

# DESCRIPTIONS OF NEW HYMENOPTERA FROM JAPAN.

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In the following pages I continue the descriptions of the new genera and species of Japanese Hymenoptera in the National Museum, presented by Dr. K. Mitsukuri, of the Imperial University of Tokio; Mr. Y. Nawa, of Gifu; Dr. S. Matsumura, of Sapporo; Mr. Albert Koebele, of Honolulu, and others.

A few species are also included from China, Formosa, Trong, Lower Siam, etc. Six genera and seventy-three species are described as new to science.

Parts I and II of this series of papers were published in the Journal of the New York Entomological Society for 1904, and treated of the superfamilies Sphecoidea, Vespoidea, Proctotrypoidea, Cynipoidea, and Chalcidoidea. The present paper treats of the superfamily Ichneumonoidea.

## Superfamily VIII. ICHNEUMONOIDEA.

### Family LXXV. ICHNEUMONIDÆ.

#### Subfamily I. ICHNEUMONINÆ.

#### MATSUMURAIUS, new genus.

This new genus belongs to the tribe Joppini, and will fall in my table of genera, Classification of the Ichneumon Flies, 1900, page 15, next to *Eccoptosarge* Kriechbaumer, but may be easily separated by the following characters:

Scutellum saddle-shaped, emarginate above ..... *Eccoptosarge* Kriechbaumer.  
Scutellum convexly rounded, not emarginate ..... *Matsumuraius*, new genus.

In the shape of the head, the venation, more or less, the scutellum, and the abdomen, this genus closely resembles *Automalus* Wesmæl, but the metathorax is abruptly truncate posteriorly, the upper hind margin bounded by a carina, the angles toothed, the lateral and pleural carinæ distinct, while the spiracles are large and linear; the areolet of the front wings is large, pentagonal, the discoidal nervure and the second recurrent nervure being broken by a stump of a vein.

## MATSUMURAIUS GRANDIS, new species.

Plate XII, fig. 1.

*Male*.—Length 30 mm. Black, closely punctate; the clypeus and the entire face to the insertion of the antennæ, the inner orbits close to the apex of the eyes, the scape beneath, the upper hind margins of the pronotum interrupted medially, the tegulæ, a small spot beneath, the scutellum, and the legs, except as hereafter noted, are yellow; the hind coxæ beneath and at apex, all trochanters, except a yellow spot on the front pair, the extreme base of middle and hind femora, the apices of same and the apex of tibiæ are black. Abdomen black, except a small spot at apex of the petiole, dorsal segments 2 and 3, and the ventral segments 2 to 4 which are red. Wings hyaline, the apical margins smoky, the stigma and veins, except the subcostal and basal veins which are black or dark fuscous, being yellowish.

*Type*.—Cat. No. 7219, U.S.N.M.

*Locality*.—Sapporo. Described from a single specimen received from Doctor Matsumura and in honor of whom the genus is named.

Genus EXEPHANES Wesmæl.

EXEPHANES KOEBELEI, new species.

*Female*.—Length about 10 mm. Black, closely punctate; the antennal joints 9 to 13 *beneath*, the tegulæ, the apex of the sixth abdominal segment, the seventh and eighth abdominal segments entirely, and the trochanters are white; the extreme apices of flagellar joints 1 to 5 are yellowish; the scutellum is pale yellowish; the apices of the femora, the front tibiæ and tarsi *beneath* are yellowish or testaceous, the front tarsi *above* and the middle tibiæ and tarsi are more brownish, the hind legs are black or brown-black, while the hind tibiæ are yellowish at the extreme base. Wings subfuscous, the stigma yellow, the veins brown. The metathorax is completely areolated, the areola being hexagonal.

*Type*.—Cat. No. 7220, U.S.N.M.

*Locality*.—Japan. One specimen taken by Mr. A. Koebele, the exact locality not stated.

Genus STENICHNEUMON Thomson.

STENICHNEUMON SAPPOROENSIS, new species.

*Male*.—Length 16 mm. Black and punctate, with the face below the antennæ, the inner orbits to summit of eyes, the mandibles, except the teeth, the scape and pedicel, except above, the upper margin of prothorax, interrupted anteriorly, the tegulæ, a line beneath, the scutellum and post-scutellum, a curved line on front coxæ, the legs, except the hind coxæ, femora and apical fourth of the hind tibiæ

which are black, a stripe on hind coxæ beneath and a small spot at sides near base, the second abdominal segment, except basal half, are all yellow. Wings subhyaline, faintly tinged, the stigma and costal vein yellow, the internal veins brown. The metathorax is areolated, but the basal and lateral areas are confluent, the areola subquadrate, the hind margin obtusely angulated.

*Type*.—Cat. No. 7221, U.S.N.M.

*Locality*.—Sapporo. One male, taken by Doctor Matsumura.

Genus MELANICHNEUMON Thomson.

MELANICHNEUMON JAPONICUS, new species.

*Female*.—Length, 14 mm. Black closely punctate, except the three or four terminal segments of the abdomen, which are nearly smooth; antennal joints 11 to 15, or at least beneath, a small line back of the eyes, the scutellum, and a large, oblong spot on all tibiæ behind snow-white; there is also a small yellowish spot on the apical margin of the last dorsal abdominal segment. Wings subfuliginous, the veins black, the stigma being brownish within; tegulæ shining black. The metathorax is completely areolated, the areola large, hexagonal. The gastrocoeli are not deep, situated at the basal lateral angles, and with irregularly longitudinally raised lines, but the space between them is broad and closely punctate, as is the rest of the abdomen.

*Type*.—Cat. No. 7222, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura).

Genus RHEXIDERMUS Förster.

RHEXIDERMUS JAPONICUS, new species.

Plate XII, fig. 2.

*Female*.—Length, 7.5 mm. Black, finely punctate, subopaque; the scutellum yellowish; flagellum reddish-brown, joints 10 to 14 *above* white; mandibles conically pointed, edentate, whitish, the tips blackish; legs ferruginous, the anterior and middle pairs, especially basally pale yellowish; abdomen much longer than the head and thorax united, above black, the petiole and the apical segments smooth and shining, or nearly, the segments 2, 3, and 4 distinctly closely punctate, ventral segments 2, 3, and 4, and the extreme lateral margins of the dorsal segments 2 to 4, testaceous; ovipositor subexserted, as long as the second joint of hind tarsi. Wings hyaline, the costal margin brown, the stigma and internal veins testaceous.

*Type*.—Cat. No. 7223, U.S.N.M.

*Locality*.—Japan (A. Koebele).

## Tribe VI. PHAEOGENINI.

Genus PHAEOGENES Wesmael.

PHAEOGENES JAPONICUS, new species.

*Female*.—Length, 5 mm. Black, with the first 7 joints of the antennæ, the legs, except tips of hind tibiæ, the first and second segments of the abdomen and the fourth very narrowly at base, red; the antennal joints 8 to 12 are more or less white, the joints beyond dark fuscus or black; the extreme apices of the abdominal segments 4 to 7, if viewed from behind, are more or less testaceous, although not noticeable from above. Wings hyaline, the tegulæ and veins basally whitish, the stigma and internal veins brownish. The head above is faintly, sparsely punctate, but in front below the insertion of the antennæ, except the clypeus, it is more closely and distinctly punctured; the clypeus is highly polished with a few scattered punctures; the thorax is distinctly, finely, but not very closely, punctured, the metathorax being finely rugulosely punctured and distinctly areolated; the abdomen has the petiole highly polished, impunctate, the second and third segments subopaque, while those beyond are shining.

*Type*.—Cat. No. 7225, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura).

## Subfamily II. CRYPTINÆ.

## Tribe II. PHYGADEUONINI.

Genus BATHYMETIS Förster.

BATHYMETIS SAPPOROENSIS, new species.

*Female*.—Length, 3.5 mm.; ovipositor shorter than the petiole. Head, thorax and petiole of the abdomen black, the rest of the abdomen, except the sheathes of the ovipositor, which are black, dark red; antennæ about 26-jointed, thickened toward apex, yellowish from the base to the sixth joint, from whence they are dusky or brownish; mandibles red; palpi and tegulæ yellowish white; legs, including coxæ, ferruginous. The head and thorax, except the metathorax which is rugulose and areolated, are smooth and shining, impunctate. Wings hyaline, the stigma and costæ reddish-brown, the internal veins paler.

*Type*.—Cat. No. 7226, U.S.N.M.

*Locality*.—Sapporo. (Dr. S. Matsumura.) One specimen, No. 38.

Genus SCINASCOPUS Förster.

SCINASCOPUS JAPONICUS, new species.

*Male*.—Length, 4 mm. Black and shining; the palpi, tegulæ and legs, except the coxæ which are blackish, the hind femora toward base above and the tips of the hind tibiæ which are reddish or brownish, are

yellowish white; the antennæ are light brownish yellow beneath; the abdomen is longer than the head and thorax united, the petiole subrugulose, subopaque and with carinæ, the other segments being smooth. Wings hyaline, the stigma and veins reddish-brown.

*Type*.—Cat. No. 7227, U.S.N.M.

*Locality*.—Sapporo. (Dr. S. Matsumura.) One specimen, No. 29.

SCINASCOPUS ALBOMACULATUS, new species.

*Male*.—Length, 8 mm. Black; the palpi, the mandibles, except teeth, the clypeus, a spot above it, a spot on scape beneath at apex, the tegulæ and epitegulæ, the front and middle trochanters, except sometimes a stripe above, and the apical margin of the seventh dorsal segment of the abdomen, are ivory white; the tips of the front femora and their tibiæ, and the middle tibiæ are light brownish or yellowish. Wings hyaline, the stigma and veins dark brown.

*Type*.—Cat. No. 2728, U.S.N.M.

*Locality*.—Nikko (A. Koebele).

Tribe III. HEMITELINI.

Genus ADIOSTOLA Förster.

ADIOSTOLA POLITA, new species.

*Female*.—Length, 2.5 mm.; ovipositor less than half the length of the abdomen; black and shining; palpi and tegulæ white; antennæ brown, the scape and pedicel yellowish; legs, except the hind coxæ, testaceous, the trochanters tinged with yellowish white. Wings hyaline, the stigma and veins, except along the costa of the front wings, pale yellowish, the costal edge being brown.

*Type*.—Cat. No. 7229, U.S.N.M.

*Locality*.—Japan (A. Koebele). Two specimens.

Genus PARAPHYLAX Förster.

