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A REVISION OF THE GENUS ACANTHORMIUS
ASHMEAD, WITH DESCRIPTIONS
OF SIX NEW SPECIES
(HYMENOPTERA, BRACONIDAE)

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The genus *Acanthormius* Ashmead, one of the most peculiar genera of the subfamily Hormiinae, was originally proposed by Ashmead, 1906, for *Acanthormius japonicus* Ashmead. Since then two other species have been described from the Solomon Islands and Madagascar. In the course of the present investigations six new species described hereinafter have been found in Japan, the Ryukyu Islands, the Philippine Islands and Malaya. The holotypes of the present new species will be deposited in the United States National Museum (USNM), Washington, D. C., the Bernice P. Bishop Museum (BPBM), Honolulu, or the Entomological Institute of Hokkaido University (EIHU), Sapporo. In addition, I have been convinced that *Aulosaphes capensis* Hedqvist, 1963, occurring in South Africa should be transferred to the present genus.

Subfamily **Hormiinae**

Genus ***Acanthormius*** Ashmead

Acanthormius Ashmead, Proc. U. S. Nat. Mus. 30: 200, 1906.

Type-species: *Acanthormius japonicus* Ashmead, 1906.

This genus is characterized by the following aspects:

Head transverse; occiput margined. Thorax with notaulices impressed. Propodeum areolated. Fore wing with three cubital cells; 1st discoidal cell petiolate; recurrent nervure received in 2nd cubital cell; nervulus postfurcal; nervus parallelus interstitial. Abdomen with three basal tergites visible above, longitudinally striate; suturiform articulation strongly impressed, crenulate; 3rd tergite with projecting, outer apical angles, "apical tubercles", in some species the tubercles being entirely reduced; apical margin of 3rd tergite with a short, transparent fringe below; ovipositor slightly curved downwardly, with its sheath prominently extended, at least as long as 2nd tergite.

Hedqvist (1963) has considered that *Acanthormius* might be placed near *Rhaconotus* Ruthe, 1854, in the subfamily Doryctinae, but it seems to be referable to his "*Aulosaphes*-group" including *Lysitermus* Foerster, 1862, *Cedria* Wilkinson, 1934, and *Aulosaphes* Muesebeck, 1935. This genus is closely related to *Lysitermus* and *Cedria* both of which have the nervus parallelus interstitial, but those two genera have only two cubital cells, the former lacking the first intercubitus and the latter the second, and in addition no

species of which the apical tubercles of the third tergite are well developed have been found in those genera. On account of the presence of three cubital cells *Aulosaphes* is closest to the present genus, from which it is distinguished by the nervus parallelus which is not interstitial but originates from the middle of the apex of the first brachial cell.

So far as I am aware, *Acanthormius dentatus* Granger from Madagascar is the only host-known species, being recorded as a parasite of *Odites* sp. of the Xyloryctidae, Lepidoptera.

The Oriental species may be distinguished by the following key:—

Key to the Oriental species of *Acanthormius*

1. Head dorsally more transverse, with temples shorter, strongly converging immediately behind eyes.
Head with vertex smooth and shining; eyes and ocelli large. Thorax with mesoscutum smooth and shining. Fore wing (Fig. 4) with radius originating just beyond middle of stigma; 1st abscissa of radius long, three-fourths as long as the 2nd. Abdomen (Fig. 15) with apical tubercles of 3rd tergite reduced; ovipositor-sheath as long as 2nd and 3rd tergites taken together. Length 1.5 mm. (♀). Philippine Is. 6. *bakeri*, sp. nov.
- Head dorsally less transverse, with temples longer, not converging immediately behind eyes. 2.
2. Fore wing with radius originating well beyond middle of stigma.
Head brownish yellow, with vertex smooth and shining; cheeks relatively bulging; eyes small; ocelli large; malar space long; antennae with 20 segments (♀), 20-22 segments (♂). Thorax with mesoscutum smooth and shining. Fore wing (Fig. 3) with stigma long and narrow; 1st abscissa of radius short. Abdomen (Fig. 10) with apical tubercles as long as half of median length of 3rd tergite; ovipositor-sheath as long as 2nd tergite. Length 1.8 mm. (♀), 1.5 mm. (♂). Japan & Ryukyu Is. 1. *japonicus* Ashmead
- Fore wing with radius originating just beyond middle of stigma. 3
3. Head with vertex rugose.
Head yellowish brown, with cheeks narrowed; eyes small; ocelli moderate in size; antennae with 17-19 segments (♀). Thorax with mesoscutum entirely rugose, covered with short hairs. Fore wing (Fig. 7) with stigma long and narrow. Abdomen (Fig. 11) with apical tubercles stout, as long as half of median length of 3rd tergite; ovipositor-sheath as long as 2nd tergite. Length 2 mm. (♀). Ryukyu Is. 5. *rugosus*, sp. nov.
- Head with vertex smooth and shining. 4
4. Ocelli smaller; antennae short and stout, at most 17 segmented in female. 5
- Ocelli larger; antennae long and slender, more than 20 segmented in female. 6
5. Abdomen (Fig. 14) with apical tubercles developed, but short and slender. Antennae 15-17 segmented with a whitish annulus apically (♀), 17-20 segmented without a whitish annulus apically (♂). Thorax with mesoscutum shagreened. Fore wing (Fig. 2) with 1st abscissa of radius short, as long as half of the 2nd. Ovipositor-sheath a little shorter than 2nd and 3rd tergites taken together. Length 1.5 mm. (♀♂). Japan. 2. *takadai*, sp. nov.
- Abdomen (Fig. 9) with apical tubercles entirely wanting. Antennae 14 segmented with a whitish annulus apically (♀), 14-15 segmented without a whitish annulus apically (♂). Fore wing (Fig. 1) with 1st abscissa of radius long, a little shorter than the 2nd. Thorax with mesoscutum smooth and shining. Ovipositor-sheath shorter, as long as 2nd tergite. Length 1.2 mm. (♀♂). Malaya. 7. *malayensis*, sp. nov.
6. Thorax with mesoscutum smooth and shining. Head with cheeks more or less bulging; eyes and ocelli large; malar space longer; antennae 20 segmented in both sexes, with a whitish annulus apically in female. Abdomen (Fig. 13) with apical tubercles slender, pale yellow;

