#### 昆 蟲 学 評 論

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# A New Species of *Ja* found in Shizuoka Prefecture, Japan (Coleoptera, Carabidae)

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The genus Ja Uéno was established in 1955 on a single male specimen found in Jaana Cave, Aichi Prefecture, Honshu (cf. Uéno, 1955; Habu, 1978). Lately I have met with a specimen of a Platynini species hitherto not known to our fauna among some Carabid beetles sent me from Dr. K. Terada of Hiroshima University.

In spite of the fact that, this single specimen being female, the absence of the ventral adhesive hairs of the fore tarsi of the male, which is the unique characteristic distinguishable from Jujiroa and Yukihikous as well as the other genera of the Platynini of Japan, is not ascertained, I believe it belongs to Ja and it is the second species of this cavernicolous genus. It was attracted by a bait trap set in a forest of Japanese red pine,  $Pinus\ densiflora$ , by Mr. Toshio Inoué.

Before describing it I wish to express my cordial gratitude to Dr. K. Terada for his giving me such an opportunity to study the interesting species.

Ja toshioi sp. nov.

"Inoue-ana-hirata-gomimushi"

Description. Length 12.3 mm (up to apex of elytra). Width 4.1 mm. Dark reddish brown, shiny.

Head (Fig. 2) moderately convex, widest at eyes, with one pair of

small shallow depressions between eyes, not punctate, with a few transverse rugae behind posterior supraorbital setae and a few distinct longitudinal rugae or sulci before anterior supraorbital setae: microsculpture faint isodiametric at central area. distinct. forming transverse meshes at laterodorsal areas: neck relatively long; tempora not tumid, gently oblique, oblique part a little longer than eye; eyes a little longer than in ana. weakly convex. WH/WF 1.29 in one  $\circ$ : posterior supraorbital setae a little more distant from neckconstriction than from eyes, interspace as wide interspace of anterior supraorbital setae; frontal lateral furrows deep, rather wide: frontal impressions somewhat deep, diverging, not reaching anterior supra-

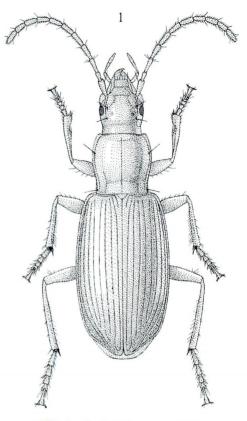


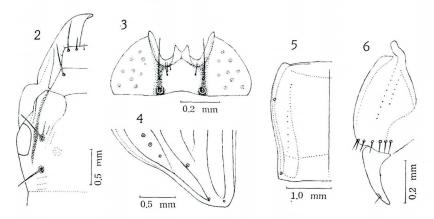
Fig. 1.  $Ja \ toshioi \ sp. \ nov. \ (\diamondsuit).$ 

orbital setae but extending inside setae as fine shallow ruga beyond mid-eye level; antennae reaching basal one-fifth of elytra, segment 1 two and five-sixths times as long as wide, one and one-sixth times as long as segment 3 which is as long as segment 4; maxillary palpi with apical segment slightly shorter than penultimate segment; mentum (Fig. 3) with some large shallow punctures on lateral lobes, pits deep, carinate at margin, a little separated from base of mentum, one pair of secondary setae a little before level of ordinary setae, two shorter additional setae present.

Pronotum (Fig. 5) rather convex, widest behind two-fifths, one and one-third times as wide as head, slightly longer than wide, WP/WH 1.33, WP/LP 0.99, WP/WBP 1.15, WBP/WAP 1.15; surface impunctate, transversely rugose on disc (transverse rugae faint at anterior half, rather distinct at posterior half), obscurely, irregularly rugose in and

near basal foveae; microsculpture faint, forming moderately transverse meshes on disc, distinct and isodiametric at basal area; apex a little rounded; apical angles gently protrudent; base almost straight at median area, somewhat oblique at lateral areas; basal angles distinct, a little more than  $90^{\circ}$ ; lateral margins somewhat roundly, gently contracted anteriorly, shallowly but a little more distinctly sinuate than in ana at four-fifths, thence very slightly diverging up to before posterior marginal setae; anterior marginal setae a little before one-third, posterior setae before basal angles, a little separated from and somewhat breaking lateral margins; basal foveae rather deep, anterior extension effaced at apical one-sixth; inside area of basal angles not convex.

Wings atrophied. Elytra not fused at suture, somewhat convex though flat at median area, widest before middle, one and four-sevenths times as wide as pronotum (WE/WP 1.56), one and seven-tenths times as long as wide; surface smooth, hardly rugose; microsculpture indistinct at basal half, somewhat distinct, forming fully transverse meshes at apical half; basal border shallowly sinuate, gently oblique outward, narrowly rounding at shoulder opposite interval 7; lateral margin somewhat roundly, gently dilated towards middle; lateral reflexed part a little wider at humeral area; apical sinuation moderately deep, inner plica hardly visible; outer angle of apical truncation (Fig. 4) widely rounded, not distinct; apex not mucronate; striae deep, not punctate; scutellary striole short but distinct; inner intervals slightly convex, outer intervals a little more convex, interval 3 without pore on right elytron, with one pore adjoining stria 2 behind middle on left elytron; basal pore



Figs. 2-6. Ja toshioi sp. nov.

- 2. Head. 3. Mentum. 4. Left elytron at apical part.
- Pronotum.Left stylus.

absent; interval 1 with one small setiferous additional pore near apex (Fig. 4); marginal series eighteen.

Tarsal segment 5 with one pair of distinct secondary setae like in *ana* at subapical area on dorsal side; hind tarsi one and one-fifth times as long as head width, segment 1 a little less than one and one-half times as long as segment 2, segment 5 rather long, segment 5/segment 1=1.19 in one 9.

Ventral side of head transversely, distinctly rugose, mesepisterna at apical area and sternite 1 at lateral areas with some distinct punctures; metepisterna a little longer than wide, L/W 1.09, front border complete,



Fig. 7. Distribution map of Yukihikous, Ja and Jujiroa spp.
a. Yukihikous minobusanus Habu. A. Ja toshioi sp. nov. B. J. ana Uéno.
1. Jujiroa troglodytes Uéno. 2. J. elongata Uéno. 3. J. nipponica (Habu).

outer sulcus effaced at anterior half; sternite 6 of  $\circ$  with inner setae slightly behind level of outer setae.

Basal segment of styluses (Fig. 6) with about seven rather long setae at apical area, apical segment moderately curved, with one rudimentary spine on outer ventral margin near middle, without spine nor seta on dorsal side.

Distribution. Japan: Honshu (Fig. 7).

Type-specimen. Holotype:  $\circ$ , VI. 8, 1979, Umeda (about 6 km distant from seashore), Kosai, Shizuoka Pref., Toshio Inoué leg., preserved in our Laboratory.

Remarks. This new species is easily distinguishable from  $Ja\ ana\ U$ éno by the characteristics mentioned in the following key.

Ja, Jujiroa and Yukihikous may have the common ancestor from which they have been derived, and their localities are so far more or less near the seacoast of the Pacific Ocean except that of Yukihikous about 35 km distant from the seashore (Fig. 7).

#### Key to species

#### Literature

HABU, A., 1978: Fauna Japonica, Carabidae, Platynini (Insecta, Coleoptera): 5, 274-277.

UÉNO, S.-I., 1955: New cave-dwelling Anchomenids of Japan. Opusc. Ent., 20: 61-63.

# Revisional Study on the Japanese Species of Genus *Medythia* JACOBY (Col., Chrysomelidae, Galerucinae).

#### By Shinsaku Kimoto

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The Japanese species of *Paraluperodes* Ogloblin were studied by Kimoto in 1965. Meanwhile, Wilcox (1973) treated *Paraluperodes* as a junior synonym of *Medythia* Jacoby. According to my study on the type species of the latter, *Medythia quadrimaculata* Jacoby, this seems to be a reasonable treatment. In my 1965 paper, *nigrobilineatus* Motschulsky was treated as a subspecies of *suturalis* Motschulsky. However, *nigrobilineatus* should be treated as an independent species as treated by Nakane (1963).

For kind cooperation during the course of the study, I am indebted to Prof. Y. Hirashima of Kyushu Univ., Dr. T. Kobayashi of Tohoku National Agricultural Experiment Station, and Mr. I. Hiura of Osaka Mus. Nat. Hist. Also, Mr. T. Shibata, Osaka, provided me the material taken from Malaysia.

#### Genus Medythia JACOBY

Medythia Jacoby, 1887, Notes Leyden Mus. 9:242 (type species: Medythia quadrimaculata Jacoby, 1887, from Sumatra; monotypy). —Wilcox, 1973, Col. Cat. Junk. Suppl. 78 (3):433.

Paraluperodes Ogloblin, 1936, Fauna USSR, 26 (1): 310, 431 (type species: Cnecodes suturalis Motschulsky, 1858, from Burma; monotypy). — Снûjô, 1962, Phil. Jour. Sci. 91 (1-2): 16, 232. — Gressitt & Kimoto, 1963, Pac. Ins. Mon. 1B: 396, 585. — Кімото, 1965, Jour. Fac. Agr. Kyushu Univ. 13 (3): 386. — Wilcox, 1973, Col. Cat. Junk. Suppl. 78 (3): 433 (=Medythia).

#### Key to species of Medythia

Antenna robuster, nearly twice as long as wide in preapical segments, and
pitchy black with first and eighth to tenth segments pale brown, in some
specimen tenth segment in part or entirely blackish; yellowish brown, head
black; each elytron with a broad longitudinal stripe which covers entire humeri
on basal area and is strongly bisinuated on outer side of middle and again

- widened posteriorly; legs yellowish brown with apical portion and basal half of tibiae blackish; length 3.0-3.4 mm ...... suturalis

#### Medythia suturalis (Motschulsky)

Cnecodes suturalis Motschulsky, 1858, Etud. Ent. 7: 100 (Burma). Paraluperodes suturalis: Ogloblin, 1936, Fauna USSR, 26, 1: 312, 433, fig. 312 (India, S. China, Sumatra, Java, Philippines). —Сно̂јô, 1958, Mem. Fac. Lib. Arts & Educ. 2 (64): 9 (Loochoos: Yogi and Nago in Okinawa). —Сно̂јô & Кімото, 1961, Pac. Ins. 3 (1): 167 (E. India, Indo-China, Sumatra, Java, Philippines, China, Formosa, Ryukyu Is.). —Сно̂јô, 1962, Phil. Jour. Sci. 91 (1-2):

233 (S. India, Sumatra, Java, Philippines, S. China, S. Japan, Formosa).

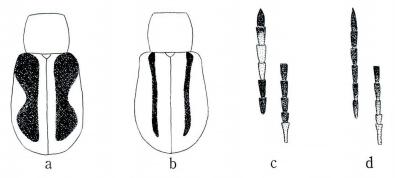


Fig. 1. a, Medythia suturalis (Motschulsky), c, ibid., antenna; b, M. nigrobilineata (Motschulsky), d, ibid., antenna.

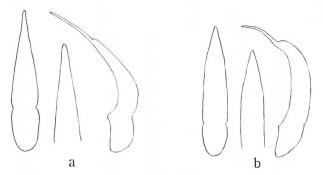


Fig. 2. Male genitalia. a, Medythia suturalis (Motschulsky); b, M. nigrobilineata (Motschulsky).

—Gressitt & Kimoto, 1963, Pac. Ins. Mon. 1B: 585 (E. India, Sunda Is., Vietnam, Philippines, Hainan Is., S. China, Taiwan, Ryukyu Is.). —Кімото, 1965, Jour. Fac. Agr. Kyushu Univ. 13 (3): 387 (Ryukyu Is.).

Luperodes suturalis ab. vittatus Weise, 1922, Tijdschr. Ent. 65:80.

Medythia suturalis: WILCOX, 1973, Col. Cat. Junk. Suppl. 78 (3): 433 (India, Java, Philippines, Japan, China, Ryukyu Is., Formosa).

Distribution: India, Burma, Thailand, Cambodia, Vietnam, Malaya, Philippines, Hainan, S. China, Taiwan, Ryukyu Is. (Ishigaki, Okinawa), Sumatra, Java, Celebes.

Material examined. RYUKYU IS.: Okinawa (after Nakane & Kimoto, 1961); Ishigaki (after Kimoto & Gressitt, 1966). TAIWAN: Takao (after Kimoto, 1966); Kaohsiung (after Kimoto, 1969). CHINA: Fukien, Szechuan, Kwangtung (after Gressitt & Kimoto, 1963). HAINAN: Kiungtung (after Gressitt & Kimoto, 1963). VIETNAM: Tonkin (after Gressitt & Kimoto, 1963). THAILAND: Khao Chong, nr. Trung, 1 ex., 24. vi. 1963, Y. Miyatake; Chieng Mai, 3 exs., 11. vi. 1965, K. Morimoto, 4 exs., 11. vi. 1965, Y. Miyatake. CAMBODIA: Chaon, 1 ex. (1962–63). Osaka City Univ. Cambodge Expd.). MALAYA: Ulu Bendol, Kuala Philah, 4 exs., 9. viii. 1976, 1 ex., 10. viii. 1976, at light, Y. Kiyoyama. JAVA: Semarang, C. Java, 11 exs., 16. xi. 1970, T. Kobayashi. CELEBES: Didrap, S. Celebes, 3 exs., 29. xi. 1970, T. Kobayashi.

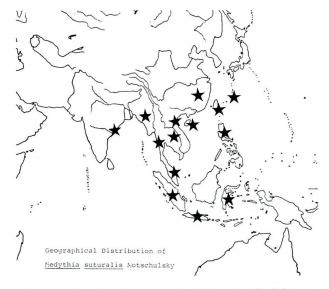


Fig. 3. Geographical distribution of Medythia suturalis (Motschulsky).

#### Medythia nigrobilineata (Motschulsky)

Cnecodes nigrobilineatus Motschulsky, 1860, Etud. Ent. 9:26 (Japan). Paraluperodes suturalis nigrobilineatus: Ogloblin, 1936, Fauna USSR, 26, 1:312,

433 (Amur, Manchuria, China, Japan). — Сно̂ Jô & Кімото, 1961, Pac. Ins. 3 (1): 165 (Japan, Korea, N. China, Manchuria, E. Siberia). — Gressitt & Кімото, 1963, Pac. Ins. Mon. 1B: 585, 586 (SE Siberia, Manchuria, N. China, Korea, Japan). — Кімото, 1965, Jour. Fac. Agr. Kyushu Univ. 13 (3): 387 (E. Siberia, Manchuria, N. China, Korea, Japan).

Luperodes suturalis ab. abbreviatus Weise, 1922, Tijdschr. Ent. 65: 81.

Paraluperodes nigrobilineatus: Nakane, 1963, in Nakane et al., Iconographia Insectorum Japonicorum, Colore naturali edita, 2:338, pl. 169 (Japan, Korea, China, E. Siberia).

Medythia suturalis nigrobilineata: WILCOX, 1973, Col. Cat. Junk. Suppl. 78 (3): 434 (Japan, Siberia, China, Manchuria).

Distribution: E. Siberia, N. & NE. China, Korea, Japan (Hokkaido, Honshu, Sado, Shikoku, Kyushu, Tsushima), Ryukyu Is. (Okinoerabu).

Material examined. JAPAN: Hokkaido (after Кімото, 1965); Honshu (after Кімото, 1965); Shikoku (after Кімото, 1965); Kyushu (after Кімото, 1965). RYUKYU IS.: Okinoerabu (after Кімото & Gressitt, 1966).

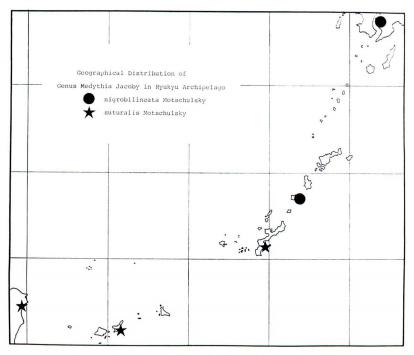


Fig. 4. Geographical distribution of Genus *Medythia*JACOBY in Ryukyu Archipelago.

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- WILCOX, J. A., 1973; Coleopterorum Catalogus, JUNK Supplementa, 78 (3): 433-664.

#### On Two Species of Callistini from Japan (Coleoptera, Carabidae)

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### Callistomimus (Callistomimus) modestus (Schaum) "Mizugiwa-ao-gomimushi"

Callistus modestus Schaum, 1863, Berl. Ent. Zeitschr., 7: 85 (China: Hongkong); FAIRMAIRE, 1888, Ann. Soc. Ent. France, (6) 8: 336.

Callistus amabilis Chaudoir: Redtenbacher, 1867, Reise Novara, 2, Col.: 20. Nomen nudum.

Callistomimus modestus Schaum: Chaudoir, 1872, Bull. Soc. Nat. Mosc., 45 (1): 382-383; Bates, 1873, Trans. Ent. Soc. Lond.: 246; Bates, 1892, Ann. Mus. Civ. Stor. Nat. Genova, (2) 12 (32): 303; Andrewes, 1921, Proc. Zool. Soc. Lond.: 237, 243-244; Andrewes, 1923, Trans. Ent. Soc. Lond.: 468; Jedlička, 1940, Neue Carab. Ostasien, 13: 18; Jedlička, 1953, Ent. Blätt., 49: 147.

Callistomimus modestus Schaum var. humeralis Andrewes, 1921, Proc. Zool. Soc. Lond.: 237, 243 (Tongking, Burma and India).

Callistomimus modestus Schaum var. insularis Andrewes, 1921, Do.: 237, 244 (Java).

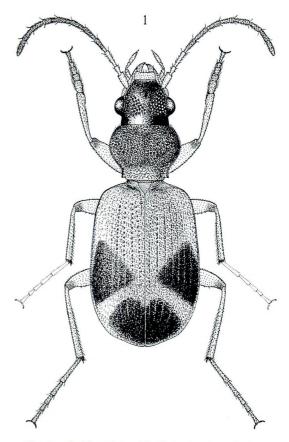
Callistomimus (Callistus) modestus Schaum: Andrewes, 1927, Ann. Mag. Nat. Hist., (9) 19: 108.

Description. Length 5.0 mm. Width 2.0 mm.

Head black, with metallic green tinge except clypeus, shiny, clypeus reddish black, labrum, basal half of mandibles, palpi and antennal segments 1 to 3 pale reddish yellow, apical half of mandibles light reddish brown, remaining segments of antennae dark reddish brown, pronotum including lateral margins reddish brown, somewhat dark at apical area, yellowish at basal area, half-shiny; elytra pale orange, mat, with two large black patches, one patch at middle, triangular, with faint greenish tinge, on intervals 3 to 9, shortest on interval 3, well dilated outward, anterior margin protrudent on interval 7, posterior margin

<sup>[</sup>Ent. Rev. Japan, Vol. XXXV, Nos. 1/2, pp. 13-20, March, 1981]

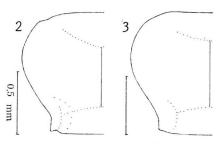
protrudent on interval 8, other patch at apical area, shorter than median patch, hardly metallic. anterior margin somewhat indented, a little protrudent on interval 3. one obscure reddish yellow patch just before median black patch on intervals 7 to 9, one dirty oblique whitish fascia between median and apical black patches, fascia obscurely beginning from interval 3, reaching lateral margin, extending posteriorly outside apical patch. reaching apical sinuation; legs reddish yellow, femora infuscate at apical area, tibiae faintly whitish except basal and apical areas, tarsi a little more reddish: ventral side of head dark reddish brown, thoraces orange, sternites black, epipleura reddish vellow.



Head moderately convex, frons with one small, longitudinal, somewhat deep impression at middle between front margin of eyes; dorsal side with large compact punctures except smooth clypeus, median area of frons before mid-eye level and vertex (behind level of hind margin of eyes), pubescent on punctate area, interspaces of punctures fully narrow, somewhat carinate; microsculpture absent; eyes convex, rather large, WH/WF 1.57 in one  $\mbox{$\circ$}$ ; antennae with segment 3 one and one-ninth times as long as segment 4; apical segment of palpi rather tumid, well narrowed at apical area.

Pronotum (Fig. 2) cordate, fairly convex though somewhat flat on central area, widest behind one-third, one and one-seventh times as wide as head, one and one-third times as wide as long (WP/WH 1.15, WP/LP

1.33, WP/WBP 1.59, WBP/WAP 0.82 in one %); surface pubescent, with large (larger than on head) compact punctures, interspaces of punctures narrow, somewhat carinate, with microsculpture distinct, isodiametric; apex almost straight at median area; apical angles depressed, not protrudent but widely obtuse, dull; base almost straight at median area, obtuse-angularly sinuate or incised on either side



Figs. 2, 3. Pronota of Callistomimus (Callistomimus) spp.

2. C. modestus (Schaum). 3. C. okutanii Habu (holotype) from N. China.

near basal angles; basal angles well angulate, a little less than  $90^{\circ},$  somewhat protrudent posterolaterally; lateral margins almost evenly, fully contracted anteriorly, more contracted posteriorly, deeply sinuate before basal angles, gently diverging from sinuation to basal angles; lateral explanate parts fully narrow; median line somewhat deep, widely effaced at apical and basal areas; anterior and posterior transverse impressions somewhat distinct; basal foveae fairly deep.

Elytra convex, widest a little behind middle, a little more than one and one-half times as wide as pronotum (WE/WP 1.52 in one &), a little less than one and one-half times as long as wide; surface rather densely pubescent, with small dense punctures on black patches, punctures not well visible on orange part; microsculpture isodiametric, distinct, distincter on black patches than on other areas; lateral margin almost evenly or weakly roundly, moderately dilated towards middle; apical sinuation almost absent; apex almost rectangular, somewhat dull; striae somewhat shallow, obscurely punctate, striae on orange part with rather large brownish blots like punctures; intervals slightly convex.

Hind tarsi more than one and one-half times as long as head width, segment 1 one and three-fourths times as long as segment 2, segment 5 fully short, segment 5/segment 1=0.51.

Ventral side distinctly (less distinctly on epipleura) pubescent-punctate.

Distribution. Japan: Hokkaido— 1 8, with a label "Ponyu, Rubeshibe, Hokkaido, 9-8-1918, by M. Suzuki" in Entomological Laboratory, Faculty of Agriculture, Kyushu University; Kyushu—Nagasaki, Nagasaki Pref. (after Ватез, 1873). N. China (after Jedlička, 1940), S. China. Java. Indo-China. Burma. India.

FUKUKI (1934) states that *C. modestus* is rather common in Moriguchi, Osaka Pref., Honshu, but Ohkura (1946) guesses it is nothing but *Chlaenius* (*Eochlaenius*) suvorovi Semenov.

Remarks. The above old specimen is the only one I have met with; it agrees with the original description as well as the key made by Andrewes (1921). It is possible that this species has already become extinct in Japan.

Andrewes (1921) describes two "varieties", one is *insularis* so far restricted only in Java, and the other is *humeralis* distributed in Indo-China (Tongking), Burma and India. These varieties suggest geographical variation, but I am hesitant at present to regard them as subspecies seeing that Bates (1892) mentions "In some of Signor Fea's examples [from Burma] there is a small black humeral spot, but in others the humeri are spotted as in Chinese specimens".

*C. okutanii* Habu described from North China fairly resembles *C. modestus*, but the pronotum (Fig. 3) is with the base not incised near the basal angles which are a little more than  $90^{\circ}$ , and not protrudent.

