EUCHARIDAE OF JAPAN, WITH DESCRIPTIONS OF THREE NEW SPECIES.*

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In the present paper, the writer intends to list all the Eucharids known from Japan and to describe three new species. It should be noted that Schizaspidia tenuicornis ASHMEAD is a synonym of Stilbula cynipiformis (Rossi).

In this opportunity, the writer expresses his hearty thanks to Prof. Dr. T. Esaki and Mr. S. Sato who are so kind as to place valuable specimens in his hands.

Stilbula SPINOLA

Stilbula Spinola, Ann. Mus. Hist. Nat. XVII, 1811, p. 150.

Stilbula cynipiformis (Rossi).

Ichneumon cyniformis Rossi, Mant. Insect, 1792, p. 125.

Eucharis cyniformis Latreille, Gen. Crust. & Insect, IV, 1809, p. 21.

Stilbula cyniformis Spinola, Ann. Mus. His. Nat. XVII. 1811, p. 150.

Eucharis cyniformis NEES, Hymen. Ichneum: affin. Monogr., 11, 1834, p. 267.

Eucharis cyniformis Blanchard, Hist. Nat. Insect, 111, 1840, p. 257.

Stilbula cynipiformis Kirby, Journ. Linn. Soc. London, Zool., XX, p. 116, 1886, p. 31.

Stilbula cynipiformis SCHMIEDEKNECHT, Gen. Insector., 1909, p. 76, Taf. 3, fig. 4, male.

Stilbula cynipiformis Ruschka, Deutsch. Ent. Zeitschr., 1924, p. 89.

Schizaspidia tenuicornis Ashmead, Journ. New York Ent. Soc. XII, 1904, no. 3, p. 151.

Schizaspidia tenuicornis Clausen, Ann. Ent. Soc. America, XVI, no. 3, p. 213, Pl. XIV. figs. 1~2.

Host.—Camponotus herculeanus japonicus Mayr (C. P. Clausen).

Locality.—Ashmead described from specimens send by Dr. Matsumura,

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but their locality are not mentioned; Koyuwai, Yuwateken, where Mr. C. P. Clausen studied the biology of this species; Mr. K. Yasumatsu collected one female on Ukidakeyaina, Kyushu, on August 30, 1931; Messers K. Yasumatsu and Fujino collected one male on Sobosan, Kyushu, on July 20, 1930; Mr. C. Takeya collected one male at Tetsugen, Chosen, on September 7, 1931 and Mr. S. Sato collected several specimens (females and males) at Suigen, Chosen, in September, 1928.

Eucharis LATREILLE.

Eucharis LATREILLE, Hist. Nat. Crust. Ins. 111, p. 210, 1802.

Eucharis esakii n. sp.

Male.—Black in general, with metallic green reflections. Antennae black; wings pale infuscated, deeper in the middle area below the marginal vein; veins brown. Legs yellowish except the coxae

and femur which are black; apices of all the femur yellowish.

Head as wide as the thorax and much wider than deep (38:25); frontovertex very broad; occili arranged in an obtuse-angled triangle, the posterior pair separated from the inner eye margins by their own diameter; face rather smooth with sparse punctures, and tranversely striate on each side; malar space longitudinally striate; the area between the toruli and eyes foveolate; a transverse carina between the toruli, which is connected on each side with the elevated margins of the toruli; the area just below the anterior occilius deppressed; vertex and occiput transversely striate.

1. Antenna of male of Eucharis esaki n. sp.

2. Antenna of femal of do.

Antennae inserted at the middle of the face, of do. slender, about 1.3 mm in length, and composed with 12 joints; scape globular in shape, smooth and shining, almost as long as wide; pedicel also smooth and shining, one-half as long as the scape and slightly narrower than the latter; flagellar joints reticulate with thick small hairs, and all joints considerably longer than wide; the first joint a little longer than the scape and pedicel combined, gradually widened towards tip, and a little more

than twice as long as wide; the second joint slightly longer than one-half the length of the first and almost as long as the third; the following joints gradually decreasing in width and length distad; the terminal joint more or less pointed at tip.

Mesonotum smooth; parapsidal furrows foveolate; the basal part of the scutellum foveolate with four longitudinal keels on each side; scutellum rather smooth with sparse punctures and a rather broad longitudinal foveolate furrow at the middle, the apical part foveolate and apex more or less emarginate. Pleurae transversely striate except the middle area of the mesoepimerum which is smooth. Propodeum more or less rugose with a median longitudinal foveolate furrow and a keel on each side. Abdominal petiol slightly longer than the hind femur, cylindrical, but more or less narrowed towards the base, and with an indistinct median longitudinal furrow, and the basal part rugose; abdomen smooth and shining; the apical margins of the segments brownish.

