Synonyms of *Topomyia rausai* with *Topomyia apsarae*, with description of the larva (Diptera: Culicidae)[1]

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ABSTRACT. *Topomyia (Suaymyia) rausai* Miyagi is synonymized with *To. (Sua.) apsarae* Klein based on description and illustration of the respective male genitalia. The fourth instar larva of *To. apsarae* is described and illustrated for the first time. Larvae were collected from water in internodes of bored bamboo.

On the basis of the adult and pupa, *Topomyia rausai* Miyagi 1980, was described as a distinct species from Palawan Is., the Philippines. Unfortunately, information on Cambodian *Topomyia* previously was unavailable to me for study. Recently, by the courtesy of Dr. R. A. Ward, we have had the opportunity to compare the Cambodian *Topomyia* spp. described by Klein (1977). After careful comparison of the description of *To. apsarae*, we have come to the conclusion that *To. rausai* should be sunken as a synonym of *To. apsarae*. Additional material of the species was collected at the Philippines in 1981 and 1982, for the project "Phylogenic studies of mosquito fauna of Southeast Asia" supported by the Ministry of Education, Japanese Government. The larva of the species is described and illustrated for the first time.

MATERIALS AND METHODS

About 35 immatures were collected from bamboo internodes at Montible Subcolony, Iwahig Prison and Penal Farm, Palawan Is. Some of them were preserved in MacGregor's solution and the rest were individually reared and the corresponding larval and pupal skins and emerged adults were preserved as associated specimens. The following description is based on 15 larval skins and 5 whole larvae identified as *Topomyia apsarae* by Miyagi. Larval specimens

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will be deposited in the collection of Laboratory of Medical Zoology, University of the Ryukyus and the U. S. National Museum of Natural History, Washington, D. C. Terminology used in this paper largely follows Belkin (1962), Harbach and Knight (1980), or as subsequently modified by SEAMP personnel and by us.

Topomyia (Suaymyia) apsarae Klein

Fig. 1 and Table 1

Topomyia (Suaymyia) apsarae Klein 1977. Cah. O.R.S.T.O.M., ser. Ent. med. et Parasitol. 15:126.

Topomyia (Suaymyia) rausai Miyagi 1980. J. Med. Entomol. 17:178. Syn. nov.

Larva: Chaetotaxy as illustrated (Fig. 1) and variation of setae as tabulated (Table 1). Head. Width 1.28 mm, about 1.5 of length, triangular in shape; pigmentation pale yellow; integument smooth; seta 1-C stout, ventrally directed; base of 5-C closer to base of 7-C than to base of 6-C, slightly laterad to 6-C; 14-C caudad to 15-C and 12-C. Antenna 0.3 mm long, about 0.33 length of head; seta 1-A inserted at apical 0.26; 2-6-A apical as in Fig. 1A. Mandible with one dorsal (DT) and ventral (VT) tooth, 2 (2-a, 2-b) strong curved setae and about 20 mandibular brush (MnB). Maxilla with long articulated and short horns and with one slender dorsal seta (5-Mp). Maxillary palpus (MPlp) 0.56 length of maxillary body (MxBo). Mentum plate with 15-17 teeth, median tooth distinctly longer than others. Thorax: setae 1-3, 5-P and 13-T fairly well developed. Abdomen: setae 6, 7-I-II 5-6 branched, well developed and barbed; setae 1-III-VI well developed stellate, 6-III-V 2 or 3 branched, well developed; 6-VI 1 or 2 well developed; 4-III, 3-IV-V single, well developed; comb scales about 15 in 2-3 irregular rows; individual scales thorn-shaped with a strong apical spine, fringed with fine spicules laterobasally. Siphon 0.75 mm length, index 5.3; lightly pigmented, apically tapering; microsculpture absent; pecten teeth 1 or 2 very fine, when more than one tooth present they are wide apart, the first tooth being near the base of the siphon and the second between 1/3 and 1/2 way to apex of the siphon; dorsal tufts of setae (2a-S) usually 6 pairs, each 6-8 branched; ventral tufts (1a-S) usually 10 pairs, each with 5-8 branches. Anal segment: lightly pigmented, saddle incomplete with small spines along distal margin; 1-3-X strongly developed; seta 4-X with 4 branches, anal gills elongate and bluntly pointed. Dorsal gill about 1.3 length of ventral gill.