## Chlaenius (Chlaenius) chuji Jedlička "Hoso-kiboshi-ao-gomimushi"

Chlaenius (Lissauchenium) Chuji Jedlička, 1946, Descrip. Carabid. Nouv. Asie Orient: 4, pl. 1, fig. 2 (Formosa: "Taihoku").

Description. Length 11.3-12.3 mm. Width 3.6-3.9 mm.

Head and pronotum metallic green, shiny, elytra bluish black, half-shiny; labrum, mandibles, antennae, palpi and legs yellowish-reddish brown, antennal segments 2 to 6 or 7, tarsi and apex of femora faintly dark (tibiae somewhat dark and tarsi darker in Yaku ex.), lateral margins of pronotum narrowly reddish brown, elytral lateral margin black, apical margin light reddish brown, elytra with reddish yellow patch at five-eighths on intervals 4 to 8, patch a little longer than wide, longest on interval 6, anterior and posterior margins somewhat indented; ventral side black, hypomera and epipleura black.

Head slightly convex or almost flat; dorsal side not pubescent, almost smooth at clypeus and central area of frons between eyes, with dense distinct punctures at other areas, obliquely, distinctly rugose-carinate at laterodorsal areas; microsculpture absent; neck rather long; tempora fairly oblique behind eyes, oblique part a little more than two-fifths as long as eye; eyes large and convex, WH/WF 1.73, 1.66 in one and one prespectively, genuine ventral margin almost reaching or slightly separated from buccal fissures; frontal impressions somewhat deep, diverging, almost reaching mid-eye level; antennae long, fully reaching basal third of elytra, segment 1 glabrous, segment 2 with two short additional setae at apex besides one ventral seta, segment 3 with a few short setae, segment 4 longest, one and two-sevenths to one and one-third times as long as segment 3; mandibles relatively long; palpi stout, completely glabrous, maxillary palpi with apical segment somewhat dilated, two and three-sevenths (8) to two and two-thirds times

 $(\ \ \ )$  as long as wide, threefourths as long as penultimate segment, labial palpi with apical segment fairly dilated, one and one-sixth  $(\ \ \ )$  to less than one and one-third times  $(\ \ \ )$  as long as wide; mentum tooth bifid.

Pronotum not transverse, rather barrel-shaped, moderately convex, widest at four-sevenths, one and one-fourth to less than one and one-third times as wide as pronotum, slightly wider than long (WP/WH 1.31, 1.26, WP/LP 1.02, 1.01, WP/WBP 1.49, 1.57, WBP/WAP 1.12, 1.07, in one ♂ and one ♀ respectively); surface sparsely pubescent (pubescence short and not distinct), with large distinct punctures, punctures somewhat sparse, but dense at basal area, absent before basal foveae, interspaces of punctures with some fine punctures: microsculpture absent on

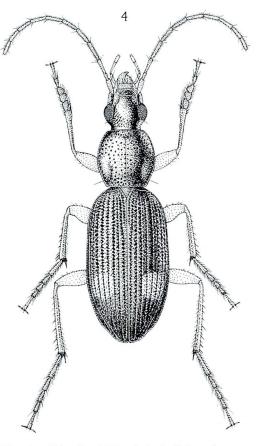


Fig. 4. Chlaenius (Chlaenius) chuji Jedlička, 3.

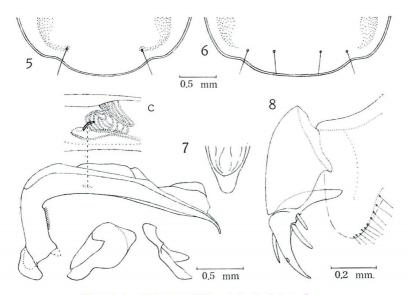
disc, traces of fully transverse meshes discernible at lateral areas; apex straight, distinctly bordered; apical angles obtuse, rounded, not protrudent; base straight, not bordered; basal angles obtuse, a little or narrowly rounded; lateral margins somewhat roundly contracted anteriorly, rectilinearly contracted posteriorly; lateral explanate-reflexed areas fairly narrow; posterior marginal setae far before basal angles, at tenelevenths; basal foveae rather shallow or somewhat deep, a little extending forward in Yaku ex.

Wings developed. Elytra moderately convex, widest a little behind middle, one and three-sevenths to one and one-half times as wide as pronotum (WE/WP 1.43, 1.50 in one  $\Diamond$  and one  $\Diamond$  respectively), one and three-fourths ( $\Diamond$ ) to one and five-sixths times ( $\Diamond$ ) as long as wide; intervals with row of large distinct punctures along striae on either

side, interspace of rows of punctures with some sparse punctures, each puncture with one short hair; microsculpture distinct, isodiametric; basal border complete, shallowly sinuate, gently slanting posterolaterally, widely rounding or forming dull wide angle at shoulder; shoulder fairly slanting; apical sinuation somewhat deep; apex a little rounded; striae deep, well punctate; scutellary striole deep, distinctly punctate, fully long; intervals fairly convex; basal pore fairly distant from basal border.

Legs slender; fore femora ( $\circ$ ) with one small but acute tooth near base; fore tibiae with two spines at outer apical angle; tarsi with sparse very short pubescence on dorsal side; fore tarsi of  $\circ$  with segment 2 as long as wide, segment 3 a little longer but a little narrower than segment 2, one and one-fifth times as long as wide; hind tarsi one and two-thirds ( $\circ$ ) or one and four-fifths times ( $\circ$ ) as long as head width, segment 1 one and five-sevenths ( $\circ$ ) to one and three-fourths times ( $\circ$ ) as long as segment 2, segment 5/segment 1=1.72 ( $\circ$ ), 1.76 ( $\circ$ ).

Ventral side with dense large distinct punctures, punctures smaller and less dense at median area of sternites, thorax almost glabrous,



Figs. 5-8. Chlaenius (Chlaenius) chuji Jedlička.

5. Sternite 6 (punctures and pubescence omitted) of  $\Diamond$ . 6. *Do.* of  $\Diamond$ . 7. Male genitalia. c: copulatory piece in dorsal aspect. 8. Female genitalia.

Aedeagus (Fig. 7) somewhat slender, fully bent behind basal one-third forming nearly 90° angle on ventral side, well curved ventrally at subapical area, almost straight from bending to subapical area, hardly twisted, apical part thin in lateral view; ventral side with short dense pubescence at basal vertical part, dorsal side with two or three very short and fine hairs opposite ventral bending; dorsal orifice terminating behind basal third, fully distant from basal bulb; basal bulb well delimited, semitranslucent, splitted ventrally, not splitted behind; apical lamella rather wide, almost as long as wide (impossible to measure length owing to strong deflexion), apex fairly rounded.

Basal segment of styluses (Fig. 8) moderately wide, glabrous, apical segment narrow, fully curved crescentwise, basal part fully prolonged outward beyond basal segment, apical half acuminate, apex acute, ventral outer margin with two distinct spines near middle, distal spine long and rather stout, nearly twice as long as and twice as wide as proximal spine, dorsal side with one spine almost as long as but a little narrower than distal ventral spine, subapical foramen opened more proximally than usual, setae absent; hemisternites membranous at apical area, with somewhat dense, rather long, fine setae at outer apical area.

Distribution. Japan: Satsunans—1 ô, VIII. 13-16, 1971, Ambô, Yaku Is., without collector's name (through Professor M. Chûjô); Ryukyus—1 ♀, III. 21, 1976, Kunigami, Okinawa Is., T. Kitano leg. (through Mr. Y. Miyake). Formosa.

Remarks. The above two specimens almost agree with Jedlicka's description except that the head is metallic green instead of being "cuivreux", and the pronotum is with lateral margins reddish brown, not "bleuâtre". Further specimens may elucidate whether these differences are geographical or not. The holotype from Formosa is smaller, 10 mm, according to the description.

This species is easily distinguishable from. *C. posticalis* Motschulsky by the smaller and narrower form, the form of the pronotum, the punctuation on the pronotum and elytra, the sixth sternite deeply sinuate at the subapical area on either side, and the aedeagus pubescent in part.

## Supplemental notes on Chlaenius (Chlaenius) leucops Wiedemann

In 1957 I mentioned that a specimen of this species rare in Japan was found in Hiroshima, Hiroshima Pref., though it was lost during the Second World War (Habu, 1957). Lately Dr. K. Terada has kindly offered me a specimen from Akiô-hashi, near Hiroshima, Hiroshima Pref., Honshu. Hiroshima is, so far as I am aware, the northern as well as the eastern limit of this species widely distributed in South Asia.

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#### Identity of Agonoamara chujoi JEDLIČKA, 1962 (Coleoptera, Carabidae)

#### By Akinobu Habu

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In 1962 Jedlicka described several new species of Japan on the basis of the specimens collected mainly by Mr. K. Shimoyama in Aomori Prefecture, North Honshu, under the title of "Neue Carabiden aus Japan" in Niponius, 1 (14), pp. 1-6, and "Zweiter Beitrag zur Kenntniss der Carabiden aus Japan" in Niponius, 1 (15), pp. 1-7. He established a new genus Agonoamara and newly described A. chujoi in the latter paper.

The identity of this genus as well as the species has long been enigmatic to me till I could examine the single paratype thanks to Professor M. Chûjô. Agonoamara does not belong to the tribe Amarini, Harpalinae, but to the Nebriini, Carabinae, and I arrange this genus and species in this paper. Jedlicka has correctly drawn his figure 2 in having the fore tibiae without subapical sinuation on the inner side.

#### Genus Nippononebria Uéno

Type-species: Nebria pusilla Uéno from Japan (designated by Uéno, 1955). Nippononebria Uéno, 1953, Shin-konchû, 6 (1): 56, 59; Uéno, 1955, Ent. Rev. Japan, 6 (6): 49-50.

Agonoamara Jedlička, 1962, Niponius, 1 (15): 2. Type-species: Agonoamara chujoi Jedlička [= Nippononebria chalceola (Bates)] from Japan (monotypic). Junior synonym, designated here.

#### Nippononebria chalceola (Bates)

Nebria chalceola Bates<sup>1)</sup>, 1883, Trans. Ent. Soc. Lond.: 219 (Japan: "Hakone; Oyama; Niohozan").

Agonoamara chujoi Jedlička, 1962, Niponius, 1 (15): 2-3, fig. 2 (Japan: Aoni, Aomori Pref.). Junior synonym, designated here.

The subsequent synonyms are omitted (see Habu, 1958, Bull. Natl. Inst. Agr. Sci.,
 (C) no. 10: 71; Habu, 1975, Ent. Rev. Japan, 28: 49.)

<sup>[</sup>Ent. Rev. Japan, Vol. XXXV, Nos. 1/2, pp. 21-22, March, 1981]

 $J_{\mbox{\footnotesize{EDLI}\check{C}}KA}$  described his species from "zwei Weibchen", but the paratype I examined is a male specimen.

In the final place special thanks are due to Professor M.  $\text{Ch}\hat{\text{O}}\text{j}\hat{\text{O}}$  for the loan of the paratype.

# Studies on Japanese Anthribidae, VI. (Coleoptera)

#### Ву Таісні Ѕнівата

#### Uncifer discrepans sp. nov. (Fig. 1)

 $_{\circ}$ . Black to blackish brown, antennae and legs yellowish brown to brown, latter somewhat darkened. Upperside densely covered with dark brown and grayish white, underside with grayish white pubescences.

Whity pubescence on pronotum and elytra formed the following well

defined marks, which contrast finely with blackish derm. On pronotum lateral mark occupying about at a fourth part of basal width, very slightly narrowed anteriorly, then abruptly but arcuately incurved at apical fourth, with a rounded blackish spot at the middle of outermost area: two spots in the middle, narrow, one before middle, another basal, thinner. On elytra a basal large mark obtrapezoidal, common except scutellum, extended laterally to 6th interspace (innerside of shoulder callus), and prolonged posteriorly to before middle, its hind side subtruncate or shallowly emarginate between both 2nd interspaces, the mark incompletely enclosed indication of subbasal swellings, always open laterally; a common trans-

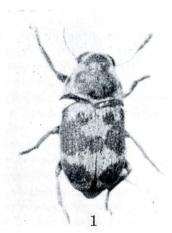


Fig. 1. Uncifer discrepans sp. nov.

verse band behind middle, almost reached to lateral sides, dilated between both 3rd interspaces, gradually narrowed laterally, its front side trisinuate, of middle sinuation between both 2nd interspaces deeper than others, generally produced anteriorly along 2nd punctate-stria, sometimes the branch connected with hind tip of the basal mark, hind side of the band weakly undulate laterally, prolonged posteriorly on sutural interspaces and constantly connected with limbal band along apical margins, therefore on apical third of elytra a pair of blackish rounded large spots present.

Rostrum grayish white, twice as wide as long, without depression,

on apical flat area granules rugose, larger and a little rougher than others. Eyes bordered with somewhat yellowish pubescence, weakly emarginate below. Frons narrow, the minimum distance half narrower than transverse diameter of eye. Antennae beyond elytral shoulder, from 3rd joint to 8th shortened but thickened, 8th noticeably small, as wide as long, triangular, it appears to be a part of club, which elongate, relative length of each joint (5:4:3.2), 9th twice as long as apical width, subequal in length to 5th and 6th together, 11th oblong.

Pronotum subconical, twice as wide at basal carina as long, lateral sides gently rounded except weakly and outwardly reflexed basal part, which is specified, sharply strongly produced postero-laterally and over elytral shoulder; disc moderately convex, transversely depressed along basal carina, especially at the middle; basal carina strongly distinctly biconvex, sharply angulate halfway to side, then protruding rather posteriorly than laterally, somewhat hook-shaped at tip, therefore basal carina very acute, at lateral side the carina quite vestigial, not extended anteriorly.

Elytra more or less depressed behind indication of subbasal swellings and slightly convex in apical half, basal margins together arcuately biconvex, but the arc much gentler than that of basal carina of pronotum; punctures of striae large, rather shallow, interspaces weakly raised.

Pygidium relatively elongate, slightly longer or scarcely as long as wide, sides straightly narrowed, apical side arcuately truncate, sculpture roughened, of granules sparse, usually larger than those of others except ones of apical area of rostrum.

Granules on underside indistinct, not large, mesosternum truncate at apex between mesocoxae. Legs with thinly whitish pubescence.

Length (excl. head): 3 mm.

Holotype,  $\varphi$ , Ikari, Amami Ohshima Is., 17. V. 1960, T. Shibata leg. (Shibata coll.); paratype,  $1\varphi$ , Santaro pass, Amami Ohshima Is., 7. V. 1960, T. Shibata leg.

The present species is characteristic from other known species of the genus, in having the distinct, well defined patterns on pronotum and elytra, the markedly acutely protuberant baso-lateral extreme part of pronotal carina, which is quite vestigial, not extended anteriorly on lateral sides of the pronotum.

#### Uncifer sakoi sp. nov. (Fig. 2)

 $\,^{\circ}$ . Brown to dark brown, elytra a little lighter (somewhat immature), antennae reddish and legs yellowish brown. Upperside clothed with dark brown and yellowish gray pubescences, latter of elytra diffusedly distributed on brown area. Underside thinly clothed with yellowish gray pubescence.

Yellowish gray pubescence of upperside clothed or marked as follows:

On rostrum and head thin, border of eyes a little denser but indistinct. On pronotum lateral sides vaguely diffused, a middle line narrow, from base lengthened across the middle but not reached to apical margin. On elytra relatively dense and formed a common T or Y shaped mark, whose basal transverse bar extended laterally to 5th or 6th interspaces including scutellum, its longitudinal stripe prolonged posteriorly on 1st and 2nd interspaces to apical margin, where dilated, and connected with lateral short line along apical curvature, the stripe complete, so a usual brown central spot absent; alternate interspaces obscurely tessellated with brown, tessellations gradually enfeebled laterally, always distinct on 3rd and/or 5th interspaces, of 3rd ones connected with the stripe here and there; a short stripe on outerside of shoulder callus. On pygidium dense and wide at each side.

Rostrum short, more than twice as wide as long (1.8:0.7), with a median rounded depression. which situated nearer to apex than to base, granules becoming rougher apically from frons. Eyes gently convex laterally, weakly emarginate below, distance between them on frons subequal to rostral length. Antennae very short, not pronotal base, 3rd joint longest, from which shortened but thickened to 7th, it is nearly as long as 8th, club thick, relatively short, 9th triangular, a little longer than apical width, 10th somewhat asymmetrical, slightly wider at apex than long and a little shorter than 11th,

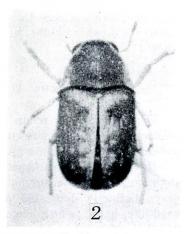


Fig. 2. Uncifer sakoi sp. nov.

which suboval, nearly as long as or slightly shorter than 9th.

Pronotum resembles in shape and sculpture that of the preceding species, but antebasal depression a little shallower before scutellum, lateral sides less arcuate; basal carina closely approximate to elytral base, gently evenly bicurved, not angulate, its lateral extreme part over elytral shoulder, but not so noticeably produced as in the preceding species, lateral carina extended near middle, angle of carinae sharp but less acute, rather blunt at tip.

Elytra widely quadrate, evenly convex, slightly depressed behind indication of subbasal swellings, basal margins together well fitting in curvature with basal carina of pronotum, especially at lateral sides; punctate-striae fine and somewhat deep, alternate interspaces a little more raised and slightly wider than other ones.

Pygidium nearly as wide as long, lateral sides substraightly narrowed, apical side rounded, granules on apical area sparse, small but prominent.

Granules on underside fine and indistinct except anal sternite, whose granules distinct, resemble in manner those of apical area of pygidium. Mesosternum truncate at apex between mesocoxae. Legs relatively robust.

Length (excl. head): 2.9 mm.

Holotype,  $\mathcal{P}$ , Miyanoura, Yakushima Is., 5. VII. 1966, K. Sako leg. (Shibata coll.) The present species is allied to U. basalis Jordan from Sumatra and U. exilis Jordan from Perak, but differs as follows: In the latter two species the 9th joint of antennae twice as long as wide, while in the present species the 9th joint short, a little longer than its apical width. In basalis the antennae long, reaching the elytral base, the 3rd antennal joint short, nearly as long as or a trifle shorter than 4th, while in the present species the antennae much shorter, the 3rd joint is the longest, obviously longer than 4th. In exilis the eyes distinctly elevated laterally, subcariniform, while in the present species the eyes rather flat, gently convex laterally.

#### Uncifer hispidus sp. nov. (Figs. 3, 4)

Dark brown to reddish dark brown, antennae, tibiae and tarsi yellowish to reddish brown. Upperside clothed or marked with and underside covered with whitish gray pubescence.

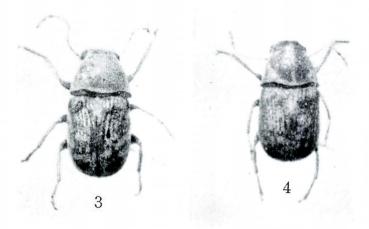
Rostrum less than twice as wide as long (1.1 or 1.2:0.7), sides slightly dilated above antennal scrobe, then parallel to apex; in \$ densely gray, distinctly depressed except basal third, depression with dense wool-like hairs, which decumbent but variable in manner, generally directed sideward and at apical part obliquely curled or directed forward, their principal color yellowish gray and becoming deeper toward apex; in \$ thinly gray, without distinct depression, flattened out at apical half, where rugosely roughly granulate.

Head unevenly granulate, granules a little smaller than those on apical half of rostrum in  $\[Phi]$ , gray pubescence in  $\[Phi]$  much sparser than in  $\[Phi]$ , but border of eyes and a middle line prominent. Eyes weakly emarginate below, rather strongly convex laterally, in  $\[Phi]$  a little more approximate to each other than in  $\[Phi]$ . Antennae in  $\[Phi]$  reached near elytral middle, 1st and 2nd joints thick, following stalks slender, 4th shorter than 3rd, as long as 5th, 6th or 7th, it is slightly longer than 8th, club elongate, 9th as long as 7th, 10th as long as 8th or 11th; in  $\[Phi]$  fully beyond elytral shoulder, from 3rd gradually shortened but thickened distally, 8th a third shorter than 3rd, 9th triangular, as long as 3rd and a little longer than 10th, which is as long as 11th.

Pronotum less than twice as wide as long, lateral sides less arcuate and less produced basally than those of the preceding two species, antebasal depression distinct; gray pubescence in  $\mathfrak P$  thin except lateral sides and a middle line, which effaced at apex, in  $\mathfrak P$  much denser, sometimes entirely covers over ground; basal carina arcuately bicurved, sometimes weakly angulate halfway to side, approaching closely scutellum and elytral shoulder at lateral extreme part, lateral carina reduced, not or scarcely reached near middle as a smooth line, angle of carinae acute but approximate  $90^\circ$ , blunt at tip.

Elytra about half longer than wide, subbasal swellings weakly raised, before and behind them shallowly depressed, basal margins together gently bicurved; dorsal pattern of gray pubescence resembles closely that of *U. truncatus*, variable, but brown subbasal swellings and a usual central subquadrate or subrounded mark at median third constantly present, gray pubescence on alternate interspaces vaguely tessellated with brown except dense 3rd and/or 5th interspaces, sometimes their gray spots diffused, or enfeebled laterally, and rather distinctly present again on outermost sides; punctate-striae deepened in basal third, interspaces convex.

Pygidium in  $\circ$  scarcely longer than wide, sides substraightly narrowed, apical side angulately rounded, sculpture almost hidden by dense gray pubescence; in  $\circ$  a little wider than long, sides arcuately narrowed and smoothly contiguous with rounded apical side, gray pubescence sparse, granules sparingly mixed with a little larger and rougher ones.



Figs. 3, 4. Uncifer hispidus sp. nov. 3.  $\Diamond$ ; 4.  $\Diamond$ .

Mesosternum truncate at apex between mesocoxae, sculpture of abdomen like that of pygidium in  $\mbox{\ensuremath{\circ}}$ .

Length (excl. head): 2.2 to 2.9 mm.

The following specimens would belong to the present species.

1  $\Diamond$  (antennae missing), Mt. Yonaha, Okinawa Is., 19. V. 1973, K. Matsuda leg., 1  $\Diamond$ , Miyanoura, Yakushima Is., 5. VII. 1966, K. Sako leg., 2  $\Diamond$   $\Diamond$ , Funayuki, Yakushima Is., 1. VII. 1969, Y. Кіуоуама leg.

The present species is peculiar by the male secondary sexual feature of the rostrum, which with densely distinctly hairy depression, this character is recalled that of *Mallorhynchus*, however, the eyes are dorso-lateral and transverse, the antennae are decidedly long. The female of *U. truncatus* Sharp is closely allied to the same sex of the present species, but in the former the eyes are more approximate dorsally to each other, the 3rd joint of antennae is equal in length to 4th, the basal carina of pronotum is more strongly angulate halfway to sides, consequently the basal margin of elytron is more arcuately and strongly produced.

#### Notes and Descriptions of Japanese Tenebrionidae (I)

#### Ву Кіміо Маѕимото

The author describes two new species and takes notes of a knowledge of Japanese Tenebrionidae in this paper.

He wishes to express his gratitude to Dr. Z. Kaszab, Dr. T. Nakane, Dr. Y. Kurosawa, Dr. C. Girard, Dr. H. Silfverberg, Messrs. J. Komiya, S. Kondo, K. Kawada, and K. Sakai for their kind assistance in this study.

#### Strongylium kawadai sp. nov.

Blackish brown, with eyes, terminal joint of antennae, elytra, mouth organs and part of undersurface lighter in color, somewhat sericeously shining. Elongate and well-convex above.

