A Study on Three Species of Cryptomeria Twig Borers, Anaglyptus subfasciatus Species Group (Col., Cerambyc.) Japan and Taiwan, with Description of A New species.

Hiroshi MAKIHARA

Forestry and Forest Products Institute, P.O. Box 16, Tsukuba Norin Kenkyu Danchi-nai, 305 Japan

and

Masao HAYASHI

Osaka Jonan Women's Jr. College, Higashi-sumiyoshi-ku, Osaka 546, Japan

Abstract In the present paper, the result of our recent study on three species of cryptomeria twig borers, Anaglyptus subfasciatus species group in Japan and Taiwan are presented. Until now this species group have been known to only two species, A. subfasciatus PIC from southern part of Hokkaido, Honshu, Shikoku, northern part of Kyushu? and A. yakushimanus HAYASHI from southern part of kyushu (Kagoshima city) and Yakushima I. A new species Anaglyptus hirsutus collected at Osaka Port in Formosan cypress, Chamaecyparis obtusa S. et Z. var. formosa HAYATA, Cupressaceae imported from Keelung, Taiwan is described. Formosan cypress is endemic species of Taiwan, distributes from 1500-2500 m above the sea level. And then we suppose that this new species distributes in high mountain area of Taiwan.

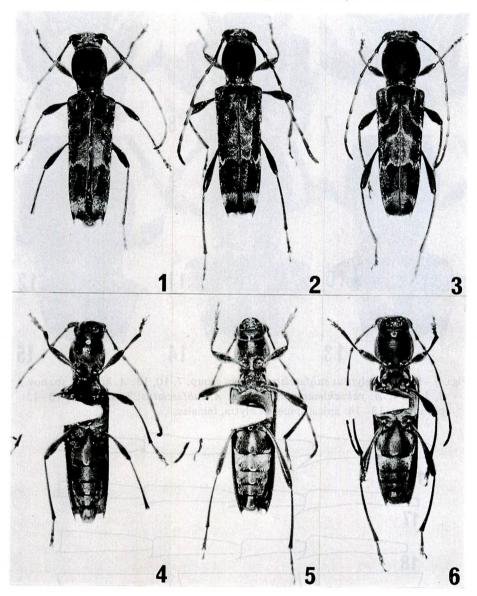
Key to three species of *Anaglyptus subfasciatus* group in Japan and Taiwan

- 1. Frons with sparse whitish yellow pubescence (Figs. 8, 9); apices of antennal segments with dense brown pubescence; pronotum with sparse or rather sparse short golden yellow pubescence (Figs. 11, 12); apical width of pronotum as wide as basal one (Figs. 11, 12); apical spines of elytra not so strongly developed and short or rather short (Figs. 14, 15); abdominal sternites with dense white pubescence on lateral side (Figs. 5, 6); 7th abdominal sternite semicircular (Figs. 20, 21) · · · · · · · · · 2
 - Frons with dense short whitish yellow pubescence (Fig. 7); apices of antennal segments without brown pubscence; pronotum with dense rather short golden yellow pubescence (Fig. 10); apical width of pronotum wider than basal ones (Fig. 10); apical spines of elytra strongly developed and long (Fig. 13); abdominal sternites

Anaglyptus subfasciatus Pic (Japanese name: Sugi-no-akane-tora-kamikiri)

Anaglyptus subfasciatus PIC, 1906, Mat. Long. 6(1): 17; Matsushita, 1933, Ins. Mats., 7(3): 107; Mitono, 1940, Cat. Col. Japon. 94: 127; ibid., 1942, Bull. School Agr. For. Taihoku Imp. Univ., 34(2): 113; Ohbayashi, 1963, Icon. Ins. Japon. nat. edit., 2: 295, pl. 148, fig. 10; Kojima et Hayashi, 1969, Ins. Life Japan 1: 86, pl. 26, fig. 10; Nakane, 1977, Nat. & Ins., 12(6): 6; Kiyosawa et al., 1981, Illust. Cerambyc. Nagano Pref.: 129, 1 fig.; Makihara, 1983, For. Pests 32(3): 13, fig. 1H; Makihara et Taniguchi, 1983, Trans. 94th Mtg. Jap. For. Soc.,:499. Anaglyptus (s. str.) subfasciatus Pic var. rufescens Hayashi, 1955, Col. Illust. Ins. Japan, 2: 49; Takizawa et al., 1982, Borers of Japanese ceder and cypress: 59.

