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Notes on Hippoboscidae (Diptera) from the Ryukyu Islands with Description of a New *Icosta* Species

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Synopsis Hippoboscid flies including a new *Icosta* species are recorded from wild birds of Amami-Oshima, one of the Ryukyu Islands.

The Japanese fauna of Hippoboscidae parasitic on birds has been insufficiently studied. From the Ryukyu Islands, two species, *Pseudolynchia canariensis* (MACQUART) from Okinawa (BEQUAERT, 1955, p. 399) and *Ornithoica exilis* (WALKER) from Ishigaki (MAA, 1966, p. 75) have been known, but a much richer fauna is expected from Ryukyuan birds. The present records are based upon a few specimens from the turtle-dove and the woodcock in Amami-Oshima. Each specific name is used in the sense of MAA (1966, etc.), and the bibliography under each species refers only to the original description and Prof. MAA's revisional work. The descriptive terms follow those by MAA (1969). Relative length and width are expressed in micrometric unit for specimens in alcohol (1 unit=0.063 mm).

Ornithoica (Ornithoica) unicolor SPEISER, 1900

Ornithoica unicolor SPEISER, 1900, Ann. Mus. Stor. nat. Genova, 40: 556.

O. (O.) unicolor: MAA, 1966, Pacif. Ins. Mon., 10: 30.

Records. 2 ♀♀, Mt. Yui, Amami-Oshima, ex *Scolopax mira*, 14 VIII 1975, H. SUZUKI. 1 ♀, Uken, Amami-Oshima, same host, 28 VII 1976, H. SUZUKI.

Remarks. This species is newly recorded from the Ryukyus, from the genus *Scolopax* and the family Scolopacidae. Neither the establishment in Amami-Oshima nor the breeding on that host which is endemic to the island is certain, because this fly is thought to be oligoxenous to the Strigidae in the tropics of East Asia and the records from the north and from other hosts have been regarded as occasional (MAA, 1966, pp. 33, 130; 1969, p. 240).

Ornithomyia avicularia aobatonis MATSUMURA, 1905

Ornithomyia aobatonis MATSUM., 1905, Thousand Insects of Japan, 2: 119.

Ornithomyia avicularia aobatonis: MAA, 1967, Pacif. Ins., 9: 735.

Records. 2 ♂♂ 2 ♀♀, Mt. Yui, Amami-Oshima, ex *Scolopax mira*, 29 IV 1975, H. SUZUKI.

Remarks. The genus *Scolopax* and the family Scolopacidae are new host records. The Ryukyus are also a new and the southernmost distribution record.

How far west- and southward this east Palaearctic subspecies spreads is unknown nor the exact limit of west Palaearctic nominate subspecies.

Icosta (Icosta) amamiensis n. sp.

Description. ♀. Head: Occipital margin very gently curved; vertical bristle shorter than notopleural bristle. Face weakly narrowed anteriorly. Frons proper short, widely notched at middle; frontal process $2/3$ as long as palpus, in profile gently curved downward, apically narrowly rounded. Palpus basally densely spinose. Vibrissal process triangular in profile. Gula posteriorly spinose.

Thorax: Mesonotum ca. 23×31 ; prescutum densely strongly striolate all over; scutellum ca. 6×18 , posterolaterally rounded, posteriorly distinctly convex. Metapleural callus with 3–5 spines. Prosteronum poorly sclerotized. Metasternal process $1/2$ as long as its basal width. Wing fuscous, 6.0–6.2 mm long; setulae extensive, leaving only cells *2bc* (basally), *2m+1a* (posteriorly) and *2a* (entirely) bare. Legs: Femur 1 strongly swollen, basal part of its anterior surface rather evenly spinose; anterior surface of femur 2 with 5–8 short spines, its basal part with short pale setae. Tibia 3 as figured. Tarsal spines 1.0.0.0/2.1.1.0/3.2.1.1 usually; tarsomeres 3 and 4 of fore leg with outer apical lobes much longer than inner ones; tarsomere 1 of hind leg ca. 7.0×2.5 , subequal in length to $2+3+4$, and slightly longer than 5; tarsomeres 2–4 of same leg asymmetrical.