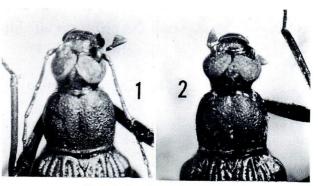
Head transverse, moderately convex, with clypeus divergently produced and bent downward toward apex straightly truncate in front, rounded on both sides, closely and finely punctate, sparsely pubescent anteriorly, genae obliquely and subrectangularly well-produced from anterior part of eyes, finely punctate, eyes very large-sized, arcuate laterally, interocular space very narrow and elevated like ridge, growing to anterior part of each gena, thus forming wide Y-shaped elevation, front-clypeal border deeply grooved with ends bent in front, vertex closely and coarsely punctate, punctures somewhat ocellate, large longitudinal impression at middle where sparsely punctate, antennae slender, reaching basal third of elytra, relative length of each joint from base to apex as follows: 5.0, 1.5, 11.5, 10.0, 8.5, 7.5, 6.5, 6.0, 5.5, 5.5, 5.5.

Pronotum a little broader than long (27.0:23.5), broadest at middle, moderately convex above, strongly and rather closely punctate, punctures ocellated, with shallow longitudinal median groove, surrounding area sparsely punctate, obsolete impression after middle and near base on both sides, front border almost straight and margined, nearly triangularly thickened in middle, hind one bisinuate and thickly margined, sides broadly rounded and finely margined, slightly sinuate before base, front angles rounded, hind ones feebly acute. Scutellum tongue-shaped but a little acute at apex, slightly elevated, finely and rather closely punctate.

Elytra about 2.6 times as long as broad, 1.3 times as broad as

<sup>[</sup>Ent. Rev. Japan, Vol. XXXV, Nos. 1/2, pp. 29-32, March, 1981]

pronotum, parallel-sided near base, broadest at basal two-thirds strongly convex, thickest after middle, acuminate toward apex and feebly dehiscent at tip, rather finely punctate-striate, with marginal striae interrupted by small prominence near



Figs. 1, 2. Strongylium spp.
1. S. kawadai sp. nov. 2. S. okumurai Masumoto.

apex, intervals rather strongly convex, impunctate, feebly reticulated transversely, epipleuron margined only in area opposite abdomen.

Prosternum finely margined in front, shallowly and somewhat rugosely punctate anteriorly, rather strongly and closely so posteriorly, elevated between procoxal cavities but softly depressed medially, with semicircular prosternal process closely punctate, convex in middle and finely margined posteriorly, mesosternum finely but rather closely punctate, elevated in crescent-shape surrounding front-inner portion of coxal cavities, and also triangularly elevated near median of front border, metasternum rather closely punctate, rugose in front, punctures larger in anterior and lateral portions, smaller in middle and posteriorly, abdomen finely and rather closely punctate, much more closely in apical portion, anal sternite finely pubescent posteriorly, with semicircular depression near apex.

Legs slender, closely punctate, with femora a little thickened, fore tibiae weakly bent downward at basal two-sevenths, middle and hind tibiae slightly curved in- and upward, tarsi without any peculiarities, relative length of each joint of fore, middle and hind tarsi as follows: 4.5, 2.5, 2.5, 2.0, 9.0; 13.5, 8.0, 6.0, 3.5, 9.5; 15.0, 7.5, 3.5, 10.5, claws rather small and somewhat falciform.

Terminal joint of maxillary palpi large and securiform, with outer side about 1.5 times as long as inner one and 1.2 times as long as apical.

Body of female larger and more elongate compared with male.

Body length: 16-17 mm.

Holotype:  $\lozenge$  , Mt. Omotodake, Ishigaki Is., Ryukyus, Japan, 9 VI 1977, K. Kawada leg.; paratype: 1 ex., ditto.

This new species is closely related to Strongylium okumurai MASUMOTO from Formosa, but is differed from the latter in following points: 1) the shape of the

head and the legs are remarkably different, 2) the elytra bear silky luster, 3) the striate-punctures are less closely set, 4) the hairs of the legs are inconspicuous, 5) the aedeagus is rather strongly curved in lateral view. (In case of *S. okumurai*, it is only slightly curved.)

#### Obriomaia komiyai sp. nov.

Blackish brown, with head and pronotum greenish blue, elytra reddish purple, basal portion of pronotum, scutellum, lateral margin of elytra, upper side of legs dark blue, undersurface dark greenish blue, six basal joints of antennae, mouth organs, gula, tibiae, etc. reddish brown, basal and sutural portion of elytra reddish yellow, uppersurface and posterior portion of underside strongly and metallically shining. Elongate oblong and moderately convex above.

Head a little transverse, narrowed forward, broadly truncate and weakly emarginate in front, rounded on both sides, clypeus finely and rather closely punctate, slightly convex in middle, frontal suture remarkably grooved, both ends of which connected with rounded groove, genae finely punctate, outer margin feebly raised, weakly arcuate, frons strongly and rather closely punctate, simply sloped forward, vertex also strongly and rather closely punctate, strongly

Pronotum transverse (21.0:16.0), broadest at middle, with disc rather strongly convex, strongly and somewhat closely punctate, front border bulged, weakly sinuate on both sides, not margined, sides slightly crenate and finely margined, rounded anteriorly and sublinearly feebly narrowed posteriorly, basal border weakly bisinuate, widely and roundly



Fig. 3. *Obriomaia komiyai* sp. nov.

produced to rear and flattened, margined but groove interrupted in middle, front angles with rounded tip, slightly produced forward, hind ones nearly rectangular. Scutellum subcordate, finely and sparsely punctate.

Elytra about 1.8 times as long as broad, 1.2 times as broad as pronotum, broadest at middle, gradually narrowed toward apex, moderately convex above, bearing rows of strong punctures on each elytron, inner ones smaller and closely set, outers coarser and sparsely so, intervals slightly convex in lateral portion, rather finely and closely punctate throughout.

Prosternum very finely and rugosely, margined in front border, sparsely punctate, rather strongly raised between coxal cavities, softly depressed and bisulcated medially, prosternal process small and depressed, rather sharply protruded, with ridge-like rim, mesosternum strongly and closely punctate, raised in V-shape before hind border, metasternum strongly punctate and more closely so on both sides, punctures finer and sparser in rest portion, abdomen strongly and closely punctate, punctures smaller and closer in apical portion.

Legs short and stout, with femora moderately thickened, tibiae slightly thickened toward apex, bearing yellowish hairs at inner side of apical half, anterior four legs feebly curved inward, hind ones nearly straight, tarsi bearing yellowish hairs beneath, apical joint strong, claws relatively large and sharp.

Terminal joint of maxillary palpi triangular with rounded sides and oblique apex.

Body length: ca. 8 mm.

This new species somewhat resembles *Obriomaia auripennis* Gebien from the Philippines, but is easily distinguished from the latter in having quite different coloration and rows of punctures on the elytra. In the latter, the head is blackish, the pronotum dark blue, the elytra yellowish green and the body above is strongly shining. The elytra bear fine punctate-striae and the distance between punctures is nearly same as their diameter.

#### Hemicera nodokai NAKANE

This species was described by T. Nakane (1963), but later Z. Kaszab (1964) regarded this as the subspecies of *Hemicera alternata* Gebien, and M. T. Chûjô (1966) agreed with Kaszab's opinion.

The author did not subscribe to this treatment, so he showed specimens of both species to Dr. Z. Kaszab when he visited Budapest. Dr. Z. Kaszab, after careful examination, accepted the author's opinion that both were clearly independent.

# On Japanese Species of *Stomis* (Coleoptera, Carabidae)

#### By Akinobu Habu

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In 1883 Bates for the first time described a *Stomis* species of Japan, *S. prognathus*, from Mt. Hakone, Kanagawa Pref. and Chûzenji, Nikkô, Tochigi Pref., and long after, in 1943, the second species, *S. miyamotoi*, was named by Habu on the basis of a single specimen found in Kamikôchi, Nagano Pref.; ten years later, Straneo (1953) described *S. japonicus* from Minoo, Osaka Pref., and soon after the fourth species, *S. zaonus*, was nonspecifically described by Habu in 1954 from a single specimen found in Mt. Zaô, Yamagata Pref. Lately Nakane (1978) arranged the Japanese species into two species, *S. prognathus* and *S. japonicus*, but I am not satisfied with his treatment.

With the view of clarifying the relationship between these four species, I have examined the specimens in hand as well as some ones loaned for the present purpose, and come to the conclusion that there are surely two species in our fauna, one is *S. prognathus* widely distributed in Honshu—except the northern area—to Shikoku, the other being *S. zaonus* distributed mainly in Tôhoku District, the northern area of Honshu. They closely resemble each other in appearance, but the male and female genitalia are definitely different between them. *S. prognathus* is separable into two subspecies, *S. prognathus prognathus* and *S. prognathus japonicus*, and *S. miyamotoi* is, though the holotype has been lost, nothing else than the former; there is no differentiation in the genitalia between these two subspecies.

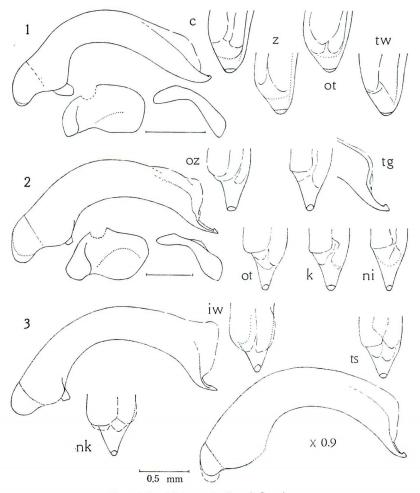
My most sincere thanks are due to Dr. K. Baba, Messrs. M. Satou, K. Shimo-Yama, K. Shirahata and many other entomologists who are kind enough to give or loan me the specimens.

#### Key to species and subspecies of Japan

 Outer area of elytral base more rounded anteriorly, humeral tooth large, reflexed, basal border of elytra generally sinuate at base of stria 3, more oblique outward (Fig. 8); eyes larger or frons narrower, WH/WF 1.43-1.50; aedeagus distinctly twisted to right side, apical part not slender in left lateral view, apical lamella

This paper is to the memory of Mr. KÔTARÔ SHIRAHATA who passed away in the 20th of May, 1980.

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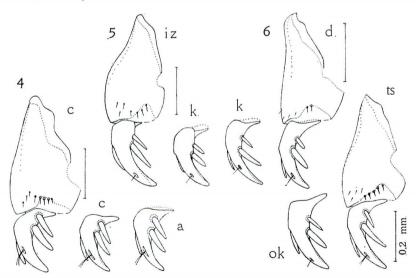
Figs. 1-3. Male genitalia of Stomis spp.

1. S. zaonus Habu. c. Mt. Chôkai, Yamagata Pref. z. Mt. Zaó, Yamagata Pref. (holotype, somewhat teneral). ot. Ôtoriike, Yamagata Pref. tw. Towada, Aomori Pref. 2. S. prognathus prognathus Bates. oz. Oze, Gumma Pref. tg. Togakushi, Nagano Pref. ot. Ôtoriike, Yamagata Pref. k. Kurokawa, Niigata Pref. ni. Nikkô, Tochigi Pref. 3. S. prognathus japonicus Straneo. iw. Mt. Iwawaki, Osaka Pref. nk. Nakao Cave, Akiyoshi, Yamaguchi Pref. ts. Mt. Tsurugi, Tokushima Pref.

- Outer area of elytral base less rounded anteriorly, humeral tooth small, hardly reflexed, basal border of elytra not sinuate, weakly oblique outward (Fig. 7); eyes smaller or frons wider, WH/WF 1.30-1.41; aedeagus hardly twisted, apical part rather slender in left lateral view, apical lamella rather long, roughly triangular, apex narrowly rounded (Figs. 2, 3); apical segment of styluses not or gently curved at basal third, proximal spine of ventral outer margin well distant from base, distinctly shorter and narrower than distal spine (Figs. 5, 6)
- Pronotum with lateral margins more strongly contracted towards base, WP/WBP 1.54-1.63, WAP/WBP 1.07-1.16
   S. prognathus japonicus

### Stomis prognathus prognathus Bates "Kibanaga-gomimushi"

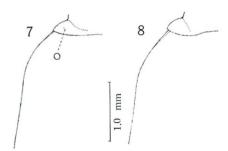
Stomis prognathus Bates, 1883, Trans. Ent. Soc. Lond.: 252-253 (Japan: Hakone and Chûzenji); Nakane, 1963, Icon. Ins. Jap., Colore natur. edit., 2 (Col.): 31, pl. 16, fig. 11 a; Nakane. 1978, Insects & Nature, 13 (12): 12-13, fig. 6. Stomis miyamotoi Habu, 1943, Ent. World, 11: 461, 462-463, fig. 2, pl. 1 (Japan: Kamikôchi).



Figs. 4-6. Styluses of Stomis spp.

4. S. zaonus Habu. c. Mt. Chôkai, Yamagata Pref. a. Aoni, Kuroishi, Aomori Pref. 5. S. prognathus prognathus Bates. iz. Mt. Izugatake, Saitama Pref. k. Kurokawa, Niigata Pref. 6. S. prognathus japonicus Straneo. d. Mt. Daisen, Kagawa Pref. ok. Mt. Ôtaki, Kagawa Pref. ts. Mt. Tsurugi, Tokushima Pref.

WH/WF 1.30-1.41, mean 1.37, in seven ↑ ↑ and five ♀♀. WP/ WH 1.27-1.39, mean 1.34, WP/LP 1.11-1.19, mean 1.15, WP/WBP 1.42-1.52, mean 1.47, WAP/WBP 1.01-1.11, mean 1.06, WE/WP 1.31-1.46, mean 1.39, in seven 3 3 and five 9.9. Elytra less than one and one-half to less than one and three-fifths times as long as wide: outer area of base (o in Fig. 7) gently rounded anteriorly, humeral tooth hardly reflexed, on lateral border of elytra in dorsal view; basal border (Fig. 7) not or hardly sinuate, almost level, weakly oblique outward.



Figs. 7, 8. Left elytra at humeral area in Stomis spp. 0: outer area of base.
7. S. prognathus prognathus BATES from Shiobara, Tochigi Pref.
8. S. zaonus HABU from Mt. Zaô, Yamagata Pref. (holotype).

Aedeagus (Fig. 2) fairly or strongly curved, hardly twisted, apical part rather slender in left lateral view, gently reflexed at subapical area, base with or without somewhat large basal lobe; apical lamella not well delimited at base, rather long, lateral margins shallowly sinuate, apical reflexion a little longer than in *zaonus*, distinctly narrow, apex narrowly rounded; right paramere narrowly rounded at apex.

Basal segment of styluses (Fig. 5) with about three short setae at apical membranous area, with about four short setae near apex on sclerotized area, apical segment fully curved, base protrudent outward, ventral outer margin with two fully long, rather stout spines, proximal spine fairly shorter and narrower than distal spine, fairly distant from base, dorsal outer margin with one spine similar to distal spine of ventral outer margin, subapical foramen before to behind apical one-third; hemisternites with more than ten short setae.

Distribution and localities of specimens examined (mostly genitalia extracted). Japan: Honshu (southern part of Töhoku District, Kantô and Chûbu Districts)—Ôtoriike, Yamagata Pref. (K. Baba leg.), Shiobara, Tochigi Pref. (J. Kato), Nikkô and Okunikkô, Tochigi Pref. (H. Oda), Oze, Katashina, Gumma Pref. (A. Habu), Mt. Izugatake, Saitama Pref. (K. Ohno), Agano, Saitama Pref. (A. Habu), Okutama, Tokyo M. D. (H. Hasegawa), Mt. Narumi, Momogawatôge, Harukiyama, Kurokawa (genitalia examined in  $3 \odot \odot$  and  $3 \odot \odot$ , Kamiishikawa, Kamisankô, Mt. Yahiko, Shioritôge, Motohashi, Mt. Mikuni, Myôkô spa, Mt. Myôkô, Kotaki, Hiraiwa, Niigata Pref. (K. Baba) (Fig. 9), Togakushi, Nagano Pref. (Y. Matsuzawa), Tateshina, Nagano Pref. (S. Imafuku), Mt. Semmai, Nagano Pref. (J. Mitsuhashi), Hirokawara, Yamanashi Pref. (Y. Asano), Mt. Amagi, Shizuoka Pref. (Y. Asano), Chûkû spa, Mt. Hakusan, Ishikawa Pref. (S. Takaba), Neo, Gifu Pref. (S.-I. Uéno).



Fig. 9. Localities of specimens examined of two Stomis spp. in Niigata Pref. and its neighbouring areas.

▲: S. prognathus prognathus BATES. •: S. zaonus HABU.

# Stomis prognathus japonicus Straneo

Stomis japonicus Straneo, 1953, Doriana, 1 (36): 3 (Japan: Minoo); Ohkura and Uéno, 1955, Coloured Illustr. Ins. Japan, Col. (first ed.): 97, pl. 36, fig. 63; Ohkura and Uéno, 1955, do. (rev. ed.): 31, pl. 8, fig. 137; Nakane, 1963, Icon. Ins. Jap., Colore natur edit., 2 (Col.): 31, pl. 16, fig. 11 b; Nakane, 1978, Insects & Nature, 13 (12): 13.

Stomis prognathus Bates: Habu, 1943, Ent. World, 11: 461-462, fig. 1.

 Elytra less than one and four-sevenths to one and five-eighths times as long as wide.

Aedeagus (Fig. 3) and styluses (Fig. 6) almost same as in preceding subsp.

Distribution and localities of specimens examined. Japan: Honshu (Kinki and Chûgoku Districts) — Mt. Iwawaki, Osaka Pref. (collector unknown), Nakao Cave, Akiyoshi, Yamaguchi Pref. (S.-I. UÉNO leg.); Shikoku — Mt. Ôtaki, Kagawa Pref. (M. Satou), Aiguritôge, Kagawa Pref. (M. Satou), Ôyashiki, Kagawa Pref. (M. Satou), Mt. Daisen, Kagawa Pref. (M. Satou), Mt. Tsurugi, Tokushima Pref. (M. Satou).

Remarks. The punctures on the basal area of the pronotum, in the elytral striae, and on the ventral side do not suggest any geographical variation.

#### Stomis zaonus Habu

"Shirahata-kibanaga-gomimushi" 1)

Stomis zaonus Habu, 1954, Bull. Natl. Inst. Agr. Sci., (C) no. 4: 241-243, fig. 5 (Japan: Mt. Zaô).

- ? Stomis miyamotoi Habu: Konishi, 1946, Ecol. Mag. Ins., 1: 18.
- ? Stomis prognathus Bates: Konishi, 1946, do.: 18.

Head with eyes larger or frons narrower than in *prognathus*, WH/WF 1.43–1.50, mean 1.46, in five  $\circ \circ$  and six  $\circ \circ$ . WP/WH 1.26–1.34, mean 1.30, WP/LP 1.08–1.16, mean 1.11, WP/WBP 1.40–1.56, mean 1.48, WAP/WBP 1.03–1.14, mean 1.09, WE/WP 1.40–1.47, mean 1.43, in five  $\circ \circ$  and six  $\circ \circ \circ$ . Elytra less than one and three-fifths to one and two-thirds times as long as wide; outer area of base (Fig. 8) fairly rounded anteriorly, humeral tooth reflexed, protrudent beyond lateral border of elytra in dorsal view; basal border (Fig. 8) generally sinuate at base of stria 3, more oblique outward than in *prognathus*.

Aedeagus (Fig. 1) fairly curved, distinctly twisted to right side, apical half wider than in *prognathus* in laterodorsal view, apical part not slender in left lateral aspect, shortly reflexed at apical area, base without distinct basal bulb; apical lamella not well delimited at base, fully wider than long, lateral margins fully contracted apically, left margin straight or weakly sinuate, right margin more or less rounded, apical reflexion short and wide, apex widely rounded; right paramere widely rounded at apex.

Basal segment of styluses (Fig. 4) with two or three short setae at apical membranous area, about four short setae at subapical area of sclerotized part, apical segment shorter than in *prognathus*, strongly curved, base fully wide, well protrudent outward, ventral outer margin with two fully long and stout spines, proximal spine a little shorter and

<sup>1) = &</sup>quot;Ô-kibanaga-gomimushi".

narrower than distal spine, a little separated from base, dorsal outer margin with one fully long and stout spine, subapical foramen opened more proximally than in *prognathus*, behind middle, with two setae longer than in *prognathus*; hemisternites with about ten short setae.

Distribution and localities of specimens examined (mostly genitalia extracted). Japan: Honshu (Tôhoku District and northern part of Chûbu District) — Aoni, Kuroishi, Aomori Pref. (K. Shimoyama leg.), Nuruyu, Kuroishi, Aomori Pref. (K. Shimoyama), Nurukawa, Hiraka, Aomori Pref. (A. Abe), do. (K. Shimoyama), Towada (at alt. 400 m), Aomori Pref. (K. Baba), Mt. Chôkai, Yamagata Pref. (K. Baba), do. (K. Shirahata), Mt. Zaô, Yamagata Pref. (through Mr. K. Shirahata), Ôtoriike, Yamagata Pref. (K. Baba), Mt. Narumi, Niigata Pref. (K. Baba), Momogawatôge, Niigata Pref. (K. Baba).

*Remarks.* The mandibles appear to be a little longer than in *S. prognathus*, but it is nearly impossible to measure them accurately.

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# Acupalpus (Setacupalpus) hilaris TSCHITSCHÉRINE found in Japan (Coleoptera, Carabidae)

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An Acupalpus species not known to our fauna is distributed in Hokkaido and North Honshu, Japan. Although I can get neither the copy of the original Tschitschérine's paper nor any specimen from East Siberia, I consider it A. hilaris Tschitschérine inasmuch as it almost agrees with Schauberger's (Schauberger, 1930) detailed and Reitter's (Reitter, 1900, 1906) brief notes. I redescribe and illustrate it in this paper from the specimens found in Japan. Here I express my heartfelt thanks to Dr. K. Baba, Messis. H. Inouye and S. Morita for sending me the specimens.

# Acupalpus (Setacupalpus) hilaris Tschitschérine "Kurozu-aka-chibi-gomokumushi"

Acupalpus hilaris Tschitschérine, 1899, L'Abeille, 29: 274; Reitter, 1900, Verh. Naturf. Ver. Brünn, 38: 138 (footnote); Reitter, 1906, Misc. Ent., 14: 103 (footnote); Schauberger, 1930, Col. Centralbl., 4: 208-209.

Description. Length 3.3-3.6 mm. Width 1.3-1.4 mm.

Shiny, head black, labrum and mandibles reddish-yellowish brown, antennal segments 1 and 2 and palpi reddish yellow, antennal segments 3 to 11 reddish brown or dark reddish brown, pronotum orange, more or less dark at median apical area, scutellum dark reddish brown, elytra reddish brown, somewhat iridescent, dark at apical half or almost entirely except light lateral margin and interval 1 and yellowish apical area, legs pale reddish-yellowish brown or reddish yellow; ventral side of head dark reddish brown (mentum yellowish), prothorax orange, meso- and metathorax black or reddish black, sternites dark reddish brown or reddish black, epipleura reddish-yellowish brown.

Head convex; microsculpture distinct, almost isodiametric; eyes a little less convex than usual, WH/WF 1.38–1.45, mean 1.40, in four  $\updelta$   $\update{1}$ 

and three  $\ \ \ \ \ \ \$ ; frontal impressions moderately deep, distinctly reaching frontal lateral furrows; fronto-clypeal suture fine and shallow; antennae a little extending beyond shoulder, segment 2 sparsely pubescent.

