

ANNOTATIONES ZOOLOGICAE JAPONENSES

Volume 31, No. 2—June 1958

Published by the Zoological Society of Japan
Zoological Institute, Tokyo University

Drosophila Survey of Hokkaido
VIII. Description of a New Species of the Genus
Amiota (Drosophilidae) from Japan¹⁾

With 10 Text-figures

Ken-Ichi WAKAHAMA²⁾ and Toyoshi OKADA

Zoological Institute, Hokkaido University and Department of Biology, Tokyo
Metropolitan University

(Communicated by S. MAKINO)

A *Drosophila* survey of Hokkaido has progressed since 1948, resulting in the discovery of new or unknown species (Makino and Mizuno 1950, Makino and Kanehisa 1951, Makino, Momma, Takada and Ishihara 1952, Mizuo 1952, Momma and Takada 1954, Suzuki 1955, Wakahama 1956, Okada 1956, Momma 1957). This paper deals with the description of a new species belonging to the genus *Amiota*.

Until recently, the following two species, *Amiota* (*Amiota*) *alboguttata* (Wahlberg) and *Amiota* (*Phortica*) *variegata* (Fallén), have been recorded from Japan by Okada (1956) and Koizumi (1952), respectively. The species to be dealt with in the following is the third member of the genus *Amiota* from Japan.

Here, the authors must express their cordial thanks to Professor Sajiro Makino for his keen interest. Furthermore they are much obliged to Professor Daigoro Moriwaki for his valuable advice, and also to Dr. Eizi Momma for his kind guidance.

Amiota (*Amiota*) *stylopyga* sp. nov.

Japanese name: Shiriken-shôjôbae (based on sword-like aedeagus).

Amiota sp. I Momma, 1957. Jour. Fac. Sci. Hokkaido Univ. Ser. VI. 13:96 (part).

Amiota leucostoma Momma, 1957. *ibid.*:96 (nec Loew, 1862).

Male and female: Body about 4 mm, large tannish species. Antennae brownish yellow; 3rd joint brown, twice longer than broad, and finely pubescent. Arista with about 10 long branches, 3 below the small fork. Eye dark red and bare. Palpus broad, crescent, apically darker, and with a few prominent bristles.

1) Contribution No. 410 from the Zoological Institute, Faculty of Science, Hokkaido University, Sapporo, Japan.

2) Present address: Department of Biology, Faculty of Literature and Science, Shimane University.

Clypeus black. Front dark brown, marginally paler, about half as broad as head, slightly wider above, and with a few frontal hairs. Carina narrow and short. Face white, pale brown above. Proboscis yellowish brown. Cheek reddish brown, the greatest width about 1/10 diameter of eye. The middle orbital only slightly shorter than the others. Only one prominent oral bristle, 2nd oral about 1/3 length of vibrissa.

Mesonotum and scutellum reddish brown, without prominent markings, thoracic pleura dark brown especially above sternepisternum. Acrostichal hairs in irregular rows. Humerus and below wing-base milky white as in the general case of the subgenus. Cross distance of dorsocentrals about 3.5 times the length distance. Anterior scutellars divergent, longer than the posterior ones.

Wings (Fig. 1) about 3.5 mm, hyaline; veins yellowish. R_{4+5} and M weakly convergent distally. Third costal section with minute wart-like bristles along its entire length, and with heavy bristles on its basal 3/5. Costal index about 2.2; 4th vein index about 3.1; 5x-index about 1.3; 4c-index about 1.7. Halteres white. Legs yellow, without markings. Preapicals on middle and hind tibiae; apicals on middle.

