentum with about 10(9-12) teeth each side the median tooth.

Abdomen (Fig. 5) - Comb with about 10(8-20) spines, usually arranged in one or two irregular rows. Siphonal index (somewhat flattened specimens) about 1.9 (1.7-2.0). Pecten: reaching to 1/2-3/5 length of siphon; with 17 (13-20) long and narrow spines, the 1 or 2 most distal of which are often wider spaced though not markedly so; longest pecten spines about 9(7-11) times as long as wide at base, finely drawn out apically. Subventral tuft at about 3/4, always distal to more distal pecten spine, with 5(3-8) simple branches, much shorter than diameter of siphon. Anal segment: saddle incomplete (though almost complete), short, with markedly spiculate distal margin; lateral seta single, shorter than saddle; upper caudal seta with 5-8 branches, lower single; ventral brush with 7(6-8) pairs of multiple setae and 2-4 tufts beyond the barred area; anal papillae short, ovoid or round lanceolate, not or only slightly longer than saddle.

3 - Diagnosis

In the female sex, *Ae. durbanensis angolae* subsp. nov. cannot be distinguished from the nominate subspecies.

Males of both subspecies, however, can be readily separated on the basis of genitalic characters. While *Ae. durbanensis angolae* subsp. nov. (Fig. 4) has a row of 10-12 setae along the distal margin of basal lobe of coxite and has only subequal, small setae on the lateral surface of style, the nominate subspecies (Fig. 1) has only 5 or 6 setae along distal margin of basal lobe of coxite and the 2 or 3 most basal setae of its style are unusually long, about 1/3 or more the length of the style itself.

According to the preceding descriptions, besides other useful statistical differences, larvae of *Ae. durbanensis angolae* subsp. nov. can be separated from those of the nominate subspecies (Figs. 3, 5) mainly by the shorter siphon and the more elongated and differently arranged pecten spines.

