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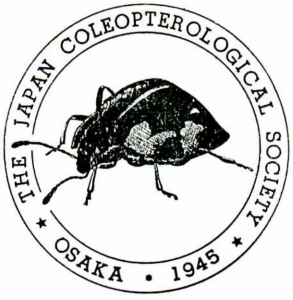

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昆 蟲 学 評 論

THE ENTOMOLOGICAL REVIEW OF JAPAN

VOL. XVI, NO. 1. SEPT., 1963.

Studies on Japanese Anthribidae, II. (Coleoptera)

By TAICHI SHIBATA

Hypseus decoratus sp. nov. (Pl. 1, fig. 1)

Dark reddish brown, decorated above with black, grey and luteous pubescence.

A clear whitish grey spot on occiput and more obsolete one set into depression placed just between eyes, the most conspicuous spot marked at pronotal base, slightly widened forward then extending across dorsal carina, where abruptly weakened and reached to a mesial convexity, another spot before apex of pronotum but abbreviated.

Grey pubescence occurs at pronotal lateral sides and on elytra which tessellated with black on alternate interspaces of elytra, and also this colour covers over head including rostrum and a large mesial depression of pronotum accompanying with light luteous; black pubescence prominent on shoulders, subbasal swellings and all pustules of elytra, especially in drawing pronotal 2 arcs, a well-defined major arc protruding at luteous apical portion, and surrounded the mesial depression and a narrower luteous arc with a minor black one together, these 3 arcs arrived at base; luteous colour very variable, sometimes lighter, but the pubescence which obliquely situated behind 2 median tubercles and near subbasal swellings on elytra distinctly clear.

Rostrum coarsely rugate-punctate, short, more than twice as wide as long, with a small median carina and moderate lateral depressions, apical margin bisinuate, relatively convex in centre, lateral margins rounded.

Frons of ♀ about as wide as the length of rostrum but much narrower in ♂, depressed between prominent eyes, the depression extends to occipital area.

Antenna scarcely beyond the middle of pronotum, largely black, basal 2 and bases of 3 terminal joints reddish yellow, 8th dark brown; 1st and 2nd thick, subequal in length to 3rd or 4th, 5th to 8th gradually shortened, 3 club-joints (each subequal in length) very loose, comparatively elongate, as long as 3rd to 8th united together, with silky pubes.

Pronotum one-third wider than long, very coarsely rugate-punctate; a large round depression on disc, 3 other shallower depressions placed at latero-apical areas and before dorsal carina, each connected with the main central one, within this mesial depression a low convexity which united to 2 external convexities (on each side of the

depression) by a transverse shallow ridge; dorsal carina produced forward but a little incurved at middle, lateral side distinctly sinuate before acute angle of carina, basal longitudinal carinula joining to the dorsal carina in an obtuse angle, basal transversal carinula present, biconvex.

Elytra subcylindrical, nearly a half longer than wide, produced and biconvex at basal margin, subparallel at lateral sides, almost flattened on disc; punctate-striate, interspaces very faintly convex, 5th, 7th and 9th of them more distinct, 3rd interspace bears 3 tubercles, of median one larger and higher than the others but a little lower than the subbasal swelling, the 2nd at apical declivity moderately prominent and somewhat smooth above, the last one placed on ante-apical portion, small as the other pustules of all alternate interspaces.

Pygidium as wide as long, triangular, covered with dense luteous grey pubescence.

Underside silver grey, particularly on metasternum and abdomen very dense and definite; abdomen in ♂ bending downward and depressed medially, in ♀ simple.

Median part of femur and apical half or 2 apical spots of tibia dark brown, the rest light reddish brown but sometimes darkened, with sparing grey pubescence.

Length (excluding of head): 3.5-4.0 mm.

Holotype, ♂, Santaro-pass, Is. Amami, 30 V, 1960, T. SHIBATA leg. (SHIBATA coll.).

Paratype, 1♀, Santaro-pass, Is. Amami, 7 V, 1960, T. SHIBATA leg. (SHIBATA coll.).

The present species is somewhat allied to *Hypseus scaphidius* JORDAN, 1931 from Java in the colour and the structure, but this new species has smaller body with quite dissimilar pattern above.

Hypseus incertus sp. nov. (Pl. 1, fig. 2)

Black, the most of upperside black with very light brownish grey pubescence partly and variegated by sericeous black.

Rostrum a half wider than long, finely rugosed alike as head, with a trace of short carina on base (somewhat depressed before eyes); apical margin slightly indented and separated from weakly rounded lateral margin by a small incision.

Frons one-third as wide as the base of rostrum; bears a small greyish white dot between eyes.

Antenna not reached to dorsal carina of pronotum; basal 2 joints reddish brown but sometimes darkened, the remainings dark brown exclusive of black terminal 3; 1st and 2nd thick, 3rd the longest and not so robust as the precedings, 4th to 8th gradually decreasing in length, about as long as 9th to 11th united together, these last 3 joints forming a loosely articulated club, each of the same length, very thinly sericeous.

Pronotum rugate-punctate, more or less granulate on latero-basal areas, about one-third wider than long, the widest at base, with several shade black dots here and there, and with a yellowish white spot before scutellum, the spot penetrates a little beyond dorsal carina; disc uneven by 3 low convexities and some shallow depressions, a central convexity indicated a median line with a trifle longitudinal ridge which occupying just before it together, the others a little higher than the centre one standing on its bilateral sides, the largest depression situated between the 2 outer convexities, enclosed the median ridge and the central convexity, and obliquely extending forward,

then combined with latero-apical depressions, more-over the prolongation connected with a posterior transverse depression placed along dorsal carina; dorsal carina gently biconvex, therefore the lateral angle acute but not sharp, its extreme tip rather rounded, lateral sinuation somewhat faint, basal longitudinal and transversal carinulae entire, the former jointed with the dorsal carina by a distinct acute angle.

Elytra short, not twice so long as the pronotum, less than one and a half times as long as wide, gradually narrowed from base to apex; basal margin weakly rounded, not strongly produced, subbasal swelling distinctly tuberculate; disc almost flat, punctate-striate, the punctuation distinct, sutural interspace depressed on posterior half, all interspaces flattened even 3rd, but 5th and 7th more or less raised at apical portions, the alternate interspaces bear some black pustules which more elevated than the pronotal discal convexities, one of them stands at the middle of 3rd very prominent as the subbasal swelling, where the 3rd interspace conspicuously widended.

Pygidium almost as long as the basal width, subtriangular, sides gently curved.

Underside silver grey and brownish grey, the former pubescence on median area much denser than the latter.

Legs nearly black, tibiae without any clear marking.

Length (excluding of head): 5.0 mm.

Holotype, ♀, Ikari, Is. Amami, 19 VI, 1961, T. SHIBATA leg. (SHIBATA coll.).

Though in the outline and colouration resemble to *Hypseus fumatus* JORDAN, 1928 from Borneo and Java, this new species is different from the latter by the antennal manner, the forms of pronotal carina and of elytral basal margin, etc.

Phaulimia grammica JORDAN, 1912 (Pl. 1, fig. 3)

JORDAN 1912, Nov. Zool., XIX, p. 142.

This species is firstly recorded from Japan, based on the following specimens.

According to the original description, they differ little from the Formosan examples, and the present author mentions the following some notes.

1♂ ♀, Ikari, Is. Amami, 8 VIII, 1961, Y. SUSUMU leg.; 3♀ ♀, Hatsuno, Is. Amami, 25, 26 V, 1960, T. SHIBATA leg.; 1♀, Nakanoshima, Is. Tokara, 3-13 VI, 1953, H. KÔNO leg.

Upperside dark reddish brown with clayish grey pubescence.

Rostrum not entirely flat, shallowly and roundly depressed on middle and very weakly emarginate at apical margin, the emargination of ♂ sharper.

Eyes bordered by, and occiput medially spotted with clayish grey pubescence.

1st and 2nd antennal joints reddish yellow, 7th and 8th or often 6th more or less dark reddish, some hairs beared at tips of 3rd to 8th joints scanty and short, not so long as in *Ph. rufescens* JORDAN, 1894 from Perak and in the Formosan specimen of *grammica*.

Further the pronotal discal patch almost crown-shaped instead of semicircular.

In ♂ the Japanese specimens mucronate on the last abdominal segment alike as the Formosan ♂, and the median parts of 1st to 4th segments more or less depressed.

Phaulimia debilis (SHARP, 1891) comb. nov. (Pl. 1, fig. 4)

Tropideres debilis SHARP, 1891, Trans. Ent. Soc. Lond., p. 311

At first sight this species is remarkably similar to the foregoing species, expressly in the elytral maculation. The author points out the difference between the two, as mentioned below.

In *Ph. debilis* SHARP, upperside dark brown to blackish brown, body slenderer; but in *grammica* JORDAN (in the Japanese examples), the ground colour somewhat lightened, dark reddish brown and the body much robuster.

Pronotum of *debilis* more conical, the lateral sides strongly convergent forward from the base, without a clear patch dorsally. Besides the 3rd to 5th or 6th and the last 3 antennal joints almost black except the basal part of 9th and the peak of 11th, the club more elongate, 9th of which much longer than the 2 remainders; on the other hands, the corresponding ones of *grammica* brownish, of the club comparatively short, 9th a little longer than the others.

The abdominal mesial depression of *Ph. debilis* ♂, more distinct, but unarmed, while the preceding species bears 2 tubercles on the abdominal sternite as well as in ♂ of *Ph. rufescens* JORDAN and *Ph. lineata* JORDAN from Perak.

Examined materials: 1♂♀, Koma-no-yu, Nagano Pref., 19 VII, 1959; 1♂, Agematsu, Nagano Pref., 1 VIII, 1959, T. SHIBATA leg.; 1♀, Mt. Gomanodan, Wakayama Pref., 27 VIII, 1951, M. YOSHIDA leg. (in Nat. Sci. Mus., Tokyo); 1♂, Mt. Daisen, Tottori Pref., 24 VI, 1959, H. YOKOYAMA leg.; 1♀, 2 VII, 1956, Y. KURODA leg.; 1♂, Mt. Tsurugi, Tokushima Pref., 14 VI, 1961, T. SAITO leg. (through Mr. Y. KIMURA); 1♂♀, Kuwadaira, Tokushima Pref., 28 VII, 1960, T. SHIBATA leg.; 2♂♂, Mt. Sobo, Oita Pref., 20, 21 VII, 1961, T. KAWATSU leg.; 1♀, Mt. Ichifusa, Kumamoto Pref., 23 VIII, 1962, C. YAMANO leg.; 1♂, Yunono, Kagoshima Pref., 20 VIII, 1962, C. YAMANO leg.

Acorynus poecilus sp. nov. (Pl. 1, fig. 5)

Black, rostrum and head covered with luteous grey pubescence, leaving a black triangular patch on occiput, the patch strongly penetrated between eyes. Pronotal 3 stripes also luteous grey but somewhat whitish, of the 2 stripes placed at lateral sides and the median one divided into 2 spots by a central transverse depression, the former spot rounded, the latter larger, trifurcate just before dorsal carina. These stripes strongly contrasting with black on the basal space. Elytral pubescence varying from light brown to whitish grey, formed the following 2 markings: a large subtriangular mark occupied on the basal third, expands laterally and reached to lateral edges except black shoulders and a black zigzag spot on each subbasal swelling, the posterior margin of the mark narrowed from lateral side towards the 5th interspace on each elytron, where sinuated and a little extends to the 6th interspace, then obliquely constricted backward. Another one occurs on the apical third including a bat-shaped black spot on each apical declivity, and touched to apical edge. The anterior margin of the mark drawing an arc but not arrived at lateral sides, with 2 symmetrical ramifying branches on sutural interspaces. One of the branches protruding forward, attained to just middle of each elytron on the 2nd interspace, then curved laterally, gradually increasing in its size and expands to the 5th or 6th interspace. These 2 large common patches conjointed by light brown sutural stripe, therefore a black transverse band lies between the both not meeting with each other at the sutural line. Additional some whitish grey spots scattered on lateral areas of the black band.

Rostrum stout and short, one-fifth wider than long, with short 5 carinae.

Frons about as wide as the interval between the inner 2 carinae of rostrum.

Antenna reddish brown, hardly beyond the elytral base; 1st and 2nd thick, each as long as 3rd, from which to 8th gradually diminishing in their lengths, 10th small, as long as wide, but a little longer than 8th and less than a half as long as 9th (=11th).

Pronotum transverse, the widest at dorsal carina, where one and a half times as wide as long; clearly punctured on disc with a very faint, not grooved transverse depression; dorsal carina nearly straight, a little produced forward at lateral side by a very gentle curve, basal longitudinal carinula absent and basal transversal one present, biconvex.

Elytra almost exactly agrees in structure as in *Acorynus anchis* JORDAN and *Acorynus latirostris* (SHARP), punctate-striate, 3rd interspace slightly convex, but the basal margin more rounded.

Pygidium luteous grey, one-third wider than long, roundly narrowed to apex.

Underside densely pubescent with grey or whitish grey.

Femur grey, spotted by black near middle and apex, but tibia and tarsus almost black, 2 narrow rings of the former and the apical part on 1st segment of the latter whitish grey.

Length (excluding of head): 5.5 mm.

Holotype, ♀, Is. Ishigaki, Ryukyu, 22 V, 1962, K. KOJIMA leg. (through Dr. M. HAYASHI) (SHIBATA coll.).

Somewhat related to *A. anchis* JORDAN and *A. latirostris* (SHARP), but the elegant patterns on pronotum and elytra are the greatest distinguishing marks of the present species from others.

Acorynus anchis JORDAN, 1912 (Pl. 1, fig. 6)

JORDAN, Nov. Zool., XIX, p. 137.

The species has hitherto been known from Formosa. The author examined 2♀♀ of the Formosan specimens (collected by T. KANO in Nat. Sci. Mus., Tokyo), and he has compared them with the under-mentioned Japanese examples. The distinction between the both has nothing or only little.

Examined specimens: 18♂♂, 7♀♀, Ikari, Is. Amami, 11, 12, 17, 18, 21, 22, 29 V & 4 VI, 1960 & 16, 17, 19, 20, 30 VI, 1961, T. SHIBATA leg.; 1♂, Santaro-pass, Is. Amami, 30 V, 1960, T. SHIBATA leg.; 3♂♂, 2♀♀, Hatsuno, Is. Amami, 25, 26, 27 V, 1960 & 22 VI, 1961, T. SHIBATA leg.; 1♀, Hatsuno, 10 IV, 1963, H. MARUOKA leg. (through Dr. M. HAYASHI); 1♂, Mt. Yuwan, Is. Amami, 8 VIII, 1961, K. YAMADA leg.; 1♀, Sato, Is. Amami, 16 VII, 1961, K. YAMADA leg.; 1♂, Hirauchi, Is. Yaku, 23 V, 1960, Y. KIMURA leg.; 1♂, Miyanoura, Is. Yaku, 10 VII, 1961, K. UEDA leg.; 1♂, Tabugawa, Is. Yaku, 11 VII, 1961, K. UEDA leg.; 2♀♀, Kosugidani, Is. Yaku, 17 V, 1960, H. YOKOYAMA leg.; 1♂, Hananoego, Is. Yaku, 11 VII, 1963, H. KONISHI leg.; 1♂, Sata cape, Kagoshima Pref., 9 VIII, 1962, K. SAKO leg.; 1♀, Mt. Kurino, Kagoshima Pref., 24 VII, 1961, K. UEDA leg.

