

A New Species of *Anomalon* from Japan (Hymenoptera: Ichneumonidae)

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Introduction

So far as my investigation goes 6 species of *Anomalon* have been recorded from Japan by T. Uchida (1928 and 1958), S. Momoi (1968), and K. Kusigemati (1983). In this paper a new species of the genus is added to the fauna of Japan. A key to the Japanese species of the genus is given to show the affinities of the new ichneumonfly. The holotype is preserved in the collection of the Entomological Institute, Hokkaido University, Sapporo.

Anomalon yoshiyasui, sp. nov.

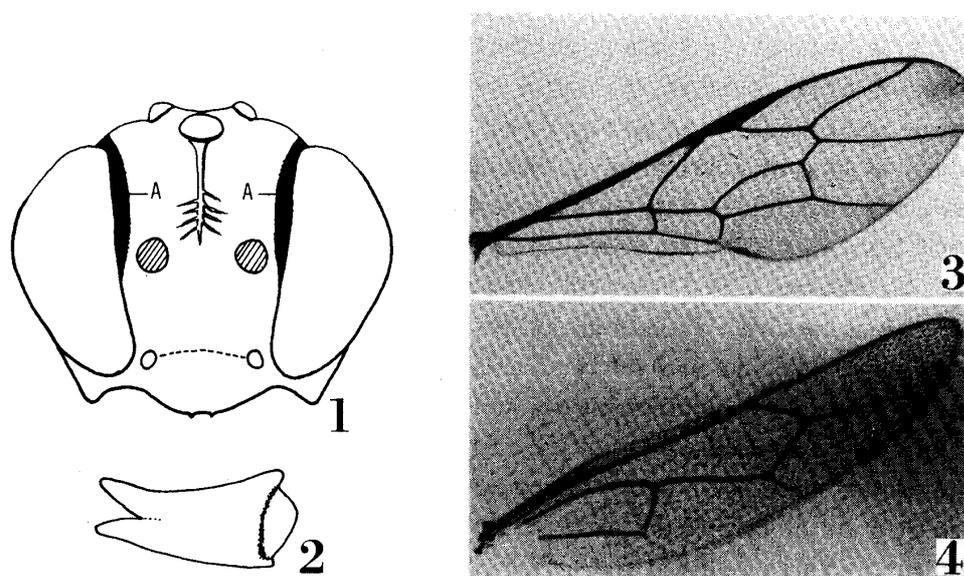
In general structures this species is very closely related to the Formosan species *Anomalon frontale* Cushman, 1937, from which it differs obviously in having the apical teeth which are approximately equal in length, the comparatively short basal abscissa of the cubitus, the finely and rather sparsely punctate lateral lobes of the mesoscutum, the almost flat and finely punctate scutellum with a basal transverse ridge, the short 1st tergite, etc.

♀. Face (Fig. 1) about 1.3 times as wide as high, polished, weakly and moderately densely punctate, the punctures becoming sparser laterally and ventrally; clypeus wide, 2.6 times as wide as high, weakly and very sparsely punctate, its apical margin broadly rounded, with a pair of apico-median tubercles (Fig. 1); malar space narrow, $2/9$ as long as basal width of mandible; temple almost flat, about $4/9$ as long as eye in lateral view; inner margins of eyes weakly convergent ventrad (Fig. 1); mandible strongly and sparsely punctate, the apical teeth approximately equal in length (Fig. 2); occipital carina complete, the dorsal median portion weakly arched upward, the lower part not sinuate and roundly bending inward near base of mandible; distance between lateral ocelli and eyes about as long as diameter of an ocellus; frons polished, distinctly and rather densely punctate, with a median longitudinal carina and short, trans-striae beside the median longitudinal carina on the basal part (Fig. 1); yellow markings of frontal orbit attaining near top of eye. Antennae slender, filiform, with 27 segments; 2nd flagellar segment $7/9$ as long as the 1st and about 1.1 times as long as the 3rd. Pronotum polished, longitudinally striate on lower half, the striae extending near the middle, and with a large impunctate area just behind epomia; epomia weak and straight; lateral lobes of mesoscutum weakly and densely punctate; median lobe of mesoscutum weakly and densely punctate on anterior $1/5$, rather weakly and roughly striate on posterior $4/5$; scutellum almost flat, finely and sparsely punctate, with a basal transverse ridge, and without lateral carinae; mesopleurum moderately strongly reticulate-rugose, with an unsculptured area just below subtegular ridge; speculum polished and smooth; mesosternum polished, weakly and rather densely punctate, with several short striae along hind margin; metapleurum and propodeum strongly