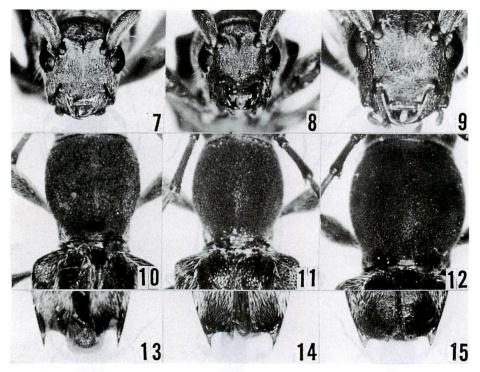
Specimens examined: 19, Tsugawa, Niigata Pref., 8. V. 1976, K. Baba leg.; 19, Mt. Washigasu, Niigata Pref., 28. V. 1976, K. Baba leg.; 19, Mt. Mikuni, Niigata Pref., 4. VII. 1976, K. Baba leg.; 855, 859, Odawara, Kanagawa Pref., 13–14. V. 1982, A. Nobuchi, N. Enda & H. Makihara leg., on the flowers of Stephanandra incisa Zabel, Rosaceae; 19, Mt. Hayachine, Iwate Pref., 3. VIII. 1982, H. Makihara leg., on the flowers of Hydrangea paniculata Sieb., Saxifragaceae; 49, Nanai, Hokkaido Pref., 15. VI. 1982, K. Tate leg., by trap of barrier board type baited with Hodlon (Izutsuya style); 16, 49, Matsumae, Hokkaido Pref., 15. VI. 1982, K. Tate leg., by same trap as above; 236, 419, Odawara, Kanagawa pref., 12–14. V. 1983, N. Enda & H. Makihara leg., on the flowers of Stephanadra incisa Zabel, Rosaceae; 26, 119, same locality as above, 17. V. 1983, H. Makihara leg., on the flowers of Stephanadra incisa Zabel, Rosaceae; 76, 289, same locality as above, N. Enda & H. Makihara leg., on same flowers as above; 19, same locality as above, 1. VI. 1983, H. Makihara leg., on the



Figs. 1-6. Anaglyptus subfasciatus species group. 1, 4: A. hirsutus sp. nov.; 2, 5: A. yakushimanus; 3, 6: A. subfasciatus, females.

flowers of *Viburnum dilatatum* Thunm., Caprifoliaceae; 19, same locality as above, 3. VI. 1983, H. Makihara leg., on same flowers as above.

Distribution: Southern part of Hokkaido, Honshu, Shikoku, Northern part of Kyushu?



Figs. 7-15. Anaglyptus subfasciatus species group. 7, 10, 13: A. hirsutus sp. nov.; 8, 11, 14: A. yakushimanus; 9, 12, 15: A. subfasciatus; 7-9: Frons, 10-12: pronotum; 13-14: apical spines of elytra, females.

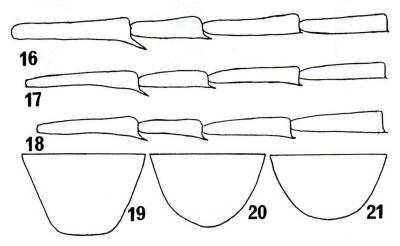


Fig. 16-21. Anaglyptus subfasciatus species group. 16-18: Antennal segments 3-6, 19-21: 7th abdominal sternites; 16, 19: A. hirsutus sp. nov.; 17, 20: A. yakushimanus; 18, 21: A. subfasciatus, females.