Pronotum (Fig. 4) rather convex, widest at or behind two-fifths, at least one and two-fifths times as wide as head, at most one and onethird times as wide as long (in four ↑ ↑ and three ♀♀ WP/ WH 1.41-1.49, mean 1.45, WP/ LP 1.29-1.33, mean 1.31): surface not punctate or with some obscure punctures at basal area: microsculpture obsolete: apex almost straight except lateral areas. bordered at lateral areas: apical angles a little protrudent, rounded; base straight at median area, gently rounded on either lateral area, not bordered: basal angles rounded; lateral margins unbordered, moderately contracted anteriorly, straightly con-

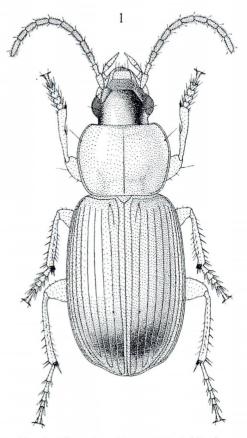


Fig. 1. Acupalpus (Setacupalpus) hilaris
TSCHITSCHÉRINE, &.

tracted posteriorly; lateral furrows narrow, distinctly reaching inside of basal angles, thence a little extending inward, becoming faint at base of basal foveae; marginal setae at one-fifth to before one-fourth; median line fine, reaching neither apex nor base; anterior and posterior transverse impressions shallow; basal foveae shallow, outside area of basal foveae somewhat convex.

<sup>1)</sup> The other specimens are not in good condition to measure the width of the elytra.

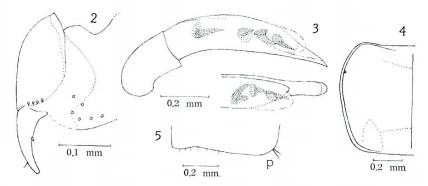
microsculpture indistinct; basal border level at inner half, gently oblique at outer half, rounding at shoulder; lateral margin moderately dilated towards middle; apical sinuation shallow or faint; apex rounded; striae fine, rather shallow to somewhat deep, not punctate; scutellary striole free at apex; intervals almost flat, interval 2 normal, interval 3 with one pore adjoining stria 2 at or before two-thirds.

Apical spurs of all tibiae not denticulate; fore tarsi of  $\,^{\circ}$  well dilated, segment 1 with adhesive hairs ventrally; mid tarsi of  $\,^{\circ}$  with adhesive hairs ventrally; hind tarsi with segment 1 generally shorter (six-sevenths to nine-tenths) than, rarely as long as, segments 2 and 3 together, segment 5 generally a little longer (at most one and one-eighth times) than, rarely slightly shorter than, segment 1, segments 1 and 2 sulcate at outer side, faintly carinate at outer area of dorsal side.

Prosternum (Fig. 5) with some very short sparse hairs at anterior half, all sternites not pubescent; metepisterna one and one-fourth to third times as long as wide; sternite 6 faintly emarginate at apex in  $\hat{\circ}$ , with one seta in  $\hat{\circ}$ , two setae in  $\hat{\circ}$ , on either side.

Aedeagus (Fig. 3) gently curved, rather slender, not twisted, weakly curved ventrally near apex, apex acuminate, ventral side not carinate; basal bulb well defined, fairly sinuate ventrally; apical lamella long, nearly two and one-half times as long as wide, lateral margins almost parallel, right margin almost straight, left margin shallowly sinuate, apex widely rounded, not distinctly bordered.

Basal segment of styluses (Fig. 2) with about four short setae (not well visible under  $\times 100$ ) at apical area, apical segment with one short spine at middle on ventral outer margin; hemisternites with some short



Figs. 2-5. Acupalpus (Setacupalpus) hilaris Tschitschérine.

2. Female genitalia. 3. Aedeagus. 4. Pronotum. 5. Prosternum in lateral view. p: prosternal process.

setae (not well visible).

Remarks. The aedeagus contains four large thorn-like copulatory pieces, distal three almost adjoin each other before the middle of the aedeagus, proximal one being behind the middle, a little distant from the other three.

This species is easily distinguishable from A. (Setacupalpus) sobosanus Habu by the black head, the wider pronotum and elytra, and the aedeagus less curved, with a longer apical lamella.

# Key to Acupalpus species of Japan

1.	Head black ···· 2
-	Head reddish brown, pronotum and elytra also reddish brown or light reddish brown ····· 4
2.	Pronotum wholly orange, a little dark at apex, elytra dark reddish brown; prosternal process with two setae. Distribution: see text
_	Pronotum black or dark brown at central area, often more or less reddish-yellowish brown at lateral areas or apical, lateral and basal areas, elytra not reddish; prosternal process without distinct setae
3.	Pronotum black except lateral margins, dark yellowish near apical and basal angles, sometimes along lateral margins, elytra black, more or less yellowish or reddish on interval 1, often with dark yellowish or reddish patch at humeral area or at humeral and apical areas, humeral and apical patches not united; aedeagus not curved ventrally at subapical area, apical part not thin in left lateral view, apical lamella well rounded apically, apex widely rounded. Distribution: Japan: Hokkaido — Memuro (H. INOUYE leg.), Shoro (S. MORITA leg.) ····································
	Pronotum always yellowish-reddish brown or brownish yellow at apical, lateral and basal areas, elytra always widely brownish yellow at basal area, often with large brownish yellow apical patch, basal and apical patches united on outer intervals; aedeagus gently curved ventrally at subapical area, apical part thin in left lateral aspect, apical lamella almost evenly or slightly roundly, fairly contracted apically, apex narrowly, somewhat rounded. Distribution: Japan: Hokkaido — Otaru and Hakodate (after BATES, 1883); Europe; ? N. Africa
4.	Antennal segment 2 glabrous except for one seta on ventral side; prosternum with several long setae at anterior half, without distinct setae at prosternal process; pronotum wider, WP/LP 1.32-1.43. Distribution: Japan: Hokkaido, Honshu, Shikoku, Kyushu, Satsunans, Ryukyus; China
_	Antennal segment 2 sparsely pubescent; prosternum with some short setae, prosternal process with two distinct setae; pronotum less wide, WP/LP 1.22-1.29. Distribution: Japan: Honshu, KyushuA. (Setacupalpus) sobosanus Habu

# New Species and Subspecies of Cerambycidae from Japan and Taiwan (Coleoptera)

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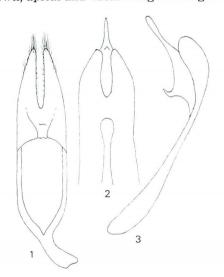
Miura Branch, Kanagawa Horticultural Experiment Station, 3002, Shimomiyada, Hasse-machi, Miura-city, 238-03

Dorysthenes elegans N. Ohbayashi, sp. nov. (Pl. 1, figs. 1–2; text figs. 1–3)

Male: Length 29 mm. Body yellowish brown; head chestnut brown except antennal tubercles reddish, mandibles testaceous; basal three segments of antennae lustrous chestnut brown and remainings lusterless brown; pronotum glossy chestnut brown, apical and basal margins fringed

with fine testaceous hairs; elytra brown, becoming lighter apically; legs light brown.

Head ruggedly and complicately sculptured; vertex provided with a deep concavity and both sides of the concavity forming ridges, antennal tubercles roundly prominent, from strongly depressed and partly concealed by the anterior margin of antennal tubercles: mandibles well developed. same as long as the third antennal segment, gently curved inwardly and each provided with a blunt tooth on apical third of outer margin; eyes large and strongly prominent, so that neck seems to be constricted; antennae 11 segmented but it seems to consist of 12 segments apparently because of that the last segment incom-



Figs. 1-3. Male genitalia of *Dorysthenes* elegans sp. nov.

- 1. Lateral lobes.
- 2. Dorsal view of median lobe.
- 3. Lateral view of median lobe.

pletely divided into two lobes, the relative length of each segment as 32: 11:50:31:31:29:27:26:25:24:49 (25:24), surface on first to second segments distinctly but coarsely punctured, third minutely and densely punctured, fourth to fifth more or less rugose with punctures, sixth to the last segments rugosely sculptured. Pronotum glossy, disk provided with minute punctures sparsely on the middle and the punctures becoming closer laterally; each lateral side provided with three acute teeth, of which apical one projecting laterally, second one more or less curved postero-laterally and hind one is the shortest. Scutellum tongueshaped. Elytra feebly rugulose, provided with three distinct carinae on each elytron and sutural apex minutely toothed. Prosternal intercoxal process strongly arched and swollen posteriorly, its apex concave laterally and seems to be emarginated when observed from lateral side. Front femora sparsely granulate along ventral sides; outer side of each tibia shallowly concave; lobes of third tarsal segment obliquely truncate distally. Male genitalia as figured.

Female: Almost similar as male. Antennae short and slender, approximate ratio of each segment as 30:9:35:21:21:18:17:15:15:15:26 (16:10). Legs slender and front femora without granules.

Holotype: §, Mt. Shitou-shan, Miaoli Hsien, Taiwan, (light trap), 11 June, 1975, K. Ueda et K. Setoya leg. (In the collection of Kyushu University, Type No. 2223) Paratype: §, Jiuyuehtan, Taiwan, 30 June, 1978, H. Akiyama leg.

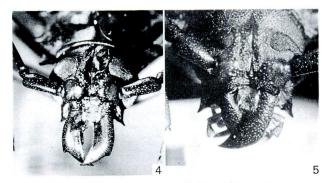
Remarks: This new species differs from *D. pici* Lameere from Taiwan in having well developed upper eye lobe instead of less convex and narrow, transversally elongated one; different structure of mandible toothed on apical one-third of outer margin instead of on basal one-fourth of inner margin; otherwise more developed antennal tubercle, more glossy pronotal disk, distinct carinae on elytra etc. This new species also closely related to *D. fossatus* Pascoe from North China, but distinguishable by the structure of mandible which provided one tooth on its outer margin instead of two. This new species seems to belong to subgenus *Prionomimus* Lameere.

Dorysthenes elegans ishigakiensis N. Ohbayashi subsp. nov.

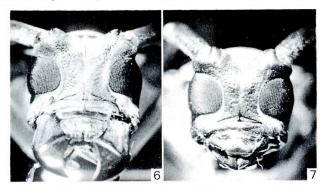
(Pl. 1, fig. 3; text fig. 4)

Female: Length 28 mm. Differs from the nominate subspecies in having the pronotum more glossy and longer; the elytra wider (0.61 times as wide as long when the nominate subspecies 0.58 times), the elytral carinae feeble and indistinct. Approximate ratio of antennal segments as follows; 30:9:36:23:20:19:18:18:17:15:30 (18:12).

Holotype:  $\mbox{$\wp$}$ , Ishigaki Is., Yayeyama Islands, Japan, 8 May, 1978, H. Hirai leg. (In the collection of Mr. K. Shimizu)



Figs. 4-5. Frontal view of Dorysthenes spp.
4. Dorysthenes elegans ishigakiensis subsp. nov. 5. Dorysthenes pici Lameere



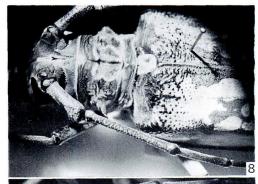
Figs. 6-7. Frontal view of Batocera spp. 6. Batocera ushijimai sp. nov. 7. Batocera lineolata Chevrolat

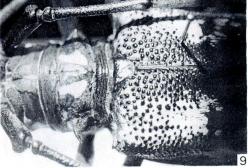
Batocera ushijimai N. Ohbayashi, sp. nov. (Pl. 1, fig. 4; text figs. 6, 8)

Female: Length 50-65 mm. Body black, closely covered with gray pubescence, the pubescence sparser on the basal three antennal segments; vertex with a narrow white line along median groove; pronotum provided with two rather wide reniform white discal spots which closely adjacent each other, and a small distinct (holotype) or vestige (paratype) white spot on anterior margin. Scutellum densely clothed with white pubescence. Elytra irregularly marked with several white spots which are obliquely elongate as shown in figure. Ventral surface bearing a longitudinal stripe consist of white pubescence on each side, the stripe extending from posterior border of eye to apical one-third of last abdominal sternite but interrupted at mesepimeron where the pubescence

is gray.

Head provided with a median line extending from front-clypeal suture occiput; vertex moderately concave, disk between upper eve lobes depressed triangularly and the median line of the disk smooth and carinate; frons as wide as deep, inferior eye lobe 1.5 times as long as gena; mandibles large and strong. as long as scape, directed forwardly; antennae slightly longer than the body, only the last segment exceeding elytral apex, third segment provided with a number of minute spines beneath. fourth to eighth segments also provided with the spines beneath and the becoming spines sparser apically. Pronotum threefourths as long as wide,





Figs. 8-9. Dorsal view of *Batocera* spp. 8. *Batocera ushijimai* sp. nov.

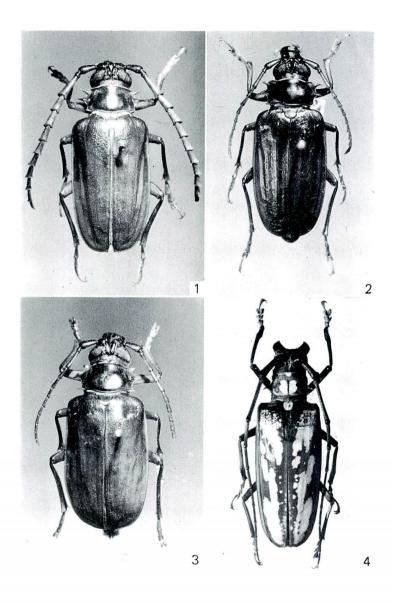
9. Batocera lineolata Chevrolat

provided with a conical, sharply pointed spine on each lateral side; disk ruggedly sculptured except on white markings and transversely wrinkled on anterior and posterior areas. Scutellum tongue-shaped. Elytra broadest at middle; basal area transversely wrinkled and the following basal one-fifth of disk provided with small and rather feeble tubercles; each humeral angle bearing a short and blunt spine; each sutural apex provided with a distinct spine and marginal angle rounded.

Holotype: 9, Musha, Taiwan, (collected by beeting of chestnut tree), 9 May, 1978, K. Ushijima leg. (In the collection of the author)

Paratype: ♀, Wushe, Taiwan, 25 May, 1976, K. AKIYAMA leg.

Remarks: This new species bears a close resemblance to *B. lineolata* Chevrolat including its varieties, but can be easily distinguished from them in having wider frons, stronger and forwardly directed mandibles, smaller and feebler tubercles of elytral disk, shorter and blunt humeral spine etc. as shown in text figures contrasted with *B. lineolata*. This new species also differs from the related species of *B. horsfieldi* Hope in having shorter inferior eye lobe (1.5 times as long as gena instead of twice), wider frons (as wide as long instead of longer than wide), smaller and



(N. Ohbayashi photo.)

feebler tubercles of elytral disk instead of distinct and large, etc.

#### Acknowledgement

I wish to express my sincere gratitude to Prof. Masao Hayashi of Osaka Jonan Women's Junior College and Prof. Masataka Satô of Nagoya Women's University for their constant guidance and helpful suggestions. I also wish to express my thanks to Messrs. K. Shimizu, K. Akiyama, K. Ushijima, H. Makihara, Y. Hori and other people who help me in getting opportunity to examine these specimens or other ways.

#### Explanation of Plate 1.

- Fig. 1. Dorysthenes elegans sp. nov., 3.
  - 2. ditto,  $\circ$ .
  - 3. Dorysthenes elegans ishigakiensis subsp. nov., ♀.
  - 4. Batocera ushijimai sp. nov., ♀.

# Chrysomelid-beetles of Nepal, collected by the Hokkaido University Scientific Expeditions to Nepal Himalaya, 1968 and 1975. Part III (Coleoptera)<sup>1)</sup>

By Shinsaku Kimoto<sup>2)</sup> and Haruo Takizawa<sup>3)</sup>

#### Introduction

This is the 3rd report of our study on Nepalese Chrysomelidae collected by the Hokkaido University Scientific Expedition to Nepal Himalaya. Though the material here dealt with was mostly collected by Drs. S. Takagi and H. Higuchi in the 1975 Expedition, also some additions and corrections to the previous reports are included. A total of 85 species are enumerated, including 2 new species and 18 new records from Nepal. All the specimens, except for some duplicates preserved in authors' collections, will be deposited in the Nepalese Collection of the Entomological Institute of Hokkaido University, Sapporo.

On this occasion we wish to express our hearty thanks to Drs. S. Takagi and T. Kumata of Hokkaido University and Dr. H. Higuchi of The Preparation Office for Tochigi Prefectural Museum for giving us opportunity to work with this interesting material.

#### Enumeration

#### Subfamily Sagrinae

# 1. Sagra carbunculus Hope, 1842

2 exs., Godavari, Nepal Valley, 19-VIII-1975, H. Higuchi leg.

Distribution: Nepal\*, N. India, Assam, Cambodia, Laos, Vietnam, S. China.

Scientific results of Hokkaido University Expedition to the Himalaya, Entomology No. 39.

[Ent. Rev. Japan, Vol. XXXV, Nos. 1/2, pp. 51-65, pls, 2-4, March, 1981]

<sup>1)</sup> Part I, 1972, Kontyû, Tokyo, 40 (4): 215-223; Part II, 1973, ditto, 41 (2): 170-180.

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<sup>3)</sup> Biological Research Center, The Japan Tobacco & Salt Public Corporation, Hatano, Kanagawa, 257 Japan.

<sup>\*</sup> The species is recorded for the first time from Nepal.

#### Subfamily Criocerinae

# 2. Lilioceris infraticornis Gressitt & Kimoto, 1961

1 ex., Betrawate-Ramche, Bagmati, 13-IX-1975, H. Higuchi leg.; 1 ex., Betrawate, 11-IX-1975, H. Higuchi leg.

Distribution: Nepal, SE. China, Taiwan.

#### 3. Lilioceris laosensis (Pic, 1916)

=Lilioceris bechynei Medvedev, 1958.

1 ex., Dhunche, 2000 m, 18-IX-1975, H. HIGUCHI leg.

Distribution: Nepal, Thailand, Laos, S. China.

# 4. Lilioceris semipunctata (Fabricius, 1801)

1 ex., Godavari, Nepal Valley, 22-VIII-1975, H. HIGUCHI leg.

Distribution: Nepal, India, Ceylon, Sikkim, Hainan, Sumatra, Java.

# 5. Lema rufotestacea Clark, 1866

l ex., Balaju, Kathmandu, 6-IX-1975, S. TAKAGI leg.

Distribution: Nepal\*, Assam, India, Hainan, S. China, Taiwan.

# 6. Lema nigrofrontalis Clark, 1866

1 ex., Ramche-Dhunche, 16-IX-1975, S. TAKAGI leg.

Distribution: Nepal, N. India, Hainan.

#### Subfamily Clytrinae

# 7. Clytra montana Jacoby, 1895

= Miochila montana (JACOBY): KIMOTO & TAKIZAWA, 1973.

5 exs., Ramche, Bagmati, 14-IX-1975, S. TAKAGI leg.

Distribution: Nepal, N. India, Kashmir.

# 8. Diapromorpha dejeani (LACORDAIRE, 1848) (Fig. 1)

31 exs., Kathmandu, 11, 14, 15, 25-VIII-1975, S. Takagi & H. Higuchi leg.; 5 exs., Ramche, Bagmati, 1500-1550 m, 14, 15-IX-1975, S. Takagi & H. Higuchi leg.; 1 ex., Betrawate, 12-IX-1975, S. Takagi leg.; 1 ex., Betrawate-Ramche, 13-IX-1975, H. Higuchi leg.; 1 ex., Sheopuri, 1700 m, 31-VIII-1975, S. Takagi leg.

Distribution: Nepal, Sikkim, India.

# 9. Smaragdina higuchii Kimoto & Takizawa, n. sp. (Fig. 2)

Ochraceous; head with posterior half bluish black and anterior half ochraceous; pronotum with a pair of large lateral markings and a small basal marking before scutellum bluish black, in one specimen basal marking united with lateral markings; scutellum mostly bluish black with apical portion ochraceous; elytron with large median, humeral and postmedian and small apical markings bluish black; median and humeral markings elongate, postmedian marking transverse, and apical marking touching with sutural margin; antenna pitchy black with three or four basal segments brownish; ventral surfaces with metathorax and lateral portion of first to third abdominal segments and almost entire fourth and fifth segments blackish; legs with dorsal surfaces of femora and most part of tibiae and tarsi pitchy black.

Head with vertex slightly depressed at middle behind clypeus, surface thickly covered with fine hairs, and distinctly and rather closely punctate especially on lateral portion and their interstices slightly costate; clypeus slightly convex, surface shining, smooth, sparsely impressed with distinct punctures. Antenna short, robust, with third segment smallest, narrowest, hardly thickened apically; fourth slightly longer than third, slightly widened apically; fifth subtriangular, almost as long as wide; sixth subequal to fourth in length and slightly wider; seventh slightly wider than sixth; seventh to ninth subequal to each other in length and shape; tenth slightly narrower than ninth; eleventh slightly longer and narrower than tenth and its apex pointed. Pronotum transverse, nearly twice as wide as long, nearly straight at anterior margin, slightly produced posteriorly at middle of basal margin, rounded on lateral margin, widest slightly before base and narrowed anteriorly, anterior and posterior corners widely rounded; surface generally convex, with a pair of distinct transverse furrows slightly before basal margin, sparsely impressed with minute punctures on middle but distinctly and rather closely punctate on middle of basal portion. Scutellum subtriangular, apex rounded; surface distinctly and rather closely punctate and their interstices finely granulate. Elytron elongate, subparallel-sided, rounded at

apex; surface convex, distinctly impressed with large punctures, and their interstices finely wrinkled.

Length: 4.5-4.8 mm.

Specimens examined. 2 exs. (one the holotype), Sheopuri, 1800-2400 m, 31-VIII-1975, H. HIGUCHI leg.

Distribution: Nepal.

This new species somewhat resembles *Smaragdina thoracica* FISHER in having a similar coloration and markings of the dorsal surfaces, but differs in having the pronotum distinctly and rather closely punctate at middle of basal portion.

#### Subfamily Cryptocephalinae

# 10. Cryptocephalus exulans Suffrian, 1854

2 exs., Ramche, Bagmati, 14-IX-1975, S. Takagi leg.; 1 ex., Sheopuri, 2600 m, 29-VIII-1975, S. Takagi leg.

Distribution: Nepal, Sikkim, India, Tibet.

# 11. Cryptocephalus triangularis Hope, 1831

2 exs., Betrawate, 700 m, 11-IX-1975, H. Higuchi leg. Distribution: Nepal, N. India, Kashmir, Tibet.

# Subfamily Eumolpinae

# 12. Basilepta abdominale (JACOBY, 1908)

7 exs., Kathmandu, 14-VIII-1975, S. TAKAGI leg. Distribution: Nepal\*, Assam, Burma.

# 13. Basilepta kumatai Кімото & Такіzawa, 1973

1 ex., Pati Bhanjyang-Sundarijar, 13-X-1975, S. Takagi leg. Distribution: Nepal.

# 14. Basilepta splendens (Hope, 1831)

4exs., Phulchoki, Godavari, 21-VIII-1975, S. Takagi leg.; 2exs., Godavari, 21-VIII-1975, H. Higuchi leg.

Distribution: Nepal, India.

# 15. Basilepta variabile (Duvivier, 1892)

2 exs., Phulchoki, Godavari, 19-VIII-1975, S. Takagi leg.; 1 ex., Godavari, 21-VIII-1975, H. Higuchi leg.

Distribution: Nepal, Sikkim, India.