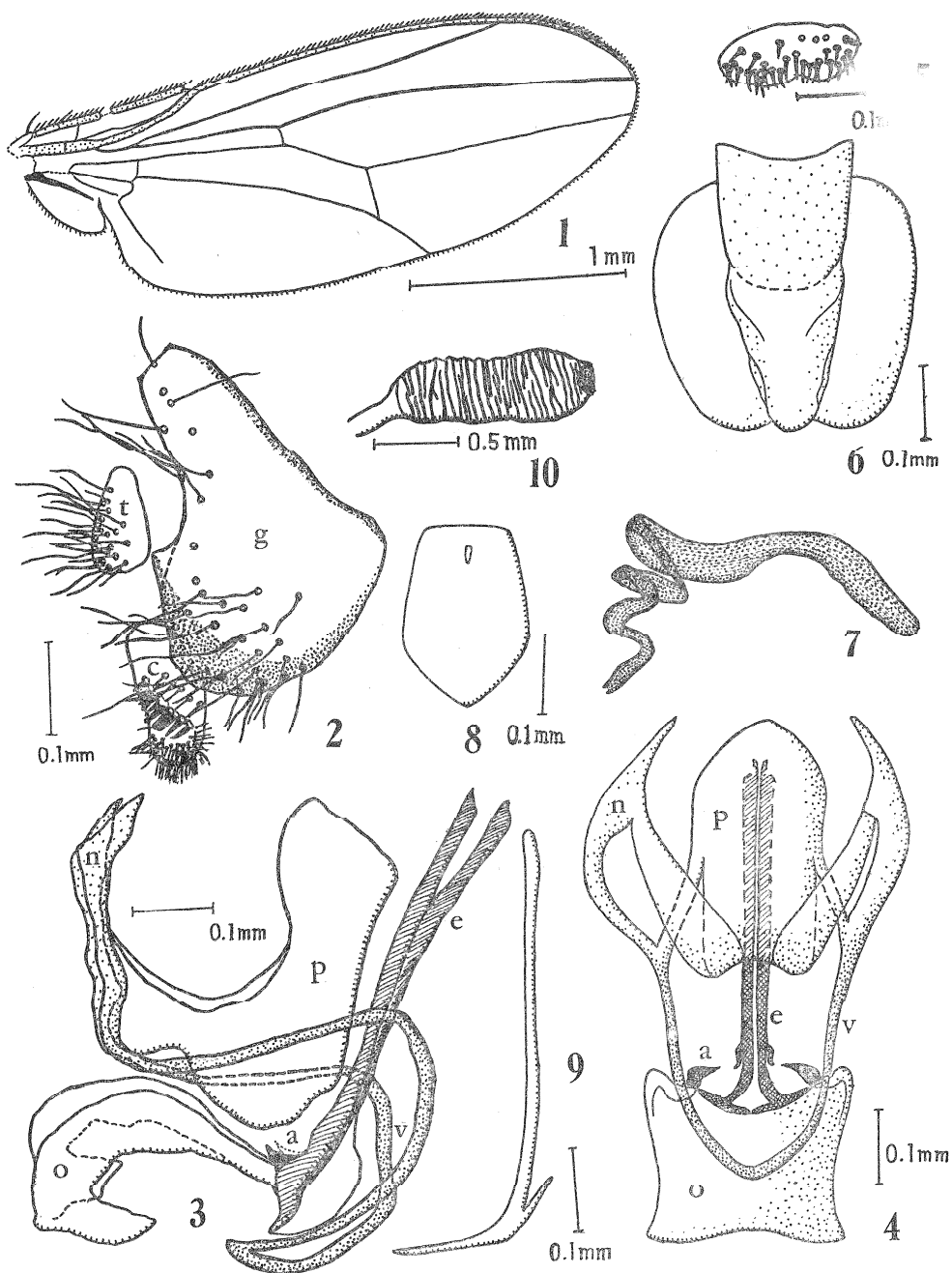
Abdomen black, with narrow caudal yellowish band on each tergite, first and second tergites yellow and laterally black. Abdominal sternites nearly quadrate and pale brown. Ninth sternite bifid.

Periphallic organs (Fig. 2) dark brown. Genital arch (g) broad and rounded below, narrowing above; lower caudal margin sinuated like stairs; heel high and rectangular; lower portion darker and with about 25 setae; upper caudal margin with about 9 setae. Anal plate (t) small, oblong vertically, separated from genital arch, and with numerous hairs. Clasper (c) one, oval, with a straight row of about 10 black, pointed, primary teeth, the upper teeth being shorter, and the row does not reach the lower margin of the clasper itself. No secondary teeth. About 5 setae along with and basal to the row of teeth. Lower and outer margins of the clasper hairy and setigerous.

Phallic organs (Figs. 3 and 4) generally dark brown. Aedeagus (e) black, bifid, very slender, nearly straight, apically hook-shaped, and basally curved outward ending in the shape of T. Apodeme of aedeagus (o) broad, quadrate and convex at middle. Anterior paramere (a) black, minute, pointed, basally broaden, without sensilla, and articulated with the base of the aedeagus. Ventral fragma (v) like a narrow arch, surrounding the aedeagus, each of the posterior arms continuous with a pale brown oblong novasternal plate (n). Posterior parameres (p) united together to form a large pale brown shield-like plate, which is laterally connected with novasternal plates.