The pubescence above luteous to clayish grey or brownish grey, but these colours often varying to reddish. Pubescence of each ocular margin not interrupted, but nar-

rowed near the occipital area in Japanese specimens.

The large basal patch on elytra very much varied, the posterior margin of which sometimes extends behind along the sutural interspaces.

In the Formosan specimens, the isolated median spot situated between the 2nd or 3rd and the 6th interspaces on each elytron, large and more distinct, though the spot rarely interrupted. But in the most Japanese examples, the spot divided into 2 small dots or vanished on the black transverse band, and in some of them this spot broken up at the 3rd interspace.

Mid tibia of ♂ armed with a small mucro on inner-apical edge as in *A. latirostris* (SHARP).

Acorynus latirostris (SHARP, 1891) comb. nov. (Pl. 1, fig. 7)

Tropideres latirostris SHARP, Trans. Ent. Soc. Lond., p. 303.

The author transfers this species to *Acorynus* from *Tropideres*. The well-known Japanese species is very closely allied to *A. anchis* JORDAN, but may be differentiated from the latter only by the follows:—

The ocular margin very narrow and interrupted near occiput, not continued as that of *A. anchis*.

Antenna and leg robuster, the posterior ring of tibia more developed.

The common basal patch on elytra consists of larger confusing spots with much more distinct black areas in places, and constantly lengthened backward along the sutural interspaces. The independent median spot occupied from the 2nd to 5th or 6th interspaces, large, rather prominent and the inner frontal edge of which generally touched to the extension of the basal patch. Anterior margin of the apical patch also a little produced forward on the sutural interspaces, but not continued with the foregoings. Wherefore the transverse black band lies between the 2 large patches not so clearly marked as to *A. anchis*. Some lateral spots dispersed on disc larger and somewhat confluent together, but those of *A. anchis* small or disappeared.

Pygidium short, especially of ♂ nearly a half wider than long at the base, more angulate; while about the same sex of *A. anchis* only one-third wider at the base than its length.

Distribution: Honshu, Shikoku, Kyushu (including Is. Tsushima; Mt. Tatera, 20 V, 1961 and Sasuna, 24 V, 1961, Y. KIMURA leg.).

Acorynus singularis sp. nov. (Pl. 1, fig. 8)

Brown to dark reddish brown, upperside pubescent with light brownish grey and dark brown or blackish.

Excepting large triangular occipital area, head light brownish grey as on rostrum. The latter thick and short, about a half again as wide as long, almost flat, punctured and shallowly depressed medially with vestigial 5 carinae, median one of which scarcely traceable on the base and dorso-lateral carinae terminated in merely 2 small bare granules on either side of the depression, the remaining external 2 short, but rather distinctly appear laterally; apical margin straight and lateral side expands just above the antennal orifice, which rounded, shallower and somewhat larger than those of the other *Acorynus*-species.

Eyes relatively small, so the distance between them about a half as the apical width of rostrum.

Mentum transverse, on the frontal margin widely emarginate.

Antenna reaching beyond the elytral base, reddish brown but partially darkened save the blackish 3 club-joints; 1st and 2nd thick, 4th and 5th of nearly equal in length, a triffle longer than 3rd (= 6th = 7th), 8th a little shorter than the precedings, club slender, 9th the longest and 10th the shortest as usual, the latter subequal in length to 8th, about one and a half times as long as wide.

Pronotum punctured, more than half again as wide as long, widest at dorsal carina, from that straightly narrowed to apex; on disc transversely depressed before middle, the depression not grooved and emarginate by an even curve, a thin interrupted mesial line, 2 spots at its each side (one behind the other) and a short spot along lateral carina light brownish grey, a spot before scutellum, 2 spots laterally on basal space also the same colour; dorsal carina very feebly trisinuate and connected with short lateral carina in a very gentle curve, basal longitudinal carinula absent, basal transversal one present, loosely biconvex.

Elytra comparatively short and almost flat, punctate-striate, before and behind subbasal swelling depressed but shallow as on sutural interspace, alternate interspaces more or less raised; basal margin biconvex and lateral sides subparallel; a large common patch at posterior half light brownish grey, its frontal margin protruding forward and arched in zigzag manner (but receding backward weakly on inner 2 and strongly on outer 3 interspaces), this patch bears 2 blackish spots situated between the 2nd and 5th or 6th interspaces, of the anterior spot (narrow and its form reminds a bat) just at apical declivity and another before apex, ill-defined mark and attained to lateral edge by a dark brown branch. The remnant area of elytra brown or dark reddish brown, and the colour gradated into dark brown (almost blackish) from base towards the apical lighter patch, the boundary between the two colours clearly defined, and distributed by vaguely light brownish grey dots, some of them encircling the dark subbasal swelling.

Pygidium brown, a little wider than long, the sides linearly narrowed towards the truncate apex.

Underside thinly pubescent with grey or whitish grey.

Legs slender, dark brown but tibiae with an obscure ring on each ante-apical part and also tarsi sparingly grey.

Length (excluding of head): 6.0 mm.

Holotype, ♀, Ikari, Is. Amami, 17 V, 1960, T. SHIBATA leg. (SHIBATA coll.).

The simple antennal orifice and mentum are characteristic in the present species, as previously stated.

Besides the peculiar mode it is distinguished from the other *Acorynus* by the elytral colouration.

Unfortunately the author has been unable to find the nearest species.

Tropideres insularis sp. nov. (Pl. 1. fig. 9)

Black, marked with luteous pubescence and dotted by whitish grey above.

Rostrum in structure as usual in *Tropideres*, a little longer than the basal width,

entirely and densely luteous also on genae. Each ocular margin interrupted on vertex, behind the interruption this luteous line widened internally, so black occipital area not forming a regular triangular patch.

The width of frons variable, but eyes of ♂ more strongly approached each other generally.

Antenna only across the pronotal base, reddish brown to black (terminal 3 joints black, constant occasionally except the base of 9th); basal 2 joints thick, 3rd the longest, 4th to 8th gradually reduced in length, club compact, 9th (=11th) nearly twice as the length of 10th, which as wide as long.

Pronotum transverse, the widest just on dorsal carina, where a little more than twice as long, and narrowed towards apex; disc uneven, irregualrly depressed in centre, with rough and deep punctures on major part, but those of ante-apical area minute, indistinct; luteous middle line enlarged before and behind the central depression, the 1st enlargement very strong, subtriangular, the 2nd smaller one narrow, transverse, this middle line backward over dorsal carina and developed again before scutellum, transversely square, in that place it more distinct and much larger than 2 latero-basal spots, secondary some small dots on pronotal area light luteous, 2 dots of which standing on each end of the central depression; carina very feebly arched forward dorsally, a little produced ahead laterally, the angle of carina very widely rounded.

Scutellum light luteous, semicircular.

Elytral construction mostly agrees with in *T. japonicus*, but robuster, elongate-quadrangular, one and a half times as long as wide; luteous pubescence largely covered over elytra, with some whitish margins partially, basal third of the luteous area across sutural interspaces, expands to each 5th interspace but on the whole deeply sinuated near subbasal swelling and leaving a luteous isolated small spot here, another side the posterior area widely diffused on apical third, the common luteous area situated between both 3rd interspaces, its outer margins nearly parallel; the remaining lateral sides black, dotted by whitish grey or light luteous, the dots mainly scattered along external punctured-striations and sometimes confluent together, occasional black pubescence invaded the apical luteous area by a very confined transverse line.

Pygidium luteous, a little wider than long, angulate, apical margin truncate.

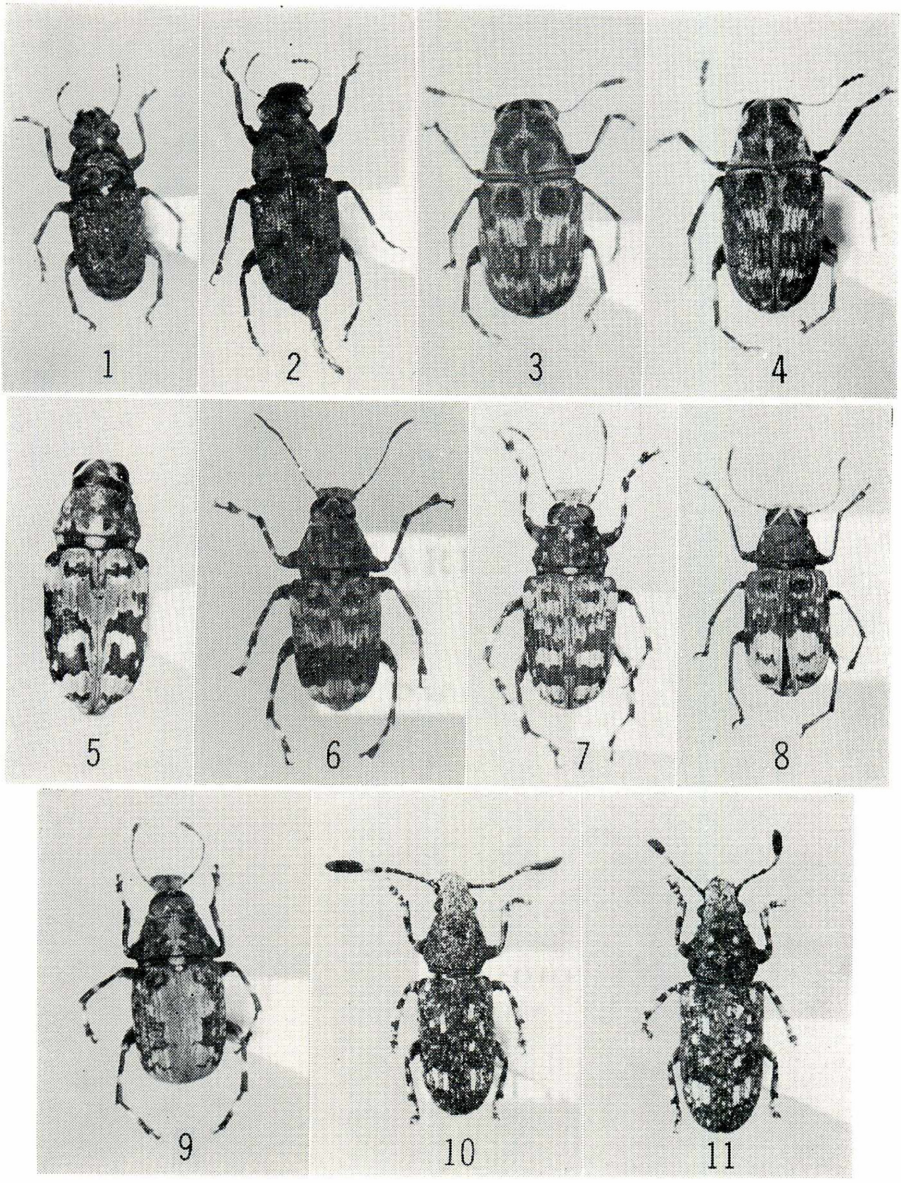
Underside whitish grey, abdomen of ♂ slightly and indistinctly depressed medially.

Femur whitish grey except a black spot before apex, the rests of legs black with a whitish annulus near middle of tibia and of 1st tarsal joint; the 1st tarsal joint comparatively slender, its length more than half of the corresponding tibia, in ♂ mid-tibia unarmed and the frontal leg a little longer than that of ♀.

Length (excluding of head): 3.5 to 5.5 mm.

Holotype, ♂, Hatsuno, Is. Amami, 2 IV, 1963, H. MARUOKA leg. (through Dr. M. HAYASHI) (SHIBATA coll.).

Paratypes, 3♀♀, Hatsuno, Is. Amami, 31 III & 2 IV, 1963, H. MARUOKA leg.; 1♂, Mt. Yuwan, Is. Amami, 10 VII, 1961, T. SHIBATA leg.; 1♂♀, Santaro-pass Is. Amami, 7 V, 1960, T. SHIBATA leg.; 2♀♀, Ikari, Is. Amami, 3 VIII & 6 VIII, 1961, K. YAMADA leg.; 5♂♂, 6♀♀, Ikari, 17, 18, 28 V, 1960 & 19, 21 VI & 4, 8, 11 VII, 1961, T. SHIBATA leg.; 1♂, 3♀♀, Hatsuno, Is. Amami, 23, 25, 26 VI, 1961, T. SHIBATA leg.; 2♂♂, 4♀♀, Yamatoson, Is. Amami, 22 VII, 1962, H. YOKOYAMA leg.; 1♂, Hatsuno,



(M. Ohkura photo.)

26 VII, 1962, Y. MIYAKE leg. (GOTÔ coll.).

Examined specimens: 20♂♂, 15♀♀, Ikari, Is. Amami, 6, 11, 12 V, 1960 & 20, 30 VI & 2, 3 VII, 1961, T. SHIBATA leg.; 7♂♂, 10♀♀, Ikari, 19 VII, 1961, Y. SUSUMU leg.

This new species has a close relationship to *T. japonicus* ROELOFS, 1879 from Japan, *T. notabilis* JORDAN, 1928 from Tonkin and *T. scitus* JORDAN, 1933 from Burma, but can be easily separated from them in having the different colouration of pubescence, the robuster and shorter elytra with quite distinctive pattern.

In ♂ of *T. japonicus* ROELOFS, the mid-tibia bears a small mucro on inner apical edge, while it is simple, not mucronate in the new species.

Eucorynus crassicornis FABRICIUS, 1801 (Pl. 1, figs. 10, 11)

FABRICIUS, 1801, Syst. El. II, p. 407.

Eucorynus clavator FAIRMAIRE, 1903, Rev. d'Ent. XXII, p. 43.

Eucorynus setosulus PASCOE, 1859, Ann. Mag. Nat. Hist. (3) IV, p. 434.

The Iriomote examples in Southern Ryukyu were determined as the above-mentioned widely distributed species, along with ones from Hainan by the present author The under localities are a new record for Japan and perhaps for Hainan Is. (China).

Examined speciemens: 1♂, 2♀♀, Is. Iriomote, Ryukyu, 26, 27 VII, 1962, Y. HAMA leg.; 3♂♂, Hainan Is., China, 29 VIII, 1940, M. MORI leg. (in Nat. Sci. Mus., Tokyo & SHIBATA coll.); 1♂, Cambodia (reared from an imported log from Cambodia, at Osaka port, 1962, S. YOSHINAGA leg.) (through Mr. A. YAMAZAKI).

Explanation of Plate 1.

1. *Hypseus decoratus* sp. nov., ♂; 2. *Hypseus incertus* sp. nov., ♀; 3. *Phaulimia grammica* JORDAN, ♀; 4. *Phaulimia debilis* (SHARP), ♂; *Acorynus poecilus* sp. nov., ♀; 6. *Acorynus anchis* JORDAN, ♂; 7. *Acorynus latirostris* (SHARP), ♀; 8. *Acorynus singularis* sp. nov., ♀; 9. *Tropideres insularis* sp. nov., ♂; 10. *Eucorynus crassicornis* FABRICIUS, ♂; 11. ditto, ♀.