Abdomen with short uniform setae on median area; setae on lateral area with much larger and much prominent basal papillae than those on median area, setae laterad to urogenital area much longer and stouter than elsewhere on abdominal membrane. Tergite 3 narrow; 6 posteriorly concavely curved, with 6–12 pairs of bristles. Laterite 3 dorsally undefinable, ventrally well sclerotized in mature specimens; laterite 7 very small with 1 bristle and 0–1 short seta. Postgenital plate with minute setae.

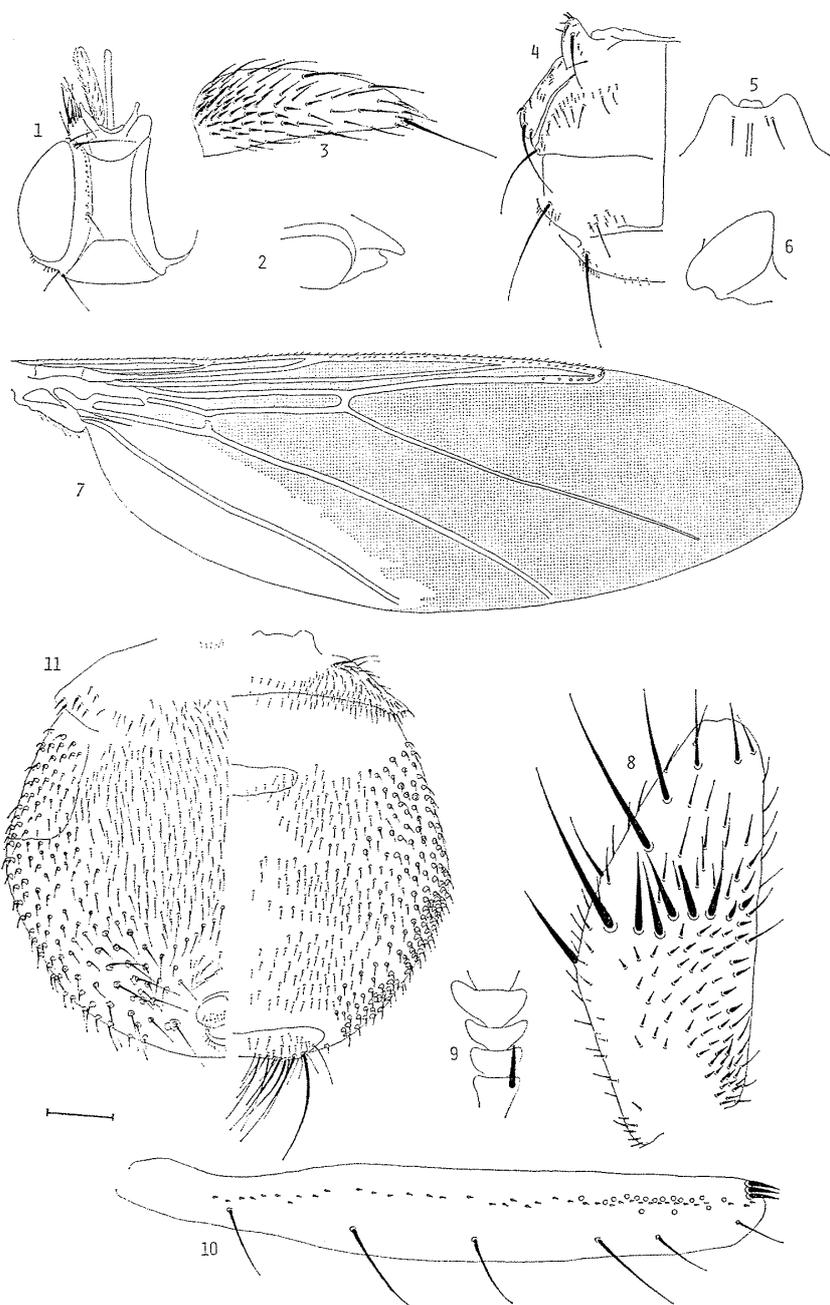
♂. Unknown.

