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A New Ichneumonid Parasite of Sciomyzid Fly, *Sepedon aenescens*, in Japan (Hymenoptera)

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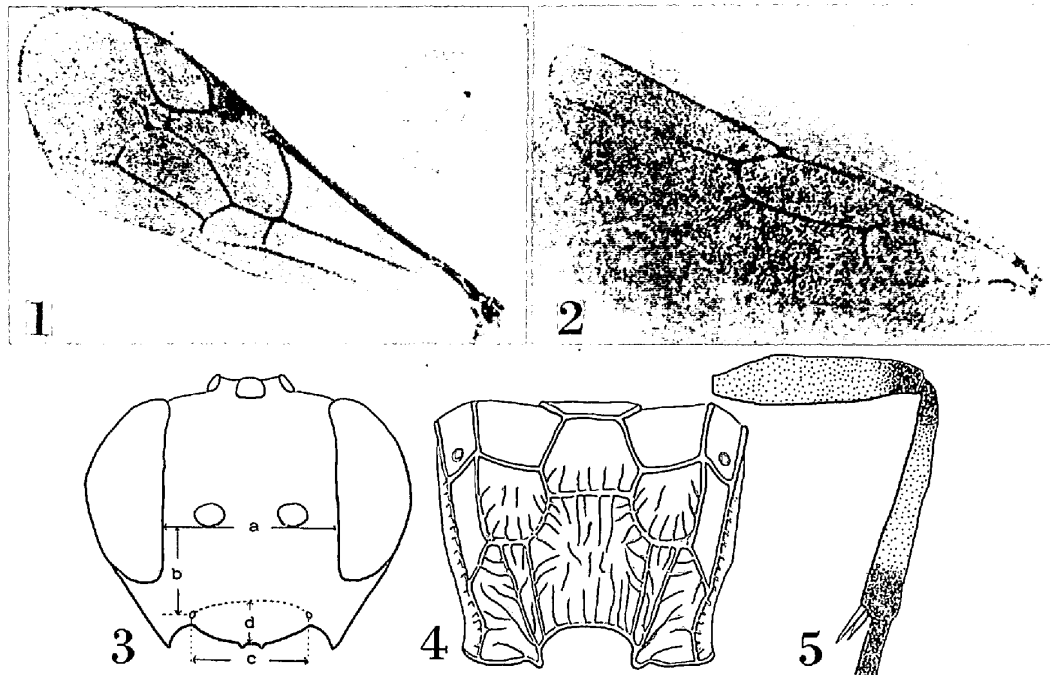
Abstract In this paper is described a new species of the genus *Phygadeuon* GRAVENHORST, which emerged from the puparium of *Sepedon aenescens* WIEDEMANN (Diptera, Sciomyzidae).

Recently the author has received ichneumonid parasite of sciomyzid fly which is a predator of *Lymnaea (Galba) ollula* GOULD, from Mr. Y. YONEDA of the Kurume University, School of Medicine, Fukuoka, for identification. The author's examination has convinced him that these specimens should be new species of *Phygadeuon*. On the basis of the present material a description of the species is given below. The holotype of the new species is in the collection of the Entomological Institute, Hokkaido University, Sapporo.

NAGATOMI and KUSHIGEMACHI [=KUSIGEMATI] (1965) recorded *Trichogramma japonicum* as an egg-parasite of *Sepedon aenescens*. KNUTSON and ORTH (1984) reviewed *Sepedon aenescens* and its related species, including the information on the parasites.

Phygadeuon yonedai sp. nov.

♀. Head in dorsal view $4/7-5/8$ as long as wide; face (Fig. 3) wide, 1.6 times as wide as high at level of lower margin of antennal socket, distinctly and densely punctate, the punctures a little sparser ventrolaterally; inner margins of eyes slightly divergent ventrally; clypeus polished, very sparsely and weakly punctate, separated from face by an indistinct groove, 1.9-2.1 times as wide as high, the apex weakly convex, and the apical margin blunt with a pair of small median teeth (Fig. 3); eye with rather sparse, white hairs; malar space about 0.9 times as long as basal width of mandible; lower tooth of mandible $1/2-2/3$ as long as the upper one; frons weakly convex, rather strongly punctate; temple weakly swollen, weakly and sparsely punctate; occipital carina strong and complete; distance between lateral ocelli and eyes 1.7-1.8 times as long as diameter of ocellus. Antennae rather slender, slightly thickened apically; apical truncation of scape 31-36 degrees from the transverse; flagellum with 17 segments; last flagellar segment 0.8-0.9 times as long as the 1st. Pronotum polished, with transverse or oblique striae on posteromedian portion, and sparse and weak punctures on posterodorsal portion; epomia weak and short;



Figs. 1-5. New ichneumonfly, *Phygadeuon yonedai* sp. nov., ♀. — 1, Left forewing; 2, left hind wing; 3, head in frontal view (a, width of face; b, height of face; c, width of clypeus; d, height of clypeus); 4, propodeum in dorsal view; 5, hind femur and tibia showing colour pattern.