PARAPHYLAX ALBISCAPUS, new species.

*Male*.—Length 3 mm. Black and shining; the palpi, mandibles, except teeth, scape of antennæ, tegulæ, and middle trochanters, yellowish white; flagellum brown-black, long and tapering off at apex; legs testaceous, the coxæ and tibiæ more or less yellowish white in part or beneath, the hind tibiæ at apex and their tarsi dusky, the hind trochanters, except the second joint above, and the hind tibial spurs ivory white. Wings hyaline, the stigma brown, the costal margin blackish, the internal veins pale brownish or yellowish.

*Type*.—Cat. No. 7230, U.S.N.M.

*Locality*.—Japan (A. Koebele). One specimen.

## Genus HEMITELES Gravenhorst.

## HEMITELES SAPPOROENSIS, new species.

*Female*.—Length 4.5 mm.; ovipositor scarcely one-third the length of the abdomen. Head reddish-brown, with a black spot on the vertex inclosing the ocelli, and finely shagreened; thorax, except the prosternum, which is reddish brown, black, finely shagreened and opaque, the parapsidal furrows absent, the metathorax completely areolated; abdomen reddish-brown, with the petiole black, and the disks of the dorsal segments more or less dusky or blackish; antennæ, except toward tips, and legs ferruginous. Wings hyaline with two transverse brown bands, one across from the basal nervure and inclosing it, and the other, a broader one, across from near the base of the stigma and including the marginal cell.

*Type*.—Cat. No. 7231, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumura). One specimen, No. 27.

## PROTEROCRYPTUS, new genus.

This new genus belongs to the tribe *Hemitelini*, and in my table of genera, Classification of Ichneumon Flies, 1900, page 32, falls in with *Diaglypta* Förster, with which, however, it has no close affinity. The table may be changed to read as follows:

15. Metathoracic ridge *not* interrupted at the middle. .... 16  
 Metathoracic ridge interrupted at the middle, the areola and petiolar area confluent.

First abdominal segment short, broad, and strong ..... *Diaglypta* Förster  
 First abdominal segment long and slender, subclavate; thorax rather short oval, the prothorax not visible from above, the parapsidal furrows absent, the metathorax rather short, rounded off posteriorly and areolated, the areola and petiolar area confluent, the spiracles small, circular.

*Proterocryptus*, new genus

## PROTEROCRYPTUS NAWAII, new species.

Plate XII, fig. 3.

*Female*.—Length about 6 mm.; ovipositor hardly one-third the length of the abdomen. Black, marked with white or yellow as follows: The face, clypeus, the narrow malar space, mandibles, scape and pedicel beneath, hind and front orbits, connected with a band across the forehead, two stripes down the mesonotum, the upper margin of the prothorax at sides broadly to the tegulæ, the tegulæ, a large spot on mesopleura anteriorly, the scutellum, the postscutellum, the mesonotum, except a narrow band at base and at apex surrounding the insertion of the petiole, all coxæ and trochanters, except a black spot on hind coxæ at base behind and a spot on their trochanters *above*, and the apical margins of the abdominal segments (the fifth and sixth

interrupted medially) are white or yellowish-white; legs pale or yellowish-white; the base of hind coxæ behind, spot on their trochanters above and the apices of hind femora and tibiæ, black. Wings hyaline, the stigma and veins reddish brown, the costal and poststigmatal veins black, the venation as in figure. The thorax is closely punctate, otherwise the insect, except some minute sparse punctures on the face, is smooth and shining.

*Type*.—Cat. No. 7233, U.S.N.M.

*Locality*.—Atami (A. Koebele).

#### Tribe VI. CRYPTINI.

Genus CRYPTUS Fabricius.

CRYPTUS ALBERTI, new species.

*Female*.—Length 10 mm.; ovipositor a little longer than half the length of the abdomen. Black, finely, closely punctate, subopaque and pubescent, the metathorax rugulose, with two transverse carinæ; antennæ black, with joint 7 at apex *beneath* and joints 8 to 11 *beneath*, white; legs black, with the apex of front femora and the front and middle tibiæ reddish, their tarsi subfuscous, the hind legs wholly black, except tarsal joints 3 and 4, which are white; the abdomen, except the petiole, is subopaque, the second and following segments very delicately shagreened, a little shiny at their apices, the sixth dorsal segment narrowly white at apex, the petiole smooth and shining. Wings subhyaline, the stigma and veins dark brown, the discoidal nervure broken by a stump of a vein, the areolet rather large, pentagonal, the sides almost parallel.

*Type*.—Cat. No. 7232, U.S.N.M.

*Locality*.—Japan (A. Koebele).

#### Tribe VII. MESOSTENINI.

Genus MESOSTENUS Gravenhorst.

MESOSTENUS OCTOCINCTUS, new species.

*Female*.—Length about 8 mm.; ovipositor half the length of the abdomen. Black and closely punctured; the mandibles, except teeth, the clypeus, face and front orbits to the summit of the eyes, the cheeks and the hind orbits not quite to the summit of the eyes, the palpi, the antennal joints *beneath* from the apex of the sixth to the sixteenth joint, a band on the prothorax above, interrupted at the middle, a round spot on the disk of the mesonotum, the scutellum and its lateral ridges anteriorly, a streak on the post-scutellum, the tegulae, a line beneath, two spots on the mesopleura, a spot on the mesosternum, a large spot on the metapleura, the margins of the metathoracic truncature broadly, all coxæ and trochanters, except a black spot on

the hind coxæ above and a spot on the first joint of the hind trochanters, the tibial spurs and the hind tarsi, except the last joint, are white; rest of legs, except knees of hind legs, tips of hind tibiæ and last joint of tarsi which are black, red; the eight segments of the abdomen are banded with yellowish white at apex, those of the fifth and sixth interrupted, those on the following very narrow. Wings hyaline, the veins dark brown, the lanceolate stigma brownish medially.

*Male*.—Length 7 mm. Agrees practically in every respect with the female, but differs in having joints 9 to 16 of antennæ white, except a streak above, the abdomen with only 7 segments, compressed at apex, all being banded at apex with white and none interrupted medially.

*Type*.—Cat. No. 7234, U.S.N.M.

*Locality*.—China (A. Koebele).

#### Subfamily III. PIMPLINÆ.

#### Tribe III. LISSONOTINI.

Genus PIMPLOPTERUS Ashmead.

PIMPLOPTERUS JAPONICUS, new species.

*Male*.—Length 7 mm. Black; the mandibles, the clypeus, a minute dot on orbits *within* near the base of the eyes, the palpi, an irregular band on each side of the anterior margin of the mesonotum, the tegulæ, front coxæ and trochanters and the tibial spurs yellowish or yellowish white; the rest of the legs, except the hind coxæ, tips of hind tibiæ, and the hind tarsi which are black, red. Wings hyaline, the stigma and veins brown. The head is shining, almost impunctate above, but finely punctate in front; the mesonotum although shining is distinctly punctate; the metathorax finely rugulosely punctate and subopaque; the long abdomen is black, subopaque, but the extreme apical margins of dorsal segments 2 to 6 exhibit a yellowish tinge when viewed from behind. Wings hyaline, the stigma and veins brown.

*Type*.—Cat. No. 7235, U.S.N.M.

*Locality*.—Hakone (A. Koebele).

#### Tribe IV. PIMPLINI.

Genus MEGARHYSSA Ashmead.

MEGARHYSSA JAPONICA, new species.

*Female*.—Length 32 mm.; ovipositor 40 mm. Black; face below the antennæ to the clypeus, except a median black line, the hind orbits broadly to the cheeks, the palpi, the upper lateral margins of the pronotum, an oblong spot above the front coxæ, a large spot below the tegulæ and a smaller spot below that on the anterior margin of the



mesopleura, two longitudinal lines on the mesonotum, the scutellum and postscutellum, a small spot on the lateral ridges that extend from the scutellum, the apex of the metathorax rather broadly, a large spot at the apex of the metapleura, a band at apex of dorsal abdominal segments 1 and 2, and oblong spots on segments 3 to 7, yellow; the legs are tricolored, yellow, black, and ferruginous; the front legs, except the coxæ behind which are black, and the femora within which are reddish are yellow; the middle coxæ, except two united spots at the sides, the base of first joint of the trochanters and the femora beneath and behind, except at apex, are black, otherwise the middle legs are yellow; the hind legs are black, but the the coxæ have a spot at base above, the base of the trochanters and the femora at apex yellow. Wings subfuscous, with a large black cloud across from the apical half of the stigma to beyond the middle of the front wing.

*Type*.—Cat. No. 7238, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura). This beautiful species shows some affinity with *M. superba*.

HEMIEPHIALTES, new genus.

This new genus, on account of having the claws simple, will fall in my generic table of the Pimplini, Classification of the Ichneumon Flies, 1900, page 54, between *Calliephialtes* Ashmead and *Perithous* Holmgren. My generic table may be modified as follows:

- 8. Front wings *with* an areolet..... 8½
- Front wings *without* an areolet.
- Metathorax finely, sparsely punctate, with the lateral areas present, the superior margin of the truncature bounded by a delicate carina, the spiracles small, oval; transverse median nervure in hind wings broken far *below* the middle..... *Hemiephialtes*, new genus.
- 8½. Metathorax smooth, shining, without punctures; areolet in front wings rhomboidal, not petiolate; transverse median nervure in hind wings broken *above* the middle..... *Perithous* Holmgren.

HEMIEPHIALTES GLYPTUS, new species.

Plate XIII, fig. 1.

*Female*.—Length about 12 mm.; ovipositor much longer than the whole body. Black, finely punctate; legs pale ferruginous, the front coxæ and trochanters, the second joint of the hind trochanters, except a spot above, and an annulus at base of hind tibiæ, yellowish white, while the first joint of hind trochanters, the hind femora, tibiæ, and tarsi are black. Wings subfuscous, the tegulæ and costal veins yellowish white, the internal veins and the stigma dark fuscous or black. The abdomen is elongate, nearly twice as long as the head and thorax united, closely punctate, opaque or subopaque, except a small shining

impunctate space at apex of the first, second, and third segments; the second, third, and fourth segments have oblique furrows from the basal middle much as in the genus *Glypta* Gravenhorst.

*Type*.—Cat. No. 7237, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura).

Genus PIMPLA Fabricius.

PIMPLA PLUTO, new species.