沖縄で5月にえた天牛類3種

野　村　英　世

1963年4～5月に行なった私の琉球採集旅行の収獲中，沖縄でえた次の3種の天牛は分布的に興味があると思われるので報告する．種名を同定された林匡夫氏に深謝する．

1. *Arhopalus* (*Cephalallus*) *unicolor* GAHAN
   29 exs., Okinawa, May 8, 1963, H. NOMURA leg., on fallen *Pinus*.
2. *Acalolepta ferriei* (BREUNING)
   1♂, Mt. Yonaha, Okinawa, May 10, 1963, H. NOMURA leg.
3. *Nanohammus subfasciatus* (MATSUSHITA)
   3♂♂, Yona, Okinawa, May 5 & 6, 1963, H. NOMURA leg.

The Cerambycidae of Ryukyu Islands. III.

Additions to the Cerambycid-fauna of Ryukyu Archipelago. 3 (Col.).

By Masao Hayashi

As the third report of this article, 18 forms are herein newly described or recorded from the region, additionally from Amami-Ôshima Island and more northern certain islands, south of Kyushu, based on the collections of the formerly mentioned gentlemen, in addition to of Mr. H. Nomura in April to May and of Mr. Y. Hama in July to August, 1963 for Okinawa and Yayeyama Islands. Certain additional material has been sent to the present author through the courtesy of Mr. Y. Nomura (Yamawaki) and Mr. J. Nagao of Fukuoka, which were chiefly collected from Amami-Ôshima Island.

Cerambycinae

Obriini

1. *Longipalpus dilatipennis* (Gressitt)

Iphrobrium dilatipenne Gressitt, 1935, Ins. Matsum., 9 : 151 (Is. Iriomote); Gressitt, 1950, Philip. Jl. Sci., 79 : 210 (Is. Okinawa)

Material examined : 1 ♂, Hatsuno, Is. Amami-Ôshima, June 12, 1963, J. Nagao leg. (Nagao coll.). New to Amami-Ôshima.

Clytini

2. *Xylotrechus brevicillis* Chevrolat (Pl. 2, fig. 1)

1863, Mem. Soc. Sc. Liège, 18 : 323 (China)

Material examined : 1 ♂, Mt. Omoto, Is. Ishigaki, Aug. 2, 1962, H. Nomura leg. (Hayashi coll.); 1 ex., Is. Ishigaki, July, 1962, H. Maruoka leg. (Maruoka coll.).

This species is firstly reported besides the type locality, since the original description was published.

3. *Xylotrechus grayii* (White)

Clytus Grayii White, 1855, Cat. Col. Brit. Mus., 8 : 261, pl. 6, fig. 4 (N. China)

Xylotrechus grayii : Chevrolat, 1863, Mem. Soc. Sc. Liège, 18 : 325.

Material examined : 1 ♀, Tonoshiro, Is. Ishigaki, July 16, 1962, Y. Hama leg. (Shibata coll.). New to Ryukyus.

[Ent. Rev. Japan, Vol. XVI, No. 1, pp. 10~16, pl. 2, Sept., 1963]

Lamiinae

Agnini

4. *Cereopsius ziczac* (MATSUSHITA)

Etymestia ziczac MATSUSHITA, 1940, Ins. Matsum., 14: 54 (Musha, Formosa)
Cereopsius ziczac: GRESSITT, 1951, Longicornia, II: 377.

Material examined: 1 ♀, Mt. Banna, Is. Ishigaki, Yayeyama Isl., July 14, 1963, Y. HAMA leg. (SHIBATA coll.). New to Ryukyus.

5. *Acalolepta luxuriosa* (BATES) ssp. *kuniyoshii* ssp. nov. (Pl. 2, fig. 2)

This new subspecies differs from the typical species in having the following characters:—

♀. Body black, antennae light reddish brown, each apex from third to tenth and preapically eleventh narrowly darkened. Body densely covered with light fulvous pubescence, antennae covered with greyish pubescence. Frons impunctate, a little broader than long, occiput with a few punctures. Antennae about 1.6 times as long as body. Prothorax comparatively less broader, strongly tuberculated laterally, tubercles stouter, not fine at apex, disc with a broader central impunctate longitudinal line. The punctures on pronotal disc and basal one-third of elytra much stronger and coarser, but sparser and more irregularly scattered. The pubescence denser, and almost lacking two complete transverse dark bands on elytra. Length, 27 mm., width, 9 mm.

Holotype, ♀ (KOJIMA coll.), Sedake, Is. Okinawa, Central Ryukyus, June 17, 1956, S. KUNIYOSHI leg. Named in honour of Mr. KUNIYOSHI, the collector.

6. *Acalolepta oshimana* (BREUNING) ssp. *omoro* ssp. nov. (Pl. 2, fig. 3)

This new subspecies differs from the typical species from Is. Amami-Ôshima, N. Ryukyus, in having the following points:—

Dark reddish brown, densely closely covered with fulvous brown fine pubescence, darker than the typical species. Antennal tubercles form a duller triangle on vertex in ♂, instead of a rectangular in the typical ♂, and a sharper angle in ♀ than in the typical ♀. Scape with a more incomplete cicatrix. Prothorax more transverse, lateral tubercles stouter. Elytra comparatively broader and shorter, about 2.2 times as long as the basal width in ♂, and 2.3 times in ♀. Middle tibiae more distinctly dilated preapically. Length, 19–27 mm., width, 6–8.5 mm.

Holotype, ♂ (KOJIMA coll.), Yona, Is. Okinawa, Central Ryukyus, June 2, 1962, KOJIMA & WATANABE leg.; paratype, 1 ♀, Mt. Meiji, Is. Okinawa, June 5, 1962, KOJIMA & WATANABE leg. (HAYASHI coll.). The subspecific name is based on the famous and oldest poem in Ryukyus.

7. *Mimorsidis scutellatus* GRESSITT (Pl. 2, fig. 4)

1951, Longicornia, II: 404, pl. 16, fig. 3 (NW. Fukien)

Material examined: 1 ♂, Is. Iriomote, July 20, 1962, H. MARUOKA leg. (HAYASHI

coll.); 1 ♂, 3 ♀♀, Mt. Omoto, Is. Ishigaki, Aug. 2 & 4, 1962, HAMA & NOMURA leg.; 2 ♂♂, Mt. Kawara, Is. Ishigaki, Apr. 12, 1963, H. NOMURA leg. (HAYASHI, SHIBATA, HAMA & NOMURA coll.). All localities are in Yayeyama Isl., Southern Ryukyus. New to Ryukyus.

Homonoeini

8. *Bumetopia okinawana* sp. nov. (Pl. 2, fig. 5)

Dark brownish black, finely and densely covered with yellowish fulvous pubescence, finer on antennae and on legs.

Slender (♂), or elongate (♀), elliptical, head slightly broader than prothorax, very finely punctulate throughout with coarse and sparse punctures on all surface excepting clypeus, frons convex, fairly transverse, vertex slightly concave with a fine median longitudinal furrow prolonged ahead to frons, antennal tubercles dully elevated, distantly separated each other; eyes coarsely faceted, strongly emarginate, almost divided in two lobes, lower lobe nearly quadrate, a little shorter than gena below it. Antennae 1.3 times longer than (♂), or nearly as long as (♀) body, scape clavate, very finely punctulate and sparsely punctured, comparative length of each antennal joint as follows:— 4 : 1 : 7 : 6 : 3.7 : 3.3 : 3.2 : 3 : 2.8 : 2.6 : 2.6 (♂); 5 : 1 : 8.2 : 6.5 : 4 : 3.5 : 3.2 : 3 : 2.6 : 2.5 : 2.5 (♀). Prothorax slightly (♂, 9 : 9.5) or distinctly (♀, 9 : 12.5) broader than long, apex slightly narrower than base, sides shallowly bituberculate at middle, disc very finely punctulate excepting a shining medio-posterior median line, and sparsely punctured. Scutellum semicircular, pointed at posterior apex. Elytra a little broader than prothorax, 2.4 times as long as the basal width in both sexes, humeri rather strongly constricted, very weakly broadened posteriorly to posterior one-third, then narrowed to separately rounded apex; disc convex, rather not so coarsely shallowly punctured on basal four-fifths. Abdomen finely sparsely punctured. Legs finely sparsely punctured, middle tibiae weakly dilated, first hind tarsal joint nearly as long as the following two joints united together. Length, 10–13 mm., Width, 3–4.3 mm.

Holotype, ♂ (HAYASHI coll.), paratypes, 2 ♂♂, 3 ♀♀, Mt. Yonaha, May 10, 1963, H. NOMURA leg.; 1 ♂, Izumi, Apr. 6, 1963, H. NOMURA leg.; 1 ♂, 3 ♀♀, Mt. Katsuu, July 10, 1963, Y. HAMA leg. (HAYASHI, SHIBATA, HAMA & NOMURA coll.); 2 ♂♂, 1 ♀, Shuri, May 12, 19 & 20, 1961, S. KUNIYOSHI leg.; 4 ♂♂, 5 ♀♀, Shuri, May 15–17, 1962, KOJIMA & WATANABE leg.; 2 ♂♂, Yona, June 2, 1962, KOJIMA & WATANABE leg.; 1 ♀, Nago, June 11, 1962, KOJIMA & WATANABE leg.; 1 ♂, Mt. Meiji, June 5, 1962, KOJIMA & WATANABE leg.; 1 ♂, Toyama, Aug. 20, 1958, K. IHA leg. (HAYASHI, KOJIMA, WATANABE & KUNIYOSHI coll.). All localities are found in Is. Okinawa.

Differs from *B. oscitans*, *japonica*, *oshimana* and *heiana*, in having slender body with fine punctures and not developed humeri, minute lateral tubercles of prothorax, different antennal and tarsal structures, etc.

Apomecynini

9. *Neosybra sinuicosta* GRESSITT

1951, Longicornia, II: 502, pl. 20, fig. 2 (Formosa)

Material examined: 6 exs., Is. Iriomote, July 19–26, 1962, H. MARUOKA leg. (HAYASHI & MARUOKA coll.); 1 ex., Mt. Omoto, Is. Ishigaki, Aug. 2, 1962, Y. HAMA leg. (SHIBATA coll.). All in Yayeyama Isl. New to Ryukyus.

10. *Sybra subtesselata* BREUNING

1960, Bull. Inst. roy. Sci. nat. Belg., 36 (7) : 14 (Is. Oshima?)

Material examined: Very many examples from Islands Ishigaki and Iriomote, in Yayeyama Islands. The specimens from Yayeyama seem to be quite identical with the original description of this species, in spite of the original locality was designated as Is. Amami-Ôshima, and there has not been found this species among the very many specimens of *Sybra* from Is. Amami-Ôshima.

11. *Sybra pascoei* LAMEERE ssp. *taiwanella* GRESSITT

1951, Longicornia, II : 498, 499 (SW. & S. Formosa)

Material examined: 1 ex., Is. Okinawa, Aug. 12, 1962, H. MARUOKA leg.; many exs., Shuri, Aug. 20 & 21, 1961, S. OKABE leg.; 1 ex., Izumi, July 10, 1963, Y. HAMA leg. (HAYASHI, MARUOKA, OKABE, KOJIMA & HAMA coll.); 1 ex., Hirara, Is. Miyako, July 15, 1962, H. NOMURA leg.; 2 exs., Is. Miyako, May 2, 1963, H. NOMURA leg. (HAYASHI, SHIBATA & NOMURA coll.). New to Ryukyus.

Pteropliini

12. *Niphona yanoi* MATSUSHITA (Pl. 2, fig. 6)

Niphona furcata: MIWA (nec BATES), 1933, Tr. N.H. Soc. Formosa, 23: 12 (Is. Iriomote)

Niphona yanoi MATSUSHITA, 1934, Tr. N. H. Soc. Formosa, 24: 240 (Formosa)

Material examined: 1 ex., Mt. Maezato, Is. Ishigaki, Aug. 2, 1962, H. MARUOKA leg. (MARUOKA coll.); 1 ♀, Is. Yonaguni, Apr. 15, 1963, H. NOMURA leg.; 1 ♀, Sonai-Urabe, Is. Yonaguni, July 20, 1962, Y. HAMA leg.; 1 ♀, Ôtomi, Is. Iriomote, July 28, 1962; 4 exs., Inaba, Is. Iriomote, July 21–23, 1963; 1 ex., Hoshidate, Is. Iriomote, July 21, 1963, Y. HAMA leg. (HAYASHI, SHIBATA, HAMA & NOMURA coll.); 1 ex., Mt. Yonaha, Is. Okinawa, Aug. 9, 1962, H. MARUOKA leg. (MARUOKA coll.); 1 ♂, 1 ♀, Mt. Meiji, Is. Okinawa, June 5, 1962, KOJIMA & WATANABE leg. (KOJIMA & WATANABE coll.).

13. *Pterolophia latefascia* SCHWARZER (Pl. 2, fig. 7)

1925, Ent. Blätt., 21 : 65 (Formosa)

Pterolophia fainanensis PIC, 1926, Mel. Exot. Ent., 45 : 32 (Formosa)

Material examined: 5 exs., Kawahara, Is. Ishigaki, May 23, 1962; 3 exs., Ishigaki-city, May 30, 1962; 1 ex., Kabira, Is. Ishigaki, May 21, 1962, KOJIMA & WATANABE leg. (KOJIMA, HAYASHI, WATANABE & KUNIYOSHI coll.); 1 ex., Tomino, Is. Ishigaki, Aug. 4, 1962, H. MARUOKA leg. (MARUOKA coll.); 1 ♀, Ôhama, Is. Ishigaki, Feb. 3, 1953, T. SHIRAKI leg. (NIAS coll.); 1 ♂, Mt. Banna, Is. Ishigaki, July 24, 1962; 1 ♂, Mt. Omoto, Aug. 2, 1962; 1 ♂, Mt. Banna, July 18, 1963, Y. HAMA leg.; 1 ♀, Tonoshiro, Is. Ishigaki, July 24, 1962, H. NOMURA leg. (HAYASHI, SHIBATA, HAMA & NOMURA coll.); 1 ex., Ôtomi, Is. Iriomote, July 18, 1962, H. MARUOKA leg. (MARUOKA coll.); 1 ♂, Ôtomi, July

28, 1962, H. NOMURA leg. (SHIBATA coll.). All localities are found in Yayeyama Islands. New to Ryukyus.

Rhodopinini

14. *Doius divaricatus* (BATES) ssp. *fulvovariegatus* ssp. nov. (Pl. 2, fig. 8)

This new subspecies is separated from the original species from Japan and Kurile Islands, in having the following points:—

Body comparatively slender, especially elytra more elongate, parallel-sided, instead of gradually narrowed posteriorly in *divaricatus* s. str. Frons less transverse, upper eye lobe larger, vertex between eyes narrower. Punctures, especially on elytra sparser. Body dark brownish black, covered with varying from fulvous to white pubescence (Amami-specimens more fulvous, Iriomote-specimen whitish), elytra decorated with brownish black markings as follows:— A short narrow stripe beside scutellum, a large narrowly triangular one at side before middle, which the apex irregularly obliquely directed posteriorly inward, a very narrow oblique one before apex, and a triangular one at apex, the last two each accompanying with white markings just before them, respectively; some additional minute points on suture. Length, 6.5–7.5 mm., width, 1.8–2 mm.