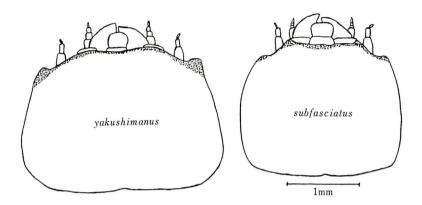


Fig. 22. Larval head of Anaglyptus yakushimanus and A. subfasciatus, dorsal view.

Anaglyptus yakushimanus Начавні (Japanese name: Satsuma-sugi-no-akane-tora-kamikiri)

Anaglyptus subfasciatus yakushimanus HAYASHI, 1968, Ent. Rev. Japan, 21(1): 14; KOJIMA et HAYASHI, 1969, Ins. Life Japan, 1: 86, pl. 26, fig. 10a; NAKANE, 1977, Nat. & Inst., 12(6): 6; MAKIHARA, 1983, For. Pests, 32(3): 14, fig. 1G. Anaglyptus yakushimanus: MAKIHARA et TANIGUCHI, 1983, Trans. 94th Mtg. Jap. For. Soc.,:499.

Specimens examined: 19, Shiroyama, Kagoshima city, 16. IV. 1967, H. Makihara leg., on the flowers of Viburnum japonicum Spreng, Caprifoliaceae; 16, 29, same locality and collector as above, on the flowers of Acer palmatum Thunb., Aceraceae; 16, Kosugidani, Yakushima I., Kagoshima pref., 24. V. 1963, N. Ohbayashi leg.; 16, Mt. Ishizukadake (1000–1500 m), Yakushima I., Kagoshima pref., 16. VII. 1970, K. Tobi leg.; 19, Shiroyama, Kagoshima city, Kagoshima pref., 2. XI. 1982, H. Makihara leg., in the died branch of Cryptomeria japonica D. Don, Taxodiaceae.

Distribution: Southern part of Kyushu (Shiroyama, Kagoshima city), Yakushima I.

Anaglyptus hirsutus sp. nov. (Japanese name: Taiwan-sugi-no-akane-tora-kamikiri)

Body black; antennae, apical spines of elytra, basal parts of femora, basal halves of tibiae and tarsi light brown; inner parts of humeri, middle parts of near suture dark reddish brown.

Head roughly punctured, with a median short furrow on vertex, covered with sparse

long erect white hairs on frons and genae, with dense prostrate short whitish yellow pubescence. Antennae short, relative length to body 1.05 (male) or 0.84 (female), relative relative length of each segment 8.0:2.5:11.4:8.0:10.0:10.0:10.4:10.4:9.5:9.0:10.9 (in male) or 10.5:3.3:13.2:7.9:10.9:10.5:10.9:10.2:8.6:6.9:7.2 (in female); 3-6 segments with endoapical spines as follows: 3 segments with long ones, 4 segments with rather long ones, 5 segments with short ones, 6 segments with very short ones (Fig. 16); 1-7 segments with sparse long suberect white hairs, sparser towards apical segments; 1-11 segments with dense prostrate short whitish yellow pubescence, denser and smaller towards apical segments.

Pronotum circular, closely punctured, apical width wider than basal ones, with sparse long erect white hairs, with dense short prostrate golden yellow pubescence, with dense prostrate rather short white hairs on lateral parts at base.

Scutellum triangular, with dense rather short prostrate black pubescence.

Elytra prominent at humeri, rather strongly narrowed apically, carinate behind humeri, with a pair of tubercles at near base, apical parts truncate with external rather long spines, with three white pubescent markings as follows: a narrow one extending obliquely backwards from suture behind tubercles to basal 1/4, and a irregular hexagonal one centered at middle of suture and a wide one at apical parts. Another parts with dense prostrate stout short black pubescence.

Legs long, with sparse long erect white hairs and dense short suberect white hairs on femora and tibiae, with rather long suberect brown hairs on tarsi.

Ventral side with dense short prostrate whitish yellow pubescence; abdominal sternites with sparse long erect white hairs; 7th abdominal sternite trapeziform.

Length: 9.1 mm (male) or 9.0 mm (female).

Distribution: Taiwan.