Egg-guide (Fig. 5): Lobes fused together to form a brownish caudomedially concaved quadrate plate, which is entirely covered by about 30 short stout black setae, the marginal setae being stouter. A large quadrate pale brown pregenital plate (Fig. 6) present in the swollen uterus.

Testis (Fig. 7): pale orange, with about 3 coils. Ejaculatory coeca absent. Ejaculatory apodeme (Figs. 8 and 9) with plate pentagonal and stem slender, straight, and over twice the length of the plate. Spermatheca (Fig. 10) brownish, elongated oval, proximally slightly narrowing, with transverse wrinkles, and



Figs. 1-10. *Amiota (Amiota) stylopyga* sp. nov. 1. Wing. 2. Periphallal organs. 3. Phallic organs (lateral aspect). 4. Phallic organs (ventral aspect.) 5. Egg-guide. 6. Pre-genital plate of female. 7. Testis. 8. Ejaculatory apodeme (ventral aspect). 9. Ejaculatory apodeme (lateral aspect). 10. Spermatheca. a, anterior paramere. c, clasper. e, aedeagus. g, genital arch. n, novasternum. o, basal apodeme of aedeagus. p, posterior paramere. t, anal plate. v, ventral fragma of novasternum.

truncate and concaved at tip. The stem of the spermatheca hyaline, twice as long as the theca, and somewhat swollen and darkened near its distal end. Parovaria hyaline, slightly shorter than the spermatheca, and with fusiform knobs. Ventral receptacle folded only once.

Holotype: Male, Numanohata, near Tomakomai, Hokkaido, 22 and 23 VI, 1954 (K. Wakahama leg.).

Allotopotype: Female, collected together with the holotype. Types are deposited in the Laboratory of Genetics, Tokyo Metropolitan University.

Other specimens examined: Numanohata, 22 and 23 VI, 1954; Bihoro, Hokkaido, 5, 6 and 7 VIII, 1954 (K. Wakahama leg.).

Distribution: Hokkaido.

Habits: Most specimens were attracted to the banana traps near the lake-side at Numanohata. Although the flies of this genus generally hover about the eyes of people (Okada 1956), it remains unknown whether this species displays a similar habit.

Relationship: This species is closely allied to *Amiota (Amiota) leucostoma*¹⁾ Loew from Europe and North America in general bodily characters, being distinguishable from the latter, however, in having entirely black clypeus (medially yellow in *leucostoma*), broader toe of the genital arch, and more numerous teeth of the clasper. The aedeagus resembles more closely that of European *leucostoma*, being "schlank, schwarz, apical etwa verbogen" (Duda 1935), than it does that of American *leucostoma*, being "light brown, long and slender, bifid at or near tip" (Wheeler 1952).

REFERENCES

- Duda, O. 1935 Die Fliegen, **58** g, 1.
 Koizumi, K. 1952 Kurashiki Konchu Dokokai, **20**, 25 (in Japanese).
 Loew, H. 1862 Berlin. Ent. Zeit., **6**, 185-232.
 Makino, S. and T. Mizuno 1952 D. I. S., **24**, 86.
 ——— and H. Kanehisa 1951 D. I. S., **24**, 110.
 ——— E. Momma, H. Takada and T. Ishihara 1952 D. I. S., **26**, 109.
 Mizuno, T. 1952 Pap. Coord. Committ. Res. Genet., III, 51.
 Momma, E. 1957 Jour. Fac. Sci. Hokkaido Univ., Ser. VI., **13** (Uchida Jubilee Vol.), 93.
 Momma, E. and H. Takada 1954 Annot. Zool. Japon., **27**, 97.
 Okada, T. 1956 Systematic study of Drosophilidae and allied families of Japan. Gihodo (Tokyo).
 Suzuki, K. 1955 Zool. Mag. (Tokyo), **64**, 44.
 Wakahama, K. 1956 Annot. Zool. Japon., **29**, 117.
 Wheeler, M. R. 1952 Univ. Texas Publ., No. **5204**, 162.

1) Okada (1956) put erroneously *Amiota leucostoma* Loew synonymous with *A. alboguttata* (Wahlberg).