Holotype, ♂ (OHBAYASHI coll.), Hatsuno, July 29, 1962, & paratype, 1 ♀, Honcha, July 23, 1962, N. OHBAYASHI leg. (OHBAYASHI coll.); paratypes, 1 ♂, Yamato-son, July 24, 1962, H. YOKOYAMA leg. (YOKOYAMA coll.); 2♀♀, Ikari, Aug. 18, 1961, K. YAMADA leg. (HAYASHI & SHIBATA coll.). All localities above-mentioned are found in Is. Amami-Ôshima, N. Ryukyus. Paratypes, 1 ♂, Is. Iriomote, Yayeyama Isl., S. Ryukyus, July 26, 1962, H. MARUOKA leg. (MARUOKA coll.); 1♀, Is. Kuchinoerabu, near Is. Yakushima, South of Kyushu, July 25, 1963, H. KONISHI leg. (HAYASHI coll.).

15. *Cylindilla formosana* (GRESSITT) comb. nov.

Microestola formosana GRESSITT, 1951, Longicornia, II: 513 (Formosa)

Material examined: 3 exs., Mt. Omoto, Is. Ishigaki, Aug. 4, 1962, H. NOMURA leg.; 3 exs., Ôtomi-Ôhara, Is. Iriomote, July 29, 1962, Y. HAMA leg. (HAYASHI, SHIBATA, HAMA & NOMURA coll.); 1 ex., Is. Ishigaki, Aug. 2, 1962, H. MARUOKA leg. (MARUOKA coll.).

Acanthocinini

16. *Rondibilis multinotatus* GRESSITT ssp. *elongatus* ssp. nov. (Pl. 2, fig. 9)

This new subspecies differs from the typical species from Kwangtung, S. China, in having the comparatively longer third antennal joint, strongly swollen sides of prothorax, longer hind femora, arriving at the posterior one-sixth, instead of posterior quarter of the elytra, elytra in ♂ having a pair of small spine-like tubercles on disc near base, etc.

Body dark brown (rarely light brown), covered with fulvous grey pubescence; apex and base of prothorax, antennae and legs, especially bases of femora and tibiae a little lighter, reddish, each apex of third to tenth antennal joints darkened. Elytra irregularly decorated with many dark brown small markings and sparsely furnished with stiff hairs. Length, 5–8 mm., width, 1.5–2 mm.

Holotype, ♂ (HAYASHI coll.) & paratypes, 3 ♀♀, Kainan, May 23, 1962; 2 ♀♀, Ishigaki-city, May 20, 1962; 1 ♂, 1 ♀, Kariba, May 21, 1962, all in Is. Ishigaki; 1 ♂, 1 ♀, Is. Iriomote, May 26, 1962, KOJIMA & WATANABE leg. (HAYASHI, KOJIMA, WATANABE & KUNIYOSHI coll.); paratypes, 3 ♂♂, 9 ♀♀, Ôtomi, Is. Iriomote, July 27 & 29, 1962, HAMA & NOMURA leg. (HAYASHI, SHIBATA, HAMA & NOMURA coll.); 1 ♀, Is. Hateruma, July 31 – Aug. 2, 1959, M. OKABE leg. (HAYASHI coll.). All localities are found in Yayeyama Islands, S. Ryukyus.

17. *Euryclytosemia* Gen. nov.

Oblong, subdepressed. Frons transverse, convex, almost not retreated, vertex broadly and shallowly concave, eyes coarsely faceted, strongly emarginate, upper lobes more or less closely set each other, under lobe longer than broad, and 1.5 times as long as gena below it, antennal tubercles separately, weakly raised. Antennae (♂) slender, slightly less than twice as long as body, sparsely ciliate beneath; scape long, slender, shallowly swollen, third joint fairly shorter than fourth, distinctly longer than scape, fourth 1.3 times as long as fifth. Prothorax broader than long, with distinct, lateral tubercles at the middle, very weakly constricted before base, apex nearly as broad as base, disc weakly convex, simple. Elytra fairly broader than prothorax, gradually narrowed posteriorly, separately rounded at apex; disc weakly convex at base near scutellum, depressed semicircularly at basal one-third. Prosternal process narrow, arcuate. Mesosternal process weakly inclined anteriorly. Metasternum in normal length. Middle coxal cavity closed laterally. Legs slender, elongate; femora shallowly clavate but depressed, middle tibiae shallowly dilated preapically on dorsal side, tarsi short, first hind tarsal joint nearly as long as second and third united together, tarsal claws divaricate.

Type species: *Euryclytosemia nomurai* sp. nov.

Range: Southern Ryukyu Islands.

This new genus is somewhat allied to *Clytosemia* BATES from Japan and Formosa, but it differs from the latter in having the broader body, shorter third antennal joint (against fourth), not quadrate under eye lobe, no discal pair of tubercles on elytral base, etc. And also it differs from *Pararhopaloscelides* BREUNING from Kashmir, in having the shorter third antennal joint, not longer prothorax, no discal tubercle at elytral base, etc. The genus is a feminine gender.

17′ *Euryclytosemia nomurai* sp. nov. (Pl. 2, fig. 10)

Light fulvous brown or reddish brown, thinly clothed with grey pubescence, denser but incompletely and narrowly in 3 longitudinal rows on pronotum, and also in a very broad oblique band on basal half, in a medio-posterior narrow band and in many irregular spots at apical declivity on elytra, remaining darker markings of a common semicircular one at base, of a broad transverse band which broadened laterally just behind middle and of a narrower oblique band at posterior one-third. Eyes black, antennae and legs lighter coloured than body. Head and prothorax shallowly closely punctulate, and elytra finely, sparsely punctured. Length, 5–5.5mm., width, about 1.5 mm.

Holotype, ♂ (HAYASHI coll.) & paratype, 1 ♂, Sonae, Is. Yonaguni, S. Ryukyus, July 19, 1963, H. NOMURA leg. (SHIBATA coll.).

The specific name is dedicated to Mr. H. NOMURA, the collector of this interesting species who has been earnestly surveying at the various islands of Ryukyus in many times.

Saperdiini

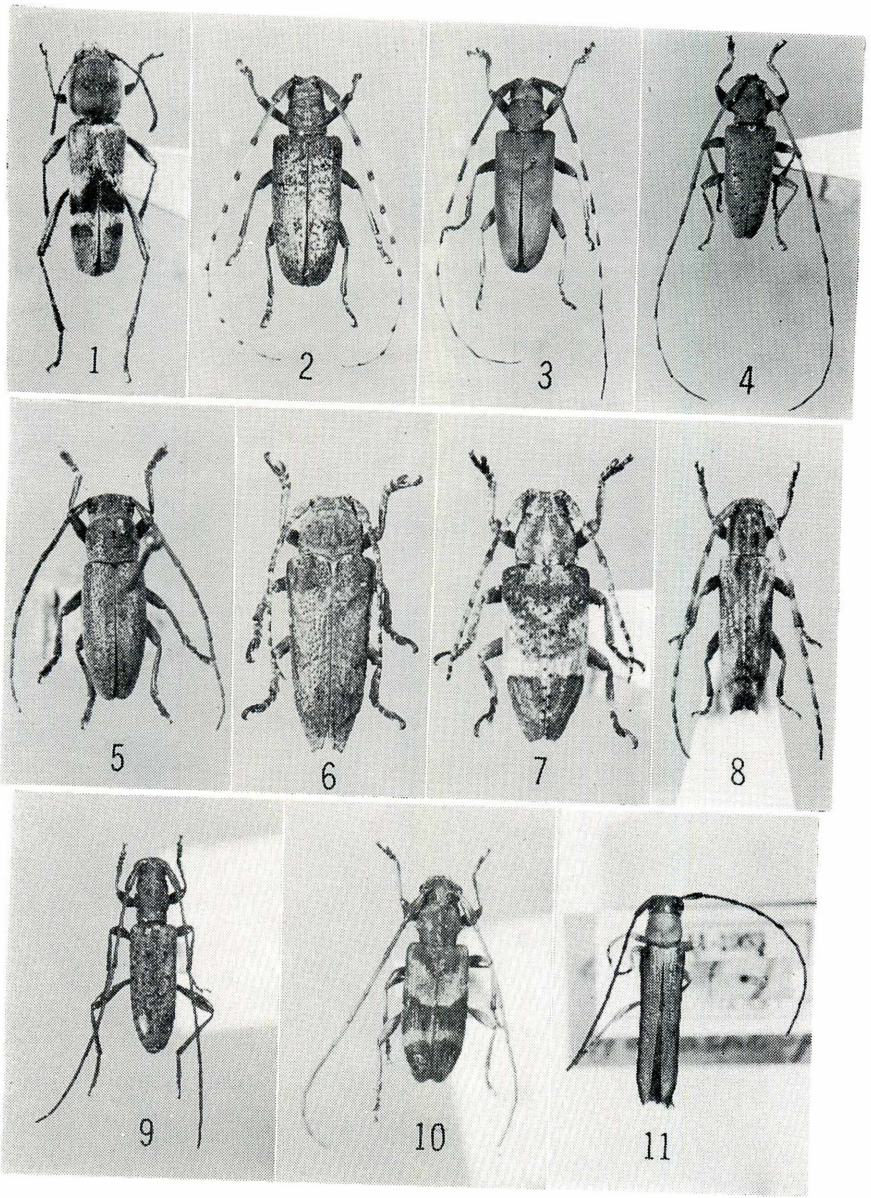
18. *Oberea shirakii* sp. nov. (Pl. 2, fig. 11)

Medium, rather not slender species. Dark orange fulvous, head slightly brownish, lower sides of frons slightly infuscated, antennal insertions, the parts embracing by the emarginated eye lobes black; mouth-parts, antennae and the sides of elytra darkened, varying from black to dark blackish brown, eyes black, disc of elytra dark brown excepting a quadrate basal orange marking embracing scutellum; apices of tibiae and all tarsi infuscated. Body finely closely covered with fulvous yellow or brownish yellow pubescence, antennae furnished with short black hairs on the undersides of from scape to sixth joints.

Head (incl. eyes) as broad as prothorax, generally closely micro-punctulate and shallowly sparsely punctured, frons almost quadrate, convex, with a median longitudinal furrow, extending backward through vertex to occiput, vertex shallowly concave, antennal insertions finely closely punctured. Under eye lobe very large, longer than wide, and 4.5 times as long as the gena below it. Antennae 1.4 times as long as body, scape closely punctulate, comparative length of each antennal joint as follows:— 5 : 1.5 : 6.8 : 6.5 : 5.5 : 5.3 : 5 : 4.8 : 4.5 : 4 : 4. Prothorax slightly broader than long, constricted rather distinctly behind apex and weakly so before base, sides roundly swollen medio-posteriorly, disc weakly convex, dull, partially with very shallow irregular punctures. Scutellum short, inverted trapezoid, punctulate. Elytra broader than prothorax, 2.75 times as long as the basal width, gradually narrowed posteriorly, and obliquely emarginate at apex with lateral sharp terminal angles. Disc coarsely sparsely punctured in 6 striate rows, 4 on disc and 2 on sides of each elytron, sides of epipleuron additionally coarsely closely punctured; punctures becoming finer to apex. Body beneath somewhat shining, generally closely punctulate, sides of metasternum and all metepisterna sparsely coarsely punctured. Fifth visible abdominal segment triangularly concave at the middle of apical portion beneath, with narrowly emarginate apex. Legs of moderate length, first hind tarsal joint shorter than second and third united together. Length, 14.5 mm., width, 3.2 mm.

Holotype, ♂ (NIAS coll.), Gusukube, Is. Miyako, between Yayeyama and Okinawa Islands, S. Ryukyus, March 11, 1953, T. SHIRAKI leg.

This fine new species is closely allied to *O. theryi* PIC (1902) from Chekiang, E. China, but it differs from the latter in having the smaller body (*theryi*, 17–19 mm.), longer antennae, not preapically narrowed elytra, and entirely orange body beneath. This new specific name is dedicated to the collector of this interesting species, Dr. TOKUICHI SHIRAKI, the famous entomologist of Japan.



(M. Ohkura photo.)

On a New *Colpodes*-Species from Amami Island, Japan (Col., Harpalidae)

By Masafumi Ohkura and Taichi Shibata

Colpodes ishidai sp. nov. (fig. 1)

Length : 11.0 to 12.0 mm. Width : 4.0 to 4.5 mm.

Black, shiny ; elytra metallic blue, sometimes with slight greenish tinge, disk of prothorax with very faint metallic tint, mouth parts, sides of prothorax and of elytra dark brown, antennae, legs, and sometimes suture of elytra dark reddish yellow, underside black or blackish brown.

Surface of head smooth, without clear microsculpture ; frontal foveae moderately deep and wide ; eyes prominent, large, with two supraorbital setae ; temporae not tumid, much shorter than eyes ; neck-constriction moderate ; antennae slender, not reaching middle of elytra ; tooth of mentum simple.

Forms of prothorax variable, relatively large, widest a little before middle, where about 1½ times as wide as long ; surface finely but distinctly punctured except median part (the punctuations of basal foveae clearer and stronger than the others), with some transverse striations on disk, microsculpture scarcely visible ; apex somewhat deeply emarginate, vaguely bordered ; front angles produced and rounded ; base finely bordered except lateral parts ; hind angles obtuse and a little rounded at their tips ; lateral sides very widely explanate and moderately reflexed, strongly roundly constricted in front, straightly and weakly narrowed behind, sometimes very little sinuate before hind angles ; bisetose, the frontal seta placed on the widest point and hind one near hind angles ; median line distinct ; basal foveae deep, large.

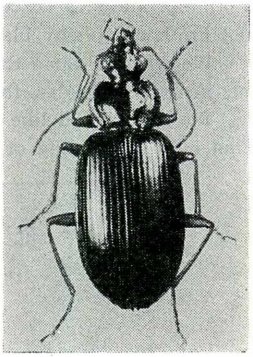


Fig. 1. *Colpodes ishidai* sp. nov.

Winged. Elytra much more than 1½ times as long as wide ; microsculpture consisting of narrow transverse lines ; shoulders distinct but rounded ; lateral sides subparallel, apical sinuation clear ; apex with a sharp, acute tooth ; striae deep throughout, finely rather distinctly crenulate ; scutellar striole long ; intervals moderately convex, interval 3 with three pores, the frontal one adjoining stria 3, the rest two adjoining stria 2 ; umbilicate pores on interval 9 about twenty in number.

Underside smooth, only mesepisterna punctured ; metepisterna about twice as long as wide, narrowed behind, sulcate at outer and inner sides ; last abdominal segment in ♂ with one, in ♀ with two marginal setae on each side.

Three basal segments of meso- and metathoracic tarsi bisulcate, the intervals between sulci carinate ; segments 4 of all tarsi bilobed, outer lobe a little longer than inner one ; claws with several microscopic hairs beneath.

[Ent. Rev. Japan, Vol. XVI, No. 1, pp. 17～18, Sept., 1963]

Aedeagus as figured. (fig. 2) (This example is somewhat immature.)

Holotype : ♂, 4. VII. 1961, Ikari, Amami Is., T. SHIBATA leg. (in SHIBATA's coll.)