*Female*.—Length 15 mm.; ovipositor 4 mm. Entirely black, except the two apical joints of the palpi which are brownish, a stripe on the front femora in front, and the front tibiae, except a stripe above, which are reddish, the stripe above on the front tibiae and the front tarsi are brownish. The whole insect is closely punctate, opaque, except the face, which is more sparsely punctate and shining, the clypeus being distinctly separated from the face, with only a few sparse punctures at its base. Wings subfuliginous, the stigma, except a pale spot at base, and the veins black. The metathorax is entirely without carinae.

*Type*.—Cat. No. 7240, U.S.N.M.

*Locality*.—Japan (A. Koebele).

Genus APECHTHIS Förster.

APECHTHIS ORBITALIS, new species.

Plate XIII, fig. 2.

*Female*.—Length 20 mm.; ovipositor not quite 5 mm. Black, the head and upper part of thorax opaque but not punctate, the sides of the thorax and the scutellum sparsely punctate, shining; the inner orbits within the incision of the eyes, the apex of the scutellum, and the postscutellum are yellowish; the base of the metanotum inclosed by the two diverging carinae is smooth and shining, impunctate but the surface on either side of the carinae is closely punctate, as well as abdominal segments 1 to 5, the following segments being almost smooth; the front legs from the apex of the coxae, the middle legs from the second joint of the trochanters, and the basal two-thirds of the hind tibiae, except a narrow black annulus at base, are flavo-testaceous, the hind femora being rufous, the rest of the legs black. Wings, except a faint tinge, hyaline, the stigma and veins, except a pale spot between the parastigma and stigma, being black.

*Type*.—Cat. No. 7242, U.S.N.M.

*Locality*.—Japan (A. Koebele).

APECHTHIS SAPPOROENSIS, new species.

*Female*.—Length 15 mm.; ovipositor short, about one-fourth the length of the abdomen. Black, the head and thorax not punctate, the face slightly shagreened, with some transverse rugae just beneath the

insertion of the antennæ, the mesonotum subopaque, the metathorax sparsely punctate on either side of the quadrate median inclosure, the basal median inclosure smooth and highly polished, open posteriorly; the abdomen is distinctly, closely punctate; the ocelli are yellowish white; the palpi blackish, with the two or three apical joints yellowish; the antennæ are black, but with the basal two or three joints of the flagellum *beneath* ferruginous; the apex of the scutellum, the post-scutellum, the front legs, except the coxæ, trochanters, the femora *above* and a spot on the tibiæ *behind*, the apex of the middle tibiæ, an annulus toward base and their tarsi, and an annulus toward base of the hind tibiæ, and tibial spurs, pale yellowish, the rest of legs black. Wings hyaline, the hind margins of the tegulæ, a very small spot in front and the costal vein pale yellowish white, the stigma and other veins black.

*Type*.—Cat. No. 7241, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura).

Genus EPIURUS Förster.

EPIURUS ANNULITARSIS, new species.

*Female*.—Length about 10 mm. Black and shining, the head and thorax, except some punctures on the sides of the metathorax, almost impunctate; palpi and tegulæ yellowish white; legs red, the hind tibiæ and tarsi yellowish white, the hind tibiæ with an annulus near base and their apices black; pulvilli and claws black. Wings hyaline, the parastigma, stigma, and poststigmatal vein yellowish, the internal veins brownish. The metanotum has two median carina above that converge toward base, and back of these are two large impressions bounded by a carina on each side and at apex, the space between this carina and the pleural carina being punctate, but the upper face of the metanotum is smooth and impunctate.

*Type*.—Cat. No. 7245, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumura). One specimen, No. 6.

EPIURUS HAKONENSIS, new species.

*Female*.—Length about 12 mm.; ovipositor as long as the abdomen, the sheaths very hairy. Black and shining, the head smooth, impunctate, the thorax faintly, feebly punctate, except the middle mesothoracic lobe anteriorly and the metathorax, which are distinctly punctate; the abdomen is distinctly, rather closely punctate, except at the apical margins of segments 2 to 6 and the two apical segments, which are impunctate; the palpi, pedicel, and first three joints of the flagellum beneath, the tegulæ, a line beneath, and the costal vein at basal half, yellowish white; the legs are ferruginous, the front coxæ, trochanters, and tarsi, the middle trochanters, apex of middle femora, an annulus at base of their tibiæ, all tibial spurs, an annulus at base of hind tibiæ,

a broader one on their middle, and an annulus at base of their tarsi, yellowish white; rest of hind tibiæ and tarsi black. Wings faintly tinged with fuscous, the stigma and internal veins black or dark fuscous.

The metathorax has an apical area indicated, the surface within punctate. The first abdominal segment is not longer than wide.

*Type*.—Cat. No. 7243, U.S.N.M.

*Locality*.—Mount Hakone (A. Koebele); also Sapporo (Doctor Matsumura).

**EPIURUS PERSIMILIS**, new species.

*Female*.—Length 11 mra.; ovipositor as long as the abdomen. Very similar to *E. hakonensis*, except as follows: The antennæ are wholly black, except the extreme apex of the scape, which is white; the front legs, except the femora, the middle legs, except the coxæ and femora, and the hind trochanters and hind tibiæ at basal two-thirds, except a narrow black annulus near the base, are yellowish white, rest of legs, except the apical third of hind tarsi, the annulus near the base, and the hind tarsi, which are black, being rufous; metanotum without an area at base, the median space smooth, impunctate; first abdominal segment a little longer than wide.

*Type*.—Cat. No. 7244, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura).

**NESOPIMPLA**, new genus.

In my generic table of the *Pimplini*, Classification of the Ichneumon Flies, 1900, page 53, this new genus will fall in with *Itopectis* Förster and *Eremochila* Förster, the claws not being toothed at base and the metathoracic spiracles being round, but from both it is easily separated by the areolet of the front wings, which is irregularly pentagonal in shape, resembling that found among the *Phygadeuonini*; the transverse median nervure in the front wings is interstitial with the basal nervure, while in the hind wings it is broken by the subdiscoidal nervure far above the middle; the metathorax has two distinct longitudinal carinæ that diverge posteriorly and end just over the insertion of the hind coxæ; the abdomen is much as in *Pimpla* Fabricius, the apex of segments 2 to 6 tumid, 3 to 6 with transverse impressions a little beyond the lateral middle, the second segment with the transverse impression distinct only laterally at the apical angles, broadly interrupted at the middle.

**NESOPIMPLA NARANYÆ**, new species.

Plate XIII, fig. 3.

*Female*.—Length 9.5 mm.; ovipositor short, less than one-third the length of the abdomen. Head, thorax, and the abdominal segments 6 to 8, except narrowly at apex black, the abdominal segments 1 to 5,

and the antennæ, except the two basal joints, pale ferruginous; palpi and legs yellowish white; the hind coxæ behind and the hind femora pale ferruginous, the extreme apex of the hind femora, an annulus at base, and the apex of the hind tibiæ being black; the tarsal joints 1 to 5 are tipped with black. Wings hyaline, the stigma, except a spot at base, and the internal veins black.

*Type*.—Cat. No. 7247, U.S.N.M.

*Locality*.—Sapporo. Bred by Doctor Matsumura from *Naranya diffusa*.

Genus THERONIA Holmgren.

THERONIA JAPONICA, new species.

*Female*.—Length 11 mm.; ovipositor about one-third the length of the abdomen. Yellowish; the suture at base of clypeus, a median line on face, the frontal depressions back of the origin of the antennæ, the space surrounding the ocelli, the occiput and the eyes, black; the flagellum is brown; thorax at sides and beneath black, the upper margin of the pronotum, the margin of the prosternum, the tegulæ, the ridge beneath, a small line on mesopleura anteriorly and a spot posteriorly, a spot on metapleura, the apex of metathorax broadly, the postscutellum, scutellum, and two lines on the mesothorax, yellow, the middle lobe of the mesonotum is black while the lateral lobes are brownish; abdomen yellowish, the first segment black at basal half or more, the following dorsal segments more or less dusky at base; legs yellowish, but with a spot at base of middle coxæ, a spot on middle femora beneath, the hind coxæ anteriorly and the hind femora beneath, black. Wings hyaline, the costal vein and the stigma yellow, the internal veins brown.

*Type*.—Cat. No. 7239, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura).

#### Tribe V. XORIDINI.

Genus ODONTOMERUS Gravenhorst.

ODONTOMERUS NIKKOENSIS, new species.

*Female*.—Length 8 mm.; ovipositor nearly as long as the body. Black, with segments 3 to 5 of the abdomen dark rufopiceous, the front tibiæ and tarsi testaceous; the middle tibiæ and tarsi darker; the hind legs, except the tibiæ beneath which have a piceous tinge, wholly black; antennæ brown; palpi white. Wings hyaline, the stigma and veins brown. The head and thorax, except the metathorax, are smooth and shining, almost impunctate; the mesonotum only sparsely punctate, more distinct on the prominent middle lobe anteriorly; the petiole and the second segment of the abdomen are finely shagreened, subopaque; the other segments smooth and shining.

*Type*.—Cat. No. 7248, U.S.N.M.

*Locality*.—Nikko (A. Koebele).

Genus *CALLICLISIS* Förster.

*CALLICLISIS INCERTA*, new species.

Plate XIV, fig. 1.

*Male*.—Length about 19 mm. Black and shining, although sparsely punctate; the face, except a central black line, scape of antennæ beneath, the pedicel, basal three or four joints of the flagellum, mandibles, palpi, tegulæ, epitegulæ, all legs from the coxæ, except the hind femora, a spot at apex of first dorsal abdominal segment, a band at apex of the second segment, the third and fourth wholly, except a brownish shade at base of the fourth, a band at apex of the following segments and the venter, testaceous or yellowish, the coxæ black, the hind femora, except at base and apex, blackish or brown-black. Wings hyaline; the stigma, except a median streak from its base, and the veins black. Antennæ, except as noted, black from the fifth or sixth joint. The abdomen is fully one and a half times as large as the head and thorax united and compressed from the third segment.

*Type*.—Cat. No. 7249, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumura).

Subfamily IV. TRYPHONINÆ.

Tribe I. MESOLEPTINI.

Genus *SYCHNOLETER* Förster.

*SYCHNOLETER JAPONICUS*, new species.

*Female*.—Length 8 mm. Black, closely, minutely punctate, opaque, with the second, third, and basal half of the fourth segment of the abdomen, red; the apical half or more of the front femora, their tibiæ and tarsi, the middle tibiæ, except at extreme apex, and the basal three-fourths of the hind tibiæ are testaceous; the tibial spurs, joints 3 and 4 of the hind tarsi, and an annulus on the antennæ (comprising joints 13 to 18), are white; the flagellum outwardly is more or less ferruginous. Wings hyaline, the stigma and veins brown.