# 16. Basilepta dhunchenum Кімото & Такіzawa, п. sp. (Fig. 3)

Cupreous; dorsal surfaces sparsely covered with fine short hairs; head mostly cupreous with labrum and anterior portion of clypeus reddish brown; antenna reddish brown with apical four of five segments pitchy black; ventral surfaces cupreous with apical portion of each segment brownish especially on apical segments; legs entirely reddish brown.

Head rugosely impressed with large, deep punctures, and clypeus widely depressed at middle and vertex with a shallow longitudinal depression at middle. Antenna relatively robust, nearly 2/3 as long as body length; first to sixth segments subfiliform, and seventh to eleventh much robuster and nearly half as wide as long in preapical segments; first segment long, somewhat club-shaped; second slenderer, nearly  $\frac{2}{3}$  as long as first; third shortest, nearly  $\frac{2}{3}$  as long as second; fourth slenderer, and about  $2\frac{1}{4}$  times as long as third; fifth nearly  $\frac{4}{5}$  as long as fourth; sixth slightly shorter than fifth; seventh subequal to sixth in length but much robuster; seventh to tenth robuster, and subequal to each other in length and shape; eleventh about 11/4 times as long as tenth and its apex pointed. Pronotum transverse, sub-hexagonal, widest slightly behind middle, and where nearly 11/3 times as wide as long, and distinctly narrowed anteriorly and posteriorly, nearly straight at anterior margin, with an obtuse tooth slightly behind middle on lateral margin, slightly rounded posteriorly on basal margin; dorsal surface rugosely impressed with large, deep punctures. Scutellum oblong, rounded at apex, convex; surface distinctly but sparsely punctate on basal half and impunctate on apical half, interstices of punctures smooth, shining. Elytron convex, broader than pronotum at base, subparallel-sided and rounded at apex, nearly 23 times as long as wide; surface convex, rugosely impressed with large, deep punctures, especially on lateral portion, and their interstices finely impressed with minute punctures; the large punctures partly arranged in semiregular longitudinal rows, especially on median portion and their interstices slightly raised; humerus distinctly raised and with a short lateral costa starting just behind humerus.

Length: 4.0-4.2 mm.

Specimens examined. 4 exs. (one the holotype), Dhunche, No. 1 West, 31-V-1968, T. Kumata leg.

Distribution: Nepal.

This new species somewhat resembles *Basilepta uenoi* NAKANE from Japan in having the body cupreous and pronotum covered with hairs, but is separable from it in having the hairs sparser and shorter and covering the elytron also.

# 17. Nodina aeneicollis Jacoby, 1895

1 ex., Bainse, 20-X-1975, S. TAKAGI leg.

Distribution: Nepal\*, Burma.

# 18. Colasposoma semicostatum Jacoby, 1908

5exs., Balaju, Kathmandu,  $25\text{-V-}1968,\ T.$  Kumata leg.; 1ex., Godavari, Nepal Valley,  $16\text{-VI-}1968,\ T.$  Kumata leg.

Distribution: Nepal, Sikkim, India.

# 19. Trichotheca hirta BALY, 1860

2 exs., Ramche-Dhunche, 16-IX-1975, H. HIGUCHI leg.

Distribution: Nepal\*, Burma.

# 20. Aulexis sp.

= Aulexis tibialis: Кімото & Такіzawa, 1973, Kontyû, Tokyo, 41 (2): 176 (Nepal). Our identification (1973) is erroneous, and this seems to represent a new species. However, we hesitate to describe because of a single specimen.

#### Subfamily Chrysomelinae

#### 21. Agrosteomela indica indica (Hope, 1831)

1 ex., Sheopuri,  $2500\,\mathrm{m},\,27\text{-VIII}\text{--}1975,\,$  S. Takagi leg.; 1 ex., Phulchoki, Godavari,  $20\text{-VIII}\text{--}1975,\,$  S. Takagi leg.

Distribution: Nepal, Bhutan, Sikkim, India, Burma.

#### 22. Potaninia assamensis (BALY, 1879)

2 exs., Bainse, Narayani, 20-X-1975, S. TAKAGI leg. Distribution: Nepal\*, Assam.

# 23. Chrysolina vishnu (Hope, 1831) (Fig. 4)

1e x., Gokarna, Kathmandu, 16-VIII-1975, S. TAKAGI leg.; 1 ex., Ramche-Dhunche, 16-IX-1975, S. TAKAGI leg.; 1 ex., Ramche, 1500-1550 m, 15-IX-1975, H. HIGUCHI leg.; 1 ex., Betrawate, 12-IX-1975, H. HIGUCHI leg.

Distribution: Nepal, Sikkim, India.

# 24. Ambrostoma mahesa (Hope, 1831)

13 exs., Sheopuri, 1600-2400 m, 26, 30, 31-VIII-1975, S. TAKAGI & H. HIGUCHI leg. Distribution: Nepal.

# 25. Ambrostoma ambiguum Chen, 1934

2 exs., Syabru-Ghora Tobela, 22, 30-IX-1975, S. TAKAGI leg.; 2 exs., Dhunche, 2000 m, 18-IX-1975, H. Higuchi leg.

Distribution: Nepal\*, N. India.

# 26. Plagiodera versicolora (Laicharting, 1781)

11 exs., Kathmandu, 14-VIII-1975, S. Такаді & Н. Нідисні leg.; 2 exs., Khurumsan, 11-X-1975, Н. Нідисні leg.

Distribution: Nepal\*, India, Afghanistan, China, Korea, Japan, Taiwan, Siberia, Europe, N. Africa.

#### Subfamily Galerucinae

# 27. Pyrrhalta brevicornis (JACOBY, 1889) n. comb. (Fig. 9)

=Diorhabda brevicornis JACOBY, 1889, Ann. Mus. Civ. Genova, 27: 214 (Nepal).

= Pyrrhalta sp.: Кімото & Такіzawa, 1972, Kontyû, Tokyo, 40 (4): 215 (Nepal).

1 ex., Godavari, Nepal Valley, 1450 m, 12-VII-1968, T. Kumata leg.

Distribution: Nepal\*, Burma.

# 28. Doryxena grossa Hope, 1831

1 ex., Sheopuri, 1700 m, 31-VIII-1975, S. TAKAGI leg.

Distribution: Nepal, Assam.

# 29. Doryxenoides tibialis Laboissière, 1927

5 exs., Dhunche, No. 1 West, 30-V-1968, T. Kumata leg. Distribution: Nepal, SW. China.

# 30. Mennipus cervinus (Hope, 1831)

2 exs., Kathmandu, 15-VIII-1975, H. HIGUCHI leg. Distribution: Nepal, N. India, Burma.

# 31. Nepalogaleruca elegans elegans Kimoto, 1970

3 exs., Sheopuri, 2600 m, 27, 28-VIII-1975, S. Takagi & H. Higuchi leg.; 2 exs., Syn Gomba, 3300 m, 2-X-1975, S. Takagi leg. Distribution: Nepal.

#### 32. Pseudadimonia variolosa (Hope, 1831)

2 exs., Godavari, 22-VIII-1975, H. HIGUCHI leg. Distribution: Himalayas, Assam, India, Burma, Thailand, SW. China.

# 33. Hoplasoma sexmaculata (Hope, 1831)

1 ex., Kathmandu, 15-VIII-1975, H. HIGUCHI leg. Distribution: Nepal, Bhutan, India, SW. China.

# 34. Hoplasoma unicolor (Illiger, 1800)

1 ex., Adhabar,  $23\mbox{-}\mbox{X-}1975,$  S. Takagi leg. ; 1 ex., Betrawate,  $2\mbox{-}\mbox{IX-}1975,$  S. Takagi leg.

Distribution: Nepal, Bhutan, India, Burma, S. China, Hainan, Malaya, Sunda Is., Philippines.

# 35. Hoplasoma costatipennis Jacoby, 1896

1 ex., Kathmandu, 25-VIII-1975, S. TAKAGI leg. Distribution: Nepal\*, Assam, India, Ceylon.

# 36. Mimastra gracilis BALY, 1878

1 ex., Sheopuri, 2500 m, 28-VIII-1975, S. Takagi leg. Distribution: Nepal, Sikkim, Bhutan, China, Kashmir.

# 37. Trichomimastra kumatai Кімото & Такіzawa, 1972 (Fig. 7)

3 exs., Phulchoki, Godavari, 20-VIII-1975, S. Takagi leg. Distribution: Nepal.

#### 38. Aulacophora indica (GMELIN, 1790)

1 ex., Betrawate, 11-IX-1975, S. Takagi leg. Distribution: Nepal, Bhutan, India.

# 39. Merista quadrifasciata (Hope, 1831)

2 exs., Kathmandu, 11-VIII-1975, S. TAKAGI leg.; 3 exs., Godavari, 22-VIII-1975,

S. Takagi & H. Higuchi leg.; 1 ex., Ramche-Dhunche, 16-IX-1975, H. Higuchi leg. Distribution: Nepal, Bhutan, N. India, Kashmir.

#### 40. Merista trifasciata (Hope, 1831)

1 ex., Sheopuri, 2300 m, 30-VIII-1975, S. Takagi leg.; 1 ex., Ghora Tobela-Syabru, 30-IX-1975, S. Takagi leg.

Distribution: Nepal, Bhutan, N. India.

# 41. Merista sexmaculata (Kollar & Redtenbacher, 1848)

2 exs., Ramche-Dhunche, 16-IX-1975, S. Takagi & H. Higuchi leg. Distribution: Nepal, Bhutan, N. India, Kashmir.

#### 42. Merista pulunini Bryant, 1952

1 ex., Godavari, 19-VIII-1975, H. Higuchi leg. Distribution: Nepal.

# 43. Paridea eberti Кімото, 1970

1 ex., Phulchoki, Godavari, 21-VIII-1975, S. Takagi leg. Distribution: Nepal, Bhutan, N. India.

# 44. Paridea octomaculata (Baly, 1880)

3 exs., Dhunche, 2000 m, 18-IX-1975, H. Higuchi leg. Distribution: Nepal, Bhutan, India, Assam, Tibet.

# 45. Cneorane manipurana Maulik, 1926

1 ex., Sheopuri, 1800-2400 m, 31-VIII-1975, Н. Нідисні leg.

Distribution: Nepal\*, India.

#### 46. Cneorane rugulipennis BALY, 1886

2 exs., Sheopuri, 2400 m, 27-VIII-1975, H. HIGUCHI leg. Distribution: Nepal, Bhutan, N. India, Assam, Burma, Taiwan.

# 47. Agetocera mirabilis (HOPE, 1831)

1 ex., Godavari, 19-VIII-1975, H. Higuchi leg. Distribution: Nepal, Bhutan, N. India, Burma, Laos, China.

#### 48. Macrima pallida (Laboissière, 1936)

1 ex., Phulchoki, Godavari, 17-VIII-1975, S. Takagi leg.; 1 ex., Dhunche, 2000 m, 18-IX-1975, H. Higuchi leg.; 1 ex., Syabru, 2200m, 21-IX-1975, H. Higuchi leg. Distribution: Nepal, Bhutan, N. India.

#### 49. Calomicrus sp.

1 ex., Gosainkund, 7-VI-1968, T. KUMATA leg.

#### 50. Arthrotus pallidus (Laboissière, 1932)

1 ex., Ramche-Dhunche, 16-IX-1975, H. Higuchi leg.; 1 ex., Khurumsang, 11-X-1975, H. Higuchi leg.

Distribution: Nepal\*, N. Vietnam.

# 51. Arthrotus persimilis Кімото, 1977

2 exs., Godavari, 21-VIII-1975, H. HIGUCHI leg. Distribution: Nepal, Bhutan.

# 52. Dercetina miniaticollis (Hope, 1831)

1 ex., Betrawate-Ramche, 13-IX-1975, Н. Нібисні leg. Distribution: Nepal, Bhutan.

# 53. Dercetina viridicyanea Kimoto, 1977

= Dercetina sp.. Кімото & Такіzаwa, 1972, Kontyû, Tokyo, 40 (4): 222 (Nepal). 1 ex., Thare Pati, Gosainkund, 3570 m, 6-VI-1968, Т. Кимата leg.; 1 ex., Sikha, No. 4 West, 2000 m, 10-V-1968, Т. Кимата leg.; 1 ex., Biratanti, No. 4 West, 1150 m, 12-V-1968, T. KUMATA leg.

Distribution: Nepal, Bhutan.

- 54. Monolepta erythrocephala (BALY, 1878)
  - = Atrachya erythrocephala (BALY): KIMOTO & TAKIZAWA, 1972.

1 ex., Dhunche, No. 1 West, 30-V-1968, T. Kumata leg.; 1 ex., Rukuche Khola, Palpa, 9-V-1968, T. Kumata leg.

Distribution: Nepal, N. India, W. China.

- 55. Monolepta sp.
  - 1 ex., Godavari, 21-VIII-1975, H. HIGUCHI leg.
- 56. Doryscus testaceus Jacoby, 1887

9 exs., Godavari, Nepal Valley, 15, 16-VI-1968, T. Kumata leg. Distribution: Nepal, S. India, Sumatra, Philippines, Tonkin, SE. China.

57. Leptarthra fasciata (JACOBY, 1884)

1 ex., Godavari, 19-VIII-1975, H. Higuchi leg. Distribution: Nepal, India.

58. Sphenoraia bicolor (Hope, 1831)

1 ex., Kathmandu, 25-VIII-1975, S. TAKAGI leg. Distribution: Himalayas, Assam, Burma.

59. Sphenoraia trifasciata Кімото & Такіzawa, 1972 (Fig. 6)

1 ex., Ramche, 14-IX-1975, S. TAKAGI leg. Distribution: Nepal.

- 60. Spitiella collaris (BALY, 1878)
  - = Spitiella auriculata Laboissière, 1931.

1 ex., Gosainkund-Thalepati, 7-X-1975, H. HIGUCHI leg.

Distribution: Nepal, Bhutan, N. India.

# Subfamily Alticinae

- 61. Nonarthra variabilis BALY, 1862
  - 2 exs., Godavari, 22-VIII-1975, H. HIGUCHI leg.

Distribution: Nepal, Assam, India, Ceylon, NE. Afghanistan, Burma, N. Vietnam, China, Hainan, Taiwan.

#### 62. Euphitrea micans BALY, 1875

5 exs., Phulchoki, Godavari, 17-VIII-1975, S. Takagi leg.; 2 exs., Ramche, 14-IX-1975, S. Takagi leg.; Ramche-Dhunche, 16-IX-1975, S. Takagi & H. Higuchi leg. Distribution: Nepal, India, Burma, N. Vietnam, S. China, Java, Sumatra, Malaya, Borneo.

# 63. Acrocrypta tuckuchensis Kimoto & Takizawa, 1972

1 ex., Khurumsang, Gosainkund, 8-IV-1968, T. Kumata leg. Distribution: Nepal.

#### 64. Hemipyxis indica CHEN, 1933

1 ex., Gokarna, Kathmandu, 16-VIII-1975, S. TAKAGI leg. Distribution: Nepal, India, Assam.

# 65. Sphaeroderma sp. 1.

1 ex., Ghora Tobela, 24-IX-1975, S. TAKAGI leg.

# 66. Sphaeroderma sp. 2.

1 ex., Dhunche, 2000 m, 18-IX-1975, H. HIGUCHI leg.

# 67. Hespera krishna Maulik, 1926

3 exs., Khurumsang, Gosainkund, 8-VI-1968, T. Kumata leg.; 1 ex., Gosainkund, 7-VI-1968, T. Kumata leg.

Distribution: Nepal, Sikkim, Burma, India.

# 68. Longitarsus hina Maulik, 1926

10 exs., Godavari, Nepal Valley, 20-IV-1968, Т. Кимата leg.; 11 exs., Balaju, Kathmandu, 16, 25-IV-1968, Т. Кимата leg.

Distribution: Nepal, India.

# 69. Longitarsus sp. 1.

1 ex., Sheopuri, 2300 m, 30-VIII-1975, S. TAKAGI leg.

#### 70. Longitarsus sp. 2.

1 ex., Gosainkund, 4300 m, 6-X-1975, S. TAKAGI leg.

#### 71. Longitarsus sp. 3.

1 ex., Gosainkund, 7-VI-1968, T. Kumata leg.

#### 72. Phyllotreta chotanica Duvivier, 1892

1 ex., Balaju, Kathmandu, 16-IV-1968, T. Kumata leg. Distribution: Nepal\*, India.

#### 73. Phyllotreta sp.

1 ex., Pokhara, No. 3 West, 25-IV-1968, T. Kumata leg.

#### 74. Aphthona andrewesi Jacoby, 1896

1 ex., Gosainkund, 7-VI-1968, T. Kumata leg. Distribution: Nepal, India.

#### 75. Manobia parvula (BALY, 1874)

29 exs., Balaju, Kathmandu, 16-IV-1968, T. Kumaka leg.; 23 exs., Godavari, Nepal Valley, 20-IV-1968, Т. Kumata leg.; 3 exs., Kathmandu, 14-IV-1968, Т. Kumata leg.; 1 ex., Rukuche Khola, Palpa, 9-V-1968, Т. Kumata leg.

Distribution: Nepal, Japan, Ryukyu Is.

# 76. Zipangia micans Scherer, 1969

1 ex., Khurumsang, Gosainkund, 8-VI-1968, T. Kumata leg. Distribution: Nepal\*, N. India.

# 77. Altica himalayensis (CHEN, 1936)

2 exs., Sheopuri, 2400 m, 26-VIII-1975, S. Такаді leg.; 1 ex., Phulchoki, Godavari, 19-VIII-1975, S. Такаді leg.; 1 ex., Ghora Tobela, 24-IX-1975, S. Такаді leg. Distribution: Nepal, Sikkim, India, Tibet, Taiwan.

#### 78. Altica cyanea (Weber, 1801)

2 exs., Dhunche, 2000 m, 18-IX-1975, H. HIGUCHI leg.; 1 ex., Betrawate-Ramche,

13-IX-1975, H. Higuchi leg.; 4 exs., Pokhara, No. 3 West, 25-IV-1968, T. Кимата leg.; 1 ex., Naudhara, No. 3 West, 28-IV-1968, T. Кимата leg.

Distribution: Nepal, India, Ceylon, Afghanistan, Burma, China, Philippines, Sunda Is., Malaya, Indo-China, Taiwan, Japan, New Guinea, Australia.

#### Subfamily Cassidinae

# 79. Cassida syrtica Вонеман, 1856

= Cassida ginpinica: Кімото & Такіzawa, 1973, Kontyů, Tokyo, 41 (2): 180 (Nepal).

1 ex., Syabru, 2200 m, 21-IX-1975, H. Higuchi leg.; 1 ex., Dhunche, 2000 m, 18-IX-1975, H. Higuchi leg.; 1 ex., Gorapani, No. 4 West, 2850 m, 2-V-1968, Т. Кимата leg.; 1 ex., Kathmandu, 1340 m, 15-IV-1968, Т. Кимата leg.

Distribution: Nepal, India.

#### 80. Cassida dorsonotata Boheman, 1854

= Cassida sp. 2: Кімото & Такіzawa, 1973, Kontyû, Tokyo, 41 (2): 180 (Nepal).

1 ex., Swinket, No. 3 West, 1180 m, 15-V-1968, T. Kumata leg.

This species closely resembles *Cassida syrtica* BOHEMAN, but is separable in having the ventral surfaces of abdomen mostly brownish.

Distribution: Nepal\*, India.

# 81. Cassida flavoscutata Spaeth, 1914

= Cassida sp. 1: Кімото & Такіzawa, 1973, Kontyû, Tokyo, 41 (2): 180 (Nepal).

1 ex., Balaju, Kathmandu, 1400 m, 25-V-1968, T. Kumata leg.

Distribution: Nepal\*, Sikkim, India.

#### 82. Laccoptera quadrimaculata (Thunberg, 1789)

4 exs., Kathmandu, 11-VIII-1975, S. Takagı leg.; 1 ex., Phulchoki, Godavari,  $1800-2200\ m,\ 21-VIII-1975,$  S. Takagı leg.

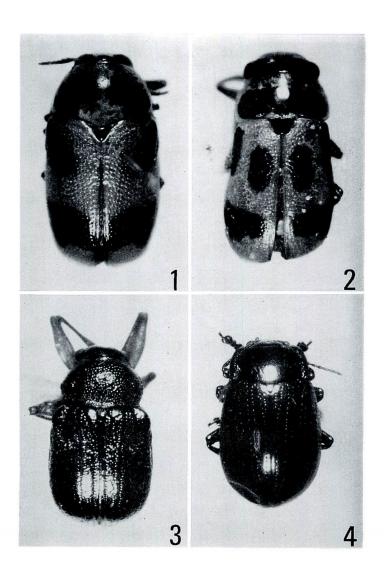
Distribution: Nepal, Sikkim, India, Andaman Is., Indo-China, Malaya, S. China, Taiwan, Ryukyu Is.

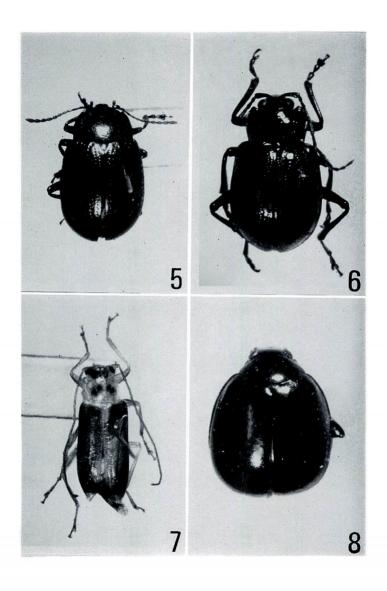
#### Subfamily Hispinae

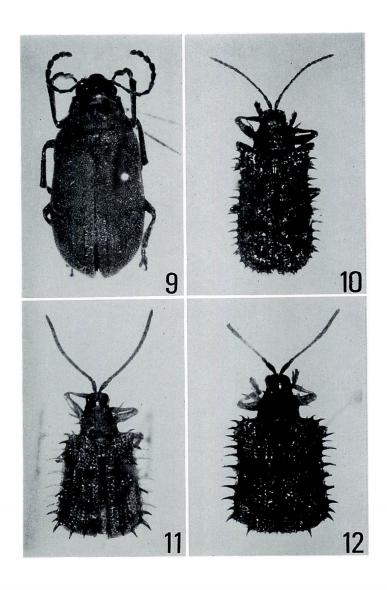
# 83. Dactylispa brevispinosa (Chapuis, 1877) (Fig. 10)

= Dactylispa peregrina Maulik, 1926.

1 ex., Sheopuri, 2300 m, 30-VIII-1975, S. TAKAGI leg.; 1 ex., Phulchoki, Godavari,







#### 21-VIII-1975, S. TAKAGI leg.

Distribution: Nepal, Sikkim, India, Burma.

#### 84. Dactylispa anula Maulik, 1919

1 ex., Sheopuri, 2300 m, 30-VIII-1975, S. TAKAGI leg.

Distribution: Nepal\*, Assam.

## 85. Dactylispa bindusara Maulik, 1919 (Fig. 12)

1 ex., Sheopuri, 1700 m, 31-VIII-1975, S. TAKAGI leg.

Distribution: Nepal\*, Sikkim, Assam, India.