Paratypes : 1♀, 21. V. 1960 ; 1♂, 29. V. 1960 ; 8♂♂ 1♀, 17. VI. 1961 ; 1♀, 19. VI. 1961 ; 1♂ 1♀, 20. VI. 1961, Ikari, Amami Is., T, SHIBATA leg. ; 2♀♀, 22. VI. 1961, Hatsuno, Amami Is., T. SHIBATA leg. (in our coll.)

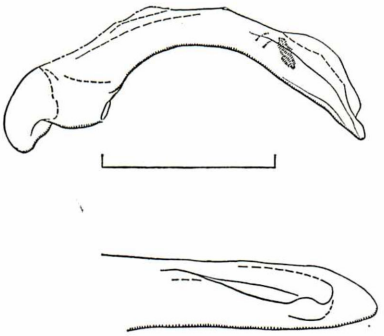


Fig. 2. Aedeagus, except both parameres.

The present species is very closely allied to *Colpodes apex* JEDLIČKA, 1940 from Formosa, according to the short original description in his keys, but may be distinguished from it as follows :—

In *apex*, elytral striae and prothoracic basal foveae smooth, but in the new species, the former finely crenulate, the crenulation rather distinct and may be indicated as punctate-striation, the latter very clearly and strongly punctured. And in *apex*, head, prothorax, and legs (excepting red tarsi) pitchy brown, but in the present species, head and prothorax pitchy black, legs uniformly dark reddish yellow.

We wish to name this beautiful speices in honour of Mr. HIROSHI ISHIDA with our hearty gratitudes, for his cordial assistances to our studies.

We also should like to express greatly our thanks to Mr. ISAMU HIURA, for his kind help in drawing of very fine pictures.

奄美大島のツブゴミムシ3種の記録

芝　田　太　一

1. *Pentagonica biangulata* DUPUIS, 1912

1♂, 小湊, 奄美大島, 1961年4月30日, 山田健吉氏採集.

DUPUIS は台湾の標本について上翅の dorsal pore をはっきりさせていないが, 奄美大島の個体では第3間室にこの属に通常な3孔点をもつ. なお, 筆者は石田裕氏の御好意により台湾産の *P. formosana* DUPUIS, 1912 と思われる1標本を検したが, これも明らかな3孔点を有している.

2. *Pentagonica daimiella* BATES, 1892　ダイミョウツブゴミムシ

1♂, 湯湾岳, 奄美大島, 1961年8月8日, 山田健吉氏採集.

1873年に BATES が *P. ruficollis* ムネアカツブゴミムシと誤認し, 改めて記載したもので, 原産地は長崎, その後 JEDLIČKA (1953) が中国福建省から記録している. 筆者は浜裕夫氏採集の西表島 (新記録) の1個体 (1♀, 1962年7月26日) も検したが, これは少し小形であった.

3. *Pentagonica nigripennis* BATES, 1873

1♀, 八津野, 奄美大島, 1960年5月24日, 筆者採集 ; 1♀, 新村, 奄美大島, 1961年6月22日, 筆者採集.

これも前種と同じ長崎原産で, ANDREWES (1923) の記述によく合致する.

A New Species of the Genus *Pterostichus* from Japan

(Carabidae, Coleoptera)

By Kazuo Tanaka

527, Kyôdô, Setagaya-ku, Tokyo

Pterostichus (*Nialoe*) *okutamae* sp. nov. (Pl. 3, figs. 1–5)

Length: 15½–17½ mm. Width: 5⅓–6 mm. Apterous.

Body depressed, black, shining; labrum, base of mandibles, middle of under-side, tibiae and tarsi more or less ferruginous.

Head (width: 3.36–3.71 mm.) smooth; both clypeus and labrum a little emarginate at apex; frontal furrows tolerably deep, nearly parallel and extending onto clypeus anteriorly, diverging at posterior end and reaching level of front supraorbital pores; hind supraorbital pores just behind post-eye level; spaces outside frontal furrows convex; lateral grooves not hooked at hind end and terminating at about hind supraorbital pores; eyes relatively small and moderately convex, encircled behind by tumid tempora which is as convex and ⅝ as long as eye; genae beneath eye smooth; apical joint of labial palpi widest at about apical ¼ and slightly tapering towards extremities, truncate at apex, 4 times as long as wide and as long as penultimate; that of maxillaries compressed-cylindric, truncate at apex, nearly 4 times as long as wide and longer than penultimate; antennae subfiliform [6th joint 2½ (♂) or 2⅓ (♀) times as long as wide], with apical 3½ (♂) or 3 (♀) joints extending beyond base of prothorax, joint 2 generally 4-setose, rarely 3- or 5-setose.

Prothorax quadrate, widest at apical third, 1.19–1.22 times as wide as long, 1.32–1.40 times as wide as head; disc smooth, with only slight rugosities at base and rudimental punctures in basal foveae; apical margin emarginate, nearly unbordered, the angles produced, rounded at tip; lateral margins gently arcuate in apical ¾ and sinuate-narrowed behind, nearly parallel before base, the borders widened at and near apical angle, sometimes crenulate near base, the grooves distinct but together with the borders effaced at basal parallel part; basal margin thin, unbordered, emarginate in middle, a little wider than apical margin, 0.78–0.80 as wide as the widest part, the angles right or rather acute, sharp at tip; median line distinct, abbreviated at extremities but extending anteriorly beyond apical crescent depression which is also distinct; basal fovea one on each side, round, of moderate depth; front marginal pores variable in number, from 1 to 4, most often 2, hind one at basal angle.

Elytra oblong-subparallel, 1.41–1.54 times as long as wide, widest at about middle, 2.07–2.26 times as long and 1.15–1.21 times as wide as prothorax; shoulders 0.66–0.71 as wide as the widest part, the angles obtuse; basal border slightly oblique; striole short; striae distinct throughout, nearly smooth (or minutely crenulate); interstices smooth, flat or slightly convex; apical sinuation very distinct, inner plica

[Ent. Rev. Japan, Vol. XVI, No. 1, pp. 19~20, pl. 3, Sept., 1963]

scarcely visible; dorsal pores variable in number, from 7 to 13, on interstices 3 & 5 and most of them adjoining striae 2, 3, 4 & 5.

Underside smooth except mesepisterna, a part of which is scattered with rudimental punctures; prosternal process with a shallow median furrow, its apex truncate with both angles rounded; metepisterna rhomboidal, 1/3 wider than long; metepimera fairly large; apical vental segment ♂ with a deep and wide cavity along apical margin which is deeply emarginate and provided with an asymmetrical projection (Fig. 3). Basal 3 joints of meso- & metatarsi sulcate on outer side.

Microsculpture extremely fine, consisting of isodiametric meshes on head, of a little transverse ones on prothorax, of moderately transverse ones on elytra, those of ♀-elytra a little less transverse and coarser than in ♂.

Genitalia ♂ (Fig. 4); tumour of median lobe very large; apical margin of left paramere slightly emarginate.

Habitat. Kantô Mountain-range, Honshû, Japan.

Holotype & allotype: Mt. Mitô, Okutama, Tokyo Pref., Aug. 21, 1963; paratypes: 2 ♀ ♀, Mt. Mitô (data as above), 1 ♀, Mt. Gozen, Okutama, Aug. 28, 1959.

The types in coll. K. TANAKA, 1 paratype in coll. Mr. H. ISHIDA.

Besides above I obtained following examples decidedly belonging to this species but having some differences.

1 ♀. Mt. Mitô (data as above). The prothorax is more quadrate, the widest part is a little removed towards apex, the side margins are less arcuate, the basal margin is wider.

1 ♀, Mt. Gozen, June 1, 1963. The prothorax is a little smaller and the elytra are subopaque.

1 ♂, 1 ♀, Mt. Daibosatsu, Yamanashi Pref., June 27, 1963. The prothorax is cordate-quadrate, the basal margin is narrower, 0.74–0.75 as wide as the widest part.

This species resembles *P. cristatoides* STRANEO[1] in general appearance but is distinguished by the larger head, plurisetose 2nd joint of antennae, narrower prothorax, multiple front marginal setae, many dorsal pores of elytra and the shape of ♂ apical ventral segment and genitalia. Among the species of the subgenus *Nialoe* this species is most closely allied to *P. watanabei* TANAKA[2] but distinguished by the more depressed body, smooth genae, wider prothorax, less arcuate elytral side margins, smooth underside (except mesepisterna), shorter metepisterna, wider cavity of ♂ apical ventral segment and the shape of ♂ genitalia, the median lobe of which is distinctly slenderer, on the contrary the tumour is more conspicuous, the left paramere is quadrate with the slightly emarginate apical margin instead of pentagonal with the strongly arcuate apical margin of *P. watanabei*.

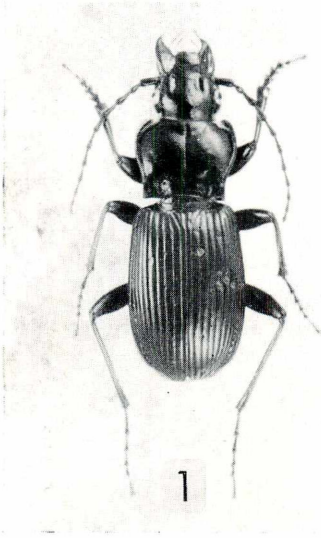
Explanation of Plate 3.

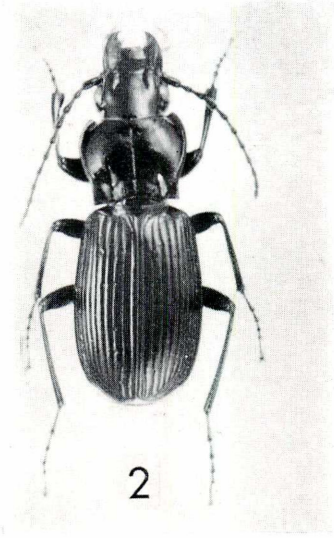
1–5, *Pterostichus* (*Nialoe*) *okutamae* sp. nov.

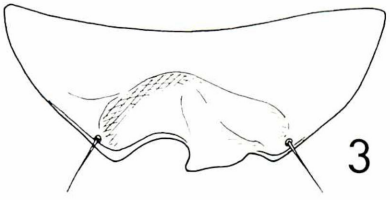
1, Holotype. 2, Allotype. 3, Apical ventral segment of holotype. 4, Genitalia of holotype; a, median lobe (lateral view); b, id. (dorsal view); c, right paramere; d, left paramere; e, a chitin tooth of inner sac. 5, A male from Mt. Daibosatsu.

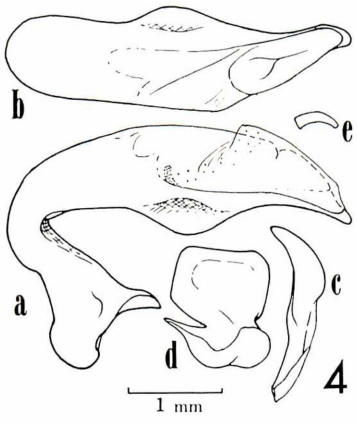
1) 1955, Ann. Mus. Civ. Genova LXVIII, 5, p. 91, f. 4, 9 & 20.

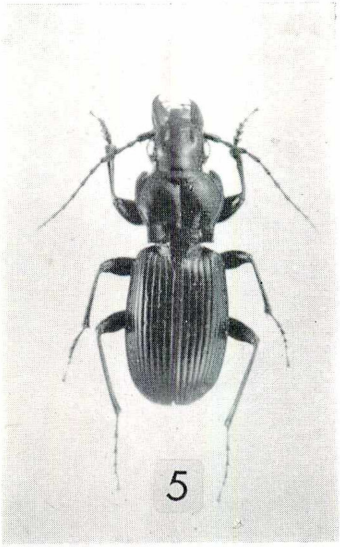
2) 1960, Kontyu XXVIII, 1, p. 39, f. 3 & 4, pl. 4, f. 2.











(K. TANAKA photo. & del.)

A New Subgenus of the Genus *Peltodytes* (Col., Haliplidae)

By Masataka Satô

Biological Laboratory, Nagoya Jogakuin College, Mizuho-ku, Nagoya

Genus *Peltodytes* Régimbart

Peltodytes Régimbart, 1878, Ann. Soc. ent. France, 5 (8): 457.
Cnemidotus Erichson (nec Illiger), 1832, Genera Dytisceorum: 19.
Type-species: *Dytiscus caesus* Duftschmid, 1805 (=*Dytiscus impressus* Panzer, 1794).

Zimmermann divided the genus into two groups in his work of 1924. But it should be name-worthy as subgenera and then I will described here.

1 (2) Metacoxal plate pointed behind ..... *Peltodytes* s. str.
2 (1) Metacoxal plate rounded behind ..... *Neopeltodytes* subgen. nov.

Subgenus *Peltodytes* s. str.

The members of this subgenus are chiefly distributed in the Palaearctic Region and some of them in the Oriental and the Ethiopian Regions.

Subgenus *Neopeltodytes* M. Satô, nov.

Peltodytes (Gruppe II) Zimmermann, 1924, Entom. Blätt., 20: 6.
Type-species: *Peltodytes callosus* (LeConte, 1852).

Judging from the literatures, all the Nearctic species described in the genus *Peltodytes* may be included in this new subgenus.

I wish to express my cordial thanks to Prof. Dr. T. Ishihara, Dr. H. B. Leech, Mr. K. Ohbayashi and Prof. M. Hiro for their kindness in constant advice or in materials.

Right metacoxal plate of *Peltodytes* (*Neopeltodytes*) *callosus* (Le Conte)

[Ent. Rev. Japan, Vol. XVI, No. 1, p. 21, Sept., 1963]

日本産コガシラミズムシの研究（1）

佐　藤　正　孝
名古屋女学院短期大学生物学教室

Studies on the Haliplidae of Japan (Coleoptera) (I)

By Masataka Satô

日本のコガシラミズムシ科甲虫の分類学的研究は Sharp (1873) により始められてから多くの研究者により業績が発表されてきた．戦前における滝沢の総説 (1931) 及び 神谷の図説 (1932)，日本動物分類 (1936) はこの類の研究に指針を与えたものであるが，これ等の研究は Zimmermann の世界の総説 (1924) に従ってなされたものと思われ，現在の知識では不都合な点も見受けられる．それに加え Guignot による亜属の再検討 (1928, '55) は一層この類研究の進歩に多くの貢献をした．近年日本においてコガシラミズムシ科に関する研究報告もなく未だ旧態を脱し切れないままであり，亜属の問題ばかりでなく種の同定にもいささか疑問のあるものもある．そこで私は浅学をかえりみずあえてこの拙文を草した次第で，諸賢の批判を賜われば幸である．

この小文を草するにあたり常日頃ご指導頂いている愛媛大学石原保教授，立川哲三郎助教授，本学広正義教授，大林一夫，久松定成，宮武睦夫の諸氏に厚くお礼申しあげるとともに，文献についてご配慮頂いた中條道崇，石田昇三の両氏に厚くお礼申しあげる．

Family Haliplidae コガシラミズムシ科

Carabidae（オサムシ科）の Omophronini（カワラゴミムシ族）に一見似た非常に特異な Hydradephaga（水棲食肉類）のなかまであるが，他の諸科からは後基節が板状に拡がり腹部をおおうことで容易に区別できる．全世界に4属が知られているだけの小さなグループで，池沼，水田等の止水域に生息し，分類学的には食肉亜目に含まれるが本科のものはすべて食植性である．

日本産 Haliplidae の属の検索

1（2）翅鞘の後半に亜縫合線を有する．小肥枝の先端節は他節より長い．後基節板は腹部第1～5節を覆い，側縁は縁取られる．♂交尾器の左側片は縁毛を欠き，先端に附属突起を具えない …… *Peltodytes*

2（1）翅鞘に亜縫合線を有しない．小肥枝の先端節は他節より短い．後基節板は腹部第1～3節を覆い，側縁は縁取られない．♂交尾器の左側片は縁毛を有し，先端に附属突起を具える …… *Haliplus*

〔昆虫学評論，第16巻，第1号，22～24頁，1963年，9月〕

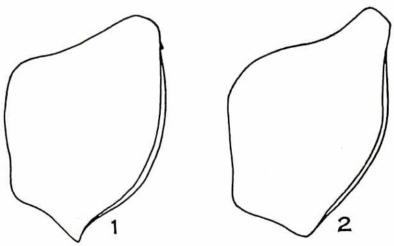
Genus *Peltodytes* RÉGIMBART コガシラミズムシ属

Peltodytes RÉGIMBART, 1878, Ann. Soc. ent. France, 5 (8) : 457.