mesoscutum polished, weakly and rather sparsely punctate, the punctures a little stronger posteromedially; notaulus weak and short, extending to basal $1/3$, sometimes $1/2$; scutellum slightly convex, with distinct and sparse punctures, without lateral carinae; postpectal carina strong, with a narrow interruption in front of each middle coxa; meso- and metapleurum polished, weakly and sparsely punctate; juxtacoxal carina distinct and complete; metapleurum with short and vertical striae along pleural and juxtacoxal carinae. Propodeum (Fig. 4) short, strongly and completely areolated, with weak sublateral crests; areola 0.8–1.0 times as long as wide at costula; basal and first lateral areas smooth; 1st and 2nd pleural areas, 2nd lateral area and areola more or less weakly striate or rugose; 3rd pleural and lateral areas and petiolar area distinctly rugose. Wings (Figs. 1, 2) with stigma 2.6–2.9 times as long as wide, with radius emitting from basal $2/3$ – $5/7$; nervulus postfurcal by $1/4$ – $4/9$ of its own length; areolet receiving 2nd recurrent vein a little distad of the middle, sometimes at the middle; nervellus vertical, intercepted at lower $2/7$ – $1/3$. Hind femur slender, 4.1–4.3 times as long as wide in lateral view, with very fine, dense, setiferous punctures. Abdomen polished, depressed; 1st tergite slender, 1.9–2.2 times as long as wide at apex, with sparse hairs on lateral side, smooth on petiole, longitudinally striate on postpetiole, the median dorsal carina distinct, extending to near apex, and the dorsolateral carina distinct and complete; spiracle of 1st tergite very small, circular, situated at basal $3/5$; apex of

1st sternite opposite the spiracle; 2nd and following tergites polished, with very sparse hairs, the hairs a little denser on the 4th to 6th tergites; 2nd tergite $5/7-5/6$ as long as wide at apex and 1.3-1.4 times as long as the 3rd. Ovipositor straight, rather strongly compressed, reaching distinctly beyond apex of abdomen; ovipositor sheath $1/6-1/5$ as long as forewing.

Body black. Scape, pedicel and basal 3 segments of flagellum yellowish brown; 4th flagellar segment yellowish brown basally, dark brown apically, sometimes entirely infusate; 5th and subsequent segments infusate, a little paler ventrally; mandible dull ferruginous, blackish on apical teeth and extreme base; palpi yellowish brown. Tegula fulvous to light ferruginous. Legs yellowish brown to light ferruginous; middle tibia and front and middle tarsi sometimes fusco-rufous to fuscous; hind femur on apical $1/5$, both ends of hind tibia, and hind basitarsus infusate (Fig. 5). First tergite entirely black; 2nd and 3rd tergites, and base of 4th tergite light ferruginous; 4th tergite except at base and subsequent tergites blackish; extreme apices of 4th and 5th tergites tinged with yellowish brown; ovipositor light yellowish brown; ovipositor sheath fuscous. Wings subhyaline; stigma infusate, the both ends pale.

Length: Body 4.6-4.9 mm., forewing 3.1-3.8 mm.

♂. Agrees with the above-mentioned description of the female, except for the following characters:—

Face 1.4-1.5 times as wide as high, clypeus 2.3-2.4 times as wide as high; malar space $5/7$ as long as basal width of mandible; distance between lateral ocelli and eyes 1.9-2.0 times as long as diameter of an ocellus; hairs of eyes shorter and sparser than in female; flagellum filiform, with 19 or 20 segments; last flagellar segment $1/2-2/3$ as long as the 1st; apical truncation of scape about 28 degrees from the transverse. Abdomen with 1st tergite more slender, 2.7-2.9 times as long as wide at apex; 2nd tergite 1.2-1.3 times as long as the 3rd. Hind femur more slender, 4.8-5.0 times as long as wide in lateral view. Flagellum infusate, the 1st and 2nd segments yellowish brown to dark brown; legs a little darker than in female; tarsi fuscous to infusate.

Length: Body 4.4-5.4 mm., forewing 3.5-3.9 mm.

Holotype. ♀, Japan: Kitashigeyasu, Miyaki, Saga-ken, 18-xii-1984, bred from puparium of *Sepedon aenescens* WIEDEMANN by Y. YONEDA.

Paratypes. Japan: 1 ♂, with the same data as in holotype except date emerged, 1-xii-1984; 1 ♂, with the same data as in holotype except date emerged, 20-ii-1985; 9 ♀♀, 31-vii-1972, Takachihono-mine, Kagoshima-ken, K. KUSIGEMATI leg.; 1 ♀, Takachiho-gawara, Kirishima-yama, Kagoshima-ken, Y. MINAMI leg.; 3 ♀♀, 11-vi-1975, Takachihono-mine, Kagoshima-ken, T. SHIBA leg.; 1 ♀, 16-vi-1976, Takachihono-mine, Kagoshima-ken, K. ÔHARA leg. Taiwan: 1 ♀, 14-iv-1981, Wulai, Taipei Hsien, H. TAKEMOTO leg.

Host. *Sepedon aenescens* WIEDEMANN (Diptera, Sciomyzidae).

Distribution. Japan (Kyushu) and Taiwan.

In this species is variable in colouration the 3rd abdominal tergite which is usually light ferrugineous on the basal 1/4-1/3 and blackish on the apical 2/3-3/4, sometimes entirely blackish, or almost entirely light ferrugineous.

This species may be readily distinguished from any other congeneric species by the haired eyes and the clypeus which is separated by a indistinct groove from the face. Furthermore, this species is most closely related to the Japanese *P. kiashii* UCHIDA, 1930, but it can be immediately distinguished from the latter by the entirely striate postpetiole, the very finely punctate hind femur, the entirely light ferrugineous hind coxa, 2nd and 3rd abdominal tergites.

It is his real pleasure that this species is named in honour of Mr. Y. YONEDA who reared the type specimen.

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