

Some notes on *Ficalbia modesta* King & Hoogstraal (Culicidae)

by

J. VAN DEN ASSEM

(Publ. Health Dep., Division of Malariology, Neih. New. Guinea)

Ficalbia modesta (Culicidae) was described by KING and HOOGSTRAAL (1946), from specimens collected in a light trap at the edge of a rain forest in the Hollandia area, Netherlands New Guinea. The larva remained unknown.

Recently (June—September 1957) numbers of *F. modesta* larvae were caught at the shore of Lake Sentani (Hollandia area), from the roots of *Pistia stratiotes* (Araceae) and *Hydrocharis asiatica* (Hydrocharitaceae). The larvae of this species exhibit the peculiar habit of syphonal oxygen uptake via living vegetable tissue, also known in two other *Ficalbia* species (*hybrida* and *pallida*) and in two other Culicidae genera, most pronounced in *Taeniorhynchus* species.

The *modesta* larvae were found associated with larvae of *Taeniorhynchus* (*M. uniformis* and *T. (M.) bonnewepsterae*). The peculiar rootpiercing specialism of the *Ficalbia* and *Taeniorhynchus* species was observed to allow the larvae an almost sessile life, most probably a great advantage in an environment crowded with predators, as occurred in the Sentani lake breeding place. Surface dwelling larvae were very rare in the same locality, a few *Anopheles bancrofti* and some *Ficalbia minima* — an oriental species, not yet recorded from this territory — were taken.

Ficalbia modesta was found breeding in a very restricted area (like both *Taeniorhynchus* species). The larvae were collected from a *Pistia-Hydrocharis* field, floating in heavily polluted water, between the shore of the lake and a native village built on poles over the water about 30 meters offshore, the breeding place at the lee side of the houses. *Pistia* fields further along the coast in relatively

TABEL 1.

	surf. temp. sunny day 01.30 p.m.	15 cm below surf.	P H	KMnO ₄ uptake	Amm. N ₂	Alb. N ₂	NaCl.
A.	38.0° C.	28.0° C. — 25.0° C.	6.8	43.3 mg/L.	0.5 p.p.m.	1.7 p.p.m.	trace
B.	37.8° C.	28.0° C.	7.3	18.0 mg/L.	1.0 p.p.m.	0.6 p.p.m.	trace

clean water did not yield larvae. A few analytical data comparing breeding place (A) and a *Pistia* field nearby, negative for larvae, (B) are condensed in table 1; the KMnO₄ uptake of the water is used as a measure for the oxidable organic material present.

Night catches on human baits in the native village near the breeding place did not produce adult specimens of *Ficalbia modesta*, probably the species is not anthropophilous.

DESCRIPTION OF THE LARVA OF FICALBIA MODESTA.

Head slightly broader than long; preclypeal spines dark brown, long and prominent; headhairs A, B and C on a straight line, B and C close together, hair A 9—12 branches, frayed, lateral hair about $\frac{3}{4}$ of medial one, B 2—3-branched, much longer than head, frayed, C 5—6-branched, frayed, slightly shorter than head, hair D small, 4-branched, bare; antenna with smoky basal part, small spines present all over, antennal tuft beyond middle, branches frayed at base, apical elongation $\frac{3}{4}$ of basal part; abdominal segment 8 with 14 teeth in a single, curved row, teeth with lateral, frayed membrane; siphon about $2\frac{1}{2}$ —3 times longer than wide, asymmetrical cone-shaped, apex black, three small curved spines

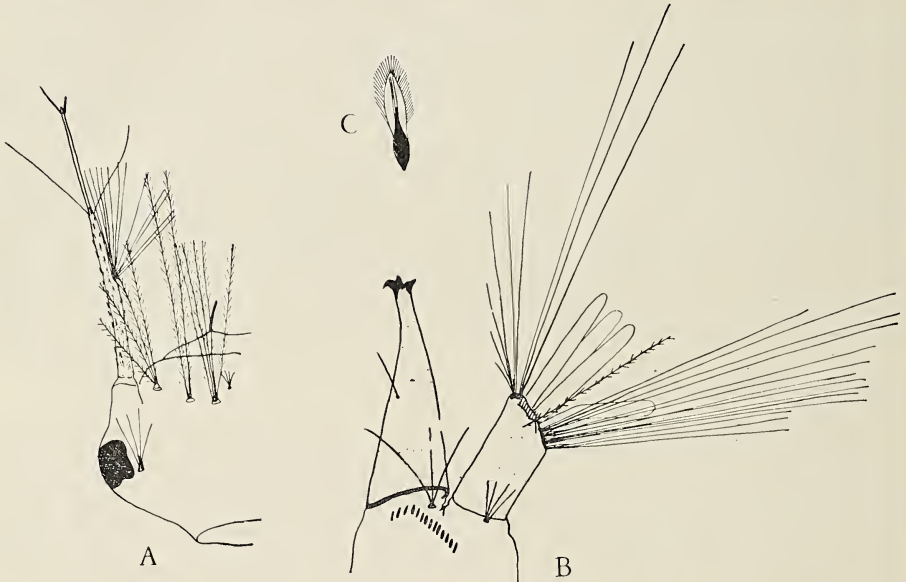


Fig. 1. *Ficalbia modesta*. A, head of larva, left portion; B, distal segments of larva; C, comb tooth.

present at extreme top, halfway two single, long hairs; anal segment two times longer than wide, apically a row of sharp spines present; isc six branches, largely varying in length; osc three branches, 2—3 times as long as anal segment; anal papillae slightly blunt at apex, longer than segment; anal fan composed of four, strongly branched tufts, 2—3 times longer than segment; anal hair single, frayed, long. Pecten teeth do not occur. (fig. 1).

Literature

KING W. V. & H. HOOGSTRAAL, 1946, Two new species of mosquitoes of the genus *Ficalbia* from Netherlands New Guinea. *Proc. ent. Soc. Wash.* 48 : 186—190.