- ovipositor-sheath longer, as long as 2nd and 3rd tergites taken together. Length 1.3 mm. (♀♂). Ryukyu Is. 4. *iriomotensis*, sp. nov.
- Thorax with mesoscutum weakly shagreened. Head with cheeks narrowed; eyes moderate in size; ocelli very large; malar space shorter; antennae longer, 24 segmented without a whitish annulus apically (♀). Abdomen (Fig. 12) with apical tubercles stout, dark brown; ovipositor-sheath shorter, as long as 2nd tergite. Length 2 mm. (♀). Philippine Is. 5. *philippinensis*, sp. nov.

1. *Acanthormius japonicus* Ashmead

Acanthormius japonicus Ashmead, Proc. U. S. Nat. Mus. 30: 200, ♀, 1906.

Acanthormius japonicus: Fahringer, Opusc. bracon. 3: 176, 1932; Watanabe, Jour. Facul. Agr., Hokkaido Imp. Univ. 42: 43, 1937; idem, Ins. Mats. 21: 5, 1957.

This species was originally described from a single female specimen. The original description reads as follows:—

"*Female*—Length 1.8 mm.; ovipositor about one-third the length of the abdomen. Head and thorax pale brownish, the abdomen dark brown above, longitudinally striated, beneath pale yellowish; head smooth and shining, brownish yellow; palpi, tegulae, coxae, and trochanters whitish or yellowish white; rest of legs pale yellowish; metathorax areolated.

"*Type*.—Cat. No. 7300 U.S.N.M.

"*Locality*.—Hakone, (A. Koebele). One specimen."

The original description is too incomplete to allow one to know the species definitely. However, by courtesy of Muesebeck who has examined the type of *A. japonicus* and given me valuable suggestions I could definitely identify the specimens examined with *A. japonicus*. On the basis of the present material a redescription of this species will be given below:—

♀. Head dorsally transverse, with temples long, not converging behind eyes; vertex smooth and shining; cheeks comparatively bulging; eyes small; malar space two-thirds as long as eye height; ocelli large, the distance between posterior ocelli rather shorter than diameter of an ocellus. Antennae slender, longer than corpus, with 20 segments (1 ♀). Thorax with mesoscutum almost smooth and shining, weakly rugose posteriorly; mesoscutum, pronotum and anterior part of mesopleura with short, recumbent hairs; scutellum small, weakly convex, smooth and shining. Propodeum completely areolated, weakly rugose. Fore wing (Fig. 3) with stigma long and narrow, at least 5 times as long as its maximum width; radius originating well beyond middle of stigma; ratio of inner side of stigma to outer side 5:3; 1st abscissa of radius short, three-fifths as long as the 2nd; nervulus postfurcal by its own length. Abdomen (Fig. 10) nearly as long as head and thorax taken together, wider than thorax; 1st tergite slightly longer than wide at apex; 2nd tergite wider and longer than the 1st; 3rd tergite at median line as long as two-thirds of the 2nd; apical tubercles of 3rd tergite long, rounded at apex, nearly half as long as median length of 3rd tergite; ovipositor-sheath as long as 2nd tergite, and twice as long as apical tubercle.