*Type*.—Cat. No. 7250, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumura). One specimen, No. 23.

Tribe IV. TRYPHONINI.

Genus *RHIMPHALEA* Förster.

*RHIMPHALEA DUBIA*, new species.

*Male*.—Length 4.5 mm. Black and shining, impunctate; antennæ yellowish beneath, the scape black above, the flagellum dark brown above; palpi and tegulæ white; legs, except coxæ, pulvilli and claws, and a spot at apex of hind tibiæ which are black, flavo-testaceous, the tibiæ and tarsi yellowish white, the tips of coxæ whitish, the hind femora reddish. Wings hyaline, the stigma and veins dark brown.

The second and third dorsal segments of the abdomen have a transverse depression or furrow at the middle.

*Type*.—Cat. No. 7251, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumura). One specimen, No. 24.

Genus *ASTHENARA* Förster.

*ASTHENARA RUFOCINCTA*, new species.

*Male*.—Length 8.6 mm. Black and shining, with the second and third segments of the abdomen red; the cheeks, front orbits, and a spot back of eyes, a spot on each side of the middle mesothoracic lobe anteriorly, a line on the lateral margin of the lateral lobes in front of the tegulae, a line beneath the tegulae, the front trochanters in part and the base of the front femora, the middle trochanters, the apex of middle and the sutures of the hind trochanters are white; the front and middle tibiae and tarsi yellowish; rest of the legs black; the hind legs, except the tibial spurs and the sutures of the trochanters, wholly black. Wings hyaline, or only faintly tinged, the stigma and veins brown.

*Type*.—Cat. No. 7252, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumura). One specimen, No. 34.

Tribe V. *BASSINI*.

Genus *BASSUS* Gravenhorst.

*BASSUS JAPONICUS*, new species.

*Female*.—Length 4.5 mm. Black and shining, but punctate; the palpi, mandibles, clypeus, face, inner orbits, scape and pedicel beneath, front margins of the lateral lobes of the mesonotum, scutellum, a transverse line on the ridge at base of the metanotum, the tegulae, a spot beneath, the epitegulae, the origin of veins at base of the wings, the front and middle legs, apex of hind coxae and trochanters and two-thirds of the hind tibiae, except an annulus at base, are white or yellowish-white, the rest of the legs being black, except the front and middle femora and tibiae, which are tinged with red; the extreme apical margins of dorsal abdominal segments 5, 6, and 7 are whitish; flagellum black brownish at base beneath. Wings hyaline, the costal veins and stigma blackish, the internal veins brown.

*Type*.—Cat. No. 7253, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumura). Two specimens, No. 40.

Genus *SYRPHOCTONUS* Förster.

*SYRPHOCTONUS ATAMIENSIS*, new species.

*Male*.—Length about 5 mm. Black; clypeus, a quadrate spot above, a triangular spot on inner orbits below the middle of the eyes, scape and pedicel of antennae and front coxae and trochanters yellowish-white.

*Locality*.—Atami (A. Koebele).

## Tribe VII. EXOCHINI.

Genus EXOCHUS Gravenhorst.

EXOCHUS HAKONENSIS, new species.

*Female*.—Length 6 mm. Black and shining; the face, palpi, tegulae, the basal two-thirds of the hind tibiae, except an annulus at base, the tibial spurs and tarsi, except at apex, are white; the rest of the legs red. Wings hyaline, the veins and the stigma, except within, brown.

*Type*.—Cat. No. 7255, U.S.N.M.

*Locality*.—Hakone (A. Koebele).

Subfamily V. OPHIONINÆ.

## Tribe V. CAMPOPLEGINI.

Genus CAMPOPLEX Gravenhorst.

CAMPOPLEX HAKONENSIS, new species.

*Female*.—Length 11 mm.; ovipositor as long as the abdomen. Black, closely punctate, pubescent, opaque, the petiole alone smooth and shining; the palpi, tegulae, and tibial spurs are white; scape of antennae beneath yellowish; the front legs, except coxae and first joint of trochanters, apex of middle femora and their tibiae and tarsi, and the hind tibiae behind from near base to apical third, are testaceous or reddish. Wings hyaline, the stigma and veins dark brown.

*Type*.—Cat. No. 7256, U.S.N.M.

*Locality*.—Hakone (A. Koebele).

CAMPOPLEX BICOLORIPES, new species.

*Male*.—Length 13 mm. Resembles the former species, but the color of the legs and abdomen is different. The apex of the second dorsal abdominal segment and the third, fourth, and fifth segments are red; the front and middle legs, except coxae, are yellowish-white, the femora tinged with reddish, the front coxae with a white spot at apex, the hind legs, except the tibial spurs and a narrow annulus at base of tarsi which are white, are entirely black.

*Type*.—Cat. No. 7257, U.S.N.M.

*Locality*.—Hakone (A. Koebele).

## Tribe VII. BANCHINI.

NAWAIA, new genus.

This new genus belongs to the tribe *Banchini*, and in my generic table, Classification of the Ichneumon Flies, 1900, page 96, falls in next to the American genus *Ceratosoma* Cresson, page 97, now *Cerato-gastra* Ashmead. Cresson's name being preoccupied. It agrees with this genus in the shape of the abdomen, but differs quite widely in



other characters: The areolet in the front wings is large and pentagonal; the median cell is a little shorter than the submedian; the transverse median nervure in the hind wing is broken at its basal angle, the subdiscoidal nervure being almost interstitial with the median vein; the clypeus has a slight median sinus; the scutellum ends in a small tooth; while the claws are simple.

The genus is named in honor of Mr. Y. Nawa, the well-known entomologist of Japan, proprietor of the entomological laboratory in Gifu, also the editor of that interesting Japanese magazine, *The Insect World*, and one who has done so much to stimulate entomological research throughout Japan.

NAWAIA JAPONICA, new species.

Plate XIV, fig. 3.

*Female*.—Length, 11 mm. Black; the orbits, the face below antennæ, except a median black line and a black line at base of clypeus, the mandibles, the palpi, the upper margin of pronotum, two lines on the mesonotum which curve outwardly at the anterior margin, the tegulæ, a spot beneath, the scutellum except the transverse furrow at base and a spot at apex inclosing the apical tooth, the postscutellum, the metathorax except a black transverse band at base, bands at apex of all the segments of the abdomen (the bands widening posteriorly so that the apical segments are almost wholly yellow), two lines on first segment, two spots at base of second, the apices of all femora and the front and middle femora beneath second joint of trochanters, most of middle tibiæ except a spot at base and a stripe behind, a large spot on hind coxæ behind, and an annulus on the hind tibiæ before the middle, all yellow. Wings hyaline, the stigma and veins brown-black.

*Type*.—Cat. No. 7259, U.S.N.M.

*Locality*.—Gifu. Described from two specimens, No. 47, received from Mr. Y. Nawa.

Tribe IX. PORIZONINI.

Genus TEMELUCHA Förster.

TEMELUCHA JAPONICA, new species.

*Female*.—Length 7.5 to 8 mm. Head yellowish, with the occiput and a spot on vertex inclosing the ocelli black; the eyes brown; the thorax brownish yellow, with a large oblong spot on the middle of the mesonotum anteriorly, the furrow across base of the abdomen, and an oblong spot at base of the metanotum black; the front and middle coxæ and trochanters, and the basis of the tarsi are yellowish white; tips of hind tibiæ and the three last joints of tarsi are black; abdomen brownish yellow, the petiole basally, blotches at base of the second

and third segments, and the sheaths of the ovipositor being black. Wings hyaline, the stigma light brown.

*Type*.—Cat. No. 7260, U.S.N.M.

*Locality*.—Swatow, China, and Japan (Mr. A. Koebele).

#### Tribe X. PRISTOMERINI.

Genus PRISTOMERUS Holmgren.

PRISTOMERUS CHINENSIS, new species.

*Female*.—Length 6.5 mm.: ovipositor nearly as long as the abdomen. Black; the mandibles, except teeth, and the tegulae are white; the clypeus, the two basal joints of antennae, the ridge of the prosternum, the hind angles of the pronotum, the legs, except hind coxae and the apex of the hind tibiae, which are blackish, and the abdomen, except most of the petiole above, the second dorsal segment, most of the third dorsal segment, and the sheaths of the ovipositor, which are black, are testaceous. Wings hyaline.

*Type*.—Cat. No. 7261, U.S.N.M.

*Locality*.—Swatow, China (Mr. A. Koebele).

#### Tribe XI. PLECTISCINI.

Genus ATELEUTE Förster.

ATELEUTE PALLIDIPES, new species.

*Male*.—Length 2.5 mm. Black and shining, the two basal joints of the antennae, the second with a pale annulus at apex, and the abdomen toward apex of the first segment and on the second, with a rufopiceoris tinge; flagellum brown-black, with short hairs; legs flavotestaceous, the front and middle coxae and trochanters paler yellowish; all the tarsi are very long, longer than their tibiae. The abdomen is long, much longer than the head and thorax united, slender and depressed, the sides nearly parallel. Wings hyaline, the stigma and costal vein brown, the internal veins paler.

*Type*.—Cat. No. 7262, U.S.N.M.

*Locality*.—Japan (A. Koebele).

#### Family LXXVI. ALYSIIDÆ.

Genus PHÆNOCARPA Förster.

PHÆNOCARPA FORMOSÆ, new species.

*Male*.—Length 2.1 mm. Brownish yellow, the head paler yellowish, the metathorax and the abdomen darker brown; eyes dark brown; clypeus, tegulae, front coxae and trochanters, the middle coxae at apex and the first joint of their trochanters, and the first joint of hind trochanters, white; rest of legs and the first two joints of the antennae

pale yellowish, the flagellum brown, becoming blackish toward apex. Wings hyaline, the stigma and basal nervure brown, the other veins pale.

*Type*.—Cat. No. 7263, U.S.N.M.

*Locality*.—Formosa (A. Koebele).

Genus KAHLIA Ashmead.

KAHLIA SECUNDA, new species.

*Female*.—Length 4.5 mm. Black and shining; mandibles red with black teeth; palpi, tegulae, and more or less of the trochanters yellowish-white; rest of legs mostly testaceous, the tips of hind femora, apical third of hind tibiae and basal two joints of hind tarsi except at tips, dark brownish or fuscous; wings hyaline, the veins blackish, the lanceolate stigma, mostly rufous or testaceous within, the stigmal vein originating near its apex and extending to the apical margin of the wing, making the marginal cell very large.