Cnemidotus ERICHSON (nec ILLIGER), 1832, Genera Dytisceorum : 19.

模式種 : *Dytiscus caesus* DUFTSCHMID, 1805 (=*Dytiscus impressus* PANZER, 1794).

全世界に約30種が知られており，日本からは2種の記録がある．オーストラリア及び南アメリカを除く世界各地に分布するが，北アメリカにこの属の約⅔が分布し，しかもこの地域のものは後基節板の後縁が突出せず，他地域産のものと一応区別できるので別亜属として新名を与えておいた (*Neopeltodytes*)[1]．このことはすでに ZIMMERMANN (1924) も気がついており2つのグループに区別している．日本産のものは後基節板後縁が突出することにより *Peltodytes* (s. str.) に含まれ，この特長は日本産のものに限った場合 *Haliplus* 属との明瞭な区別点ともなり得る．



Figs. 1,2. Right metacoxal plate of 1, *Peltodytes* (s. str.) *intermedius* (SHARP) and 2, *P.* (s. str.) *sinensis* (HOPE).

日本産 *Peltodytes* (s. str.) 属の種の検索

1 (2) 頭頂に黒紋を有しない．翅鞘点刻列の個々の点刻は大きい．後基節板の後縁は著しく突出する…… *P. intermedius* (SHARP)

2 (1) 頭頂に2個の黒紋を有する．翅鞘点刻列の個々の点刻は小さい．後基節板の後縁はわずかに突出する…… *P. sinensis* (HOPE)

Peltodytes (s. str.) *intermedius* (SHARP) コガシラミズムシ

Cnemidotus intermedius SHARP, 1873, Trans. Ent. Soc. London : 55 (Nagasaki).

Peltodytes intermedius, RÉGIMBART, 1899, Ann. Soc. ent. France, 68 : 191.

体は楕円形でかなり膨隆する．黄色ないし黄褐色で光沢を有する．前胸背後縁，翅鞘の点刻及び斑紋，縫合線に沿った部分は黒色を呈する．頭部は小さく，粗に微細点刻を装う．前胸背は前後縁に沿って粗大点刻を具え，後縁中央両側に凹陥を具える．各翅鞘には10条の粗大点刻列を具え基部のものはかなり顕著で，後方及び側方に向って小さくなる．間室は滑沢．体下面は光沢を有し，粗大点刻を装うが，後基節板はやや密で，腹部はこれを欠く．

体長 : 3.14～3.56 mm ; 体幅 : 1.96～2.04 mm.

分布 : 日本 (北海道，本州，四国，九州)，台湾，中国.

日本のコガシラミズムシ類の中で最も普通な種で，池や水田等で得られ，灯火にもよく飛来する．

1) M. SATÔ, 1963, Ent. Rev. Japan, XVI (1) : 21.

Peltodytes (s. str.) *sinensis* (HOPE) シナコガシラミズムシ

Cnemidotus sinensis HOPE, 1845, Trans. Ent. Soc. London, 4: 15 (China).

Haliplus variabilis CLARK, 1863, Trans. Ent. Soc. London, (3) 1: 417 (Corea, Canton, Amoy).

Peltodytes sinensis, RÉGIMBART, 1899, Ann. Soc. ent. France, 68: 192.

前種に酷似しているが検索に示した点で明らかに区別できる．また色彩はやや淡色気味であるが，変異がある．♂交尾器：中央片は強壮で先端は鈍く尖る．左側片は前方に狭まらず，先端は丸められる．右側片はほぼ三角形で先端部は膜質状．

体長：3.56～3.75 mm；体幅：2～2.14 mm.

分布：琉球列島（中之島*，奄美大島，徳之島*，与論島*，沖之永良部島*，西表島*，与那国島*），台湾，朝鮮，中国，インドシナ，トンキン．

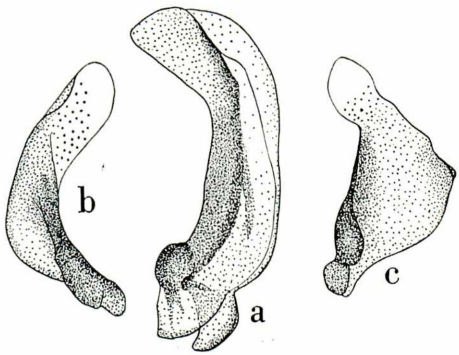


Fig. 3. Male genitalia of *Peltodytes* (s. str.) *sinensis* (HOPE): a, median lobe, left lateral aspect; b, left lateral lobe, internal aspect; c, right lateral lobe, internal aspect.

滝沢（1931）は朝鮮から *P. koreanus* を記載したが，本種に非常によく似ている．なお，後種もかなり変異がみられるので，あるいは *P. sinensis* の synonym かも知れない．

（未完）

琉球列島産甲虫類覚え書（2）

佐　藤　正　孝

下記した4種はいずれも東南アジア，台湾等に比較的広く分布しているが，琉球列島からは未記録と思われるのでここに報告しておきたい．

1. *Trox* (s. str.) *opacotuberculatus* MOTSCHULSKY ヒメコブスジコガネ（Trogidae）
   3 exs., May 17. 1962, Is. Akuseki-jima, M. SATÔ leg. 森林中で鳥の死体から得た．
2. *Atractocerus niger* STROHMEYER コバネツツシンクイ（Lymexylidae）
   1 ex., June 14.1962, Hatsuno, Is. Amami-Ôshima, M. SATÔ leg. 薄暗い森林中で伐採間もない木の香りの新しい材木に飛来したもので，丁度ハチが飛んでいるようであった．
3. *Alleculodes sauteri* BORCHMANN (Alleculidae)
   3 exs., June 13 & 14, 1962, Hatsuno, Is. Amami-Ôshima, M. SATÔ leg. 枯木を叩いて得た．
4. *Macrosiagon bipunctatum* (FABRICIUS) フタオビオオハナノミ（Rhipiphoridae）
   1 ex., May 28, 1962, Is. Nakano-shima, M. SATÔ leg. 灯火に飛来．

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* 新記録．

卵を通じて見たる姫蜂の分類と習性の関係

戸　澤　信　義

The Relations between the Classification and Habits of Ichneumon-flies, on the Points of their Eggs

By Nobuyoshi Tosawa

Abstracts: The present author tried to criticize the modern classification of Ichneumonidae (Hym.) on the basis of egg shape, convincing that the insect egg has the important elements of specific personality as well as the morphological characters of adult body. He studies to taxonomize 233 species of eggs according to the Constantineanu's classification, on the relation of their parasitic habits.

種は divine，属は artificial，これは日頃筆者の口癖である．種は造化の自然物である．これを type として設定しておけば紛れる事はないが，属は違う．著者の主観により類種を近接せしめるための方便であるから，著者が異なれば主観も違う事があり，当然別な配属になる事がある．族～科また然り．これ必竟卑近な形態的な特徴をもって律するからである．卑近とは何か，神のみぞ知る．人智をもってしては何か他の方法で裏付けするより外仕方がない．

姫蜂の分類は1900年 Ashmead が有名な大著[1]を表わして以来この半世紀間大体揺ぎのないものであったが，1950年前後から徐々にこの定則は破られ，遂に1961年 Constantineanu[2]によれば全く別なものになってしまっておる．残念な事にはこれは亜科のみで，属の例示がないため適確な内容は解らないが，これと同様な歩調をとっておる Townes[6]を参照して大様は推察出来た．これによれば Ashmead が族に取扱い，Dalla Torre[3]が亜科としたものをかなり多く採用せられておるが，名はそのままでも その内容は決してそのままではない．中には従来別々な亜科にあったものを拾い集めて 亜科を形成しておるものもある．その体系の考えも全く新らしい．

この新らしい分類表を見ておると 不思議に習性のよく似たものが纏められておる．不思議と云うのは蜂では 体形がよく似ておりながらその 習性は全く別なものが多いからである．だから習性に直結した形態的特徴を もって分類上の区別をすればよいが これは決して容易なわざではない．従って習性のみをもって分類の適否を論ずる事は出来ない．

ところが卵は成虫の体軀とは別な要素よりなっており，しかも 夫々種特有の形態を備えておる．その上卵と習性とは密接な関係があるから，これをもって成虫による 分類を批判するのは決して無意義ではないと考える．たまたま岩田久二雄氏の報文[4]を知り，これを資料として研究して見たのが本文である．

これについては特に御高著を利用する事を許された 岩田氏の御好意を ここに感謝すると共

〔昆虫学評論，第16巻，第１号，25～34頁，第4～5図版，1963年，９月〕

に，文献の渉猟に御便宜を与えて下さった林匡夫・大倉正文両氏の御助力に対しても厚くお礼を申上げる次第である．

1.* PIMPLINAE, CRESSON, 1877 (pt.) (=Ephialtinae, TOWNES)

産卵管の長いものが多い．卵の形は非常に細長いものから，sausage 形，長楕円形等いろいろある．寄主は主として甲虫，鱗翅類，稀には双翅類，膜翅類を攻撃する．

(1) Pimplini：産卵管は基部で曲り，先端は尖る．外部寄生をなし，幼虫は樹幹又は繭の中に潜む寄主の外皮を破って摂食するため大顎の内面は鋸歯状になっておる．卵は sausage 形(*Tromatobia*[222]**, *Iserops*)，紡錘形 (*Charitopimpla*[31], *Philopsyche*[169])，それが彎曲するもの(*Scambus*[194], *Pimpla*[175])等がある．*Perithous*[163,164] は特に細長く，別族の感があり，*Hoplitophrys*[105]は長楕円形の⅓で曲り Banchinae の様である．*Scambus* は従来 *Epiurus* として知られたもの，*S. annulitarsis*[194]はワタノメイガ，ミノガ；*S. hakonensis* はマメノメイガ，オビカレハ，セグロシャチホコ；*S. persimilis* はクワノメイガ，シンジュサン；*Pimpla aethiops* v. *disparis* はマイマイガ，オビカレハ，ウスバシロチョウ，エゾシロチョウ；*P. inquisitor* はイガ，毒蛾類，枯葉蛾類；*P. luctuosa* はシンジュサン，イチモンジセセリ；*Iserops orientalis* はヒメカレハ；*I. attaci* は枯葉蛾類に寄生する．*Tromatobia* の卵は小形で自由に動きまわる寄主に産卵せられる．*T. ovivora*[222] は *Epeira* (蜘蛛)，*Nematius, Lophyrus* (葉蜂類)，青尺蛾類，鳳蝶類に寄生する．

(2) Polysphinctini：雌の産卵管は僅かに腹端より現われる程度．卵は小形，楕円形～紡錘形．多くは蜘蛛類を攻撃し，直接に蜘蛛を刺すもの，或いは蜘蛛の体表に産卵する．*Polysphincta nikkonis* はノジタナグモ，イエタナグモ (草蜘蛛科)；*P. tenuiabdominalis* と *P. tuberculata*[185] はゴミグモ (黄金蜘蛛科)；*Polysphinctoides japonicus*[186] はホウオウヒメグモに寄生する．後者の卵は寄主の体表に付着しやすいように卵の背面に特殊装置がついておる．

(3) Ephialtini：産卵管は強靱，時には体長より長いものがある．卵は紡錘形，*Ephialtes*[72] は両端が，*Apechthis*[18] その他は一端が狭まっておる．TOWNES によれば *Apechthis* は *Ephialtes* の synonym としておるが，卵の形および成虫の形態より考えればこの処置には同じ難い．寄主は普通露出した前蛹又は蛹に寄生する．*Itoplectis*[114] は二次寄生する事があり，著るしく細く尖って小形である．*Ephialtes carbonarius* v. *hokkaidonis*[72] はマツノホソゾウムシ，トドマツキボシゾウムシ；*E. laspesiae* はナシノヒメシンクイガ；*E. manifester* v. *matsumurai* はウスバカミキリ，トビイロマダラカミキリ；*Apechthis capulifera*[18]はクスサン，テングチョウ；*A. rufa* は葉捲蛾，枯葉蛾，雀蛾，鳳蝶類；*Xanthopimpla punctata* はクワノメイガ，イチモンジセセリ；*Sarcophora nivella* は大螟蛾に寄生する．また二次寄生をする．*Itoplectis alternans* v. *spectabilis*[114] はマツカレハの寄生蜂の小繭蜂類を攻撃する．

(4) Therionini：本族の蜂は鱗翅類の一次又は二次寄生をする．二次寄生の直接の寄主は

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* 亜科の番号は CONSTANTINEANU の分類による．

** 学名に付した肩数字は第4～5図版に図示した卵の番号を示す．

小繭蜂である．卵は何れも紡錘形．*Theronia atalanta*[209]はチャノミガ，マツカレハ，オビカレハ，ツバメエダシャク，イチモンジセセリ，エゾシロチョウ，テングチョウ；*T. laevigata* v. *nigra* はオビカレハ，ヒメウスバシロチョウに寄生する．

（5） Rhyssini：雌の腹端は著しく膨張し，産卵管を力強く樹幹に挿入出来る．産卵管は体長に等しいか，少し長い位，恐らく寄主に直接注射しないでせいぜい寄主のおりそうな所へ産卵し，寄主がたまたまそれに触れた際刺戟せられて孵化するのではないかという．そのため卵は異常に長い柄を有し[76,192]，殆んど卵の本体の数倍あるものもある．寄主は天牛又は樹蜂類．*Megarhyssa japonica*[123]の卵は極端に長大，ニホンキバチに寄生する．

3. XORIDINAE, DALLA TORRE, 1901

この亜科の蜂は従来の Cryptinae に似ておる．寄主の多くは樹幹に潜む甲虫である．卵は根棒状又は sausage 形．*Xorides* 2種の卵は同じく長大形でありながら，*X. albomarginalis*[226]は両端が著しく細まっており，*X. crassitibialis*[227]は一端のみ細くなった根棒状である．又 *Xylonomus investigator*[228]は根棒状なのに，同属の *X. sapporensis* v. *nigritibialis*[229]は sausage 形である．かように同属間に異形の卵のある事は成虫間の形態的相似も再検討すべきではないか．しかも TOWNES は *Xylonomus* を *Xorides* の synonym としておる．*Ischnocerus*[110]の卵は一端がやや細まって *Theronia*（前科）に近く，*Odontocolon*[153]の卵は柄の曲った根棒状である．