Head brownish yellow without fuscous markings; thorax and abdomen variable in colour from brownish yellow to dark brown; antennae brownish yellow, darkened towards apex; legs honey yellow; all tarsi more or less fuscous. Wings hyaline; stigma fuscous, broadly pale yellow at base; veins brownish yellow; 2nd intercubitus colourless. Ovipositor-sheath dark brown.

Length 1.8 mm.

♂. Essentially as in the female, both in colour and sculpture, except that the antennae are more slender, with 20–22 segments (3 ♂♂).

Length 1.5 mm.

Japan: Honshu—Hakone (after Ashmead); Nachi, Wakayama-ken, 1♀, 21-ix-65, H. Takada leg. Kyushu—Amami-oshima, 1♂, 25-v-59, K. Kamijo leg. & 2♂♂, 24-iv-65, H. Takada leg. Ryukyu Is.: Ishigaki-jima, 1♀, 18-iii-64, C. M. Yoshimoto & J. Harrell leg.

Distribution. Japan; Ryukyu Is.

This species is readily distinguished from any other species by the 1st abscissa of the radius originating well beyond the middle of the stigma.

2. *Acanthormius takadai*, sp. nov.

♀. Head dorsally transverse, with temples long, not converging immediately behind eyes; vertex smooth and shining; cheeks narrowed; eyes large; malar space less than half as long as eye height; ocelli very small, the distance between posterior ocelli more than twice as long as diameter of an ocellus. Antennae stout, as long as corpus, with 15–17 segments. Thorax with mesoscutum shagreened, covered with short hairs; pronotum and anterior part of mesopleura covered with short hairs; scutellum small, convex, smooth and shining. Propodeum completely areolated, weakly rugose, with transverse striae. Fore wing (Fig. 2) with stigma relatively short and broad, 4 times as long as its maximum width; radius originating just beyond middle of stigma; 1st abscissa of radius two-thirds as long as the 2nd, and equal to the 2nd intercubitus in length; nervulus just postfurcal. Abdomen (Fig. 14) rather shorter than head and thorax taken together, wider than thorax; 1st tergite a little shorter than its width at apex; 2nd tergite wider and longer than the 1st; 3rd tergite at median line as long as two-thirds of the 2nd; apical tubercles of 3rd tergite short and slender, nearly one-fifth as long as median length of 3rd tergite; ovipositor long, its sheath being a little shorter than 2nd and 3rd tergites taken together.

Dark brown to black; face and 1st abdominal tergite yellowish brown; antennae dark brown with four basal segments brownish yellow, and with apical segments except for the two extreme ones yellowish white. Legs pale yellow. Wings hyaline; stigma fuscous, pale yellow on basal third; veins yellowish brown; 2nd intercubitus colourless. Ovipositor-sheath dark brown.

Length 1.5 mm.

♂. Differs from the female, apart from usual sexual differences, by the following aspects:—

Darker in colour; abdomen more slender; antennae dark brown, only three basal segments yellowish, with 17–20 segments; apical tubercles of 3rd tergite less weakly developed.

Length 1.5 mm.

Japan: Hokkaido—Tomakomai, 1♀, 23-vi-59, K. Kamijo leg. Honshu—Nachi, Wakayama-ken, 1♀ (holotype in EIHU), 21-ix-65, H. Takada leg.; Kyoto, 1♂, 15-vi-65, H. Takada leg. Shikoku—Matsuyama, Ehime-ken, 1♀, 1♂, 30-iv-65, H. Takada leg. Kyushu—Tsushima, 4♂♂, 11-vi-65, H. Takada leg.; Amami-oshima, 1♂, 25-v-59, K. Kamijo leg. & 1♂, 24-iv-65, H. Takada leg.

This species is closely related to *Acanthormius japonicus*, from which it is readily

distinguished by the very small ocelli, by the radius originating just beyond the middle of stigma, by the shagreened mesoscutum, and by the antennae having a whitish annulus apically in the female.

3. *Acanthormius rugosus*, sp. nov.

♀. Head dorsally transverse, with temples long, not converging immediately behind eyes; vertex rugose, pubescent; cheeks narrowed; eyes small; malar space two-thirds as long as eye height; ocelli moderate in size, the distance between posterior ocelli a little longer than diameter of an ocellus. Antennae stout, as long as corpus, with 17-19 segments. Mesoscutum entirely rugose, covered with short whitish hairs; pronotum and mesopleura as rugose as mesoscutum, pubescent; mesopleura with a broad smooth area medially; scutellum small, smooth and shining. Propodeum completely areolated, rugose. Fore wing (Fig. 7) with stigma long and narrow, 5 times as long as its maximum width; radius originating just beyond middle of stigma; 1st abscissa of radius short, a little shorter than half of the 2nd, which is a little shorter than twice as long as 2nd intercubitus; nervulus postfurcal by its own length. Abdomen (Fig. 11) as long as head and thorax taken together, wider than thorax; 1st tergite short, rather shorter than width at apex; 2nd tergite longer and wider than the 1st; 3rd tergite at median line as long as the 2nd; apical tubercles stout, slightly curved inwardly in dorsal view, half as long as median length of 3rd tergite. Ovipositor-sheath as long as 2nd tergite, dark brown.