Type material: Holotype, &, Osaka port, Japan, 21. I. 1963, collected from formosan cypress, Chamaecyparis obtusa S. et Z. var. formosana HAYATA, Cupressaceae imported from keelung, Taiwan, S. Yoshimura leg.; paratype, Q, Osaka port, Japan, 12. II. 1978, collected from as same as above tree, S. Fujisawa leg.

Type depository: The holotype is preserved in HAYASHI's collection.

Note: Formosan cypress, Chamaecypris obtusa S. et Z. var. formosana HAYATA

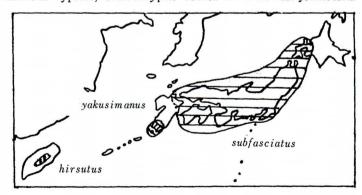


Fig. 23. Distribution map of Anaglyptus subfasciatus species group.

is endemic variety of Taiwan, distributes from 1500-2500 m above the sea level. And then we suppose that this new species distributes in high mountain areas of Taiwan.

Acknowledgement

I wish to my sincere to Mr. N. HIGASHIYAMA of Institute of Kobe Plant protection, Osaka branchi for the loan of valuable specimen for our study.

摘 要

スギ、ヒノキの害虫として著名なスギノアカネトラカミキリ Anaglyptus subfasciatus Picには近縁な別種サツマスギノアカネトラカミキリ A. yakushimanus Hayashi が知られ(槇原・谷口、1983により鹿児島市、屋久島に産するものは、その成虫、幼虫の形態の差異によりスギノアカネトラカミキリとは別種として扱かうとの報告がある。)スギ、ヒノキを食害するスギノアカネトラカミキリ種群と呼べるような仲間は日本から上記の2種のみが知られるだけであった。今回、筆者らは台湾基隆港より大阪港に輸入されたタイワンヒノキより発見されていたこの1種を調べる機会を持ち、新種と判定したので、タイワンスギノアカネトラカミキリ A. hirsutus と命名し、発表した。なおタイワンヒノキは台湾特産で標高1500~2500mに分布することから本新種は台湾高地に分布していると推定される。またあわせてスギノアカネトラカミキリ種群3種の検策表と既知の2種の検視個体のうち、訪花していた植物の種類などが明らかなものについては報告した。

References

- GRESSITT, J., L. 1951. Longicorn Beetles of China. Longicornia, 2: 1-667, 22 pls.
- HAYASHI, M., 1955. Cerambycidae. Col. Illust. Ins. Japan 2. Coleoptera: 19-76, pl. 9-27, Hoikusha, Osaka. (In Japanese)
- 1968. Studies on Cerambycidae from Japan and its Adjacent Regions (Col.) 16. Ent. Rev. Japan, 21(1): 11-18.
- KIYOSAWA et al., 1981. Illustrations of Cerambycidae in Nagano Pref.: 1-230. (In Japanese)
- KOJIMA, K. & M. HAYASHI, 1969. Insect's life in Japan 1. Cerambycidae: 1-295, 56 pls. Hoikusha, Osaka. (In Japanese)
- KUSAMA, K., 1973. The list of biology and distribution of Cerambycidae in Japan. New Insect Collecting 3, suppl.: 1-159, (In Japanese)
- MAKIHARA, H., 1983. Distinguished characters of Anaglyptue subfasciatus Pic from its allied species. Forest Pests, 32(3): 11-14, 5 figs. (In Japanese)
- MAKIHARA, H. & A. TANIGUCHI, 1983. A study of cryptomeria twig borer, Anaglyptus subfasciatus Pic (Col.: Cerambycidae) in Kagoshima pref. Trans. 94th Mtg. Jap. For. Soc.,: 499-500.
- MATSUSHITA, M., 1933. Beitrag zur Kenntnis der Cerambyciden des japanishen Reichs. Jour. Fac. Agr. Hokkaido Imp. Univ., 34(2): 157-445, 5 pls.
- MITONO, T., 1940. Cat. Col. Japonic. 94, Cerambycidae; 1–283. (In Japanese)