5. ACOENITINAE, DALLA TORRE, 1901

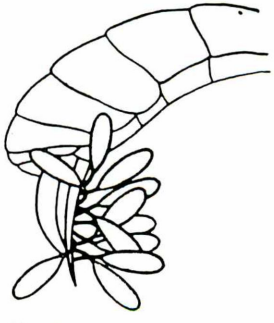
朽木又は腐木に食入っておる甲虫に寄生しておるものが多い．卵は細長く一端が尖って水蛭のような形[165,201]．ところが *Coleocentrus excitator*[44]のみは根棒状で異なっておる．この寄主はセンノカミキリ，ナカグロカミキリである．

10. PANISCINAE, DALLA TORRE, 1901 (=Netelinae)

成虫の体形，体色さらに夜行性である事まで *Ophion, Enicospilus* によく似ておるため，従来 Ophioninae に配属せられておったが，近年漸く Tryphoninae に移された．成虫の区別点は前翅における鏡胞の有無であるが，卵は大変な相異で3属4種は何れも菜豆形の一端に爪のような付属がついておる[157–160]．この亜科の蜂は寄主が繭を紡いで蛹期に入る前に寄主の体を離れて地下に潜って蛹となる．*Paniscus ocellaris*[159]はヨトウガに寄生する．

12. TRYPHONINAE, CRESSON, 1887 (pt.)

卵は剛毛状の柄を有し，寄主に付着する装置になっておるが，成虫は産卵前に産卵管の出口にいくつか柄を下にして林立状態に卵を貯えておく奇習がある．



Tryphon sp. の産卵前に卵を貯えておる状態（CLAUSEN による）

13. CTENISCINAE, DALLA TORRE, 1901

寄主は Argidae, Diprionidae 等の葉蜂類．マツハバチに内部寄生する *Exenterus oleacus*[82]の卵は平凡な楕円形であるが，*Polyblastus* は前記 *Tryphon* のように卵を産卵管に貯える習性があるから外部寄生ではなかろうか．

14. CRYPTINAE, CRESSON, 1887 (pt.) (=Gelinae, TOWNES, 1951)

寄主はいろいろあって鱗翅類，膜翅類および蜘蛛等に寄生する．樹幹のトンネル又は葉を円めた中等に隠れている幼虫，前蛹又は蛹に産卵する．卵形も種々で，楕円形（*Goniocryptus*）[94]，紡錘形（*Paracryptus*），長形（*Torbda*[215]）等があり，*Neotorbda* は長形で彎曲しておる．*Spilocryptus japonica* はニカメイガ，クワノメイガ；*S. grapholitha* はナシノヒメシンクイガ；*Nippocryptus suzukii* はミノムシ；*N. tarsalis* はヒメベッコウバチ等に寄生する．

15. MESOSTENINAE, DALLA TORRE, 1902

成虫の体形，習性共に Cryptinae に酷似し，卵形も多くは紡錘形に近く，その一端はやや尖っておる．TOWNES はこの両科を合して Gelinae, tribe Mesostenini (=Cryptini) としておる．

17. PHYGADEUONINAE, DALLA TORRE, 1902

寄主は多種多様．卵は大小いろいろあるが，何れも紡錘形に近い．*Aceraspis*[3] のみは弦月形，*Acroricnus ambulator*[4] はクロバネドロバチ，スズバチの巣に産卵する．この卵は亜科の中で特に大きい．*Endasys perviventris* は松葉蜂類；*Microcryptus pristiphora* は *Pristiphora politivaga*（葉蜂科）に寄生する．ところが *Microcryptus sapporensis* はエゾシロチョウに寄生する．

18. HEMITELINAE, DALLA TORRE, 1902

多くのものは一時的又は常習的に二次寄生をする．2例の卵は何れも紡錘形．*Hemiteles* (*Rhadiurgus*) *bicoratus* はイガ，カキノヘタムシガ，ホシカレハ；*H.* (*Isadelphus*) *molestae*[6] はナシノヒメシンクイガ；*H. kumamotonis* はマツカレハに寄生する．

20. SPHINCTINAE, DALLA TORRE, 1901

Sphinctus sp. は欧州では毒蛾に寄生する．*S. nigrithorax*[203] の卵は楕円形で一端に乳首のような付属物がついておる．これは恐らく外部寄生のためであろう．

21. GELINAE, VIERECK, 1901 (=Pezomachinae, D. T., 1902)

(1) Gelini：卵は紡錘形又は sausage 形．*Mesoleptus*[88] は *Lophyrus* 或いは *Tenthredo*（葉蜂類）に寄生する．*Genarches angularis*[90] の卵は曲った sausage 形である．

(2) Aptesini：本族の雄は無翅形，雌は有翅形のものが多い．蟻蜂や冬尺蛾類とは翅の有無が反対であるのは面白い．卵は根棒状[64] で甚だ大形，主として葉蜂類に寄生する．

24. ALOMYINAE, DALLA TORRE, 1902

Phaeogenes[166] は欧州では簑蛾類に寄生すると記されておる．卵は sausage 形．

26. ICHNEUMONINAE, ASHMEAD, 1900 (pt.)

大部分は鱗翅類の内部寄生者，卵は大小あるが何れも sausage 形．寄主の幼虫又は蛹に産卵し，蛹から寄生者は出る．成虫は雌雄異形もしくは雌雄異色のものが多い．

(1) Pristocerini：多くは尺蛾類に寄生，燕蛾類にも寄生する．*Ectopius convexus*[66] の卵は甚だ小さい．

(2) Platylabini：寄主は種々な蛾，例えば毒蛾，尺蛾，夜蛾類が知られておる．*Platylabus*[177, 178] の卵は何れも小形．sausage 形～楕円形である．

（3）Acanthojoppini：*Pseudoplatylabus violentus* は夜蛾に寄生し，卵はやや彎曲する．

（4）Eurylabini：*Probolus*[187] の卵は楕円形に近い．

（5）Amblytelini：夜蛾又は蝶類に寄生し，卵は大形で sausage 形が多い．*Hoplismenus* は専ら蝶類に寄生し，*H. dentatus*[103] はウラギンヒョウモン；*H. pica* v. *japonica* はミドリヒョウモン，メスグロヒョウモン等に寄生する．*Cratichneumon japonicus* はキマダラヒカゲ；*C. luteiventris* は尺蛾類；*Melanichneumon leucomelas*[133] はシロテンアオヤガ；*M. spectabilis* はリンゴケンモン；*Ctenichneumon divisolius*[61] は夜盗蛾，きりが類；*Tricholabus striatus* はツメクサガに寄生する．

（6）Ichneumonini：*Ichneumon generosus*[106] は夜蛾類，鳳蝶類；*I. molitorius* は夜蛾類，アカタテハ；*Coelichneumon auspex*[35] はクワゴ，エグリエダシャク，オオシロテンアオヨトウガ；*C. cyaniventris* は波尺蛾類；*C. garugawensis* はアカモンドクガ；*C. persimilis* はアマヒトリガ；*Ulesta agitata* はダイミョウセセリ，オオチャバネセセリに寄生する．

（7）Protichneumonini：蛾に寄生するものが多く，*Protichneumon platycerus* v. *takasagoensis*[188] はヒメオオエダシャク；*Amblyjoppa cognatoria*[8] はエビガラスズメに寄生．

27. JOPPINAE Kriechbaumer, 1898 (=Troginae Förster, 1868)

鳳蝶類および雀蛾類の寄生者として知られており，成虫は大形のものが多いが，卵は割合に小形で sausage 形である．*Dinotomus mactator*[219], *Callojoppa pepsoides* v. *arrogans*[30] は鳳蝶類；*Goederia alboguttatus* はエビガラスズメに寄生する．

28. LISTRODROMINAE, Dalla Torre, 1902

卵は1例しかないが，小形で sausage 状．この亜科の蜂は専ら小灰蝶類の寄生者，例えば *Anisolabus diminutus*[14] はベニシジミ，カバイロシジミを寄主とする．

31. BANCHINAE, Dalla Torre, 1901

この亜科は Pimplinae から Glyptini, Lycoriini, Lissonotini を移し，Ophioninae の Banchini を加えて，Dalla Torre の創設当時より内容は豊富になっておる．卵は何れも特異に彎曲した sausage 形である．

（1）Glyptini：*Glypta bipunctatoria* は螟蛾，枯葉蛾に寄生し，v. *tobensis*[92] の卵は特に楕円形．

（2）Lycoriini：*Lycornia triangulifera*[121] の卵は先細りの水蛭形，しかも捻れておる．

（3）Lissonotini：卵は何れも Banchinae 特有の彎曲した sausage 形[137,206]．寄主は樹幹の間隙や捲葉の間等に隠れておる小蛾類の幼虫．

（4）Banchini：*Exestastes cinctipes* はヨトウガ，ツメグサガに寄生する．

34. MESOLEPTINAE, Townes, 1944 (=Scolobatinae)

この亜科は Townes の創立したものであるが，氏の著書[6] より察すると Ashmead の Tryphoninae の Mesoleptini, Ctenopelmatini, Tryphonini の各族，Ophioninae の Paniscini, Banchini 等から pick up して形成しておる．成虫を検討する暇がなかったが，各種の卵形から見るとかなり異質的なものが混在しておると察せられる．

（1）Pionini：*Eustiprosomus*[80] は一端のすぼんだ長楕円形である．

（2）Ctenopelmatini：*Scolobates*[198]の卵形は紡錘状．*S. annulatus* はチュウレンジハバチに寄生する．*S. testaceus*[199]の卵は sausage 形，*Ctenopelma* の卵は根棒状．

（3）Euryproctini：*Hadrodactylus typhane* v. *orientalis*[98]の卵は斗六豆によく似た形，恐らくオスグロハバチに寄生するのではないか．

38. DIPLAZONINAE, VIERECK, 1918

Diplazon はヒラタアブに寄生する．この類の習性は筆者の前著[5]にくわしい．図示2種の卵は成虫の体長に比して異常に大きい[25, 26]．

41. METOPIINAE, DALLA TORRE, 1901

大体鱗翅類に寄生するが，*Colpotrochia pilosa* は異例でハラナガスズバチ（印度にて，MORLEY による）に寄生する．卵の形もまた種々あって，*Colpotrochia*[46]は楕円形，*Colpotrochioides*[47]は殆んど菱形に近く，*Metopius*[141]は弦月形．*M. rufus* はハスモンヨトウに寄生する．

43. OPHIONINAE, CRESSON, 1887 (pt.)

この亜科は縮少されたためか，3属8種の卵は同質的で何れも Wiener sausage 形．寄主は大形の蛾が多く，*Aglaophion purpurescens*[212]はクルマスズメ；*Ophion obscurus*[155]はモクメシャチホコとケンモンヤガ；*Enicospilus ramidarius*[71]はベニシタバに寄生する．

45. THERIONINAE, VIERECK, 1918 (=Anomalinae, DALLA TORRE, 1901)

卵の形から察してこの亜科はかなり異質的なものが含まれておる．

（1）Anomalini： 卵形は細長く小さい．*Anomalon foliator* v. *japonicus*[152]は朽木虫類に寄生する．*Agrypon flavifringatum*[7]はナミヒラタアブ；*Acanthostoma insidiator*[2]はクスサン，ヤママユ，ヒメヤママユに寄生し，卵は楕円形で一端やや尖る．

（2）Gravenhorstini：卵にはいろいろな付属がついておる．*Aphanistes jozankeanus*[21]の卵は球形に近く，真中はC字形にえぐらており，マツカレハに寄生する．*A. ruficornis*[22]は枯葉蛾，雀蛾およびヒトリモドキに寄生し，卵は楕円形で，中央に乳首のようなものがついておる．*Trichomma occisor*[218]の卵はスポイドのような形で膨れた所に扁平なものがついておる．*Labronychus nikkonis*[115]の卵は楕円形，その一端に小さな爪形の突起がある．

（3）Therionini：*Therion circumflexum*[87]はマツカレハ；*Heteropelma calcator*[102]はあつばが類；*Schizoloma amictum*[197]はリンゴドクガに寄生，3種共その卵は硝子製の吸飲器のような卵らしからぬ形をしておる．

47. CAMPOPLEGINAE, DALLA TORRE, 1901 (=Porizoninae)

主として鱗翅類に寄生し，*Zachrops naranyae*はワタオビコヤガ；*Rhythmonotus takagii*[193]はマツカレハに寄生するが，異例として *Nemerites canescens*[147]のようにゴミムシダマシに寄生するものもある．卵は幾分彎曲したsausage形．*Dyspectes pradator*[63]はそれとは異なり斗六豆のように中央がえぐられており，一方の突出した頂点に乳首状の付属がついておる．

50. CREMASTINAE, DALLA TORRE, 1901

この亜科の蜂は小蛾類に寄生し，卵は細くて小形．*Cremastes biguttatus*[58]はニカメイガ；*C. flavoorbitalis* は冥蛾類，ヒメシンクイガ，マダラメイカ等から発生する．

Summary

The following items are the results obtained by the present author who tried to classify 233 eggs of Ichneumon-flies according to the CONSTANTINEANU's scheme.

1) Generally speaking, the eggs are similar in shape in each subfamily, though some of them are not so. These exceptions, he thinks, ought to re-determine the speciemens or to revise the classification.

2) The shapes of eggs are all simple in the internal parasites, while those of most external ones are shaped peculiarly.

3) Some of the external parasites which attach directly their eggs to the surface of the skin of hosts, produce eggs with peculiarly formed projections.

4) The Ichneumons having more or less long ovipositor produce eggs either slender shaped or long-elliptical, narrowed one or both poles. These structures are supposed to be effective on getting out through such long ovipositors.

5) The Pimplinae, for example, whose hosts always live in tunnels in tree-trunks, have eggs with especially long stalk supposed to be layed themselves open to touch the hosts on where about of the eggs, by the way they shall be stimulated to hatch.

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Explanation of the Plates

The eggs were found in oviducts or common oviducts of living ichneumon adults, and measured and sketched under magnification 32 times of stereobinocular microscope practised by Dr. K. IWATA, but some minute ones were observed in 64 times which are distinguisged by asterisks before the oval numbers in the tables.