Head and thorax yellowish brown with fuscous parts; abdomen dark brown; antennae brown, darkened towards apex; legs honey yellow; wings hyaline; stigma fuscous, broadly pale yellow at base; veins yellowish brown; 2nd intercubitus colourless.

Length 2 mm.

♂. Unknown.

Ryukyu Is.: Iriomote-jima, 1♀ (holotype in BPBM), Ushikumori, 425 m. 11-iii-64 & 1♀, 9-iii-64, C. M. Yoshimoto & J. Harrell leg.; Ishigaki-jima, 1♀, 18-iii-64, C. M. Yoshimoto & J. Harrell leg.

This species is readily distinguished from any other Oriental species by the rugose vertex. It should be noted that in a female specimen of which the data are the same as the holotype the nervus parallelus is not interstitial but originates from the upper third of the apex of the first brachial cell. (See: Fig. 8). The specimen in question seems to be referable to this species, but is excluded from the type-series.

4. *Acanthormius iriomotensis*, sp. nov.

♀. Head dorsally transverse, with temples long, not converging immediately behind eyes; cheeks more or less bulging; eyes large; malar space short, about half as long as eye height; ocelli large, the distance between posterior ocelli as long as diameter of an ocellus. Antennae long and slender, longer than corpus, with 20 segments. Thorax with mesoscutum smooth and shining, with short hairs; pronotum and mesopleura anteriorly covered with short hairs; scutellum small, slightly convex, smooth and shining. Propodeum completely areolated, almost smooth and shining. Fore wing (Fig. 5) with stigma relatively short and wide, 4 times as long as its maximum width; radius originating just beyond middle of stigma; 1st abscissa of radius short, three-fifths as long as the 2nd, and three-fourths as long as 2nd intercubitus; nervulus postfurcal by its

own length. Abdomen (Fig. 13) as long as head and thorax taken together, a little wider than thorax; 1st tergite as long as width at apex; 2nd tergite longer and wider than the 1st; 3rd tergite at median line two-thirds as long as the 2nd; apical tubercles of 3rd tergite long and slender, nearly half as long as median length of 3rd tergite. Ovipositor-sheath as long as 2nd and 3rd tergites taken together.

Head entirely brownish yellow; thorax reddish brown; abdomen dark brown; apical tubercles pale yellow; legs honey yellow; antennae yellowish brown, with 15th-18th segments yellowish white. Wings hyaline; stigma entirely pale yellow, without fuscous spots; veins brownish yellow; 2nd intercubitus colourless. Ovipositor-sheath dark brown.

Length 1.3 mm.

♂. Essentially as in the female, except that the antennae are entirely brownish yellow, 20 segmented, without a whitish annulus apically.

Length 1.3 mm.

Ryukyu Is.: Iriomote-jima, 1♀ (holotype in BPBM), Nakara Gawa, 0-200 m., 1♀, 12-iii-64, C. M. Yoshimoto & J. Harrell leg.

This species somewhat resembles *A. takadai*, from which it is readily distinguished by the larger eyes and by the smooth mesoscutum.

5. *Acanthormius philippinensis*, sp. nov.

♀. Head dorsally transverse, with temples long, not strongly converging immediately behind eyes; vertex smooth and shining; cheeks narrowed; eyes moderate in size; malar space a little longer than half of eye height; ocelli large, the distance between posterior ocelli half as long as diameter of an ocellus. Antennae long and slender, longer than corpus, with 24 segments. Thorax with mesoscutum rugose on the whole, covered with short hairs; scutellum small, smooth and shining; pronotum and mesopleura rugose, pubescent, the latter having a broad, smooth and shining area medially. Propodeum completely areolated, reticulate-rugose. Fore wing (Fig. 5) with stigma long and narrow, 5 times as long as its maximum width; radius originating just beyond middle of stigma; 1st abscissa of radius a little longer than half of the 2nd, and a little shorter than 2nd intercubitus; 1st intercubitus only distinct on upper half and entirely obliterated on lower half; nervulus postfurcal by its own length. Abdomen (Fig. 12) as long as head and thorax taken together; 1st tergite as long as wide at apex; 2nd tergite longer than the 1st; 3rd tergite two-thirds as long as median length of the tergite; ovipositor-sheath as long as 2nd tergite.