- NAKANE, T., 1977. The beetles of Japan (new series) 41. Cerambycidae 36. Nat. & Ins. 12(6): 4-9.
- OHBAYASHI, K., 1963. Cerambycidae. Icon. Insect. Japonic. Col. nat. edita 2, Coleoptera: 267-318, pl. 134-159. (In Japanese)
- PIC, M. 1906. Nouveaux Longicornes de Chine et du Japan. Mat. Long. 6(1): 16-18.
- TAKIZAWA, Y. et al., 1982. Cryptomeria twig borer. Borers of Japanese ceder and cypress: 59-100. Sobun, Tokyo. (In Japanese)

New Cerambycid Beetles of the Genus *Demonax*THOMSON from Taiwan (Coleoptera, Cerambycidae)

Tatsuya NIISATO

Minamitokiwadai 1-17-1, Itabashi-ku, Tokyo 174, Japan

and

Kiyohiko IKEDA

Department of Biology, Yamanashi University, Kofu 400, Japan

Abstract Four new cerambycid beetles of the genus Demonax THOMSON are described from Taiwan: Demonax formosomontanus, D. nishiyamai, D. sulinensis and D. masaoi.

Throughout the survey made in recent years by our friends and us, a large number of specimens belonging to the tribe Clytini were collected in the various parts of Taiwan. These collections includes many undescribed or unrecorded species on the fauna of Taiwan. Although most of them are still under investigation, we are going to describe four new species of the genus *Demonax* Thomson as a part of our study.

The following abbreviations are used in this paper: HW-maximum width of head, PW-maximum width of pronotum, PL-length of pronotum, PA-apical width of pronotum, PB-basal width of pronotum, EW-maximum width of elytra, EL-length of elytra.

Before going further, we express our hearty thanks to Dr. Yoshihiko Kurosawa of National Science Museum (Nat. Hist.), Tokyo, for allowing us to study the museum collection, to Messers Masao Ito, Shusei Saito and Akira Nishiyama for their kind offers of materials, and to Mr. Sumao Kasahara for his preparing of the illustrations used herein.

Demonax formosomontanus Ikeda et Niisato, sp. nov.

Male. Body rather elongate and cylindrical, with legs very long. Colour black, slightly brownish on antennae and tarsi, and dark reddish brown to yellowish brown on mouthparts except for black mandibular tips, tibial spures and claws.

Head in large part densely clothed with pale yellow pubescence, with gula sparsely with yellowish white pubescence and semilong hairs. Antennae densely clothed with pale

yellowish gray pubescence, though the pubescence become more yellowish on the distal segments; underside of 2 to 4 with semilong pale yellow hairs. Pronotum densely clothed with yellowish gray pubescence, which are arranged as shown in fig. 1. Prosternum densely clothed with dull gray pubescence. Elytra densely clothed with olive gray pubescence, each with the following darkish areas: a squarish black spot on epipleuon behind humerous; a V-shaped black band, starting just behind scutellum, curving obliquely backward to middle of disc, then curving and narrowing forward to external margin, where it is joined to the preceding spot; a broad black band on basal third, zigzag anteriorly and oblique (almost transverse in the allotype) posteriorly; a somewhat vague dark yellowish brown band on apical sixth. Ventral sides of mid and hind thoraces densely clothed with dull gray to yellowish gray pubescence, except for mesosternal process, mesepimeron, metasternum and middle part of metapisternum dense white pubescent. Abdomen clothed with dense dull gray pubescence and sparse semilong erect goldenish yellow hairs intermixed except for posterior half of 1st sternite and most of 2nd sternite white pubescent. Legs clothed with gray pubescence, and goldenish yellow hairs sparsely intermixed on femora and tibiae.