#### Explanation of Plates 2-4.

- Plate 2, Fig. 1. Diapromorpha dejeani (LACORDAIRE)
  - 2. Smaragdina higuchii n. sp.
  - 3. Basilepta dhunchenum n. sp.
  - 4. Chrysolina vishnu (HOPE)
- Plate 3, Fig. 5. Chrysolina inconstans (Wiedemann): Kimoto & Takizawa, 1973.
  - 6. Sphenoraia trifasciata Kimoto & Takizawa
  - 7. Trichomimastra kumatai Kimoto & Takizawa
  - 8. Glaucosphaera cyanea (Duvivier): Kimoto & Takizawa, 1973.
- Plate 4, Fig. 9. Pyrrhalta brevicornis (JACOBY)
  - 10. Dactylispa brevispinosa (CHAPUIS)
  - 11. Dactylispa elegantula (Duvivier): Kimoto & Takizawa, 1973.
  - 12. Dactylispa bindusara MAULIK



# A Geographic Race of *Nebria* (*Paranebria*) chinensis BATES (Coleoptera, Carabidae)

## By Akinobu Habu

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Thanks to Dr. K. Terada and Dr. S.-I. Uéno, I have been able to study a geographical form of *Nebria chinensis* Bates. It is distributed in Tsushima Is., Japan and Quelpart Is., Korea, both islands being more than 200 km distant from each other.

Nebria (Paranebria) chinensis tsushimae subsp. nov.

Description. Length 13.8-15.0 mm. Width 5.0-5.9 mm.

Antennae and palpi reddish brown, pronotum more reddish on lateral explanate-reflexed areas, legs yellowish-reddish brown (reddish black or "rufo-piceis" as BATES<sup>1)</sup> mentioned in *chinensis chinensis*).

<sup>&</sup>lt;sup>1)</sup> Nebria chinensis Bates, 1872, Ent. Monthly Mag., 9:52 (China: "Taken on the Yang-tsze Kiang, in Sze-chuen").

<sup>[</sup>Ent. Rev. Japan, Vol. XXXV, Nos. 1/2, pp. 67-69, March, 1981]

distinctly sinuate (not sinuate in *chinensis chinensis*) just before basal angles (Fig. 2), basal angles more protrudent laterally as small tooch (tooth larger in ex. from Quelpart Is. than in ex. from Tsushima Is.).

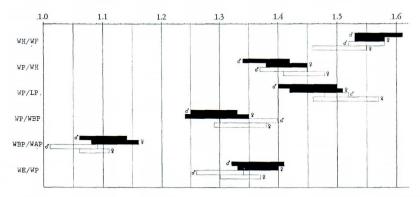
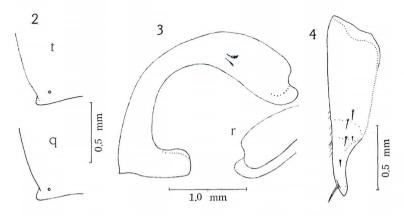


Fig. 1. Range of proportions in Nebria (Paranebria) chinensis Bates. Black bar: N. chinensis chinensis Bates from Honshu and Kyushu, Japan. White bar: N. chinensis tsushimae subsp. nov. from Tsushima Is., Japan and Quelpart Is., Korea. LP: length of pronotum. WAP: width of apex of pronotum. WBP: width of base of pronotum. WE: width of elytra. WF: width of narrowest part of frons between eyes. WH: width of head. WP: width of pronotum.



Figs. 2-4. Nebria (Paranebria) chinensis tsushimae subsp. nov.

2. Basal angles of pronotum. t. ex. from Tsushima Is. q. Quelpart Is.

3. Aedeagus (in Quelpart Is. example). r. apical third in right lateral view.

4. Left stylus (in Quelpart Is. example).

Male genitalia (Fig. 3) and female genitalia (Fig. 4) almost similar to those of *chinensis chinensis*.

 ${\it Distribution.} \quad {\it Japan: Kyushu-Tsushima Is., Nagasaki Pref. Korea: Quelpart Is.}$ 

Finally I wish to express my thanks to Dr. K. Terada and Dr. S.-I. Uéno for their kindness.

# New Data about Some Chrysomelid Beetles from China with a Description of a New Species of *Psylliodes* LATREILLE (Col., Chrysomelidae)

## By BLAGOY GRUEV

University of Plovdiv, Bulgaria

This paper offers new zoogeographical data about 27 species of Chrysomelidae from China and a description of a species (*Psylliodes cantonensis* sp. n.) new to science. Six of the species (*Phyllotreta latevittata* Kutschera, *Altica lubishevi* Palij, *Chalcoides fulvicornis* Fabricius, *Psylliodes chalcomera* Illiger, *Cassida turcmenica* Weise, *Cassida subferruginea* Schrank) are herein newly recorded from the country.

I am greatly indebted to Mrs. Sharon Shute of the British Museum (Natural History) and to Dr. Zoltan Kaszab of the Hungarian National Museum, Budapest for loan of all the specimens listed here, and to Prof. Dr. Shinsaku Kimoto of the Kurume University for his valuable assistance.

Abbreviations: BM—British Museum (Natural History); H—Leg. P. M. HAMMOND; HM—Hungarian National Museum, Budapest; Hs—Leg. F. HAUSER; T—Leg. P. M. THOMSON.

#### Subfamily Eumolpinae

Cleoporus variabilis (BALY, 1874)

Known in China from: Kiangsu, Chekiang, Kwangtung, Fukien, Hupeh, Szechuan, Yunnan, Kweichow, Kwangsi, Kiangsi, Hainan (Gressitt & Кімото, 1961).

New material. Honan: Lin Hsien, 13. VIII. 1966, H, 3 exs., BM.

## Mireditha nigra Chen, 1940

Known in China from: Shansi, S. Kansu (Gressitt & Кімото, 1961; Кімото, 1972).

New material. Shensi: Hua Shan, 30 & 31. VII. 1966, H, 12 exs., BM, det. S. Kimoto.

## Colasposoma dauricum Mannerheim, 1849

Known in China from: Kirin, Shansi, Liaoning, Kansu, Shantung, Szechuan (Gressitt & Кімото, 1961; Кімото, 1972).

New material. Shensi: Tachai, 19. VII. 1966, H, 1 ex., BM; Yenan, 26. VII. 1966,

H, 2 exs., BM; Heilungkiang: Laoshantou, 28. VI. 1965, H, 2 exs., BM.

## Colasposoma metallicum Clark, 1865

Known in China from: Chekiang, Kiangsi, Kwangtung, Fukien, Kweichow, Szechuan, Hainan (Gressitt & Kimoto, 1961).

New material. Yunnan: G. Forest, 1918,  $1\,$  ex., BM; Fukien: Foochow,  $3\,$  exs., BM.

#### Pachnephorus brettinghami Baly, 1878

Known in China from: Kiangsu, Fukien, Kwangtung, Hupeh, Szechuan (Gressitt & Кімото, 1961).

New material. Hopei: Tientsin, VII. 1902, T, 5 exs., BM.

#### Parnops atriceps Pic. 1903

Known in China from: NE. China (Manchuria) (GRESSITT & KIMOTO, 1961). New material. Shensi: Yenan, 26. VII. 1966, H., 6 exs., BM; Heilungkiang: Harbin, 25. VII. 1965 and 10. VII. 1966, H., 7 exs., BM. The specimens of both localities are quite identical (including the shape of the aedeagus—Fig. 1).

#### Scelodonta lewisii Baly, 1874

Known in China from: Liaoning, Shantung, Kiangsu, Chekiang, Kiangsi, Hupeh, Kwangtung, Hainan (Gressitt & Кімото, 1961).

New material. Hopei: Peking, Pa Ta Chu, 14. VII. 1966, H, 3 exs., BM.

## Aoria (Aoria) larvatus Gressitt & Kimoto, 1961

Known in China from: Kwangtung, ?Kiangsu (Gressitt & Kimoto, 1961). New material. Kiangsu: Soochow, 1 ex., BM. This find confirms the existence of A. larvatus in Kiangsu.

## Malegia flavipes Chûjô, 1942

Known in China from: Liaoning, Kirin, Yunnan, ? Hainan (Gressitt & Kimoto, 1961).

New material. Honan: Lin Hsien, 12 & 13. VIII. 1966, H, 4 exs., BM; Hopei: Peking, Pa Ta Chu, 14. VII. 1966, H, 3 exs., BM; Tientsin, T, 3 exs., BM, det. S. Kimoto.

## Abirus fortunei (BALY, 1861)

Known in China from: Sikang, Szechuan, Yunnan, Kweichow, Kwangsi, Kiangsi, Kwangtung, Fukien, Chekiang, Kiangsu (Gressitt & Kimoto, 1961).

New material. Haining, 2 exs., BM.

#### Subfamily Chrysomelinae

Chrysolina (Lithopteroides) exanthematica (Wiedemann, 1821)

Known in China from: Kirin, Hopei, Chekiang, Anhwei, Kiangsu, Hupeh, Szechuan, Yunnan, Kwangtung (Gressitt & Kimoto, 1963).

New material. Shensi: Hua Shan, 31. VII. 1966, H, 1 ex., BM.

#### Ambrostoma (Ambrostoma) fortunei (Baly, 1860)

Known in China from: N. China, E. Manchuria, Honan, Kiangsu, Chekiang, Anhwei, Kiangsi, Fukien, Kweichow, Hunan (Gressitt & Kімото, 1963; Кімото & Каwase, 1966; Кімото, 1972).

New material. Shensi: Hua Shan, 30. VII. 1966, H, 2 exs., BM.

#### Phaedon (Phaedon) brassicae Baly, 1874

Known in China from: Kiangsu, Anhwei, Chekiang, Kiangsi, Fukien, Hupeh, Hunan, Kweichow, Szechuan, Kwangtung, Heilungkiang, Kirin (Gressitt & Кімото, 1963).

New material. Haining, leg. J. J. WALKER, 1 ex., BM; Honan: Lin Hsien, 12. VIII. 1966, H, 1 ex., BM; Kiangsu: Shanghai, leg. J. J. WALKER, 4 exs., BM; Heilungkiang: Harbin, 10. VI. 1950 and 22. VI. 1952, 4 exs., BM.

#### Colaphellus bowringi Baly, 1865

Known in China from: Hopei, Kansu, Shensi, Shantung, Kiangsu, Chekiang, Kiangsi, Szechuan, Kweichow, Kwangtung, Hupeh, Liaoning, Kirin, Anhwei, Hunan, Kwangsi, Fukien (Gressitt & Kimoto, 1963).

New material. Honan: Lin Hsien, 12. VIII. 1966, H, 1 ex., BM.

## Chrysomela (Microdera) salicivorax (Fairmaire, 1888)

Known in China from: Kiangsi, Kweichow, Hopei, Liaoning, Shensi (Gressitt & Кімото, 1963).

New material. Shantung: Tai-an, 2 exs., BM.

## Gonioctena (Gonioctena) rufipes (Degeer, 1775)

Known in China from: Manchuria (Gressitt & Кімото, 1963). New material. Tibet (Tsinghai): Kuku-Nor, 3200 m, 1898, Hs, 6 exs., HM.

## Gonioctena (Asiphytodecta) tredecimmaculata (Jacoby, 1888)

Known in China from: Kiangsi, Fukien, Kweichow, Yunnan, Kwangtung, Hupeh,

Szechuan (GRESSITT & KIMOTO, 1963).

New material. Shensi: Hua Shan, 30. VII. 1966, H, 2 exs., BM.

#### Subfamily Alticinae

#### Phyllotreta latevittata Kutschera, 1860

Known from: E. Mediterranean, Caucasus, Mesopotamia, Kazakhstan, Uzbekistan, Tajikistan, Kirgizia (LOPATIN, 1977).

Material. Sinkiang: Kuldscha, Ober. Jli-Thal, 1897, Hs, 1 ex., HM. New to China.

#### Altica lubishevi Palij, 1963

Known from: Turkmenia, Uzbekistan, Tajikistan, Kirgizia (LOPATIN, 1977; MOHR, 1977). The subspecies *burjatica* Palij is known from E. Siberia (BAERTUEVA, 1973).

Material. Tibet (Tsinghai): Kuku-Nor, 3200 m, 1898, Hs, 2 exs., HM. Aedeagus examined. New to China.

#### Altica tamaricis weisei (Jacobson, 1889)

Known in China from: Szechuan (GRESSITT & KIMOTO, 1963).

New material. Tibet (Tsinghai): Kuku-Nor, 3200 m, 1898, Hs, 26 exs., HM. Aedeagus examined.

#### Chalcoides fulvicornis (Fabricius, 1792)

Known from: Europe, N. Africa, Kazakhstan, C. Asia, Siberia. Material. Sinkiang: Kuldja, Mont. bor., 2 exs., HM. New to China.

## Psylliodes attenuata (Koch, 1803)

Known in China from: Kweichow, Heilungkiang (Gressitt & Kimoto, 1963; Gruev, 1977).

New material. Anhwei: Nanking, Shaolingwei, 9. VIII. 1937, leg. Miss Hurford, 4 exs., BM.

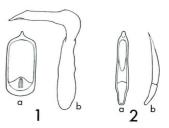
## Psylliodes cantonensis sp. n.

Slender, moderately convex. Dark green, shining, with slight bronzy nuance, or entirely reddish with bronzy lustre. Antennae yellow brown with 3-4 basal segments paler. Ventral surface and legs reddish brown; hind femora dark above, with metallic tinge (hind femora of reddish brown specimens not darkened). Head visible from above, narrower than pronotum, smooth and shining, with clear, moderately strong punctures (a narrow longitudinal line in the middle not punctured). Frontal

tubercles smooth, not delimited behind, with a hole between them. Interantennal ridge obtuse. Antennae nearly as long as the half length of body; segment 2 shorter than 1 and 11 and longer than the rest ones; 3 and 5 equal, shorter than 4; 4 and 6-10 subequal. Pronotum narrower than elytron, about  $1\frac{1}{4}$  times as broad as long, widest at base, with sides nearly straight and with anterior angles strongly produced; smooth, strongly and densely punctured; margined at base. Elytron widest behind

the shoulders, with shoulder tubercles prominent, and with rows of deep and dense punctures; interspaces with a single row of small but deep and clear punctures. Hind wings developed. Hind tibia slightly curved; the apical portion is about ½ of the length of the tibia.

Male. Anterior tarsal segment 1 weakly extended; last abdominal sternite with a small smooth space, without a depression; ventral side of aedeagus (Fig. 2) with a longitudinal depression from base to apex.



Figs. 1, 2. Aedeagus.

- 1. Parnops atriceps Pic. a, dorsal view; b, lateral view.
- 2. Psylliodes cantonensis sp. n. a, ventral view; b, lateral view.

Length 2.55-2.90 mm.

The new species resembles *P. punctifrons* BALY. Differs from it in having antenna and aedeagus differently shaped.

Material. Canton, 27. VII. 1949, on *Clerodendron fortunatum*, leg. W. E. Hoffman,  $\diamondsuit$  holotype,  $\diamondsuit$  allotype,  $\diamondsuit$   $\diamondsuit$ ,  $\diamondsuit$ ,  $\diamondsuit$  paratypes (BM) and  $\diamondsuit$   $\diamondsuit$  paratypes (in the author's collection).

## Psylliodes chalcomera (Illiger, 1807)

Known from: Europe, Caucasus, Asia Minor, N. Africa, Kazakhstan, M. Asia, Siberia.

Material. Heilungkiang: Harbin district, 22. VI. 1952, 1 ex., BM. New to China.

#### Subfamily Cassidinae

Cassida (Cassida) berolinensis Suffrian, 1844

Known in China from: Ordos (Mongolia) (Gressitt & Kimoto, 1963).

New material. Shensi: Yenan, 26. VII. 1966, H, 2 exs., BM. The specimens belong to ab. daurica.

#### Cassida (Cassida) piperata Hope, 1842

Known in China from: Liaoning, Hopei, Shantung, Kiangsu, Fukien, Kwangtung,

Sikang (GRESSITT & KIMOTO, 1963).

New material. Heilungkiang: Harbin, 30. VI. 1965, H, 1 ex., BM.

#### Cassida (Tylocentra) turcmenica (Weise, 1892)

Known from: Kazakhstan, C. Asia.

Material, Sinkiang; Kuldscha, Ober, Ili-Thal, 1897, Hs, 5 exs., HM. New to China.

#### Cassida (Hypocassida) subferruginea Schrank, 1776

Known from the Palearctic Region east to Kazakhstan, M. Asia and Mongolia. Material. Hopei: Peking, Pa Ta Chu, 14. VII. 1966, H, 1 ex., BM; Shensi: Hua Shan, 30. VII. 1966, H, 4 exs., BM; Heilungkiang: Erlungshan, 29. V. 1966, H, 1 ex., BM. New to China.

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## Female Genitalia of Pterostichini Species mainly from Japan (I) (Coleoptera, Carabidae)

## By Akinobu Habu

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When I prepared a revision of the Platynini, I found that there were three types of the styluses, and I regarded them as the principal characteristic of the three subtribes, Platynina, Sphodrina and Dolichina (Habu, 1978). The Pterostichini being the nearest akin to the Platynini—the latter has sometimes been included in the former—it is quite within the range of possibility that the similar parallelism occurs in this tribe. With a view of clarifying it, I have examined the female genitalia of more than seventy species from Japan and several ones from foreign countries. The result, however, contrary to my expectations, is that the variability is not coherent to any characteristic of the subtribes. The female genitalia are, for all that, of some weight for classification on the subgeneric or generic levels.

JEANNEL (1942), laying much stress upon the male genitalia, proposed a unique system of his own with regard to his Pterostichidae, but the female genitalia disclose some weakness of his classification:— for example, he included the genera Stomis, Poecilus and Argutor in his tribe Poecilini, but the female genitalia indicate that they are far distant from one another, and he comprised the subgenus Lagarus of Pterostichus in the genus Stomis, nevertheless neither is near akin to the other.

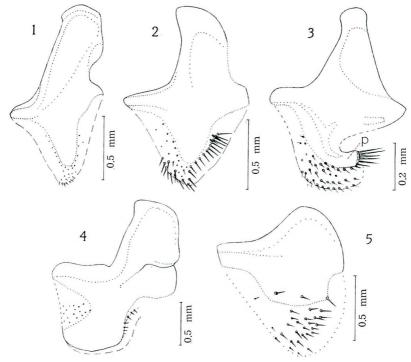
I describe and illustrate the female genitalia with some remarks in this paper. Some of the subgenera of *Pterostichus* being not well defined, I treat them provisionally. Before going further my sincere thanks are offered to numerous entomologists who kindly placing the specimens in my hands for study.

## Genus Myas Dejean

Styluses (Figs. 6-9) almost straight or weakly curved, shorter as compared with body length; basal segment rather wide, sclerotized part not extending outward at apical area, membranous part without setae; apical segment rather wide, not or a little curved, base not or somewhat

<sup>1)</sup> Each genus, subgenus or species not found in our fauna is asterisked:— e. g. \*Subgenus *Omaseus* Stephens.

<sup>[</sup>Ent. Rev. Japan, Vol. XXXV, Nos. 1/2, pp. 77-99, March, 1981]



Figs. 1-5. Left hemisternites of Pterostichini of Japan.

1. Poecilus fortipes Chaudoir from Memuro, Hokkaido (H. Inouye leg.).

2. Pterostichus (Eosteropus) prolongatus Morawitz from Tajima, Urawa, Saitama Pref. (A. Habu).

3. Pterostichus (Eurythoracana) haptoderoides japanensis (Lutshnik) from Iijima, Nagano Pref. (A. Habu).

p: protrusion.

4. Lesticus magnus (Motschulsky) from Kurokawa, Niigata Pref. (K. Baba).

5. Myas cuprescens (Motschulsky) from Mt. Hiko, Fukuoka Pref. (A. Habu).

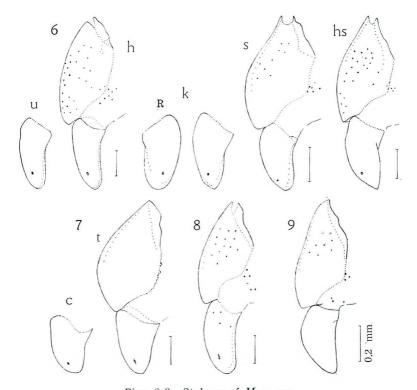
protrudent outward, ventral outer margin shallowly or slightly sinuate, without any spine, dorsal outer margin without spine, subapical foramen very small, sometimes absent, without setae, apical segment often a little turned to outside at apical half, so subapical foramen a little transferred outside. Hemisternites (Fig. 5) unusually coalescent with dorsal membrane, shorter than in *Pterostichus*, sclerotized part relatively short, apical membranous part wide, fairly setose.

The styluses are with the appendages most reduced among the genera of the Pterostichini so far as I am aware, but similar degeneration occurs also in *Pterostichus distinctissimus* Jedlicka (Fig. 57) from

Formosa. The hemisternites coalescent with the dorsal membrane are also remarkable.

#### Myas cuprescens (Motschulsky)

Apical segment of styluses (Fig. 6) somewhat variable, more or less wide, one and six-sevenths times to fully more than twice as long as wide, often rather flattened, sometimes less turned to outside and subapical foramen opened less outward (Fig. 6 s, hs), ventral outer margin shallowly but somewhat distinctly sinuate, inner



Figs. 6-9. Styluses of Myas spp.

6. M. cuprescens (Motschulsky). R. apical segment of right stylus. h. ex. from Mt. Hiko, Fukuoka Pref. (at alt. 500-600 m) (A. Habu). hs. Mt. Hishigadake, Niigata Pref. (K. Baba). k. Mt. Kurosawadake, Niigata Pref. (at alt. 2100 m) (K. Baba). s. Mt. Shiroumadake, Niigata Pref. (at alt. 2300 m) (K. Baba). u. Urawa, Saitama Pref. (H. Kajimura). 7. M. coreanus (Tschitschérine). c. ex. from Mt. Chôkai, Yamagata Pref. (K. Shirahata). t. Mt. Ariake, Tsushima Is., Nagasaki Pref. (Y. Miyake). 8. M. asperipennis Habu from Mt. Hsüeh, Formosa (S.-I. Uéno). 9. M. uenoi Habu from Mt. Hsüeh, Formosa (S.-I. Uéno).

margin hardly to somewhat distinctly rounded, subapical foramen present; hemisternites (Fig. 5) with more than twenty distinct setae on apical membranous part, sometimes with a few spinous setae at apical area of sclerotized part.

#### Myas coreanus (Tschitschérine)

Basal segment of styluses (Fig. 7) well rounded at inner margin, apical segment shorter and wider than in *cuprescens*, at most one and one-half times as long as wide, widest at base, ventral outer margin slightly or shallowly sinuate; hemisternites with about twenty spinous setae on apical membranous part.

#### \*Myas asperipennis Habu (Formosa)

Basal segment of styluses (Fig. 8) moderately rounded in Hsüeh ex., well rounded in Yü-shan ex., on inner margin, apical segment similar to that of *cuprescens*, fully more than twice as long as wide, subapical foramen present; hemisternites with about twenty spinous setae on apical membranous part.

#### \*Myas uenoi Habu (Formosa)

Basal segment of styluses (Fig. 9) less rounded on inner margin than usual, apical segment widest before middle, twice as long as wide, inner side well rounded near middle, ventral outer margin almost straight, slightly sinuate, subapical foramen absent; hemisternites with about fifteen distinct setae on apical membranous part.

It is noteworthy that the subapical foramen of the apical segment is obliterated, and therefore this species has extremely degenerate styluses in *Myas* as well as in the Pterostichini.

#### Genus Poecilus Bonelli

Styluses (Figs. 10-14) straight; basal segment relatively long, sclerotized part often dilated outward (not dilated in *Pterostichus* except *nigrita*), but not reaching outer margin of membranous part as in *Stomis*, membranous part with some setae, setae situated more outward and more remote from base of apical segment than in *Pterostichus*; apical segment short and wide, not tapering apically, more or less curved, base not protrudent outward, ventral outer margin fairly sinuate, with two more or less stout spines at basal third to half, dorsal outer margin with one stout spine or without spine, subapical foramen present, with two setae often fairly long and distinct. Hemisternites (Fig. 1) fully narrower than in *Pterostichus*, inner margin not deeply sinuate near middle, apical membranous part with some setae at apex, setae not developed.