Head yellowish brown; thorax reddish brown; abdomen dark brown; antennae yellowish brown, darkened towards apex; legs brownish yellow. Wings hyaline; stigma entirely pale yellow; veins brownish yellow; 2nd intercubitus colourless. Ovipositor-sheath dark brown.

Length 2 mm.

♂. Unknown.

Philippine Is.: Mt. Makling, Luzon, 1♀ (holotype in USNM), no other data, C. F. Baker leg.

This species is similar to *A. rugosus*, from which it is readily distinguished by the smooth and shining vertex.

6. *Acanthormius bakeri*, sp. nov.

♀. Head dorsally very transverse, with temples short, converging immediately behind eyes; vertex smooth and shining; cheeks narrowed; eyes large; malar space nearly as long as one-third of eye height; ocelli large, the distance between posterior ocelli as long as diameter of an ocellus. Antennae a little shorter than corpus, with 19 segments. Thorax with mesoscutum smooth and shining; pronotum and mesopleura anteriorly covered with short hairs; scutellum relatively large, flat, smooth and shining. Propodeum completely areolated, almost smooth and shining. Fore wing (Fig. 4) with stigma short, 4 times as long as its maximum width; radius originating just beyond middle of stigma; 1st abscissa of radius three-fourths as long as the 2nd, and a little shorter than 2nd intercubitus; 2nd cubital cell long and narrow; nervulus just post-furcal. Abdomen (Fig. 15) long and narrow, rather longer than head and thorax taken together, not wider than thorax; 1st tergite a little longer than wide at apex; 2nd tergite as long as the 2nd; apical tubercles entirely wanting; fringe minutely serrated at outer apical angles of 3rd tergite. Ovipositor-sheath as long as 2nd and 3rd tergites taken together.

Head yellowish brown; thorax and abdomen yellowish, the latter being darker; antennae brown, the basal segments yellowish; legs brownish yellow. Wings hyaline; stigma yellowish brown, pale basally; veins yellowish; 2nd intercubitus colourless. Ovipositor-sheath reddish brown.

Length 1.5 mm.

♂. Unknown.

Philippine Is.: Mt. Makling, Luzon, 1♀ (holotype in USNM), no other data, C. F. Baker leg.

This species is distinct from any other species by the very transverse head with the short temples.

7. *Acanthormius malayensis*, sp. nov.

♀. Head dorsally transverse, with temples long, convex, not converging immediately behind eyes; eyes moderate in size; malar space half as long as eye height; vertex smooth and shining; cheeks narrowed; ocelli small, the distance between posterior ocelli 1.5 times as long as diameter of an ocellus. Antennae short, as long as corpus, with 14 segments. Thorax smooth and shining; pronotum, mesoscutum and anterior part of mesopleura covered with short hairs; scutellum comparatively large, flat, smooth and shining. Propodeum completely areolated, weakly rugose, with transverse striae. Fore wing (Fig. 1) with stigma short, 4 times as long as its maximum width; radius originating just beyond middle of stigma; 1st abscissa of radius a little shorter than the 2nd, and as long as 2nd intercubitus; 2nd cubital cell short; nervulus slightly post-furcal. Abdomen (Fig. 9) rather short and stout, a little longer than thorax; 1st tergite shorter than width at apex; 2nd tergite 1.5 times as long as the 1st, closely longitudinally striate; 3rd tergite three-fifths as long as the 2nd, striation as on the 2nd; apical tubercles entirely wanting, with fringe rather broad, slightly emerginate medianly. Ovipositor-sheath as long as 2nd tergite.

Brownish yellow except for mesopleura and 3rd tergite dark brown; antennae yellowish brown, basal segments being yellowish, and apical three, rarely four, segments whitish; legs brownish yellow. Wings hyaline; stigma yellowish brown, with both

extreme ends pale; veins yellowish brown; 2nd intercubitus colourless. Ovipositor-sheath dark brown.

Length 1.2 mm.

♂. Essentially as in the female, except that the antennae are 14-15 segmented and not whitish apically.

Length 1.2 mm.

Malaya: Batu Caves, 1♀ (holotype in USNM), 22-iii-60, no other data & 8♀♀, 6♂♂, 1950-1960, collected at light.

This species is distinct from any other Oriental species by the shorter antennae with fewer segments and by the longer 1st abscissa of the radius.

The following three species described from South Africa, Madagascar and the Solomon Islands, respectively, seem to be referable to the genus *Acanthormius*. However, I have no knowledge of these species except from their original descriptions.

8. *Acanthormius capensis* (Hedqvist), comb. nov.

Aulosaphes capensis Hedqvist, Ent. Tidskr. 84: 43, ♂, Fig. 10, A & B, 1963.