Head distinctly narrower than pronotum (HW/PW 0.73), densely and rather coarsely punctured, the punctures being coarser on occiput and sparser on gula; frons almost squarish, a little wider than long, wider at apex than at base (1: 0.86), gently convex, with anterior part rather strongly depressed, sinuately bordered along lateral margins; clypeus trapezium, about 3 times as long as wide, narrower at apex than at base (1:1.2); genae as deep as lower eyelobes. Antennae slender and long, reaching elytral apices; scape slightly arched, shorter than 2; 4 as long as scape; 5 a little longer than 3; 5 to 10 slightly decreasing in length; 11 as long as 9; 3 and 4 briefly toothed apically, though the tooth is obsolete in 3; relative lengths of segments -1.7:0.5:2.0:1.7:2.1:2.0:1.7:1.6:1.5:1.4:1.5. Pronotum spherical, widest at middle; PW/HW 1.36, PW/PL 0.94, PW/PB 1.48, PW/PA 1.43; disc rather strongly convex, fairly even, in large part rather finely reticulate. Scutellum triangular. Elytra 2.7 times as long as the humeral width, almost parallelsided; humeri strongly expanded; each apex almost transversely truncate, with a minute projection at external angle; disc slightly raised near suture behind scutellum, densely and finely granulose. Ventral surface finely and very sparsely punctured. Legs elongate, with hind legs 2.3 times as long as elytra; 1st hind tarsal segments 2.8 times as long as the following two segments combined.

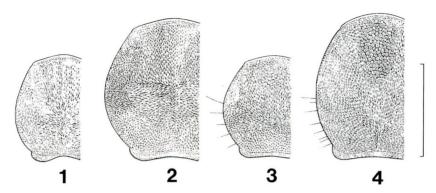
Length: 9.5 mm; width: 2.1 mm.

Female. Antennae fairly short, barely reaching about apical third of elytra, relative lengths of segments -1.5:0.5:1.6:1.5:1.7:1.5:1.3:1.1:1.05:1.0:1.05; legs a little shorter. (the specimen examined has more brownish body than the holotype).

Length: 8.8 mm; width: 2.1 mm.

Type series. Holotype: &, Tohasu, at the northern side of the Jiuyuehtan lake, Yuchih, Nantou Hsien, C. Taiwan, 23. III. 1981, K. IKEDA leg. Allotype: Q, C. Taiwan, 1967, ex. coll. Y. KUROSAWA (no further data).

Notes. This species very closely resembles to D. simillimus GRESSITT distributed in E. China such as Chekiang, Kiangsu and Fukien. From the information of the original description of D. simillimus by GRESSITT (1939), it is clear that this species is distinct



Figs. 1-4. Pronotum of *Demonax* spp. - 1, *D. formosomantanus* IKEDA et NIISATO; 2, *D. nishiyamai* NIISATO; 3, *D. sulinensis* NIISATO; 4, *D. masaoi* NIISATO. Scale: 2 mm.

from D. simillimus, in being the smaller body (12.5 mm in D. simillimus) and having the reticulate pronotal disc (glanulose in D. simillimus).

Demonax nishiyamai Niisato, sp. nov.

Female. Closely stands by preceding species, D. formosomontanus, from which it is difficult to distinguished by the elytral maculation alone. Different from D. formosomontanus in some external characters, especially by the stout and shorter antennae, by the larger and transverse pronotum and by the posteriorly attenuate elytra.

Colour black, slightly brownish on tarsi, and dark reddish brown on mouthparts except for black mandibles, tibial spures and claws.

Head densely clothed with yellowish gray pubescence, except for gula which is thinly with pale gray hairs; antennae densely clothed with pale yellowish gray pubescence, the pubescence become yellowish on distal segments; pronotum densely clothed with yellowish gray pubescence, which are arranged as shown in fig. 2; prosternum in large part densely clothed with pale yellowish gray pubescence; scutellum rather thinly clothed with olive gray pubescence; elytral maculation as in *D. formosomontanus*, though the colour of pubescence are more yellowish, and the 2nd black band is sinuate posteriorly; ventral surface densely clothed with pale yellowish gray pubescence, except for basal two and last abdominal sternites which are clothed with pale gray pubescence, and intermixed with goldenish yellow short hairs on femora and tibiae.