*Type*.—Cat. No. 7264, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura).

Family LXXVIII. BRACONIDÆ.

Subfamily I. APHIDIINÆ.

Genus EPHEDRUS Haliday.

EPHEDRUS JAPONICUS, new species.

*Female*.—Length 1.6 to 2 mm. Polished black; mandibles, palpi and legs honey-yellow, the hind coxæ dusky basally; abdomen mostly black, but more or less brownish piceous toward base, the petiole sometimes yellow and about three times as long as wide. Antennæ 11-jointed, black, the first two joints more or less testaceous, the third with a yellow annulus at base, about four times as long as thick. Wings hyaline, the venation brownish, the recurrent nervure joining the second cubital cell just behind the first transverse cubitus.

*Male*.—Differs from the female in having the antennæ longer, 16-jointed, the flagellar joints being not much more than twice as long as thick; the hind femora and tibiae, except at base, are rufo-piceous; while the abdominal petiole is black.

*Type*.—Cat. No. 7265, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). One male and 9 female specimens bred from an Aphis.

Genus ACLITUS Förster.

This genus has not been recognized since it was briefly characterized by Doctor Förster in 1862. I have recognized all of Förster's genera, although Rev. T. A. Marshall ignores them and has apparently "lumped" them all under *Aphidius* Nees and *Trioxys* Haliday.

This genus is closely allied to *Aphidius* Nees, but differs decidedly

in several particulars. The radius is always much longer, the parapsidal furrows distinct, the metathorax emarginate behind, the second dorsal abdominal segment is very large, while the sheaths of the ovipositor are broad and compressed.

**ACLITUS NAWAII**, new species.

Plate XV, fig. 3.

*Female*.—Length, 5.1 mm. Black, with the face, the orbits, the scutellum, the base of abdomen, the extreme apex of the long petiole, an oblique spot on the sides of the second segment and the sheaths of the ovipositor, testaceous; legs testaceous, the middle and hind femora tibiae and tarsi darker or brownish. The antennae are filiform, 24-jointed, the scape oval, large and stout, the pedicel much narrower, wider than long, the flagellum gently tapering off toward apex, the joints not more than twice as long as thick. The head and thorax are smooth and shining, the parapsidal furrows are punctate and meet posteriorly before attaining the base of the scutellum, the lateral lobes being shagreened anteriorly; the metathorax is rugulose, deeply emarginate behind, and with a median carina, which is forked at apex. The abdomen is lanceolate and terminates in a broad, compressed ovipositor, the length of the basal joint of the hind tarsi; the petiole is long, gradually dilated posteriorly and longitudinally striated.

*Male*.—Length 4.5 mm. Agrees fairly well with the female, except that the abdomen is clavate, entirely black, except the suture between the first and second segments, while the antennae are 30-jointed.

*Type*.—Cat. No. 7266, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). One male and 2 female specimens were sent, bred from a large Aphis, which, judging from the dry pupa skins, I identified as a species of *Lachnus*, or certainly a genus in the subfamily *Lachnina*.

Genus **APHIDIUS** Nees.

**APHIDIUS GIFUENSIS**, new species.

*Female*.—Length 2.5 mm. Head and thorax above, except the scutellum laterally and the metathorax, polished black, rest of thorax testaceous; abdomen long lanceolate, piceous, the petiole yellowish, the incisions of the segments yellow or testaceous, or sometimes yellow, with dusky transverse marks on segments 2 to 6; legs, including all coxae, honey-yellow; antennae long, 17-jointed, the first two joints and base of the third, yellow, rest of the joints brown-black, joints 3 to 16 about equal in length, nearly three times as long as thick. Wings hyaline, the stigma and the veins, except the basal nervure, brown, the basal nervure black.

*Type*.—Cat. No. 7267, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). Two specimens bred from an unknown Aphis.

## APHIDIUS JAPONICUS, new species.

*Female*.—Length 4.8 mm. Head, sutures of scutellum, the metathorax and abdomen, except the petiole beneath and the apex of the second segment, black and shining, rest of thorax and the legs, except the two last joints of tarsi which are dusky, yellow. The antennæ are long, filiform, 22-jointed, the first two joints more or less yellowish, the following joints black or brown-black; joints 6 to 21 only about twice as long as thick, joints 3 to 5 a little longer. Wings hyaline, the stigma and veins light brownish, the basal nervure blackish.

*Male*.—Length 4 mm. Agrees well with the female, except that the mesothoracic lobes are sometimes dusky, the antennæ longer, 24-jointed, while the abdomen beneath, the basal half of the third dorsal segment, and sometimes the sutures 4 and 5 are yellow.

*Type*.—Cat. No. 7268, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). One female and 3 male specimens bred from an Aphis.

## APHIDIUS LACHNIVORUS, new species.

*Male*.—Length 3.6 mm. Black and shining; the mesonotal furrows are more or less distinct, the surface on each side, especially posteriorly, opaquely roughened, while between them is a more or less distinct median furrow. The antennæ are long, 26-jointed, the joints of the flagellum at least twice as long as thick; legs testaceous, the hind coxæ and femora black, the hind tibiæ, except at base, fuscous; the metanotum has a transverse carina bounding the truncature, but is not areolated, and there is a median furrow extending from the scutellum to the carina. The abdomen is elongate, shining black, except a yellow spot at the apex of the second dorsal segment; the first segment alone is faintly aciculated basally.

*Type*.—Cat. No. 7269, U.S.N.M.

*Locality*.—Nikko (A. Koehle). One specimen labeled from *Lachnus* sp. on Larch.

## APHIDIUS AREOLATUS, new species.

*Female*.—Length 2 mm. Polished black without parapsidal furrows, the metathorax with five distinct areas, the areola or middle one, diamond shaped. The antennæ are 13-jointed, the first joint of the flagellum about thrice as long as thick, a little longer than the second, the following very gradually decreasing in length, the penultimate joint being only a little longer than thick, the last, or club joint, large, ovate, longer than the first; legs brownish yellow, the incision of the joints paler; abdomen lanceolate, longer than the head and thorax united, black, except the base and apex of the petiole and a spot at apex of the second segment which are yellowish; the petiole is shagreened or roughened, otherwise the abdomen is smooth and shining; wings hyaline, the stigma and veins light brown.

*Male*.—Agrees in color with the female, but differs in having the antennæ longer, 19-jointed, the joints of the flagellum being fully twice as long as thick, or even a little longer.

*Type*.—Cat. No. 7270, U.S.N.M.

*Locality*.—Japan. Described from 2 female and 5 male specimens, labeled No. 1268, and bred by Mr. Albert Koebele from an unknown Aphis.

Genus LYSIPHLEBUS Förster.

LYSIPHLEBUS JAPONICUS, new species.

*Female*.—Length 2 mm. Head, dorsum of mesonotum, the scutellums, and the dorsum of the abdomen, except the petiole and suture 2, and sometimes one or two of the other sutures, black; basal 3 or 4 joints of the antennæ, the legs, and the abdomen, except as noted, yellow. The antennæ are 13-jointed, black or brown, black from the fifth joint; joints 3 to 6 are about thrice as long as thick, those beyond a little shorter. Wings hyaline, the stigma and veins light brownish.

*Male*.—Agrees well with the female, except that the antennæ are longer, 17-jointed, and brown-black, except the first two joints; the base of the second dorsal abdominal segment, as well as the petiole, is yellow.

*Type*.—Cat. No. 7271, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). Three specimens, 2 females and 1 male, bred from an unknown Aphis.

Subfamily IV. METEORINÆ.

Genus METEORUS Haliday.

METEORUS JAPONICUS, new species.

*Female*.—Length 4.4 mm. Head, except the stemmaticum, and the thorax, except the parapsidal furrows, the depression in front of the scutellum, the foveæ at base of the scutellum, the sutures surrounding same, and the metathorax entirely, which are black, brownish-yellow; abdomen black, the second segment brownish-yellow; legs yellowish. The antennæ are long, about 30-jointed, brown, the 4 or 5 basal joints of the flagellum being about *four* times as long as thick. Wings hyaline, the veins light brown, the costal vein and the stigma within blackish. The first segment of the abdomen is longitudinally striate, the others smooth and shining, the ovipositer about two-thirds the length of the abdomen.

*Type*.—Cat. No. 7272, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). Three female specimens, No. 53, evidently bred from a Lepidopteron.

## Subfamily V. MACROCENTRINÆ.

## Genus MACROCENTRUS Curtis.

## MACROCENTRUS GIFUENSIS, new species.

*Female*.—Length 4.5 mm.; ovipositor longer than the whole insect. Head black; thorax brownish-yellow, the metathorax dusky or brownish; abdomen above brown or blackish, sometimes paler at the sutures, variable, the first, second, and third segments longitudinally striated; antennæ very long, brownish-yellow, becoming dusky toward apex, 40 or more jointed, the joints dusky at apex, appearing annulated; legs, including coxæ, yellow. Wings hyaline, the veins brownish, the stigma with a large dark brown blotch within.

*Type*.—Cat. No. 7274, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). Two specimens.

## Subfamily IX. CHELONINÆ.

## Genus PHANEROTOMA Wesmæl.

## PHANEROTOMA FLAVA, new species.

*Female*.—Length 7 mm. Uniformly brownish-yellow; eyes and ocelli black; apical half, or nearly, of the wings smoky, the basal half hyaline; antennæ longer than the body, brown-black, the flagellar joints long, about five times as long as thick. The wings have the costæ to the parastigma, the median and submedian veins, and the basal and recurrent nervures yellow, the rest of the veins, with the parastigma and stigma being black.

*Type*.—Cat. No. 7276, U.S.N.M.

*Locality*.—Japan (A. Koebele). This is one of the largest species yet discovered in the genus.

## Genus ASCOGASTER Wesmæl.

## ASCOGASTER ATAMIENSIS, new species.

*Female*.—Length 4 mm. Black, subopaquely punctate, with a sparse whitish pubescence, the base of the abdomen with elevated, longitudinal lines, the palpi pale, the two basal joints of the antennæ and the legs, except the coxæ, tips of hind tibiæ and more or less of the middle and hind tarsi, except basal joint, which are black, or dark fuscous, are ferruginous, the flagellum brown becoming dusky toward apex. Wings hyaline, the parastigma and stigma dark brown, the veins testaceous, tinged with brown.