Fore wings 3 mm. in length, and sparsely ciliate; Submarginal, marginal, stigmal and postmarginal veins approximately in the ratio of 100:50:8:5. Hind wings 2.5 mm. in length and also sparsely ciliate.

/ Length of body, 6.5 mm.

Female.—Similar to the male in general, but the antennae much differ from those of the latter: Antennae are composed with 11 joints, and much shorter than those of the male; scape a little shorter than wide; pedicel slightly shorter than the scape; flagellum narrowed towards apex; the first joint twice as long as wide at apex and considerably longer than the scape and pedicel combined; the second joint much shorter than the first; other joints gradually decreasing in length and width distad, but the last joint slightly longer than the preceeding joint. Abdominal petiol slightly shorter than the hind femur.

Length of body, 5 mm.

Type.—2 males in the Department of Entomology, Kyushu Imperial University. Cotype in the Tokyo College of Agriculture and Forestry.

Two males collected by Dr. Esaki on Sobosan, Kyushu, on July 15, 1931; Mr. S. Hashimoto collected 3 males and 8 females at Fuchu, Tokyo, on June 19, 1936, and Mr. S. Sato collected 3 males at Suigen, Chosen (date unknown).

This species is allied to *Eucharis ascendens* FAB. of Europe, but it differs distinctly from the latter in the antennae: in this species the antennae of the female 11 jointed, while in *E. ascendens* 10 jointed; in the male the antennae 12 jointed as those of the latter, but all the flagellar joints longer than wide.

Schizaspidia WESTWOOD

Schizaspidia Westwood, Proc. Zool. Soc. London, 111, 1835, p. 69.

Schizaspidia yakushimensis n. sp.

Male.—Head, thorax and abdominal petiol black with metallic green reflections; abdomen black and shining except the apical part which is yellowish brown. Antennae dark brown except the scape which is yellowish. Wings faintly clouded; veins dark brown. Legs yellowish brown except all the coxae which are black; fore and middle femora rather brownish except the distal part.

Head slightly wider than deep (25:20); face almost smooth; cheeks and frontovertex slightly, longitudinally striate; a small transverse keel between the anterior ocellus and posterior ocelli; ocelli arranged in a

straight line, the posterior ocelli separated from the eye margins by twice their own diameter; clypeus with lateral sutures. Antennae pectinate with nine branches, and 12 jointed; the first branch shortest, about one-thirdas long as the second, others subequal in length, and the terminal one more or less short.

Thorax strong reticulate; mesonotum with three longitudinal keels running from the anterior margin to the middle; parapsidal furrows distinct; scutellum much longer than wide, with two long processes which considerably shorter than the length of the scutellum; the basal area of the scutellum foveo-reticulate. Abdominal petiol nearly cylindrical, about five times as long as wide, reticulate above, and longitudinally striate beneath. Abdomen rather small and smooth.

Fore wings uniformely ciliate; submarginal, marginal,



Antenna of male of Schizaspidia yakushimensis n. sp.

stigmal and postmarginal veins approximately in the ratio of \$0:65:12:30; hind wing also uniformly ciliate; hooks 8 in number.

Length of body, 5 mm.

Type.—One male in the Department of Entomology, Kyushu Imperial University.

One male was collected by Mr. H. Hori at Ambo, Yakushima, on August 8, 1929.

This species is allied to Schizaspidia foveatella (GIRAULT) of Philippines, but it may be distinguished from the latter by the following points:

S. yakushimensis n. sp.

Body black with metallic green reflections.

Face feebly striate.

Mesonotum with three longitudinal keels.

Fore wings without any fascia.

S. foveatella (GIRAULT).

Body black.

Face distinctly striate.

Mesonotum without any keel.

Fore wings with a transverse

fascia.

Schizaspidia taiwanensis n. sp.

Male.—Closely allied to S. yakushimensis n. sp., but it may be distinguished by the following points: mesonotum without longitudinal keels; antennae composed with 13 joints, but the terminal joint very small; scape dark brown; legs yellowish brown except all the coxae which are black.

Length of body, 4 mm.

Type.—One male in the Department of Entomology, Kyushu Imperial University.

One male was collected by Dr. ESAKI at Musha-Tattaka, Formosa, on August 16, 1921.

Schizaspidia vicina MASI.

Konowia, V, 1926, p. 366.

Locality.—Kankau, Formosa.



Antenna of male of Schizaspidia taiwanensis n. sp.

Schizaspidia scutellaris Masi Konowia, V. 1926, p. 370.

Locality. - Kankau, Formosa.