TAXONOMIC DISCUSSION. The adult of *Topomyia apsarae* is very similar to *Topomyia (Suaymyia) cristata* Thurman 1959, in general facies but the male genitalia are strikingly different from the latter (Klein 1977; Miyagi 1980). As the immature stages of *Topomyia cristata* are unknown, it is not feasible at this stage to compare the larvae of these 2 species. However, the larva *To. apsarae* is very characteristic and it can be readily separated from other local species (Baisas 1946) by the 2 unequal conspicuous horns on maxillae, well

developed stellate setae on abdominal segments (1-III-VI), siphon with only 1 or 2 small pecten teeth and well developed dorsal and ventral rows of siphonal setae. The larval maxilla of *To. apsarae* is characteristic, being large and produced into a long horn. According to the literature (Edwards 1932; Feng 1941; Baisas 1946; Mattingly 1971), 4 known species of subgenus *Suaymyia, To. houghtoni* Feng, *To. imitata* Baisas, *To. argenteoventralis* Leicester and *To. decorabilis* Leicester, have such characteristic maxillary horns.

BIONOMICS. This species has extremely peculiar habits. The larvae have been collected only in bamboo internodes bearing a tiny hole bored by a beetle. The larva preys upon small crustacea and chironomid larvae in fluid accumulating in the bamboo internode. As with all other *Topomyia,* it is doubtful if this species will take a blood meal (Ramalingam 1975, Miyagi 1976).

DISTRIBUTION. Cambodia; Philippines (Palawan Is.).

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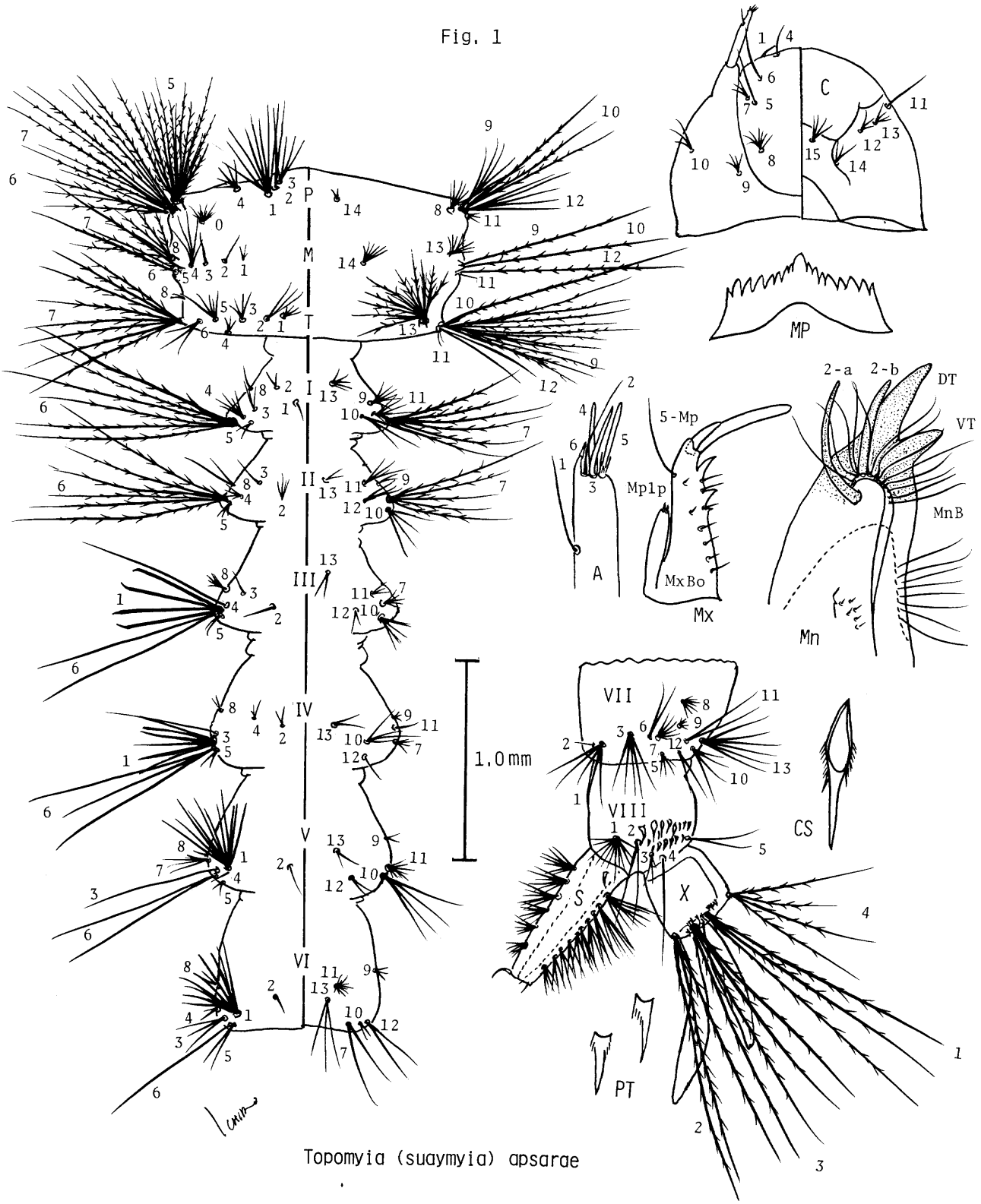
Table 1. Chaetotaxy of the 4th instar larva of *Topomyia (Suaymyia) apsarae* Klein 1977