*Type*.—Cat. No. 7275, U.S.N.M.

*Locality*.—Atami (A. Koebele).

## Subfamily XII. MICROGASTERINÆ.

## Genus GLYPTAPANTELES Ashmead.

## GLYPTAPANTELES POLITUS, new species.

*Female*.—Length 3 mm. Black, shining, and impunctate, except some sparse, faint punctures on the thorax anteriorly; the antennæ are longer than the body, black or brown-black, except the scape, which is more or less brownish-yellow basally and beneath; ocelli honey-yellow; the legs, except the hind coxæ and the abdomen at sides and beneath, are yellow; the metathorax is smooth, without a median carina; the abdomen is smooth, shining, and impunctate, the plate of the first segment is narrowed toward apex and about two and one-half times as long as wide at base, the second segment is a little shorter than the third, with two oblique grooved furrows that converge anteriorly. Wings hyaline, the stigma blackish, the veins, except the costæ toward apex, pale.

*Male*.—Length 2.5 mm. Antennæ wholly black, the apex of hind femora and tibiæ fuscous, their tarsi subfuscous, the thorax anteriorly more distinctly finely punctured, the metathorax finely wrinkled; otherwise similar to the female.

*Type*.—Cat. No. 7278, U.S.N.M.

*Locality*.—Gifu (N. Nawa). Three specimens, No. 56.

## GLYPTAPANTELES MINOR, new species.

*Female*.—Length 2 mm. Agrees well with *G. politus*, except that it is smaller with the antennal scape, except narrowly at apex, and the pedicel yellow, the stigma and stigmal vein brown, the three terminal ventral segments black or piceous, while the hind tibiæ are fuscous at apex.

*Type*.—Cat. No. 7279, U.S.N.M.

*Locality*.—Gifu (N. Nawa). Four specimens, No. 57.

## GLYPTAPANTELES FEMORATUS, new species.

*Male*.—Length 1.8 mm. Black and shining; legs brown-black, with the front legs, apex of middle femora and their tibiæ and tarsi, and the basal third of hind tibiæ, yellow, the hind tarsi subfuscous, more or less yellowish beneath; antennæ black, longer than the body, the first joint of the flagellum about two and one-half times as long as thick, shorter than the second or third, but stouter; the abdomen is smooth and shining, with the first and second ventral segments yellow; the plate of the first dorsal segment has the hind angles rounded; the second segment is a little shorter than the third and has two converging grooved lines from its basal middle.

*Type*.—Cat. No. 7280, U.S.N.M.

*Locality*.—Gifu (N. Nawa). Two specimens, No. 59.



## GLYPTAPANTELES (APANTELES) JAPONICUS, new species (Ashmead).

*Female*.—Length, 2.8 to 3 mm. Black, shining; face, thorax, and hind coxæ very finely punctulate; head above and posteriorly polished, impunctate; labrum and mandibles honey-yellow; palpi white; scape, pedicel, tegulæ and legs, except hind coxæ which are black, brownish-yellow; flagellum black or brown-black. Wings hyaline, the stigma and subcostal vein brown, other veins pallid. Metathorax smooth without areas or carinæ. Abdomen beneath, except the large plow-share shaped ventral valve, and the lateral margins of dorsal segments 1-5 brownish-yellow or ferruginous; the plate of first segment lanceolate, more than three times as long as wide, gradually narrows toward apex; second segment shorter than the third, with two oblique impressed lines; plate and all segments smooth, impunctate.

*Male*.—Length, 2.2 to 2.5 mm. Agrees well with female in colorational detail, but the antennæ are much longer than the body, the abdomen is smaller and shorter, while the second abdominal segment is about twice as long as the third.

*Type*.—Cat. No. 3457, U.S.N.M. Described from many specimens in National Museum, Acc. No. 23417, received July 30, 1890, from Rev. H. Loomis, of Yokohama, Japan, who bred them from the larva of *Oeneria dispar*, and from many additional specimens received by Dr. L. O. Howard from Prof. A. H. Kirkland, who also received them from Rev. H. Loomis.

The species belongs in Marshall's Section IV, of *Apanteles*, and comes very close to two European species—*Apanteles vitripennis* Curtis and *A. fulripes* Haliday, from both of which it is readily distinguished by the impunctate metanotum, the difference in the plate of the first abdominal segment, by having the first and second segments smooth, not aciculated, and by the venter being entirely brownish-yellow.

## GLYPTAPANTELES NAWAII, new species.

*Female*.—Length, 2 mm. Black and shining, but with the head and thorax finely punctulate, the scutellum polished, impunctate, the metathorax finely rugulose, with a median carina. The antennæ are about as long as the body and black; legs brownish-yellow, the hind coxæ black, the front and middle coxæ usually with a slight fuscous spot at base only, the hind femora at extreme apex and the tips of their tibiæ faintly fuscous. The abdomen is black and shining, except ventral segments 1 and 2 which are yellowish; the plate of the first dorsal segment and the second segment are finely sculptured; the plate of the first is about two and one-half times as long as wide, a little wider at apex than at base; the second segment is shorter than the third with a

median ridge, rest of the segments smooth, polished. Wings hyaline, the stigma and first branch of the radius brown-black, the other veins light brownish.

*Male*.—Agrees with the female, except that the antennæ are somewhat longer, the front and middle coxæ wholly yellow, while the second dorsal segment of the abdomen is much shorter, or only about half as long as the third.

*Type*.—Cat. No. 7281, U.S.N.M.

*Locality*.—Gifu (N. Nawa). Three specimens labeled No. 54.

Genus MICROPLITIS Forster.

MICROPLITIS ATAMIENSIS, new species.

*Male*.—Length, 2.5 mm. Black, closely punctate and pubescent, the head above on the vertex smooth and shining, the occiput closely punctate; ocelli pale yellowish; antennæ, except the minute pedicel, entirely black; legs mostly brownish-yellow, but with all coxæ, the first joint of all trochanters, a spot at base of front femora, the basal half of middle femora, the hind femora entirely, the apical third or more of hind tibiæ, and the hind tarsi black; basal two-thirds of wings subfuscous, the apical third and a fascia extending across from the parastigma hyaline, the stigma and veins dark brown. Abdomen, except the first segment, which is rugose-punctate, smooth and shining.

*Type*.—Cat. No. 7285, U.S.N.M.

*Locality*.—Atami (A. Koebele). One specimen.

MICROPLITIS SAPPOROENSIS, new species.

*Female*.—Length, 4 mm. Black, closely punctate and pubescent, the head smooth and shining on vertex, rather densely clothed with a fine whitish pubescence in front; palpi pale; clypeus, mandibles, and legs, except the hind coxæ, a spot at apex of hind femora, and most of the hind tarsi brownish-yellow; the hind coxæ, a spot at apex of hind tibiæ, and the hind tarsi, except base of the first joint, black; ventral segments 1 and 2 and base of 3, yellow; the abdomen, except the first segment, which is sparsely, finely punctate, is smooth, shining, and impunctate. Wings hyaline, the parastigma, the stigma, except the basal half, and the internal veins brownish or fuscous; the basal half, or nearly, of the stigma and the longitudinal veins before the basal nervure yellowish.

*Type*.—Cat. No. 7285, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura). One female specimen, labeled No. 39.

## Subfamily XV. BRACONINÆ.

## Genus MELANOBRACON Ashmead.

## MELANOBRACON TIBIALIS, new species.

*Female*.—Length, 7 to 7.5 mm.; ovipositor about two-thirds the length of the abdomen. Brownish-yellow, smooth, and shining; head quadrate, the eyes large, brown-black; the antennæ, except the two basal joints, joints 2 to 5 of middle tarsi, and the hind tibiæ and tarsi, except a pale annulus at base of tibiæ, are black. Wings subhyaline, or slightly smoky, with the stigma and veins, except the submedian vein, entirely, and the costal and subcostal veins at base, which are yellow, are black. The abdomen has a longitudinal furrow each side of the first and second dorsal segments, and also on the second a triangular elevation from its base, while the suture between the second and third segments is rather deep.

*Type*.—Cat. No. 7287, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). Three specimens, labeled No. 49.

## Genus MACRODYCTIUM Ashmead.

## MACRODYCTIUM FLAVIPES, new species.

*Female*.—Length, 3.5 mm.; ovipositor about as long as the abdomen. Polished black; the first two joints of the antennæ, a small annulus at the base of the third joint, and the legs, except the last joint of the front and middle tarsi, the extreme apex of hind tibiæ, and the hind tarsi, which are fuscous, are yellowish, or brownish-yellow; the second abdominal segment is longitudinally striate on each side of the triangular ridge or plate at base. Wings hyaline, the stigma and veins brown, the tegulæ and the longitudinal veins basally pale yellowish.

*Type*.—Cat. No. 7288, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura). One specimen, labeled No. 32.

## Genus CHELONOASTRA ASHMEAD.

## CHELONOASTRA KOEBELEI, new species.

Plate XIV, fig. 3.

*Female*.—Length 5.5 to 6 mm.; ovipositor from a half to two-thirds the length of the abdomen. Black, the head and thorax smooth and shining, the abdomen opaque, concave beneath as in *Chelonus* Jurine, the first three segments coarsely regulose, the second and third closely united and occupying most of the surface of the abdomen, the fourth and fifth segments very short, shagreened. The head as viewed from above is obtrapezoidal, the face sparsely punctate, pubescent, the eyes

hairy. Wings fuliginous, the stigma and veins brown-black, the venation as in *Bracon Fabricius*.

*Type*.—Cat. No. 7287, U.S.N.M.

*Locality*.—Atami (A. Koebele). Many specimens.

**CHELONOGASTRA PLEURALIS**, new species.

*Female*.—Length 3 to 3.5 mm.; ovipositor about the length of the abdomen. Brownish-yellow; the stemmaticum, the eyes, the occiput more or less, the crenulate furrow at base of scutellum, the sutures of same, sometimes the disks of the mesothoracic lobes but not always, the mesopleura, the metathorax, and usually the disks (and sometimes the greater part except laterally) of the first, second, and third abdominal segments, and spots at the extreme lateral margins of the fourth and fifth segments black; the hind coxæ, the femora, except at both ends, the tibiæ, except at base, and the tarsi, are black, or dark fuscous. Wings subfuscous, the veins brownish, the stigma somewhat pale within. Abdomen sculptured much as in previous species.