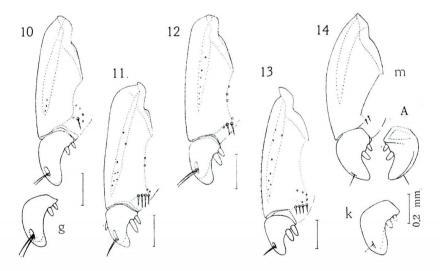
The female genitalia are characteristic in this genus so far as the three species examined are concerned, and I cannot find any allied subgenus in Pterostichus.

#### \*Poecilus coerulescens coerulescens (Linné) (Europe)

Basal segment of styluses (Fig. 10) with one or two rather short or somewhat long setae at subapical area, apical segment moderately curved, less than one-half as long as basal segment, dorsal outer margin with one spine, dorsal and ventral marginal spines short; hemisternites with about ten short but distinct setae at apical membranous part.

#### Poecilus coerulescens encopoleus Solsky

Basal segment of styluses (Figs. 11, 12) with generally four, sometimes less than four, somewhat long setae at subapical area, apical segment fully short, wider than in preceding subsp., one-third as long as basal segment, moderately curved, distal spine on ventral outer margin and one spine on dorsal outer margin somewhat longer than in above subsp.; setae on hemisternites similar to those of preceding subsp.



Figs. 10-14. Styluses of Poecilus spp.

10. P. coerulescens coerulescens (Linné) from Germany. g. apical segment in another ex. from Germany. 11. P. coerulescens encopoleus Solsky from Sasaguchihama, Niigata Pref. (K. Baba). 12. Do. from Urawa, Saitama Pref. (A. Habu). 13. P. cupreus (Linné) from Germany. 14. P. fortipes Chaudoir. A. apical segment in dorsal view. k. ex. from Kirigamine, Nagano Pref. (S. Imafuku). m. Memuro, Hokkaido (H. Inouye).

#### \*Poecilus cupreus (Linné) (Europe)

Basal segment of styluses (Fig. 13) with sparse, very short setae near inner margin, with four rather short setae at subapical area, apical segment short and wide, one-third as long as basal segment, moderately curved, dorsal outer margin with one spine, dorsal and ventral marginal spines rather long and fairly stout; hemisternites with about ten short setae at apical membranous area.

The basal segment of the styluses with sparse, very short setae is very unusual

#### Poecilus fortipes Chaudoir

Basal segment of styluses (Fig. 14) with two or three setae at subapical area, setae shorter than in *coerulescens* and *cupreus*, apical segment wide, two-fifths as long as basal segment, well curved, spines on ventral outer margin rather short but stout, dorsal outer margin (Fig. 14 A) without spine, subapical foramen with setae shorter and finer than in two preceding spp.; hemisternites (Fig. 1) with about ten short fine setae at apical membranous part.

This species is distinctly separate from the preceding two in having the apical segment of the styluses without any spine on the dorsal outer margin.

#### Genus Pterostichus Bonelli

Styluses fairly diverse, but less so in basal segment than in apical segment; basal segment with sclerotized part not extending outward at apical area (exceptionally membranous part more or less brownish and not well distinguishable from sclerotized part in *nigrita* (Fig. 41)), but outer margin of sclerotized part obliquely running from middle to apical area, some setae generally lined obliquely on or along border between sclerotized part and membranous part near base of apical segment, setae sometimes absent; apical segment with one to three spines on ventral outer margin, one spine on dorsal outer margin, dorsal spine or dorsal and ventral spines rarely absent, subapical foramen generally present, rarely absent, two setae sometimes obliterated though subapical foramen visible. Hemisternites (Figs. 2, 3) wider than in *Poecilus*, well sinuate on inner margin before middle, more or less widely membranous apically, membranous part setose, sclerotized part sometimes protrudent outward at apical area (Fig. 3, p)

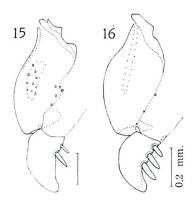
This vast genus is heterogeneous, and examinations of the female genitalia in world-wide scope will give a clue to some reasonable classification.

\*Subgenus undefined (for letensis and matsumurai)

Styluses (Figs. 15, 16) almost straight or somewhat curved; basal

segment somewhat wide, well rounded on inner margin, without setae on membranous part; apical segment short and wide, curved, base hardly or somewhat protrudent outward, ventral outer margin with two or three spines, spines generally developed, dorsal outer margin without spine, subapical foramen and setae absent. Hemisternites with sclerotized part not protrudent outward at apical area, setae on apical membranous part not developed.

This group is very isolated from the other subgenera so far as I have known, and were it not for the spines on the ventral outer margin of the apical segment, the styluses would remind of *Myas*, especially *M. uenoi* Habu (Fig. 9). It seems to be natural that the spines on the ventral outer become shorter and finer, and that the correlatively becomes rudimentary or absence (Figs. 87, 88) or Abacetus and Ch.



Figs. 15, 16. Styluses of *Pterosti-chus* (subg. ?) spp. from Nepal. 15. *P. matsumurai* Habu from Thare Pati, Gosainkund (T. Matsumura). 16. *P. letensis* Habu from Lete, Palpa (T. Kumata).

that the spines on the ventral outer margin of the apical segment become shorter and finer, and that the spine on the dorsal outer margin correlatively becomes rudimentary or absent as in *Pterostichus macrogenys* Bates (Figs. 87, 88) or *Abacetus* and *Chlaeminus* spp. (Figs. 104–107), but in this group the ventral marginal spines are more or less developed, while the dorsal marginal spine is contrariwise obliterated, and the genus *Cosmodiscus* (Fig. 101) is also the same instance.

## \*Pterostichus (subg. ?) letensis Habu (Nepal)

Apical segment of styluses (Fig. 16) well curved, base somewhat protrudent outward, inner margin fully rounded from base to apex, ventral outer margin distinctly sinuate, with three spines, spines fully long and very stout; hemisternites not sclerotized but membranous at apical third, with some very short and fine indistinct setae (more than twenty pores present) at apical membranous part.

## \*Pterostichus (subg. ?) matsumurai Habu (Nepal)

Apical segment of styluses (Fig. 15) less curved than in *letensis*, base hardly protrudent outward, inner margin less rounded before middle, ventral outer margin shallowly sinuate, with two spines, spines fairly long, but distinctly narrower than in *letensis*; hemisternites more widely sclerotized and accordingly apical membranous part narrower than in *letensis*, with about eight short setae (pores distinct) and less than twenty non-setiferous pores.

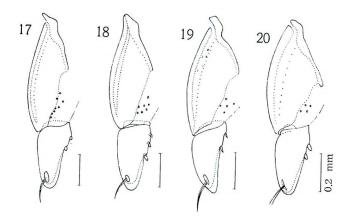
#### Subgenus Bothriopterus Chaudoir

Styluses (Figs. 17–20) straight; basal segment without setae on membranous part; apical segment not or hardly curved, rather wide, twice to more than twice as long as wide at base, not sinuate on ventral outer margin, gently contracted but never tapering apically, not at all dilated outward at base, with two or three spines on ventral outer margin, with one spine on dorsal outer margin, dorsal and ventral spines fully short, subapical foramen present, with two fairly long distinct setae. Hemisternites with sclerotized part not protrudent outward at apex, less setose than usual (setae at most ten) at apical membranous part.

So far as the following four species are concerned, the female genitalia are similar, and they imply that *Bothriopterus* is homogeneous and far distant from the other subgenera I have known. Jeannel (1942) includes the subgenera *Argutor*, *Bothriopterus* and *Omaseus* in his genus *Argutor*, but I cannot fall in with his treatment.

#### Pterostichus (Bothriopterus) adstrictus Eschscholtz

Basal segment of styluses (Fig. 17) narrow; apical segment with two fully short, a little stout spines on ventral outer margin; hemisternites with about ten short but stout setae at apical membranous part.



Figs. 17-20. Styluses of Pterostichus (Bothriopterus) spp.

17. P. adstrictus Eschscholtz from Akankohan spa, Hokkaido (K. Baba). 18. P. oblongopunctatus honshuensis Habu et Baba from Mt. Iide, Niigata Pref. (K. Baba). 19. P. subovatus (Motschulsky) from Hirayu, Gifu Pref. (K. Baba). 20. P. aeneocupreus Fairmaire from Nepal (T. Matsumura).

## Pterostichus (Bothriopterus) oblongopunctatus honshuensis Habu et Baba

Basal segment of styluses (Fig. 18) narrow; apical segment with two or three spines on ventral outer margin, spines fully short and hardly or a little stout; hemisternites with about seven rather short setae at apical membranous part.

## \*Pterostichus (Bothriopterus) aeneocupreus Fairmaire (India and Nepal)

Basal segment of styluses (Fig. 20) rather wide; apical segment with two or three short, stout spines on ventral outer margin; hemisternites with six or seven short spinous setae at apical membranous part.

## Pterostichus (Bothriopterus) subovatus (Motschulsky)

Basal segment of styluses (Fig. 19) a little wider than in *adstrictus* and *oblongopunctatus honshuensis*; apical segment more contracted apically than in three above spp., ventral outer margin with two spines, spines narrower than in three above spp.; hemisternites with about eight short but distinct setae at apical membranous part.

## Subgenus Cryobius Chaudoir

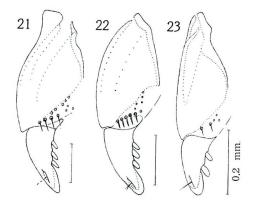
Styluses (only in *korgei*) (Fig. 23) straight; basal segment with setae at subapical area of membranous part; apical segment rather stout, weakly contracted but not tapering apically, base protrudent outward, ventral outer margin with one or two spines, dorsal outer margin with one spine near middle, dorsal and ventral marginal spines distinct, subapical foramen and setae distinct. Hemisternites with sclerotized part not protrudent outward at apical area.

## Pterostichus (Cryobius) korgei Jedlička

Basal segment of styluses (Fig. 23) a little wide, with two short setae at subapical area, apical segment weakly curved, ventral outer margin with generally two (sometimes one) somewhat long, fully stout spines, dorsal marginal spine similar to those of ventral outer margin; hemisternites with more than ten somewhat long setae at apical membranous part.

## Subgenus undefined (for defossus)

Styluses (Fig. 22) curved; basal segment wide, with setae or spines at subapical area of membranous part; apical segment longer than in *Cryobius*, not tapering, base well protrudent outward, ventral outer margin a little sinuate, with three distinct spines, dorsal outer margin



Figs. 21–23. Styluses of *Pterostichus* spp. 21. *P. (Lyperopherus) subrugosus* Straneo from Mts. Daisetsu, Hokkaido (T. Shirôzu). 22. *P.* (subg.?) *defossus* Bates from Hirayu, Gifu Pref. (K. Baba). 23. *P. (Cryobius) korgei* Jedlička from Mts. Daisetsu, Hokkaido (N. Yasuda).

with one spine at about middle, subapical foramen distinct, two setae not long. Hemisternites densely setose at apical membranous part, sclerotized part roundly, widely protrudent outward at apical area.

## Pterostichus (subg. ?) defossus Bates

Basal segment of styluses (Fig. 22) with five or six rather short spinous setae at subapical area, apical segment fairly curved, three spines on ventral outer margin moderately long, fully stout; hemisternites with about thirty somewhat long setae at apical membranous part, with five or six long setae at apex of protrusion of sclerotized part.

## Subgenus Lyperopherus Motschulsky

Styluses (Fig. 21) almost similar to those of *defossus*. Hemisternites with sclerotized part not protrudent outward at apical area.

## Pterostichus (Lyperopherus) subrugosus Straneo

Basal segment of styluses (Fig. 21) wide, with four moderately long, fine setae at subapical area, apical segment fairly curved, a little narrowed towards apex at apical part, three spines on ventral outer margin moderately long and somewhat stout; hemisternites with about twenty distinct setae at apical membranous part.

#### Subgenus Lagarus Chaudoir

Styluses (Figs. 24, 25) a little curved; basal segment more or less wide, with some setae at subapical area of membranous part; apical segment curved, wide at basal half, narrow at apical half, base protrudent outward, ventral outer margin fairly sinuate, with two or three spines, dorsal outer margin with one spine at about middle, dorsal and ventral spines long and stout, subapical foramen with setae moderately long or somewhat short. Hemisternites with sclerotized part not protrudent outward at apical area.

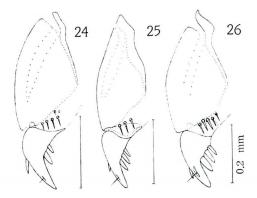
Lagarus is never allied to Stomis as Jeannel (1942) considered. Judging from the shape of the styluses, Lagarus, Eolagarus and Argutor may be common descendants.

#### \*Pterostichus (Lagarus) vernalis (Panzer) (Europe)

Basal segment of styluses (Fig. 24) wide, with four rather short setae at subapical area, apical segment well curved, ventral outer margin with two spines; hemisternites with about twenty setae on apical membranous part, setae short except four or five somewhat long ones at outer area.

## Pterostichus (Lagarus) sulcitarsis Morawitz

Basal segment of styluses (Fig. 25) less wide than in *vernalis*, with three or four moderately long setae at subapical area, apical segment less curved than in



Figs. 24-26. Styluses of *Pterostichus* (*Lagarus*) and *P.* (*Eolagarus*) spp. 24. *P.* (*Lagarus*) vernalis (Panzer) from Germany. 25. *P.* (*L.*) sulcitarsis Morawitz from Iijima, Nagano Pref. (A. Habu). 26. *P.* (*Eolagarus*) dulcis (Bates) from Tajima, Urawa, Saitama Pref. (H. Kajimura).

vernalis, ventral outer margin with three spines; hemisternites with less than twenty rather short setae at apical membranous part.

#### Subgenus Eolagarus Tschitschérine

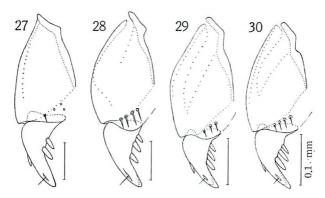
Styluses (Fig. 26) similar to those of *Lagarus*, but subapical foramen opened more proximally. Apical area of sclerotized part of hemisternites roundly, indistinctly protrudent outward, with about four relatively long setae at apex.

#### Pterostichus (Eolagarus) dulcis (Bates)

Basal segment of styluses (Fig. 26) wide, with four or five moderately long setae at subapical area, apical segment fairly curved, ventral outer margin with three spines, spines stouter than in *sulcitarsis*; hemisternites with about twenty rather short or somewhat long setae at apical membranous part.

#### Subgenus Argutor Stephens

Styluses (Figs. 27-30) curved; basal segment fairly wide, with some setae at subapical area of membranous part; apical segment curved, wide at basal half, narrow at apical half, base protrudent outward, ventral outer margin fairly sinuate, with two or three spines, dorsal outer margin with one spine near middle, spines moderately long and stout, subapical foramen with moderately long or somewhat short setae.



Figs. 27-30. Styluses of Pterostichus (Argutor) spp.

27. P. strenuus (Panzer) from Germany. 28. P. longinquus Bates from Raizan, Maebaru, Fukuoka Pref. (A. Habu). 29. P. neglectus Morawitz from Wakkanai, Hokkaido (K. Baba). 30. P. bandotaro Tanaka from Watarase, Ibaraki Pref. (K. Suga).

Hemisternites with sclerotized part protrudent outward at apical area.

#### \*Pterostichus (Argutor) strenuus (Panzer) (Europe)

Basal segment of styluses (Fig. 27) with one or two (?) short setae at subapical area, apical segment with two spines on ventral outer margin; hemisternites with more than twenty distinct setae at apical membranous part, apical area of sclerotized part shortly, widely protrudent outward, with about five long setae at apex.

## Pterostichus (Argutor) longinquus Bates

Basal segment of styluses (Fig. 28) with four or five moderately long setae at subapical area, apical segment with three spines on ventral outer margin; hemisternites with about ten short setae at apical membranous part, apical area of sclerotized part a little protrudent outward, with about three rather long setae at apex.

## Pterostichus (Argutor) neglectus Morawitz

Basal segment of styluses (Fig. 29) with three or four rather short setae at subapical area, apical segment with three spines on ventral outer margin; hemisternites with more than ten rather short setae at apical membranous part, apical area of sclerotized part protrudent outward, with about four rather long setae at apex.

## Pterostichus (Argutor) bandotaro Tanaka

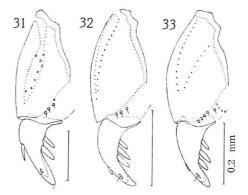
Styluses (Fig. 30) and hemisternites similar to those of neglectus (both species probably identical).

## Subgenus Eurythoracana Strand

Styluses (Figs. 31–33) gently curved; basal segment wide, with very short and fine setae at subapical area of membranous part; apical segment fairly curved, somewhat wide (less wide than in *Argutor*) at basal half, narrow at apical half, base well protrudent outward, ventral outer margin distinctly sinuate, with two or three spines, dorsal outer margin with one spine near middle, dorsal and ventral spines fully long and stout, subapical foramen small, short fine setae (or seta) present or absent. Hemisternites (Fig. 3) with sclerotized part more or less protrudent outward at apical area.

#### Pterostichus (Eurythoracana) haptoderoides japanensis (Lutshnik)

Basal segment of styluses (Fig. 31) with about three setae at subapical area,



Figs. 31-33. Styluses of Pterostichus (Eurythoracana) spp.

31 *P. haptoderoides japanensis* (Lutshnik) from Iijima, Nagano Pref. (A. Habu). 32. *P. kajimurai* Habu from Tsuchiai, Urawa, Saitama Pref. (A. Habu). 33. *P. procephalus* Bates from Shikanoshima Is., Fukuoka Pref. (H. Watanabe).

apical segment a little twisted, so spine on dorsal outer margin well visible in ventral aspect, ventral outer margin with two spines, setae in subapical foramen not visible under  $\times 80$ ; hemisternites (Fig. 3) with about thirty fully short setae at apical membranous part, protrusion of sclerotized part distinct, with six to eight rather long distinct setae at apex.

#### Pterostichus (Eurythoracana) kajimurai Habu

Basal segment of styluses (Fig. 32) with three or four setae at subapical area, apical segment normal, dorsal spine hardly discernible in ventral view, ventral outer margin with three spines, subapical foramen with setae (or seta); hemisternites with more than twenty setae at apical membranous part, apical area of sclerotized part a little protrudent outward, protrusion not so distinct as in preceding sp., with about four long setae at apex.

## Pterostichus (Eurythoracana) procephalus Bates

Basal segment of styluses (Fig. 33) with about five setae at subapical area, apical segment similar to that of *kajimurai*, dorsal spine hardly visible in ventral view, ventral outer margin with three spines, subapical foramen with seta (or setae); hemisternites with about twenty rather short setae at apical membranous part, sclerotized part with protrusion shorter and wider than in *haptoderoides japanensis*, with four to six rather long setae at apex.

#### Subgenus Rhagadus Motschulsky

Styluses (Figs. 34-40) almost straight or a little curved; basal segment without setae or with one or two short setae at subapical area of membranous part; apical segment gently curved (less curved than in *Eurythoracana*) at apical half, base well protrudent outward, ventral outer margin sinuate, with two or three (rarely four) spines, dorsal outer margin with one spine at about middle, dorsal and ventral spines fully long and fully stout, subapical foramen present, setae moderately long. Hemisternites with sparse setae (at most seven setae) at apical membranous part, sclerotized part not protrudent outward at apical area.

This subgenus differs from the two preceding subgenera in the form of the apical segment of the styluses, and the hemisternites with the sclerotized part not protrudent outward at its apex, and with the apical membranous part sparsely setose.

#### Pterostichus (Rhagadus) microcephalus (Motschulsky)

Basal segment of styluses (Fig. 34) rather narrow, without setae (with pores) at subapical area, apical segment a little wider (also in *nimbatidius*) at apical half than in *polygenus*, *straneoi* etc., with three, rarely four, spines on ventral outer margin; hemisternites with about six short spinous setae at apical membranous part.

## Pterostichus (Rhagadus) nimbatidius Chaudoir

Basal segment of styluses (Fig. 35) similar to that of *microcephalus*, apical segment with three spines on ventral outer margin, spines a little longer than in *microcephalus*; hemisternites with about five rather short setae at apical membranous part.

## Pterostichus (Rhagadus) polygenus Bates

Basal segment of styluses (Fig. 36) somewhat wide, with one very short and fine seta at subapical area, apical segment a little narrower than in two preceding spp. at apical half, ventral outer margin with two spines; hemisternites with about seven setae at apical membranous part.

## Pterostichus (Rhagadus) straneoi Habu<sup>2)</sup>

Basal segment of styluses (Fig. 37) wide, a little wider than in polygenus in

 $<sup>^{2}</sup>$ )? = Pterostichus latemarginatus Straneo, 1955. Nomen nudum, without definition as species.

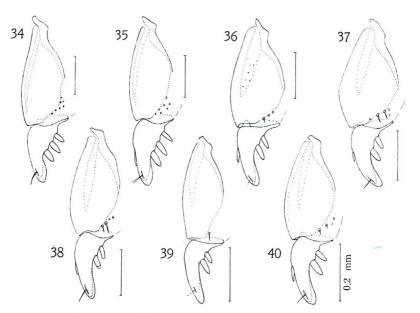
two spec. examined, with two setae at subapical area, setae a little longer and stouter than in *polygenus*, apical segment a little more curved, otherwise almost same as in *polygenus*; hemisternites with about four rather short or somewhat long setae at apical membranous part.

#### Pterostichus (Rhagadus) kirishimanus Habu

Basal segment of styluses (Fig. 38) rather narrow, a little narrower than in *polygenus*, with two setae at subapical area, setae almost similar to those of *straneoi*, apical segment almost similar to that of *polygenus*; hemisternites with five or six short setae.

#### Pterostichus (Rhagadus) takaosanus Habu

Basal segment of styluses (Fig. 39) narrow like in microcephalus, with one



Figs. 34-40. Styluses of Pterostichus (Rhagadus) spp.

34. P. microcephalus (Motschulsky) from Mt. Ômine, Gumma Pref. (H. Hasegawa). 35. P. nimbatidius Chaudoir from Kamiube, Ube, Yamaguchi Pref. (Kaoru Tanaka). 36. P. polygenus Bates from Kurokawa, Niigata Pref. (K. Baba). 37. P. straneoi Habu from Mt. Hiko, Fukuoka Pref. (A. Habu). 38. P. kirishimanus Habu from Mts. Kirishima, Kagoshima Pref. (A. Habu). 39. P. takaosanus Habu from Shiroyama, near Mt. Takao, Tokyo M. D. (A. Habu). 40. P. brittoni Habu from Katashina, near Oze, Gumma Pref. (A. Habu).

short seta at subapical area, apical segment rather slender at apical two-thirds, spines similar to those of *polygenus*; hemisternites with five short setae at apical area of membranous part.

#### Pterostichus (Rhagadus) brittoni Habu

Basal segment of styluses (Fig. 40) somewhat wide like in *polygenus*, with one or two very short and fine setae at subapical area; hemisternites with about six short setae at apical membranous part.