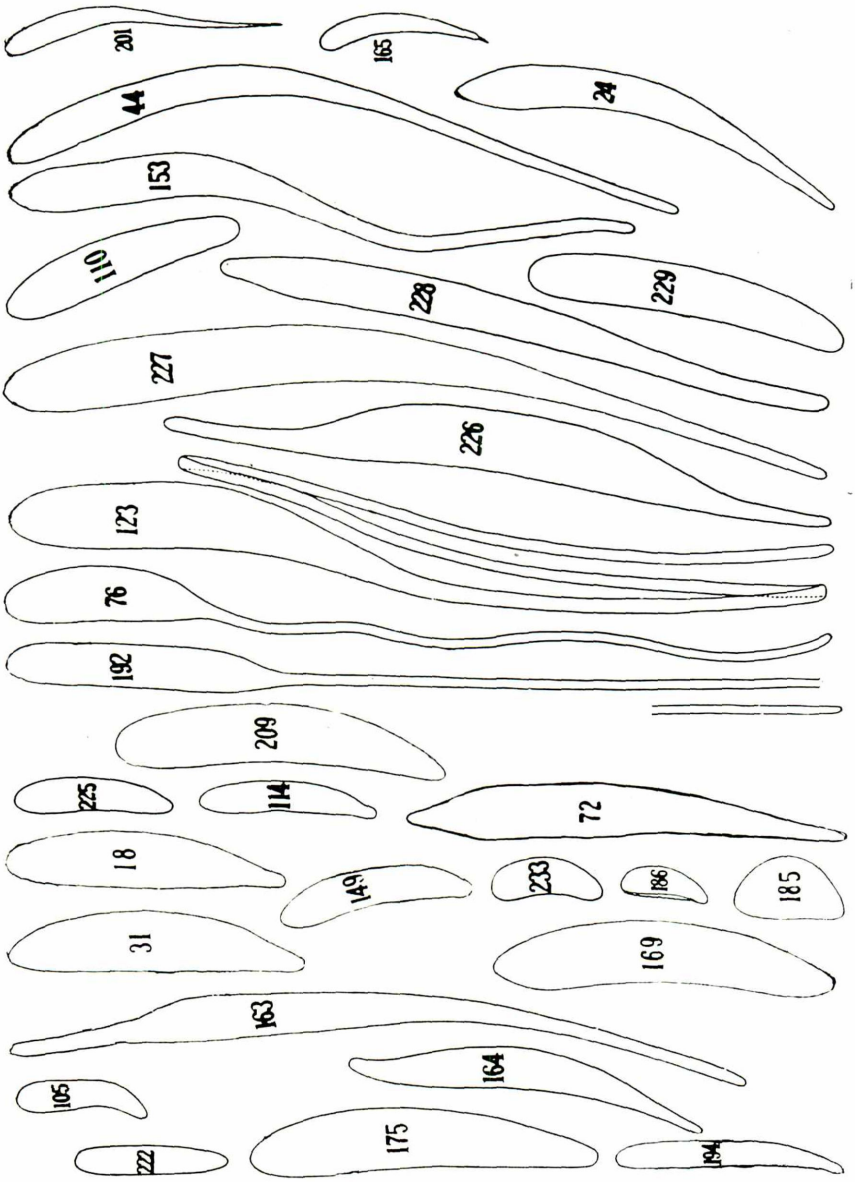
The length of the adult bodies record the standard size of them but not at all the same bodies from which the eggs were dissected. Both the length of adult bodies and eggs are variable, especially the latter is said to be more variable even in the same body.

Some of the scientific names given in the table are revised by the present author. The revised names are indicated by (†) marks behind the names.

No.	Scientific name	egg number	egg length/width mm.	adult length body+ovipost. mm.
	Plate 4.			
	1. Pimplinae			
	(1) Pimplini			
1	*Scambus annulitarsis* A.	194	1.64/0.16	10+10
2	*Pimpla pluto* A.	175	2.41/0.41	40+ 2
3	*Tromatobia ovivora* B.	222	1.13/0.21	10+ 3
4	*Hoplitophrys brisckei*, v. *japonicus* U.	* 105	0.49/0.11	17
5	*Perithous japonicus* U.	163	5.27/0.25	18+ 3
6	*Perithous varius* G.	164	2.46/0.23	
7	*Philopsyche sagurae* V.	169	2.41/0.41	
8	*Charitopimpla taiwanensis* U. †	31	2.13/0.41	9+ 6
	(2) Polysphinctini			
9	*Polysphincta tuberculatus* U.	185	0.83/0.44	12
10	*Polysphinctoides japonicus* U. †	186	0.59/0.44	7
11	*Zatypota albocoxa*, v. *nigrithorax* U.	233	0.74/0.22	7
	(3) Ephialtini			
12	*Ephialtes carbonarius*, v. *hokkaidonis* U.	72	3.12/0.33	15+40
13	*Apechthis capulifera* K.	18	2.04/0.41	15+ 3
14	*Nesopimpla naranyae* A.	149	1.41/0.26	11+ 3
15	*Itoplectis alternans*, v. *spectabilis* M.	114	1.26/0.20	
16	*Xanthopimpla minomensis* U.	225	1.18/0.26	12+ 4
	(4) Therionini			
17	*Theronia atalantae* P.	209	2.37/0.41	9+ 3
	(5) Rhyssini			
18	*Rhyssa approximator*, v. *dubiosa* M. †	192	7.12/0.26	21+21
19	*Epirhyssa japonica*, v. *sapporensis* U. †	76	5.92/0.33	10+15
20	*Megarhyssa japonica* A.	123	14.43/0.44	30+40
	3. Xoridinae			
21	*Xorides albomarginalis* U.	226	5.12/0.39	20+20
22	*Xorides crassitibialis* U.	227	6.15/0.39	24+10
23	*Xylonomus investigator* S.	228	4.58/0.25	15+10
24	*Xylonomus sapporensis*, v. *nigritibialis* U.	229	2.33/0.33	12+ 4
25	*Ischnocerus seticornis*, v. *sapporensis* U.	110	1.74/0.31	8+25
26	*Odontocolon nikkonis* U. †	153	3.21/0.30	8+ 8
	5. Acoenitinae			
27	*Coleocentrus excitator* P.	44	5.31/0.24	33+30
28	*Arotes sugiharai* U.	24	2.76/0.26	17
29	*Phaenolobus maruyamensis* U.	165	1.30/0.15	10
30	*Siphomedia apicalis*, v. *tosensis* U.	201	2.22/0.17	16
	Plate 5.			
	10. Paniscinae			
31	*Parabatus cristatus*, v. *japonicus* U.	160	1.74/0.56	9+ 1
32	*Paniscus ocellaris* T.	159	1.20/0.68	27
33	*Paniscus grumi* K.	157	0.98/0.41	27
34	*Prothecis japonicus* U. †	158	0.93/0.37	
	13. Cteniscinae			
35	*Exenterus oleacus* U. †	* 82	0.48/0.19	12

No.	Scientific name	egg number	egg length/width mm.	adult length body+ovipost. mm.
	14. Cryptinae			
36	*Goniocryptus maruyamensis* U.	94	1.25/0.33	10
37	*Torbda nigra* U.	215	2.89/0.36	
	15. Mesosteninae			
38	*Mesostenus funebris* G.	140	2.59/0.41	15+ 5
39	*Nematopodius flavoguttatus* U.	146	1.57/0.39	11
40	*Idiolispa obfuscator*, v. *nigra* U.	109	1.17/0.37	9+ 1
	17. Phygadeuoninae			
41	*Acroricnus ambulator* F.	4	3.26/0.37	17+ 7
42	*Aceratascis clavata* U.	3	0.82/0.16	
	18. Hemitelinae			
43	*Hemiteles molestes* U. †	6	1.37/0.28	7
	20. Sphinctinae			
44	*Sphinctus serotinus*, v. *nigrithorax* U. †	* 203	0.83/0.37	12
	21. Gelinae			
	(1) Gelini			
45	*Mesoleptus laevigatus*, v. *laticinctus* W.	* 88	0.49/0.13	8
46	*Genarches angularis* U.	90	1.07/0.26	
	(2) Aptesini			
47	*Cratocryptus microstratellus* U.	57	1.70/0.28	8
48	*Ecthrus nigripes* U.	64	4.00/0.33	20
	24. Alomyinae			
49	*Phaeogenes flavescens* U.	166	1.44/0.37	9
	26. Ichneumoninae			
	(1) Pristocerini			
50	*Ectopius convexus* U.	66	0.74/0.22	7
	(2) Platylabini			
51	*Platylabus iwatensis* U.	177	0.66/0.15	8
52	*Platylabus nigricornis* U.	178	0.82/0.34	
	(3) Acanthojoppini			
53	*Pseudoplatylabus apicalis* U.	190	1.10/0.23	
	(4) Eurylabini			
54	*Probolus culpatorius*, v. *fukuchiyamensis* U.	187	0.84/0.31	
	(5) Amblytelini			
55	*Hoplismenus dentatus* S.	103	1.78/0.43	12
56	*Melanichneumon leucomelas* U.	133	2.04/0.44	16
57	*Ctenichneumon divisolius* G.	61	0.93/0.30	16
	(6) Ichneumonini			
58	*Coelichneumon auspex* M.	35	1.80/0.36	17
59	*Ichneumon generosus* L.	106	1.54/0.33	14
	(7) Protichneumonini			
60	*Protichneumon platycerus*, v. *takasagoensis* M.	188	2.78/0.56	30
61	*Amblyjoppa cognatoria* S.	8	2.07/0.44	24
	27. Joppinae			
62	*Dinotomus mactator* T. †	219	1.12/0.26	20
63	*Callojoppa pepsoides*, v. *arrogans* S.	30	1.61/0.37	25
	28. Listrodrominae			
64	*Anisolabus diminutus* U.	14	0.57/0.17	8
	31. Banchinae			

No.	Scientific name	egg number	egg length/width mm.	adult length body+ovipost. mm.
	(1) Glyptini			
65	*Glypta bipunctatorius*, v. *tobensis* U.	* 92	0.35/0.15	10
	(2) Lycoriini			
66	*Lycorina triangugulifera* H. †	* 121	0.44/0.07	
	(3) Lissonotini			
67	*Syzeuctes sambonis* U.	* 206	0.61/0.11	13.5
68	*Lampronota giganteus* U. †	137	0.71/0.16	
	(4) Banchini			
69	*Exestastes fukuchiyamanus* U.	* 83	0.30/0.13	
70	*Exestastes ishikawensis* U.	* 84	0.54/0.11	14
	34. Mesoleptinae			
	(1) Pionini			
71	*Eustiphrosomus antilope* G.	* 80	0.44/0.15	
	(2) Ctenopelmatini			
72	*Scolobates auriculatus*, v. *nigriabdominalis* U.	198	0.54/0.26	
73	*Scolobates testaceus* M.	199	0.65/0.22	8
	(3) Euryproctini			
74	*Hadrodactylus typhane*, v. *orientalis* U.	* 98	0.44/0.19	
	38. Diplazoninae			
75	*Diplazon laetatorius* F. †	* 25	0.62/0.10	6.5
76	*Diplazon tetragonus* T. †	26	1.39/0.16	7
	41. Metopiinae			
77	*Metopius dissectorius* P.	141	0.87/0.24	15
78	*Colpotrochia nipponensis* U.	* 46	0.33/0.15	15
79	*Colpotrochioides kurisuei* U.	* 47	0.26/0.10	15
	43. Ophioninae			
80	*Aglaophion purpurescens* S. †	212	2.37/0.41	30
81	*Ophion obscurus* F.	155	1.44/0.19	20
82	*Enicospilus ramidalus* L.	71	1.05/0.21	25
	45. Anomalinae			
	(1) Anomalini			
83	*Anomalon folicator*, v. *japonicus* U. †	* 152	0.25/0.05	13
84	*Agrypon flavofrontatum* S.	* 7	0.25/0.05	8
	(2) Gravenhorstini			
85	*Aphanistes jozankeanus* M.	* 21	0.20/0.08	
86	*Aphanistes ruficornis* G.	* 22	0.20/0.09	18
87	*Trichomma accisor* H.	* 218	0.36/0.10	15
88	*Labronychus nikkonis* U.	* 115	0.22/0.11	
89	*Acanthosoma insidiator* S.	* 2	0.46/0.17	35
	(3) Therionini			
90	*Therion circumflexum* L. †	* 87	0.43/0.16	21
91	*Heteropelma calcator* W.	* 102	0.39/0.14	15
92	*Schizoloma amictum* F.	* 197	0.44/0.16	24
	47. Campopleginae			
93	*Campoplex sugiharai* U. †	* 154	0.25/0.07	
94	*Nemeritus canescens* G.	* 147	0.25/0.08	
95	*Hologenes argyloplocevora* U. †	* 13	0.59/0.11	
96	*Rhythmonotus takagii* M.	193	0.65/0.17	
97	*Dyspectes praegator* L.	63	0.74/0.30	
	50. Cremastinae			
98	*Cremastes biguttatus* M.	* 58	0.20/0.06	



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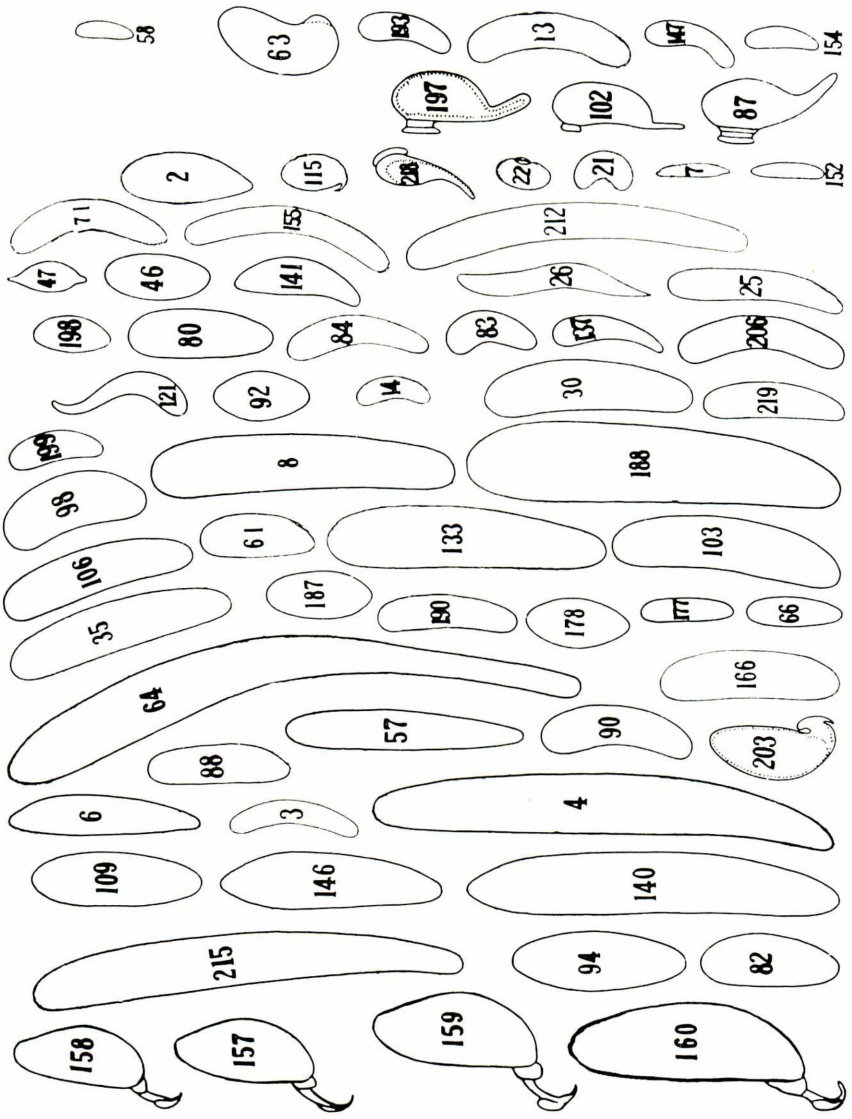

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