Having read the original description with the figures I have been convinced that this insect should be undoubtedly transferred to *Acanthormius*, since the nervus parallelus of the fore wing is interstitial.

The original description reads as follows:—

“♂. Antennae with the joints 1-3, head, and thorax reddish brown. The rest of the antennae brown. Legs and gaster except 3rd segment yellowish brown, 3rd segment darker. Wing veins pale brown.

“Head nearly transverse, smooth and somewhat gibbous below the base of the antennae. Antennae (broken, 9 joints) inserted above the middle of the face. Eyes small, oval. Malar space as long as the length of the eye. The space between ocelli and the eye = the space between ocelli and occipital carina. Thorax except scutellum shagreened, scutellum smooth. Notaulices wide and crenulated, meeting in front of the prescutellar furrow. A short longitudinally, weak furrow between notaulices and frontad from the meeting point of the notaulices. Prescutellar furrow with 4 cross-carinae. Propodeum areolated and shagreened. Gaster with 3 segments, which are regularly, coarsely and longitudinally striated, between the striae wrinkled. The 3rd segment apically and laterally (fig. 10 B) with a toothed fringe. Legs slender with hind tibiae gently curved. Mesopleura smooth with a nearly smooth furrow. Wing veins, see fig. 10 A.

“Female unknown.

“Length: 1.9 mm.

“Holotype: in the coll. of the Entomological Museum of Lund University.

“Locality: S. Africa, Cape Prov., Cape Peninsula, Hout Bay, Skoorsteenkop, 2.2, 1951 No. 166.

Leg. Prof. P. Brinck, collected in an insect trap, Alt. ft. 650.

“This species undoubtedly belongs to the genus *Aulosaphes* Muesebl. Differs from the known species by having smooth head, malar space as long as the length of the eye and different colour.”

Distribution: South Africa.

9. *Acanthormius dentatus* Granger

Acanthormius dentatus Granger, Mém. Inst. Sci. Madagascar 2 (A): 187, ♀, Fig. 194, 1949.

The original description reads as follows:—

“TÊTE subglobuleuse, lisse et luisante. Antennes de 18 articles, un peu plus longues que le corps, légèrement épaissies au sommet. THORAX lisse et luisant. Mésonotum subtronqué en avant;

notaules assez profonds, élargis et crénelés en avant, confluent en arrière. Fossette antéscutellaire large, presque lisse, obsolètement crénelée. Ailes (Fig. 194). Pattes longues et grêles. Segment médiaire transversal, lisse et luisant, aréolé. ABDOMEN: tergite 1 transversal, très finement et irrégulièrement strié en long sur fond finement chaginé. Tergite 2 un peu moins long que large, luisant, imperceptiblement alutacé au milieu, finement strié en long sur les côtés; 2^e suture profonde et crénelée, subsinuée au milieu. Tergite 3 deux fois plus large que long, lisse et luisant au milieu, finement strié en long sur les côtés, prolongé en arrière par deux fortes saillies dentiformes. Tergites suivants très courts, tarière aussi longue que le tiers de l'abdomen. Long. 1.75 mm.

"COLORATION.—Testacé-rougeâtre; tête et thorax en grande partie rembrunis. Antennes testacé-rougeâtre, avec le tiers médian rembruni et les deux derniers articles brun-noir. Ailes très légèrement enfumées: nervures et stigma testacé-brunâtre. Pattes testacées. Bords latéraux du tergite 2 et tergites suivants, au moins en majeure partie, bruns; sternites testacés. Valves de la tarière brunes.

"♂. Inconnu.

"Bekily, X. 1940, 4 ♀ (A. SEYRIG).

"HÔTE.—*Odites* sp. (LEP. XYLORYCTIDAE)."

Ditribution: Madagascar.

10. *Acanthormius dubitatus* Brues

Acanthormius dubitatus Brues, Bull. Mus. Comp. Zool. 62: 105, ♀. 1918.

The original description reads as follows:—

"Type.—M. C. Z. 9,055. Solomons: Three Sisters, Malapaina. W. M. Mann.

