

Kontyû, Tokyo, 44(3): 323-326. September 25, 1976

A New Species of *Brachytarsina* (Diptera, Streblidae) from the Ryukyu Islands

Motoyoshi MOGI

Department of Medical Zoology, Nagasaki University School
of Medicine, Nagasaki 852, Japan

Synopsis A new species of streblid batfly belonging to the genus *Brachytarsina* is described. This is the second species of the genus to be known from the Ryukyus and the third one from Japan.

Streblid flies are exclusively blood-sucking parasites of bats and are primarily tropical and subtropical in distribution. The genus *Brachytarsina* occurs mainly in the Oriental Region and includes about 30 described species. In the Ryukyu Islands, *B. amboinensis* RONDANI from *Miniopterus schreibersi* in Ishigaki Island has been the only published record of streblid fly.

The author had a chance to examine some specimens of batflies collected from *Rhinolophus cornutus* in Iriomote Island. They included an undescribed species each of Streblidae and Nycteribiidae. The former is described in the following lines.

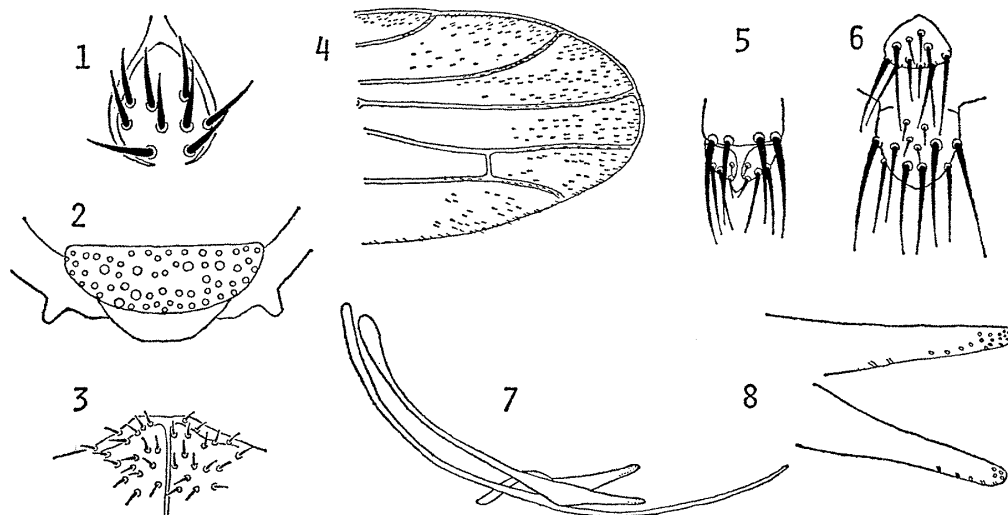
Brachytarsina suzukii sp. nov.

Description. Body 1.7-2.0 (mean 1.85) mm long in ♂, 2.0-2.5 (mean 2.15) mm in ♀ (measured from anterior margin of laterovertex to apex of abdomen in alcohol). Head not darker than other parts of body, dorsally strongly convex, in profile highest at level of postvertex where upper and hind cephalic margins form an angle of 80° to 90°. Eye small, circular. Laterovertex evenly setose, setae near dorso-apical end longest; mediovertex narrow; postvertex ovoid or elongate-ovoid with 4-12 (mean 7.3) setae, separated from laterovertex by narrow colourless membrane, posteriorly meeting occipital margin. Postgena anteriorly setose; occiput with 1 or 2 row of small setae. Arista with branches at apical 1/2. Labial theca with length subequal to width, postero-lateral corner broadly rounded, gradually narrowed apicad, with ca. 20 fine seturae; labella very short. Thorax wider than long, uniformly setose all over; setae on prescutum (anterior part) longer than on elsewhere of dorsum, those on lateral surface becoming gradually shorter towards lower parts, those on venter as long as or shorter than interspaces of their basal punctures; several setae on scutum and scutellum significantly longer than neighbouring setae. Relative length of prescutum, scutum and scutellum ca. 23:16:9. Prescutum anteriorly gently emarginate at middle; posterior scutellar margin broadly

rounded. Thoracic squama posteriorly conical. Anterior mesonotal lobe broad, hardly or slightly notched at middle.

Wing ca. 1.8 mm long in ♂, 1.9 mm in ♀ (measured from the fracture-line at the base of radius to the apex of wing); vein R_{2+3} apically gently curved; R_{4+5} and M_{1+2} weakly divergent apicad; basal abscissa of M_{1+2} slightly longer than 2nd abscissa. Legs setose; femora with long dense setae on dorsum, shorter ones on outer surface, basal 2/3 of inner surface entirely bare and apical 1/3 with long setae; tibiae uniformly setose, dorsal setae longer than ventral ones, longest dorsal setae of tibia 1 ca. 3/4, tibia 2 ca. 1/2 and tibia 3 as long as respective tibial breadth in profile. Tarsomere 5 shorter than wide, with 2 major setae on apical margin of each lobe, inner seta longer than outer one.