reticulate-rugose; basal area of propodeum confluent with areola, polished, not haired; 1st lateral area of propodeum rather densely haired; propodeal spiracle elliptic. Wings (Figs. 3 and 4) nervulus postfurcal by $1/3$ of its own length; portion of cubitus between intercubitus and 2nd recurrent vein about 1.8 times as long as intercubitus; postnervulus intercepted at its upper $1/5$; nervellus slightly reclivous; brachiella present on basal $5/7$; portion of cubitella between nervellus and intercubitella about 2.4 times as long as nervellus. Legs with coxa polished, finely and rather densely punctate wholly, with no rugulose area; hind femur comparatively stouter, 4.8 times as long as wide in lateral view; apical margin of front tibia with a tooth on outer side; basitarsus of hind leg 2.5 times as long as 2nd hind tarsal segment. Abdomen with 1st tergite short, about 3.4 times as long as basal width of postpetiole; postpetiole stout, about 1.4 times as long as its basal width; 2nd tergite subpolished, rather densely haired wholly, very faintly striate basally, very finely granulate apically, about 1.4 time as long as the 1st and 1.6 times as long as the 3rd; 3rd tergite weakly mat, rather densely haired; ovipositor sheath about 1.1 times as long as 1st tergite.

Black. Clypeus dark brown to black, paler apically; malar space tinged with dark brown; mandible pale yellow, the apical teeth being dark brown; palpi and scape pale yellow; pedicel pale yellow ventrally, dirty yellow dorsally; flagellum pale yellow basally, infusate apically; frontal orbit narrowly tinged with pale yellow (Fig. 1). Tegula yellowish brown, darker basally. Front leg pale yellow; apices of 1st and 2nd tarsal segments, apical half of 3rd tarsal segment and 4th and 5th tarsal segments infusate. Middle leg with coxa pale yellow basally, indefinitely dark brown basally; trochanter and femur pale yellow; tarsus except at extreme base infusate. Hind leg with coxa pale yellow basally, indefinitely dark brown basally; trochanters pale yellow ventrally, dark brown dorsally; femur dull ferrugineous; tibia dull ferrugineous, darker apically a little darker than femur; tarsus except for extreme base of each segment infusate. First tergite black, indefinitely dark brown to yellowish brown on about basal $1/4$, with a yellow apical band; 2nd tergite with distinct yellow apical band; extreme apices of 5th and 6th tergites and 7th tergite pale yellow. Wings subhyaline.

Length: Body 8.8 mm., forewing 4.9 mm.



Figs. 1-4. *Anomalon yoshiyasui*, sp. nov., ♀: 1, Head in frontal view (A, yellow marking of inner orbit); 2, Mandible; 3, Forewing; 4, Hind wing.

♂. Unknown.

Holotype (♀): Omoto-dake, Ishigaki-jima, Okinawa-ken, Ryukyu Is., 24-v-1975, Y. Yoshiyasu leg. (Right front leg except coxa and first trochanter lacking).

Distribution: Japan (Ryukyu Is.).

This species may be distinguished from the other members of the genus *Anomalon* occurring in Japan by the following key:—

1. Clypeus with a pair of distinct apico-median tubercles (Fig. 1).2
- Clypeus without distinct apico-median tubercles.3
2. Mandible with apical teeth equal in length (Fig. 2). Scutellum almost flat, finely and sparsely punctate, without lateral carinae. Mesopleurum with an unsculptured area just below subtegular ridge. Frontal orbit (Fig. 1), base and apex of 1st tergite and apex of 2nd tergite yellow. (Japan).*yoshiyasui*, sp. nov.
- Mandible with apical teeth unequal in length. Scutellum distinctly convex, reticulate-rugose, with strong lateral carinae. Mesopleurum with a strongly trans-striate area just below subtegular ridge. Frons, 1st and 2nd tergites entirely black. (Japan).*japonicum* (Uchida)
3. Occipital carina complete above.4
- Occipital carina incomplete above.6
4. Hind wing with nervellus reclivous; brachiella reaching to basal 1/2. Face finely and densely punctate; clypeus finely and sparsely punctate. Pronotum with a large unsculptured area just behind epomia. (Japan).*kurumensis* Kusigemati
- Hind wing with nervellus vertical; brachiella reaching near hind margin of hind wing. Face more strongly and densely punctate; clypeus strongly and more densely punctate. Posterodorsal area of pronotum unsculptured or rugose.5
5. Posterodorsal area of pronotum more or less rugose. Frons strongly trans-striate. Postnervulus intercepted above the middle. Hind coxa less extensively rugulose on dorsal side. (Japan, Korea and Mongolia).*coreanum* (Uchida)
- Posterodorsal area of pronotum unsculptured. Frons distinctly and densely punctate, with weak and short trans-striae along median carina. Postnervulus intercepted at middle. Hind coxa more extensively rugulose on dorsal side. (Japan).*victrovi* Momoi
6. Base of 1st tergite yellowish brown to dark brown. Hind coxa longitudinally rugulose on the basoventral portion. (Japan).*kusigematii* Momoi
- Base of 1st tergite immaculate black. Hind coxa weakly and regularly spaced punctate on ventral side. (Japan, Formosa and Korea).*nigribase* Cushman

Summary

One species of the genus *Anomalon* is described: *A. yoshiyasui*, sp. nov. from Japan (Ryukyu Is.). A key to the Japanese species is provided.

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