"♀. Length 2.3 mm. Uniformly ferruginous, the legs and three basal joints of antennae pale yellow. Face evenly convex, smooth and shining; malar space one third as long as the eye; clypeal emargination deep, leaving a large semicircular opening above the mandibles. Front and posterior part of head polished, the latter very strongly margined. Antennae 21-jointed; scape short, oval; pedicel more than half as large as the scape; flagellar joints long, gradually decreasing in length toward apex, basal ones cylindrical, apical ones becoming more or less lanceolate. Mesonotum highly polished with deep crenulate parapsidal furrows that converge and meet before the scutellum; also with a median furrow impressed only behind; scutellum with two large, quadrate, nearly confluent foveae at the base. Propodeum areolated, the superomedian area an equilateral triangle connected with the anterior margin by a median carina, petiolar area pentangular, long, narrowed below. Abdomen consisting of three segments, the second longest, about as wide as long; third a little shorter; first one third shorter; upper surface coarsely longitudinally striated or wrinkled; third segment deeply emarginate at apex and also at the middle of each side, with a small tooth just preceding the lateral emargination; venter pale; ovipositor shorter than the first segment. Propleura with several coarse striae below, mesopleura convex, polished with a few coarse striae converging from the upper anterior margin toward the centre of the disc; below with a deep elongate impression and just inside the posterior edge with a crenate line; metapleura coarsely rugose. Wings nearly hyaline, with pale brown veins; submedian cell slightly longer than the median; stigma elongate; second section of the radius one third longer than the first; radial cell nearly attaining the wing-tip; recurrent nervure interstitial with the first transverse cubitus; submedian cell of hind wing fully half as long as the median."

Distribution: The Solomon Islands.

Acknowledgments

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in its present form. I am also very grateful to Dr. J. L. Gressitt, Bishop Museum, Honolulu, Dr. K. Kamijo, Hokkaido Forest Experiment Station, Bibai, and Dr. H. Takada, Entomological Institute, Hokkaido University, Sapporo, for their kindness in offering invaluable material for the present use.

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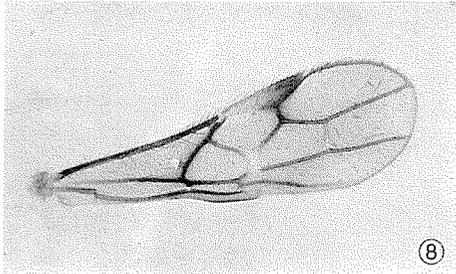
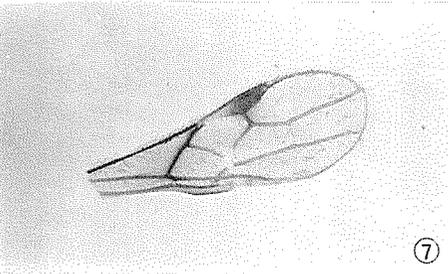
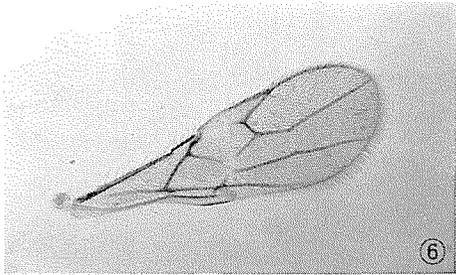
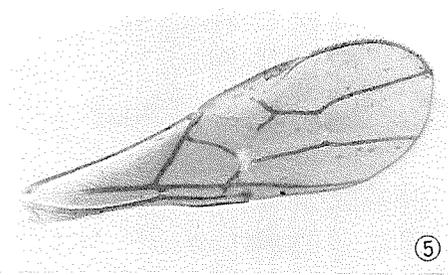
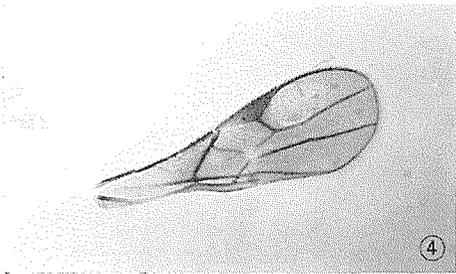
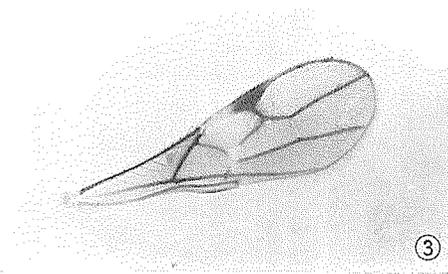
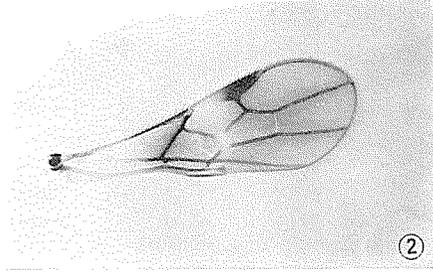
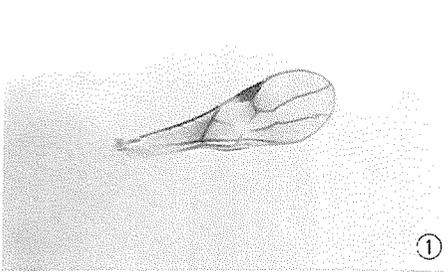
Explanation of plates