Abdomen of ♀ with ca. 2 columns of very long dark setae flanking each side of dorsomedial bare area of connexivum. Tergites 1 and 2 well definable. Posterior lobe of laterite 2 strongly convex with subacute inner posterior corner; setae on that lobe, particularly those on inner posterior margin, much longer, stouter and basally darker than long setae on scutellum. Laterite 7 with ca. 10 setae of varied length. Sternite 2 rectangular, anterior part covered by hind coxae and trochanters (when they are in repose) almost entirely bare and medially weakly interrupted, other part setose, lateral setae longer than median ones. Lateral and ventral connexiva uniformly setose except for a bare area around sternite 2 and posterior lobe of laterite 2; this bare area protrudes from right and left posterior ends into setal area and makes a pair of bare transverse stripes a little before mid-length of abdomen; ventral setae becoming gradually shorter posteriorly, but those on hind-



Figs. 1-8. *Brachytarsina suzukii* sp. nov. — 1. Postvertex. — 2. Scutellum and vicinities. — 3. Anterior part of thoracic venter. — 4. Wing-apices, setae on wing-margin omitted. — 5. Dorsal view of ♀ proctiger. — 6. Ventral view of ♀ proctiger and sternite 7. — 7. ♂ genitalia. — 8. ♂ parameres. Fig. 2, 3, 5-7 same scale, 1 and 8 more enlarged in the respective scale, 4 more reduced.

most 2 or 3 rows abruptly becoming longer again. Sternite 7 triangular with 6–17 (mean 10.5) setae in 2–4 rows. Proctiger almost as wide as sternite 7, dorsally with 3 and ventrally with 3–4 transverse rows of setae. Abdomen of ♂ roughly similar to that of ♀; hindmost rows of ventral setae becoming longer not so markedly as in ♀, apparently no transverse bare stripe; laterite 7 with ca. 15 setae. Pygidium higher than long in lateral view, with many setae of varied length on lateral surface and ca. 10 small setulae around anus. Digitiform process in lateral view weakly curved, 3× as long as wide, hardly narrowed apicad, with 2 setae as long as process proper. Genitalia moderately long, left and right parameres apically similarly narrow and straight; aedeagus plus its apodeme ca. 0.85 mm long, i.e. ca. 1/2 as long as wing.

Holotype (♀), Ôtomi-dô Cave, Iriomote Island, the Ryukyu Islands, Japan, ex *Rhinolophus cornutus*, 14. II. 1974, H. SUZUKI. Allotype (♂), Paratypes, 24 ♂♂, 29 ♀♀, same data as holotype. Type-series including the holotype will be preserved in the National Science Museum, Tokyo, except for a pair of the paratypes which will be preserved in the B. P. Bishop Museum, Hawaii.

Distribution. At present known from Iriomote Island.

Remarks. The above-described new species belongs to the subgenus *Brachytarsina* s. str. No valid species of this subgenus has been described from the Oriental Region since JOBLING's 1951 key to the Oriental and Australian *Brachytarsina*. According to the valuable advice by Dr. MAA, however, many undescribed species occur in the Oriental Region and some of them are closely related to the new species. Therefore, a closer study on the relationship of *suzukii* is left to the forthcoming revisional studies by Dr. MAA.

Two other species of *Brachytarsina* are known to occur in Japan, i.e., *B. amboinensis* in the Ryukyu Islands and *B. kanoi* MAA in Japan proper. *B. suzukii* is easily separable from both of them by much smaller size, thorax wider than long and broad at most slightly notched anterior mesonotal lobe. Besides, the primary host of them is *Miniopterus schreibersi* and *Rhinolophus ferrumequinum*, respectively.

The type-host of *B. suzukii* is distributed widely in Japan proper, the Ryukyu Islands and southern China. Therefore *B. suzukii* may not be endemic to Iriomote Island, but its occurrence north of Amami-Oshima Island seems to be improbable. The author has examined a good number of *R. cornutus* in Amami-Oshima and Kyushu, but *B. suzukii* has not been found at all. Here it might be interesting to refer to the suggestion that *R. cornutus* of Iriomote and Ishigaki (now designated as endemic subspecies *perditus*) is probably a species different from *R. cornutus* which spreads north of Okinawa (KURAMOTO, 1972).

Ôtomi-dô Cave is known to be one of the large roosting sites of bats including *Hipposideros turpis* and *Miniopterus schreibersi*. Whether the above-described new species is specific on *R. cornutus* or may breed also on *H. turpis* is interesting.

Acknowledgements

The author wishes to express his sincere thanks to Dr. T. C. MAA of the Bernice P. Bishop Museum, Hawaii, for reading the manuscript and giving invaluable useful advice, and to Dr. H. SUZUKI of Nagasaki University for giving valuable specimens. He is also grateful to Dr. T. UCHIDA of Kyushu University, Fukuoka, for giving information on bats.

References

- HIREGAUDAR, L. S., and D. V. BAL, 1956. Some ectoparasites of bats from India. *Agra Univ. J. Res. (Sci.)*, **5**: 1-134.
- JOBLING, B., 1934. A revision of the genus *Nycteribosca* Speiser. *Parasitology*, **26**: 64-97.
- 1951. A record of the Streblidae from the Philippines and other Pacific islands, including morphology of the abdomen, host-parasite relationship and geographical distribution, and with descriptions of five new species. *Trans. ent. Soc. Lond.*, **102**: 211-246.
- KURAMOTO, T., 1972. Studies on bats at the Akiyoshi-dai Plateau, with special reference to the ecological and phylogenetic aspects. *Bull. Akiyoshi-dai Sci. Mus.*, **8**: 7-119. (In Japanese with English abstract.)
- MAA, T. C., 1967. A synopsis of Diptera Pupipara of Japan. *Pacif. Ins.*, **9**: 727-760.
- 1971. Review of the Streblidae (Diptera) parasitic on megachiropteran bats. *Pacif. Ins. Mon.*, **28**: 218-243.

会 員 異 動

退 会

〈東北〉阿部 禎 〈関東〉河合 弘, 奥村定一, 玉置真司, 竹下修一郎, 山本大輔 〈東海〉
平野伊一, 高松好文 〈近畿〉津田富士夫 〈九州〉松岡善一 〈団体〉近畿図書館

死 亡

〈関東〉野口圭子 〈名誉会員〉C. P. KLAUSEN