*Type*.—Cat. No. 7290, U.S.N.M.

*Locality*.—Atami (A. Koebele). Many specimens.

Genus **MICROBRACON** Ashmead.

**MICROBRACON JAPELLUS**, new species.

*Female*.—Length 2.5 mm.; ovipositor about as long as the abdomen. Brownish-yellow, smooth and shining; eyes, the metathorax above, the first segment of abdomen, a median stripe on the second, and the disks of the fourth and fifth, more or less, black; antennæ brown, the pedicel yellowish; legs wholly yellowish, immaculate. Wings hyaline, with a grayish tinge, the veins and stigma, except along the outer margin, yellowish.

*Type*.—Cat. No. 7291, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumura). One specimen, labeled No. 36.

Genus **EUUROBRACON** Ashmead.

**EUUROBRACON PENETRATOR** (Smith.)

Plate XV, figs. 1, 2.

*Bracon penetrator* SMITH, Proc. Zool. Soc., London, 1877, p. 413, female.

*Bracon yokohamæ* DALLA TORRE, Cat. Hym., IV, 1898, p. 295.

*Euurobracon penetrator* ASHMEAD, Proc. U. S. Nat. Mus., XXIII, 1900, p. 140.

*Male*.—Length 19 mm. Flavo-ferruginous, the head a little paler; legs yellow, the hind pair, except coxæ and trochanters, black or blackish; antennæ black; wings yellowish hyaline, the apical margins broadly fuliginous, the front pair with a spot inclosing the basal

nervure, a spot at base of marginal cell, and a spot in the second discoidal cell black.

*Type*.—Male. Cat. No. 7292, U.S.N.M.

*Locality*.—Japan (Doctor Mitsukuri).

Genus ZAGLYPTOGASTRA Ashmead.

This genus was characterized briefly in my Classification of the Ichneumon Flies, 1900, page 137, where I placed it next to *Iphiaula* Förster on account of similarity of the structure of the head, thorax, and abdomen, but it really belongs to my tribe *Euwobraconini*, as the submedian cell in the front wings is longer than the median.

ZAGLYPTOGASTRA ABBOTTII, new species.

Plate XV, fig. 4.

*Female*.—Length about 18 mm.; ovipositor 17 mm. Uniformly brownish yellow, the eyes and the flagellum brown-black, the sheaths of the ovipositor black, the wings yellowish hyaline, with a black spot at the origin of the radius, and the tips of the hind wings dusky. The head and thorax are highly polished impunctate, the forehead concave, the scape fully thrice as long as thick, truncate at apex and slightly narrowed and rounded at base, originating from a distinct pedicellus, the tarsi longer than their tibiae, the abdomen strongly sculptured as in figure.

*Type*.—Cat. No. 8299, U.S.N.M.

*Locality*.—Trong, Lower Siam (Dr. W. L. Abbott).

Family XVI. RHOGADINÆ.

Tribe I. EXOTHECINI.

Genus XENOBIUS Förster.

XENOBIUS ALBIPES, new species.

*Female*.—Length 2 mm.; ovipositor hardly one-third the length of the abdomen. Light brownish-yellow, smooth and shining, except on the metathorax, the eyes, the dorsum of the metathorax, and the extreme base of the first abdominal segment being black; the antennæ are brownish, as long as the body, 22 or 23 jointed; palpi, tegulæ and legs ivory-white. Wings hyaline, the stigma and veins, except the median vein toward apex, and the basal nervure, pallid.

*Male*.—Length 1.5 mm. Agrees in every respect with the female, except the antennæ are a little longer and darker, with more joints, the abdomen smaller, and with the second segment whitish.

*Type*.—Cat. No. 7293, U.S.N.M.

*Locality*.—Atami (A. Koebele).

## Tribe III. RHOGADINI.

## Genus HETEROGAMUS Wesmael.

## HETEROGAMUS FASCIATIPENNIS, new species.

*Female*.—Length 6 mm. Dark brown, rugoso-punctate, opaque, the thorax above, except the scutellum, blackish, the mesosternum, the third abdominal segment and segments beyond, less coarsely punctured, the first and second segments with a median longitudinal carina, subequal in length and much longer than the third; eyes black; palpi fuscous, the sutures of the joints and the last joint paler; antennæ and legs brownish-yellow, the last tarsal joint black. Wings fuscous with a whitish or hyaline band across from the stigma, the stigma, except at apex, pale yellowish, the other veins dark fuscous; second cubital cell hardly longer than wide. The abdomen is considerably longer than the head and thorax united, gradually narrowed toward the base; the third segment, which is the widest and much wider than long, is almost twice as wide as the first segment at base, the first being more than twice as long as wide and a little longer than the second. The antennæ are broken off from the third joint, but were probably long and slender.

*Type*.—Cat. No. 7294, U.S.N.M.

*Locality*.—Sapporo (Doctor Matsumara). One specimen, labeled No. 16.

## HETEROGAMUS THORACICUS, new species.

*Female*.—Length 5.5 mm. Head and abdomen, except the venter, black; the clypeus, malar space and the thorax, except a dark stripe on the middle of the pronotum in the depression extending from in front of the tegulæ anteriorly, and the apex of the metathorax above, which are dusky, are light brownish-yellow; palpi white; legs, except the last joint of the tarsi, pale yellowish. Wings hyaline, the stigma and submedian vein yellow, the other veins fuscous; second cubital cell only about one-third longer than wide at base.

*Type*.—Cat. No. 7295, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumara). One specimen, labeled No. 25.

## Genus RHOGAS Nees.

## RHOGAS FUSCOMACULATUS, new species.

*Female*.—Length 3.5 to 4 mm. Ground color brownish-yellow; a large spot on face below insertion of antennæ, a spot inclosing the ocelli, the lateral mesothoracic lobes anteriorly, the disk of the middle lobe posteriorly, the upper half of the mesopleura, the metathorax, and the abdomen above, except a spot at apex of first segment medially, a large band down the center of the second, and a spot at the basal

middle of the third, are fuscous; the antennæ are brown, darker toward apex; the flagellar joints after the first about twice as long as thick, the first joint being nearly thrice as long as thick; legs, including coxæ, uniformly brownish-yellow. Wings hyaline; the stigma, except at apex within, from the origin of the cubitus, and the veins, yellow, the basal nervure more or less dusky; the second cubital cell is nearly twice as long as wide at base, a little narrower at apex than at base, the second transverse cubitus being whitish and distinctly shorter than the first.

*Type*.—Cat. No. 7296, U.S.N.M.

*Locality*.—Sapporo (Dr. S. Matsumara). One specimen, labeled No. 13.

RHOGAS JAPONICUS, new species.

*Male and female*.—Length 5.5 to 6 mm. Brownish-yellow; eyes, brown-black; a spot between ocelli; the disk of metathorax, the disk of first abdominal segment, more or less, and one or two spots toward apex of the abdomen, black; the antennæ are very long, slender, becoming more or less fuscous toward apex, yellowish basally for more than half their length, the joints of the flagellum about three times as long as thick. Wings hyaline, the veins and stigma mostly yellow, the latter, however, with a large spot toward apex, and the basal nervure and the first abscissa of the radius, fuscous. The male is the smaller and differs from the female in having no fuscous spots at apex of abdomen, and in having the stigma of the front wings nearly wholly yellow; with only a trace of the fuscous spot at apex.

*Type*.—Cat. No. 7297, U.S.N.M.

*Locality*.—Gifu (Y. Nawa). Three specimens, labeled No. 51.

Tribe IV. DORYCTINI.

Genus ISCHIOGONUS Wesmael.

ISCHIOGONUS HAKONENSIS, new species.

*Female*.—Length, 7 mm.; ovipositor about as long as the abdomen. Black and shining; the hind orbits, a spot before insertion of each antenna, the cheeks, the mandibles, except teeth, the last segment of abdomen, and the legs, except a black spot at apex of all femora, the middle and hind tibiæ toward apex, and the tarsi, which are fuscous, are brownish-yellow; the palpi and tegulæ are yellowish-white; the antennæ are brown-black, with the scape reddish-brown beneath, the small ring-joint yellowish. Wings subfuscous, the veins black or brown-black, the stigma brownish-yellow, paler at base. The thorax is distinctly trilobed, the middle lobe short with a median furrow, the depression on the middle lobe posteriorly and on the lateral lobes in front of the scutellum is rugulose, the prothorax at the sides has some

raised lines, the mesopleura polished with a median depression, while the metathorax is rugulose, with two large smooth areas at base. The abdomen has the first segment and the second to the first transverse impressed line, rather coarsely longitudinally striated, the rest of the abdomen being smooth.

*Type*.—Cat. No. 7298, U.S.N.M.

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

Subfamily XVII. SPATHIINÆ.

Tribe II. HORMIINI.

Genus CHREMYLUS Haliday.

CHREMYLUS JAPONICUS, new species.

*Female*.—Length 1 mm. Head black, shining, the thorax and last four joints of the antennæ brown-black, opaque, the abdomen with a reddish tinge, the rest of the antennæ and the legs pale yellowish. The metathorax is areolated, the upper hind angles briefly toothed, the areola lozengoidal, petiolate at base. Wings hyaline, the stigma and veins brown.

*Type*.—Cat. No. 7299, U.S.N.M.

*Locality*.—Atami (A. Koebele). One specimen.

ACANTHORMIUS, new genus.

This interesting new genus may be inserted in my table of genera, Classification of the Ichneumen Flies, 1900, page 148, as follows:

4. Subdiscoidal nervure interstitial.

Recurrent nervure received by the second cubital cell.

Abdomen normal, with at least 6 segments, not longitudinally striated.

*Hormius* Nees.

Abdomen abnormal, with only 3 segments, all longitudinally striated, the third with the hind angles produced into long, acute spines, nearly the length of the ovipositor (female) ..... *Acanthormius*, new genus.

ACANTHORMIUS JAPONICUS, new species.

*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.



## EXPLANATION OF PLATES.

## PLATE XII.

- FIG. 1. *Matsunurairus grandis* Ashmead, male.  
2. *Rhevidermus japonicus* Ashmead, female.  
3. *Proterocryptus nawai* Ashmead, female.

## PLATE XIII.

- FIG. 1. *Hemicphialtes glyptus* Ashmead, female.  
2. *Apochthis orbitalis* Ashmead, female.  
3. *Nesopimpla naranya* Ashmead, female.