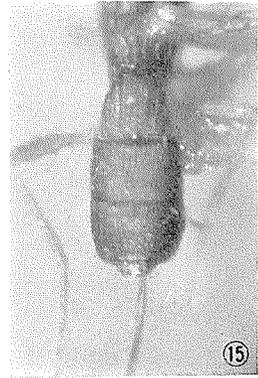
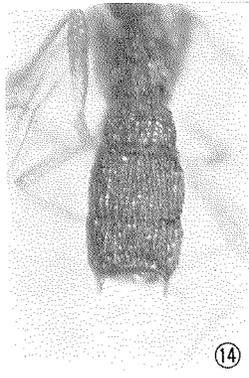
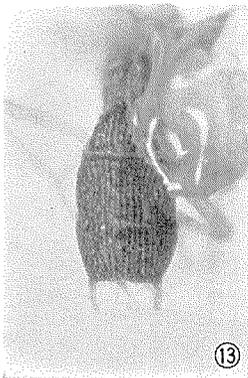
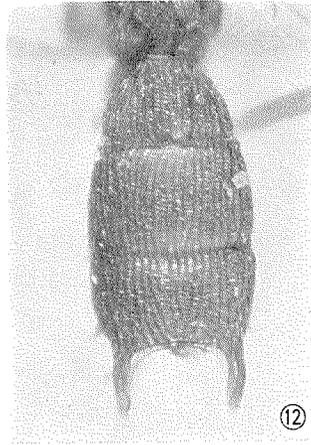
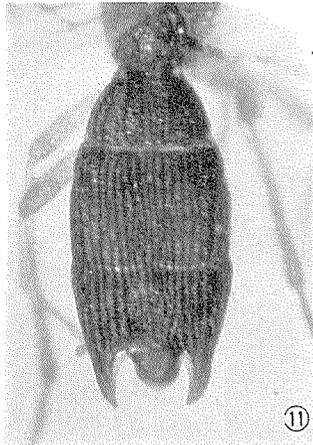
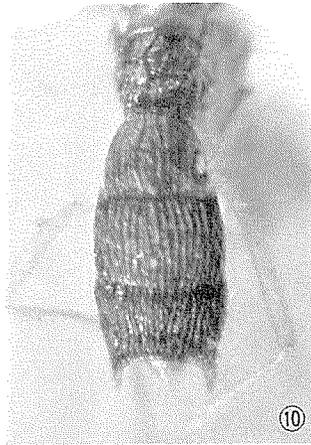
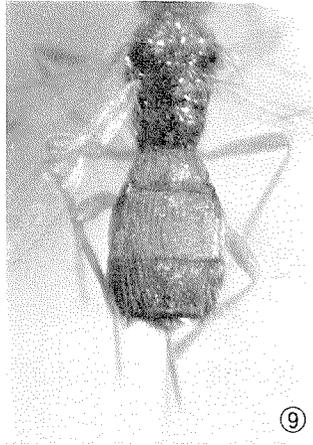
Plate V. Figs. 1-7. Fore wing (♀) of: 1. *Acanthormius malayensis*; 2. *A. takadai*; 3. *A. japonicus*; 4. *A. bakeri*; 5. *A. philippinensis*; 6. *A. iriomotensis*; 7. *A. rugosus*. Fig. 8. Fore wing of a female specimen which might be referable to *A. rugosus*, but the nervus parallelus originates from the upper third of the apex of the 1st brachial cell.

Plate VI. Fig. 9-15. Abdomen (♀) of: 9. *Acanthormius malayensis*; 10. *A. japonicus*; 11. *A. rugosus*; 12. *A. philippinensis*; 13. *A. iriomotensis*; 14. *A. takadai*; 15. *A. bakeri*.

NEW HOST-RECORD OF APANTELES RUFICRUS TO JAPAN (Hymen.: Braconidae). *Apanteles ruficrus* (Haliday, 1835) is widely distributed in the Old World. In Japan the insect is a well-known parasite of *Naranga aenescens* Moore. On the basis of the present material (2 ♀♀, 1 ♂, Yamaguchi, Japan, 29-x-67, bred from *Leucania separata* by T. Kodama) *Leucania separata* Walker is added to the host-list of *A. ruficrus* in Japan for the first time.

CHIHISA WATANABE





Errata

- Vol. 30, No. 2, p. 57, line 6 from bottom, for "Hedqvist" read "Heqvist".
Vol. 30, No. 2, p. 62, line 15 from top, for "1♀" (not holotype) read "1♂".
Vol. 30, No. 2, p. 64, lines 14 & 15 from top, for "Hedqvist" read "Heqvist."
Vol. 30, No. 2, p. 65, line 17 from top, for "Ditribution" read "Distribution".
Vol. 30, No. 2, p. 66, line 13 from top, for "Hedqvist" read "Heqvist."