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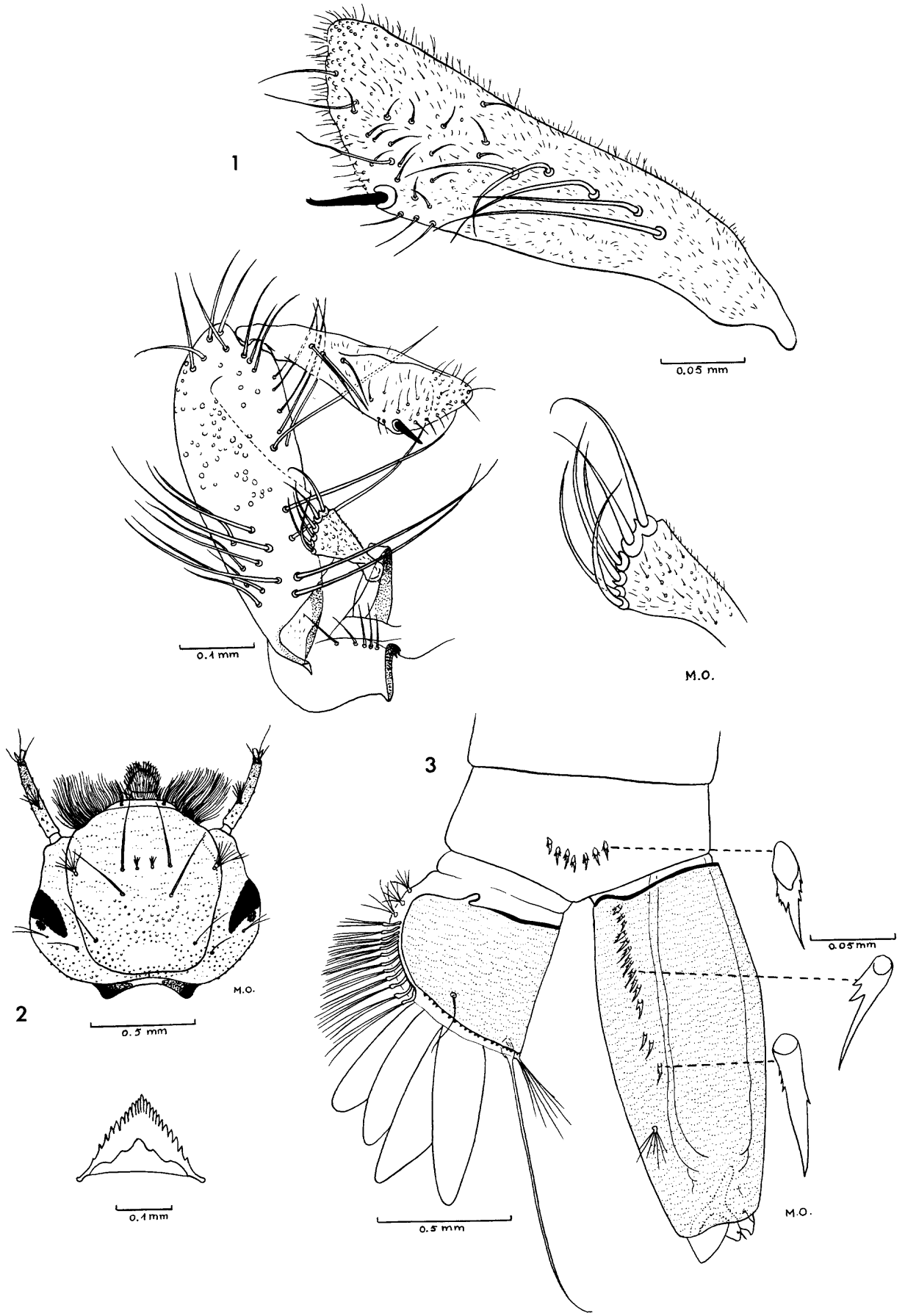
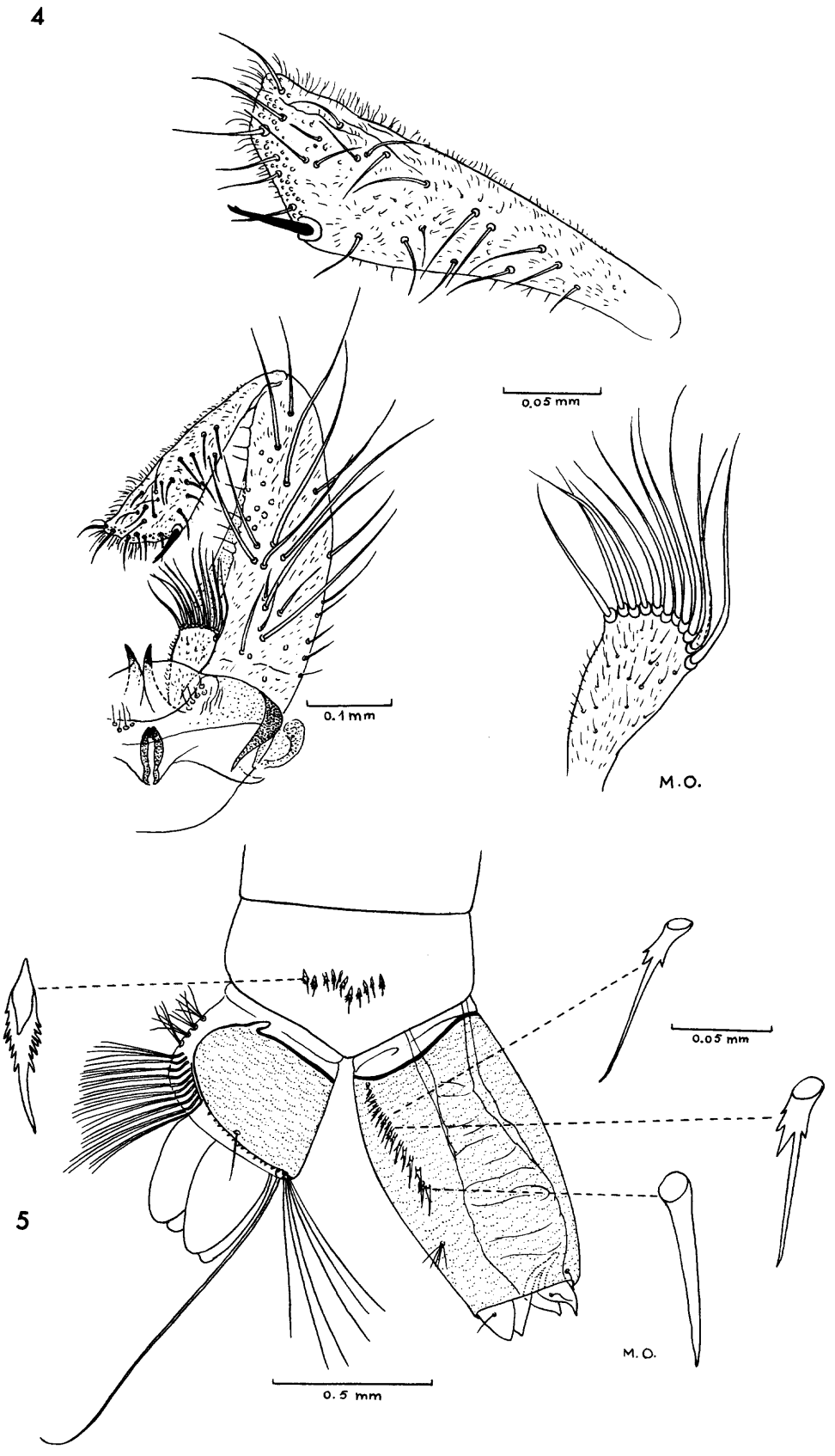


Figs. 1-3. *Aedes durbanensis durbanensis* (Theo). 1. ♂ terminalia (Lourenço Marques, Moçambique). 2 and 3. Larva (Natal, South Africa).



Figs. 4-5. *Aedes durbanensis angolae* subsp. nov. 4. ♂ terminalia.
5. Larva (Moçâmedes, Angola).