SETA NO.	HEAD	THORAX			ABDOMEN							
		PRO-	MESO-	META-	I	II	III	IV	V	VI	VII	VIII
0	-	8-10	-	-	-	-	-	-	-	-	-	-
1	1	6-8	3	4	1	?	3-4 (ST)	5-6 (ST)	10-12 (ST)	9-13 (ST)	5	10-12
2	-	1	1	3	2	3-5	1	1	1	1	1	2
3	-	3	1	3-4	2-3	1	1	1	1	3-4	5	2-3
4	1	5-6	4-5	3-4	5-7	4-5	1	1-2	1	2	?	1
5	1	8-10	1	5	2	2-3	2	2-3	2	2	4	2
6	1	2-4 (L,B)	1 (B)	3-4	6-8 (L,B)	6 (L,B)	2 (L,B)	3 (L)	2 (L)	1-2 (L)	2	
7	3-5	8-10 (L,B)	1 (B)	8-10 (L,B)	5-6 (L,B)	5 (L,B)	4-5	3-6	5-7	2	5-6	
8	7-9	5-8	4-5 (B)	2	1	2	3-5	2	1	2	6-8	S-1 4-15
9	4-6	3-4	1 (L,B)	11-13 (L,B)	5-6	2	?	2-4	1	2-3	2-5-6	1-X 3-5(L,B)
10	3	3-4 (B)	1 (L,B)	1 (L,B)	3-4	3-4	4	3-4	4	2	4-5	2-X 3-4(L,B)
11	1	3	1	2	8-10	3-4	3	1	8-10	8-10	2	3-X 3-4(L,B)
12	1-3	3-5 (L,B)	1 (L,B)	2	-	2-3	1-2	1-2	2	2	2	4-X 4(B)
13	4	-	5-7	11-13 (B)	5	2-3	1-2	2	1-2	3	5-6	
14	3	2	5-7	-	-	-	-	-	-	-	-	
15	4-6	-	-	-	-	-	-	-	-	-	-	

B: barbed; L: large sized; ST: stellate. Specimens examined: 10 from Palawan Is.

Fig. 1



Topomyia (suaymyia) apsarae