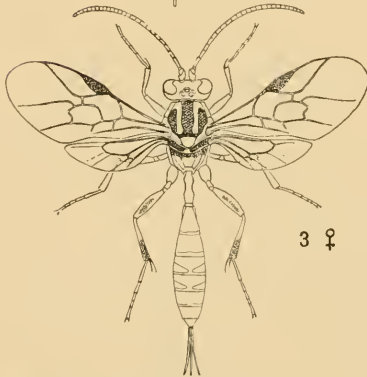
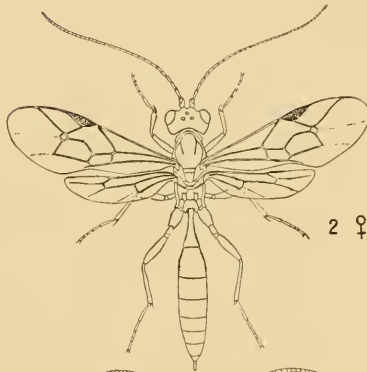
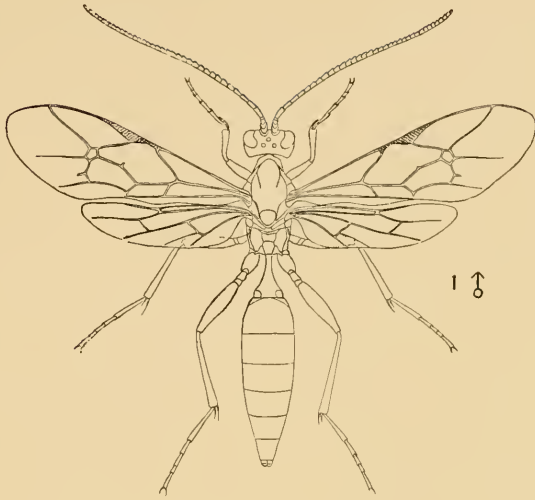
## PLATE XIV.

- FIG. 1. *Calliopsis incerta* Ashmead, male.  
2. *Naraia japonica* Ashmead, female.  
3. *Chelonogastra koebeli* Ashmead, female.

## PLATE XV.

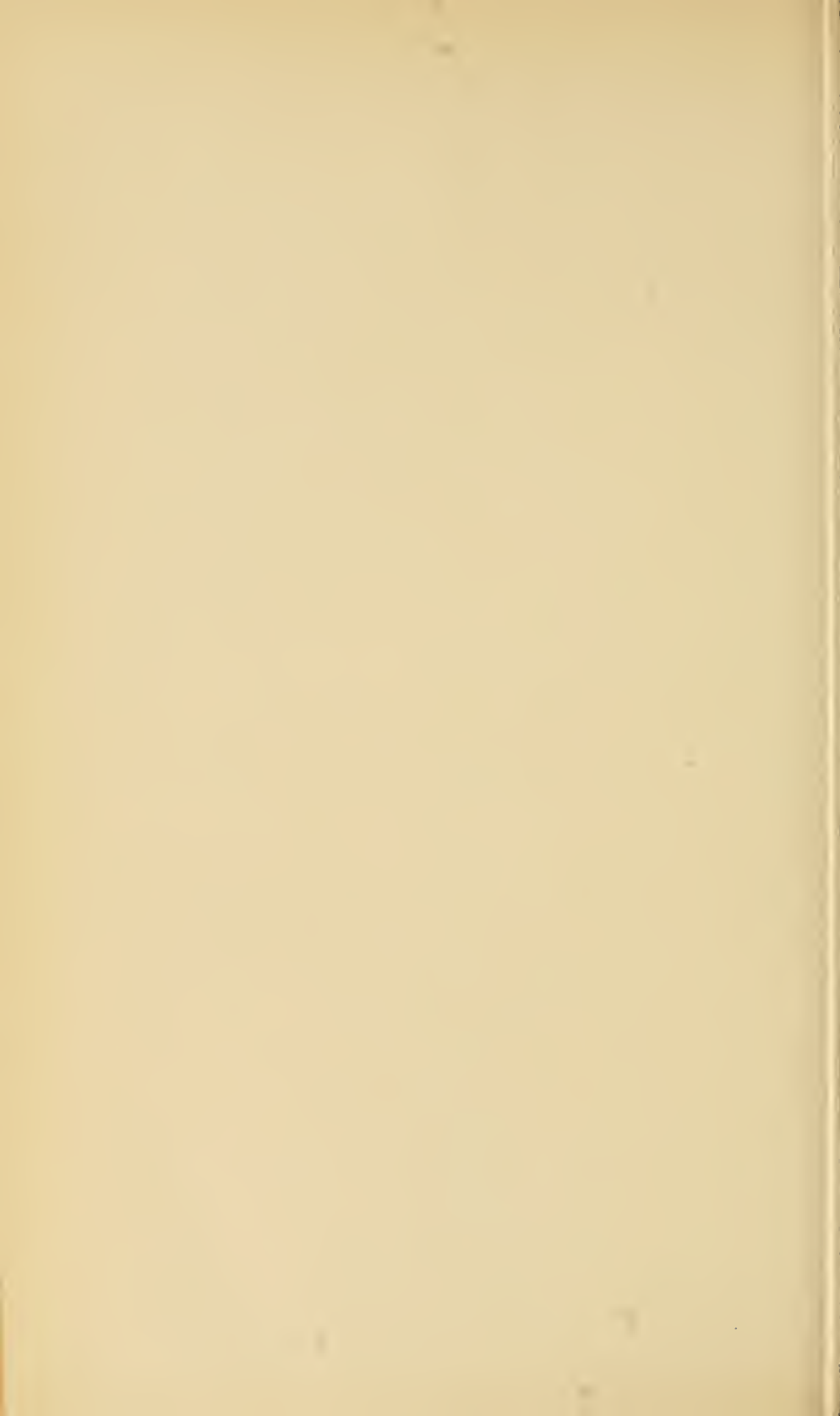
- FIG. 1. *Eurobracon penetrator* (Smith), female.  
2. *Eurobracon penetrator* (Smith), male.  
3. *Aclitus nawai* Ashmead, female.  
4. *Zaglyptogastra abbottii* Ashmead, female.

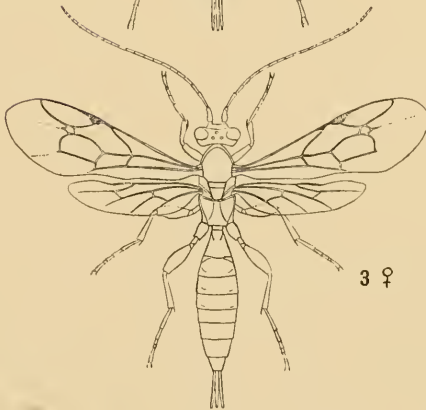
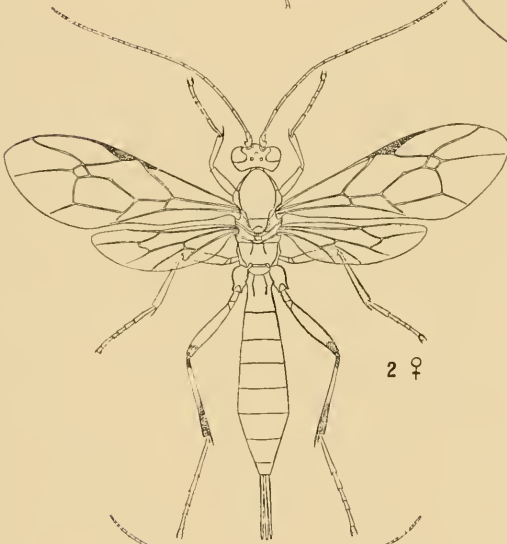




NEW JAPANESE HYMENOPTERA.

FOR EXPLANATION OF PLATE SEE PAGE 201.

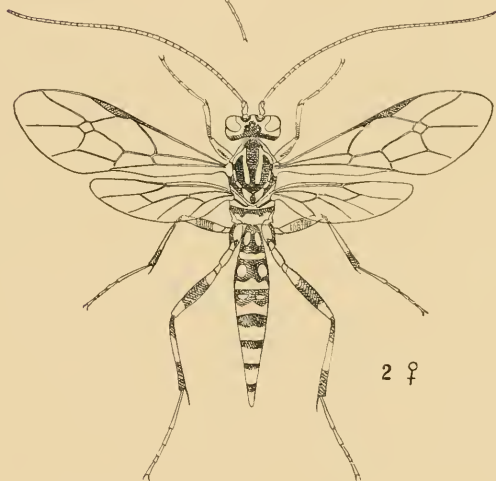




NEW JAPANESE HYMENOPTERA.

FOR EXPLANATION OF PLATE SEE PAGE 201.



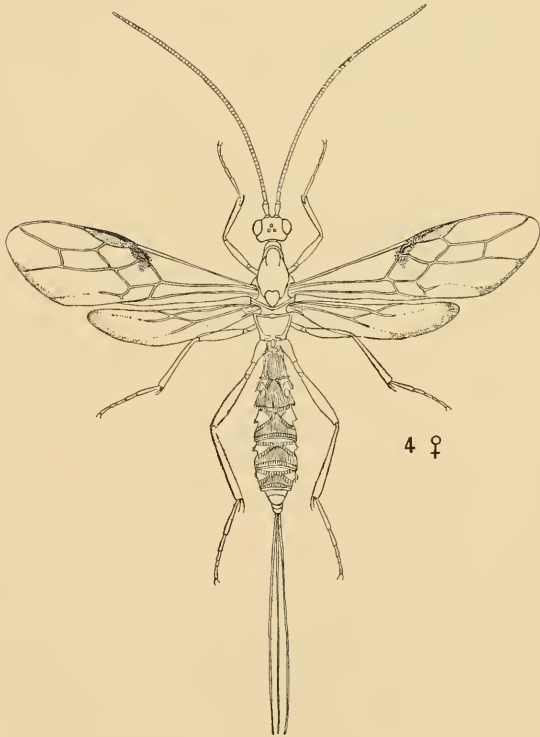
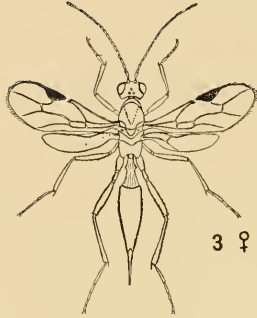


NEW JAPANESE HYMENOPTERA.

FOR EXPLANATION OF PLATE SEE PAGE 201.







NEW JAPANESE HYMENOPTERA.

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