Holotype (♀), Shinokawa, Amami-Oshima, ex *Streptopelia orientalis stimpsoni*, 20 X 1975, H. SUZUKI. Paratypes (3 ♀♀), same data. The type-series will be preserved in the National Science Museum (Nat. Hist.), Tokyo, except for 1 paratype which will be preserved in the B. P. Bishop Museum, Hawaii.

Distribution. At present known only from Amami-Oshima Island, Japan.

Remarks. *Icosta* is mainly tropical and subtropical in its distribution and only one species has hitherto been recorded from Japan. BEQUAERT (1955, p. 337) recorded *Icosta ardeae ardeae* MACQUART from "Japan" under the name of *Lynchia albipennis* (SAY) (see MAA, 1967, p. 743), but it was not clear whether "Japan" meant Japan proper or the Ryukyus or both. Therefore *amamiensis*, the second species of *Icosta* from Japan, may be the first *Icosta* from the Ryukyus. Incidentally, 6 species of *Icosta* are known from Taiwan at present.

The new species belongs to the subgenus C of the *Plana* group of the subgenus



Figs. 1-11. *Icosta (Icosta) amamiensis* n. sp. — 1. Head, front view. — 2. Head in part, dorsolateral view showing frontal and vibrissal processes. — 3. Palpus, lateral view. — 4. Thorax, dorsal view. — 5. Anterior part of thorax, ventral view showing prosternum and mesosternal lobes. — 6. Posterior part of thorax, ventral view showing metasternal process. — 7. Wing. — 8. Fore femur, anterior view. — 9. Fore tarsus, ventral view, ordinary setae omitted. — 10. Hind tibia, posterior view. — 11. Abdomen, dorsal (right) and ventral (left) views. All the Figures were based upon holotype ♀ except for Figs. 8 and 10 which were based upon paratype ♀. Scale: 0.2 mm for Figs. 3, 8, 9 and 10; 0.4 mm for Figs. 2 and 5; 0.5 mm for the other Figures.

Icosta s. str. in the sense of MAA (1969) and is most closely related to *chalcopampa* (SPEISER) which spreads widely over the Oriental region including Taiwan. The new species is, however, distinctive from the latter by palpus basally densely spinose, wing slightly longer and more extensively setulose, much larger basal papillae of abdominal setae on lateral area, urogenital area (♀) anteriorly not lined with a series of long, robust setae, laterite 3 ventrally well sclerotized in mature specimens and laterite 7 (♀) small but well sclerotized.

Probably *Streptopelia orientalis stimpsoni* is, at least one of, the breeding hosts of *amamiensis*, because population density on the host (all 4 flies reported here were from the same individual bird) seems to be higher than usual density of *Icosta* on accidental hosts (see MAA, 1969, p. 170).

Pseudolynchia canariensis (MACQUART, 1840)

Olfersia canariensis MCQ., 1840, in WEBB and BERTHELOT, Hist. Nat. Iles Canaries Ent., 2: 119.

Pseudolynchia canariensis: MAA, 1966, Pacif. Ins. Mon., 10: 128.

Records. 1 ♂1 ♀, Shinokawa, Amami-Oshima, ex *Streptopelia orientalis stimpsoni*, 20 X 1975, H. SUZUKI.

Remarks. This species originally occurs on wild hosts of the Old World tropics and subtropics, but as a parasite of domestic pigeons, it is found widely where the birds are kept. The northernmost record in Europe reaches near to 50°N (THEODOR and OLDROID, 1964, p. 54), but the record from wild hosts in Okinawa (BEQUAERT, 1955, p. 399) was unique in Japan as pointed out by MAA (1967, p. 743). This fly is certainly a native parasite of wild birds of the Ryukyus (Okinawa, Amami), but its occurrence in Japan proper and on domestic pigeons of Japan is still an open question.

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