#### Subgenus Melanius Bonelli

Styluses (Figs. 41–47) almost straight or a little curved (fairly curved only in *noguchii* in seven spp. studied); basal segment generally narrow, with some setae at subapical area of membranous part, setae generally common-sized or somewhat long, distinct (longer than usual in *nigrita*); apical segment generally weakly curved, somewhat wide at basal third to half, narrower at apical half, base gently dilated outward, ventral outer margin shallowly sinuate, with two or three (single in *noguchii*) spines, dorsal outer margin with one spine similar to ventral spines, subapical foramen present, with moderately long setae. Hemisternites with sclerotized part not protrudent outward at apex.

P. noguchii Bates has the styluses with the apical segment somewhat different from that of the other species of Melanius, but I comprise it in this subgenus though there is some doubt.

## Pterostichus (Melanius) nigrita (Fabricius)3)

Basal segment of styluses (Fig. 41) unusual, membranous part more or less brownish and border between sclerotized part and membranous part indistinct, more setose than in other spp. of *Melanius*, with about ten relatively long setae at subapical area, a few setae probably transferred on apical area of sclerotized part, apical segment with three spines on ventral outer margin, spines rather short but somewhat stout; hemisternites with more than twenty fairly long setae at apical membranous part.

There is no difference between Japanese specimens and German ones; the basal segment of the styluses widely sclerotized and densely setose is remarkable.

## Pterostichus (Melanius) ambigenus Bates

Basal segment of styluses (Fig. 42) with five or six setae at subapical area, apical segment with two or three rather short, a little stout spines on ventral outer

<sup>3)</sup> The original spelling is *Carabus nigrita* (after ZIMSEN, 1964), and *nigrita* (black colour, blackness) is not an adjective but a noun.

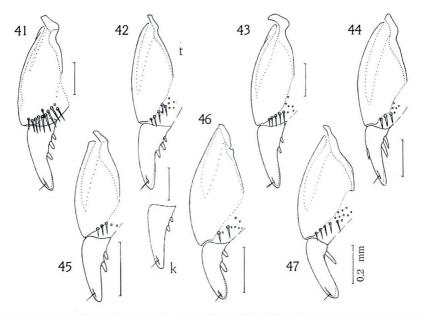
margin; hemisternites with about fifteen rather long setae at apical membranous part.

#### Pterostichus (Melanius) chujoiellus Jedlička

Basal segment of styluses (Fig. 43) with four or five setae at subapical area, apical segment with two short, hardly stout spines on ventral outer margin; hemisternites with about ten somewhat long setae at apical membranous part.

#### Pterostichus (Melanius) rotundangulus Morawitz

Basal segment of styluses (Fig. 44) with three or four setae at subapical area, apical segment a little narrower than in other spp., somewhat tapering apically, ventral outer margin with two spines, spines rather long, somewhat stout; hemisternites with more than ten somewhat long, stout setae at apical membranous part.



Figs. 41-47. Styluses of Pterostichus (Melanius) spp.

41. P. nigrita (Fabricius) from Shumarinai, Hokkaido (J. Mitsuhashi). 42. P. ambigenus Bates. k. ex. from Kurokawa, Niigata Pref. (K. Baba). t. Tsubame spa, Niigata Pref. (K. Baba). 43. P. chujoiellus Jedlička from Takane, Niigata Pref. (K. Baba). 44. P. rotundangulus Morawitz from Warabi, Saitama Pref. (A. Habu). 45. P. minor (Gyllenhal) from Germany. 46. P. anthracinus (Illiger) from Germany. 47. P. noguchii Bates from Tajima, Urawa, Saitama Pref. (H. Kajimura).

#### \*Pterostichus (Melanius) minor (Gyllenhal) (Europe)

Basal segment of styluses (Fig. 45) with three setae at subapical area, apical segment with two spines on ventral outer margin, spines somewhat long, rather stout; hemisternites with about six rather short setae at apical membranous part.

#### \*Pterostichus (Melanius) anthracinus (Illiger) (Europe)

Basal segment of styluses (Fig. 46) somewhat wide, with two setae at subapical area, apical segment a little more curved than in five preceding spp., not narrowed apically, ventral outer margin with two somewhat long, stout spines; hemisternites with more than ten rather short setae at apical membranous part.

#### Pterostichus (Melanius) noguchii Bates

Basal segment of styluses (Fig. 47) rather wide, with five setae at subapical area, apical segment fairly curved near base, thence almost straight, not narrowed apically, base hardly dilated outward, ventral outer margin with one relatively long, somewhat stout spine behind base; hemisternites with about fifteen somewhat long setae at apical membranous part.

#### \*Subgenus Omaseus Stephens

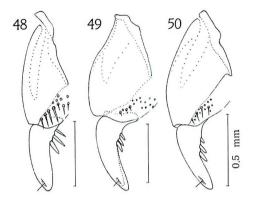
Styluses (Fig. 48) straight; basal segment narrow, with some setae at subapical area of membranous part; apical segment slightly curved, base dilated outward, ventral outer margin shallowly sinuate, with two or three spines, dorsal outer margin with one spine, dorsal and ventral spines distinct, subapical foramen present, with short setae. Hemisternites densely setose at apical membranous part, sclerotized part not protrudent outward.

## \*Pterostichus (Omaseus) vulgaris (Linné) (Europe)

Basal segment of styluses (Fig. 48) with four rather long and three short setae at subapical area, apical segment with two or three spines on ventral outer margin, spines rather long, acute, distal spine a little stout; hemisternites with about thirty somewhat long distinct setae at apical membranous part.

## Subgenus Steropus Stephens

Styluses (Figs. 49, 50) fairly curved; basal segment wide, with some setae at subapical area of membranous part; apical segment fairly curved, base distinctly protrudent outward, ventral outer margin sinuate, with two or three spines, dorsal outer margin with one spine, dorsal and ventral spines rather short to somewhat long, a little stout, subapical



Figs. 48-50. Styluses of *Pterostichus* (*Omaseus*) and *P.* (*Steropus*) spp. 48. *P.* (*Omaseus*) vulgaris (Linné) from Germany. 49. *P.* (*Steropus*) madidus (Fabricius) from France. 50. *P.* (*Steropus*) orientalis jessoensis (Tschitschérine) from Maruyama, Sapporo, Hokkaido (T. Fujimura).

foramen present, with short setae. Hemisternites with sclerotized part not protrudent outward at apex.

## \*Pterostichus (Steropus) madidus (Fabricius) (Europe)

Basal segment of styluses (Fig. 49) with about three fully short and fine setae at subapical area, apical segment with two or three spines on ventral outer margin; hemisternites with more than forty short and fine setae at apical membranous part.

## Pterostichus (Steropus) orientalis jessoensis (Tschitschérine)

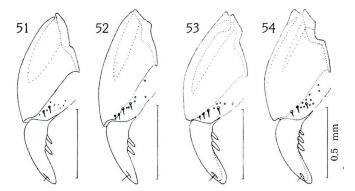
Basal segment of styluses (Fig. 50) with three to five rather short setae at subapical area, apical segment with three spines on ventral outer margin; hemisternites with more than twenty short setae at apical membranous part.

## Subgenus Eosteropus Tschitschérine

Styluses (Figs. 51–54) and hemisternites (Fig. 2) almost similar to those of *Steropus*, setae on subapical area of membranous part of basal segment short but distinct, hemisternites with about twenty-five setae at apical membranous part in four spp. of Japan.

## Pterostichus (Eosteropus) prolongatus Morawitz

Basal segment of styluses (Fig. 51) with two or three setae at subapical area, apical segment with two spines on ventral outer margin.



Figs. 51-54. Styluses of *Pterostichus* (*Eosteropus*) spp. 51. *P. prolongatus* Morawitz from Tajima, Urawa, Saitama Pref. (A. Habu). 52. *P. fuligineus* Morawitz from Katashina, near Oze, Gumma Pref. (A. Habu). 53. *P. creper* (Tschitschérine) from Mt. Takenoko, Niigata Pref. (K. Baba). 54. *P. karasawai* Tanaka from Renge spa-Mt. Shirouma, Niigata Pref. (K. Baba).

#### Pterostichus (Eosteropus) fuligineus Morawitz

Basal segment of styluses (Fig. 52) with generally four setae at subapical area, apical segment similar to that of *prolongatus*.

#### Pterostichus (Eosteropus) creper (Tschitschérine)

Basal segment of styluses (Fig. 53) with about four setae at subapical area, apical segment with two or three spines on ventral outer margin.

#### Pterostichus (Eosteropus) karasawai Tanaka

Basal segment of styluses (Fig. 54) with three or four setae at subapical area, apical segment with three spines (in two spec. examined) on ventral outer margin.

#### \*Subgenus Myosodus Fischer-Waldheim

Styluses (Figs. 55, 56) gently curved; basal segment somewhat wide, with several setae at subapical area of membranous part; apical segment rather narrow, moderately curved, not tapering apically, base well protrudent outward, ventral outer margin with one or two spines, dorsal outer margin with one spine, dorsal and ventral spines not developed, subapical foramen small, opened near apex, without setae. Hemisternites with more than thirty setae at apical membranous part, sclerotized part

widely, roundly protrudent outward, protrusion with more than fifteen setae, setae a little longer than those on membranous part.

## \*Pterostichus (Myosodus) starcki Heyden (Caucasus)

Basal segment of styluses (Fig. 56) with six rather short to somewhat long setae at subapical area, apical segment with two spines on ventral outer margin, spines on dorsal and ventral outer margins short, not stout.

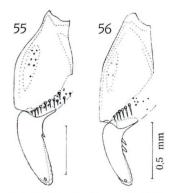
## \*Pterostichus (Myosodus) schoenherri Faldermann (Caucasus)

Basal segment of styluses (Fig. 55) with about ten short but a little stout setae at subapical area, apical segment a little wider than in *starcki*, ventral outer margin less sinuate than in *starcki*, with one spine, dorsal and ventral spines very short and fine.

## $*Subgenus undefined (for {\it distinctissimus})$

Styluses (Fig. 57) simplest in *Pterostichus*, gently curved; basal segment without setae nor pores on membranous part; apical segment rather narrow, base well protrudent outward, dorsal and ventral outer margins without any spines nor setae, subapical foramen fully small, with one (?) rudimentary seta. Hemisternites with sclerotized part not protrudent outward at apex, setae on apical membranous part not developed.

Judging from the simplest styluses, *P. distinctissimus* seems to be isolated in *Pterostichus*.



Figs. 55, 56. Styluses of *Pterostichus* (*Myosodus*) spp. from Caucasus.

55. *P. schoenherri* FALDERMANN from Riv. Supsa. 56. *P. starcki* HEYDEN from Mt. Atshishkho

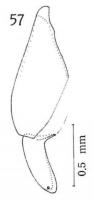


Fig. 57. Stylus of *Pterostichus* (subg. ?) distinctissimus Jedlička from Mt. Wan-sui, Mts. A-li, Formosa (S.-I. Uéno).

#### \*Pterostichus (subg.?) distinctissimus Jedlička (Formosa)

Basal segment of styluses (Fig. 57) rather narrow, apical segment short as compared with basal segment (one-half as long as this); hemisternites with about fifteen very short and fine setae on apical membranous part.

## Subgenus Adelosia Stephens

Styluses (only in thunbergi) (Fig. 58) straight; basal segment with

some distinct setae at subapical area of membranous part; apical segment rather slender, base distinctly protrudent outward, ventral outer margin with two spines, dorsal outer margin with one spine, subapical foramen distinct, with somewhat long distinct setae. Hemisternites with sclerotized part not protrudent outward at apex.

## Pterostichus (Adelosia) thunbergi Morawitz

Basal segment of styluses (Fig. 58) rather narrow, with three or four relatively long and stout setae at subapical area, apical segment almost straight or weakly curved, ventral outer margin shallowly sinuate, spines on dorsal and ventral outer margins moderately long, rather stout; hemisternites with about seventeen distinct setae at apical membranous part.

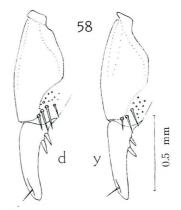


Fig. 58. Styluses of *Pterostichus* (Adelosia) thunbergi Morawitz. d. ex. from Mts. Daisetsu, Hokkaido (H. Seko). y. Yakken, Shimokita Pen., Aomori Pref. (Takashi Ishii).

# Larva of *Hispostoma marginatum*WEISE from Africa (Coleoptera, Chrysomelidae)

## By HARUO TAKIZAWA

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The genus *Hispostoma* Weise, 1907 is known from Africa and contains only 2 species, of which the biology is utterly unknown. Recently Dr. M. Daccord of Museo Civico di Storia Naturale, Verona has kindly sent me one larva and pupa of *Hispostoma marginatum* Weise for study. They will be described and systematic position of the genus will be discussed on the basis of larval morphology. Meanwhile the morphological characters of the adult will be given by him.

Before going further I wish to express my hearty thanks to Dr. M. DACCORDI for his kind proposal to study this interesting material.

## Hispostoma marginatum Weise, 1907

Last instar larva (dried specimen). Body rather flat, gradually narrowed to both ends, 4 mm in length and 2.3 mm in breadth; dark brown, head below antennal insertions, legs and venter light brownish; tubercles slightly darker; dorsum densely covered with chitinous platelets; setae short and sparse; a pair of eversible glands present on meso- and metathorax and 1st 7 abdominal segments each; legs short and robust.

Head transverse, broadly depressed medially, transversely raised near anterior margin of frons; vertex with about 6 short setae on each side; 3 or 4 setae present around 6 ocelli; frons with about 4 short setae on each side; antenna 3-segmented; cordal suture connected with endo-carina; frontal suture slightly sinuate; clypeus with 2 pairs of short setae; labrum truncate at anterior margin, with 2 pairs of short setae; mentum-submentum not chitinized; maxillary palpus 3-segmented, with the 1st obsolete; labial palpus 2-segmented, with basal segment incomplete; hypopharynx strongly chitinized anteriorly; mandible rather conically narrowed to apex.

Prothorax with large tubercle (D-DL-EPa) on dorsum; EPp absent;

<sup>[</sup>Ent. Rev. Japan, Vol. XXXV, Nos. 1/2, pp. 101-105, March, 1981]

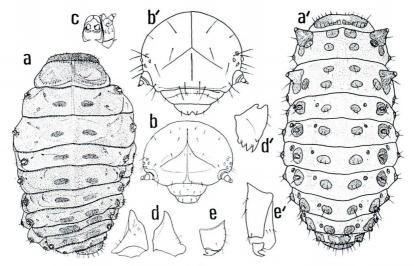


Fig 1. Last instar larva of *Hispostoma marginatum* Weise (a-e) and *Plagiodera versicolora* (LAICHARTING) (a'-e').

a, dorsal view; b, head capsule; c, lower mouth-parts; d, mandible;

e, mesothoracic tibia.

venter with ES and SS de-chitinized and obscure; P present; meso- and metathorax dorsally with 2 tubercles: Dpi long oval; DL weakly chitinized on which is located the orifice of eversible gland; EPa as large as EPp; mesothoracic spiracle situated just anteriorly to EPa; ES and ES de-chitinized; abdomen similar to meso- and metathorax; dorsum with ES and ES and

Pupa (dried specimen). Body rather flat and obovate, 3.4 mm in length and 2.6 mm in breadth; dark brownish with median line of pronotum and area around scutellum yellowish white; a pair of oval marks on dorsum of each segment, abdomen on lateral area, and 7th to 9th segments light brownish; setae short and sparse. Head strongly raised between antennal insertions and mouth-parts directed rather posteriorly in lateral view, and in front view labrum and mandible concealed below frons; vertex with about 3 short setae on each side; frons with 2 short setae on each side; labrum and clypeus each with 2 pairs of short setae; spiracle present on each of 1st 7 abdominal

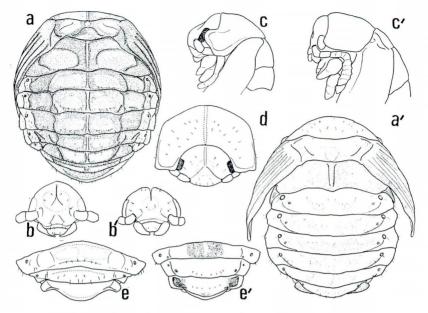


Fig. 2. Pupa of *Hispostoma marginatum* Weise (a-e) and *Plagiodera versicolora* (LAICHARTING) (a'-e').

a, dorsal view; b, head; c, prothorax and head (lateral view); d, pronotum and head (front view); e, 5th to 8th abdominal segments.

segments; pronotum deeply arcuate-emarginate on anterior margin and sparsely covered with short setae; 7th abdominal segment with a pair of lateral projections, with which the pupa is attached to the cast skin of the last instar larva; 8th abdominal sternite medially emarginate on apical margin, with a pair of small conical tuberculations.

Specimens examined. 1 larva and 1 pupa with cast skin of the last instar larva, 21. V. 1910 (larva), 21. VI. 1910 (pupa), Blantyre, Nyasaland, J. E. S. Old leg. (Nyasaland, Dr. J. E. S. Old, 1911-236).

The specific determination of this material was made by Dr. Daccordi. The peculiar characteristics of the pupal head agree well with the adult ones. Nothing is known about the biology of this species except that the pupation takes place on the leaf-surface as in  $Plagiodera\ versicolora\ (Laicharting)$ . As the larva has 9 pairs of eversible glands opening on DL on each of meso- and metathorax and 1st 7 abdominal segments, and pupates on the leaf-surface, this species belongs to the glanduliferous group of the subfamily. This group is characterized as: Pronotum with dorsal tubercles, D-DL-EPa and EPp; meso- and metathorax with DL, Da, Dpi and Dpe; 9 pairs of eversible glands opened on DL; 1st instar larva with a pair of egg-bursters on each of meso- and metathorax; larval stage consisting of 3 instars, pupating underground or on leaf-surface; pupa lacking apical projections

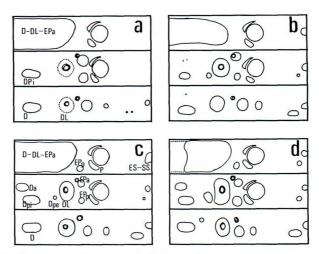


Fig. 3. Tubercle patterns (a, b & d, last instar; c, 1st instar larva) of: a, Hispostoma marginatum Weise; b, Prasocuris phellandrii (Linné) (after Paterson); c & d, Plagiodera versicolora (Laicharting).

on 9th abdominal segment; eggs laid on host leaves or within the stem of the host. This group is subdivided into 3 groups. 1) Phaedon group—Claws grooved subapically; pupa lacking projections on 7th abdominal segment; pupating underground (Phaedon Latreille, Gastrophysa Chevrolat, Phratora Chevrolat, Mesoplatys Baly). 2) Chrysomela group—Claws not grooved subapically; pupa with a pair of lateral projections on 7th abdominal segment; setae rather sparse and short; pupating on leaf-surface (Chrysomela Linné, Linaeidea Motschulsky, Plagiodera Chevrolat, Gastrolina Baly, Gastrolinoides Chûjô & Kimoto). 3) Prasocuris group—Larva without pronotal EPp; meso- and metathorax without Dai and Dpe; sometimes chitinous platelets on the dorsum extremely dense; pupa with comparatively long setae; pupating on leaf-surface (Prasocuris Latreille, Hydrothassa Thomson).

Hispostoma marginatum goes into the Prasocuris group, because of the arrangement of thoracic tubercles. The tubercle pattern in this group deviates from the typical one of the glanduliferous group. That is, the prothorax lacks EPp, and meso- and metathorax have Da disappeared. As some species have the primary setae corresponding to these tubercles, this difference seems derived from the typical one. Whether this change occurs in the course of larval development from the 1st to the 3rd instars is not confirmed. In Hispostoma meso- and metathorax lack also Dpe, so that the dorsum has only 2 pairs of tubercles, Dpi and DL, and look like the abdominal segment of which tubercles are D and DL. In the pupal stage Hispostoma has sparse and very short setae on the dorsum and is much alike to the members of the Chrysomela group rather than to the Prasocuris group. Members of the genus Prasocuris and Hydrothassa are known to feed on Ranunculaceae, the host of Hispostoma is unknown. The genus Hispostoma Weise has the anterior

coxal cavities opened and claws closely approached to each other and contiguous at the base in adult morphology. With these characters it undoubtedly goes into the subtribe Zygogrammina of Chen-Chûjô's system (tribe Zygogrammini Weise) which includes Hispostoma Weise, Barymela Weise, Timarchosoma Jacoby, Zygogramma Chevrolat and Megistomela Chapuis. Among these genera, only Zygogramma has been known of its immature stages. Z. exclamationis (Fabricius) (after Rogers) and Z. suturalis (Fabricius) (after Piper) are non-glanduliferous in their larval stage and closely resemble to the larva of Calligrapha and Chrysolina. They possibly all belong to the Chrysolina group. Then the subtribe Zygogrammina is heterogeneous, including both the members of the glanduliferous and non-glanduliferous group and is no more tenable as a natural group. The position of 3 remaining genera should be revised.

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## *Minthea rugicollis* (WALKER) ケブトヒラタキクイムシの京都府における記録

## 岩 田 隆太郎1)

New Records of *Minthea rugicollis* (WALKER) (Col., Lyctidae) from Kyôto Prefecture, Japan

## By Ryûtarô Iwata

Minthea rugicollis (WALKER) ケブトヒラタキクイムシ (Lyctidae ヒラタキクイムシ科) は熱帯地方での重要な乾材害虫として知られており (BROWNE, 1938; 他), 前胸側縁に19本の特異な球桿状棘状毛を有することを特徴としている (GERBERG, 1957).

本種の日本近傍の産地としては台湾があげられ(中條, 1937), 日本国内からは植物検疫における発見(山崎, 1965)を除くと、沖縄県(西表島)(CHÛJÔ, 1970), 鹿児島県(竹村, 1964), 福岡県(SONDA, 1969), 広島県(溝淵, 1969), 岡山県(SONDA, 1969; 森, 1978)および徳島県(SONDA, 1969)から断片的に記録されている。しかし、沖縄県西表島の記録を除いて、これらはいずれも近年における侵入によりその分布を拡げた結果と考えられ、中には未定着のケースも含まれているものとも思われる。

今回, 本種が近畿地方初記録として京都府下から採集されたので報告する.

1. 採集地: 宇治市五ヶ庄寺界道; 採集年月日: 1 ex., 25. VII. 1979 (Fig. 1.); 採集状況: 建築後数年を経たアパートの室内を歩行中;採集者: 岩田隆太郎;食害材: 不明.

2. 採集地:京都市東山区泉涌寺;採集年月:多数, V-VIII.1980; 採集状況:建築後7年を経た鉄筋マンションの室内, 天井の造作材を 食害, 断続発生(冬期無暖房の室内);食害材:ラワン材, 樹種不明。

本種が京都府下で定着しているか否かについては即断はできないものの、採集状況と本種の生態とを考えあわせると、その可能性は高いものと考えられる。そして、Lyctus brunneus (STEPHENS) ヒラタキクイムシによる乾材の食害と考えられていたものの中には、L. sinensis Lesné ケヤキヒラタキクイムシとともに本種のケースが含まれていることも考えられる。この種の分布の拡張の可能性は高く、今後その推移を見まもりたい。



Fig 1. Minthea rugicollis (WALKER)

<sup>1)</sup>京都大学木材研究所,附属木材防腐防虫実験施設(京都府宇治市五ケ庄).〔昆虫学評論,第35巻,第1/2号,107-108頁,1981年,3月〕

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#### Résumé

Minthea rugicollis, a tropicopolitan powder-post beetle, occurred in Kyôto Prefecture as the first two records in Kinki District, Japan. This species is considered to be native in Taiwan, and Iriomote Is. (Okinawa Pref., Japan), and spreading its distribution in the western part of Japan.