Head as in *D. formosomontanus*, though the frons is almost flattened except for the anterior depression. Antennae stout and rather short, reaching apical third of elytra; 3 and 4 briefly toothed apically; relative lengths of segments — 2.2:0.7:2.3:2.0:2.3:2.1: 1.8:1.5:1.4:1.1:1.4. Pronotum almost globose, larger and more transverse than in *D. formosomontanus*, evidently wider than head and nearly as wide as the humeral width of elytra, widest at two-sevenths from apex; PW/HW 1.3, PW/PL 1.07, PW/PB 1.3, PW/PA 1.3; disc strongly convex, and moderately reticulate. Scutellum triangular. Elytra 2.6

times as long as the humeral width, a little wider than pronotum; sides gradually attenuate from base to apex; humeri distinctly expanded; each apex sinuately truncate, with external angles briefly toothed; disc slightly raised near suture behind scutellum, finely granulose. Ventral surface finely and closely punctured. Legs very long, though fairly stout than in *D. formosomontanus*, with hind legs a little less than twice as long as elytra; first hind tarsal segment 2.5 times as long as the following two segments combined.

Length: 12.5 mm; width: 3.0 mm.

Holotype, ♀, Lienhwachih (about 800 m alt.), Yuchih, Nantou Hsien, central Taiwan, 14. V. 1980, A. NISHIYAMA leg.

Demonax sulinensis Niisato, sp. nov.

Female. Body moderately robust and elongate. Colour black, partially blackish brown; tibial spures and claws dark reddish brown.

Head densely clothed with dullish yellow pubescence, the pubescence become sparser on gula; genae densely with pale yellowish gray pubescence. Antennae densely clothed with silvery gray pubescence. Pronotum densely clothed with dullish yellow pubescence, with a few long pale hairs on basal half on each side; pronotal pubescence arranged as shown in fig. 3. Scutellum densely clothed with olive gray pubescence. Elytra densely clothed with olive gray pubescence, each with the following two black and one olive green pubescent bands: a rather narrow V-shaped black band, starting just behind scutellum, curving obliquely, and slightly broadening then narrowing to middle of disc, where it is angulate behind, and then curving and narrowing forward to external margin; a broad black band just before middle, zigzag anteriorly and oblique posteriorly; a vague defined olive green band in apical fourth. Ventral sides of mid and hind thoraces densely clothed with yellowish gray pubescence; mesosternal process, external margin of mesepisternum, most of metasternum and metapisternum except for the apical part with dense whitish pubescence. Abdomen densely clothed with pale yellowish gray pubescence and with a few erect goldenish yellow hairs intermixed, the former of which are slightly more yellowish on 3 and 4 sternites. Legs rather densely clothed with pale gray pubescence and sparsely with short goldenish yellow hairs.

Head distinctly narrower than pronotum (HW/PW 0.74), densely and rather coarsely punctured, except for gula which is more coarsely and sparsely punctured, frons squarish, longer than wide (1: 0.86), apex as wide as base, almost flattened though moderately depressed near the anterior part, with a indistinct median furrow and also with lateral borders almost straight; clypeus transverse, a little less than 5 times as long as wide, distinctly narrower at apex than at base (1:1.35), with anterior margin weakly emarginate; genae 0.88 times as deep as lower eyelobes. Antennae fairly stout, reaching apical third of elytra; scape slightly arched, a little shorter than 3; 4 shorter than scape and as long as 6; 5 as long as scape; 6 to 8 decreasing in length; 9 to 11 equal in length and each segment 0,8 times as long as 8; 3 and 4 distinctly toothed apically, though the tooth in 4 is about twice as long as in 3; relative lengths of segments — 1.6:0.6:1.7:1.4:1.6:1.4: 1.3:1.0:0.8:0.8:0.8. Pronotum globose, widest at middle; PW/HW 1.35, PW/PL 1.0, PW/PB 1.43, PW/PA 1.51; disc moderately convex, somewhat impressed near middle part,

with reticulation large and distinct. Scutellum subtriangular, rounded at apex. Elytra 2.6 times as long as the humeral width; sides moderately expanded at humeri, slightly narrowed behind humeri then parallel to middle, weakly rounded and gradually attenuate to apices, which are sinuately truncate and briefly toothed at external angles; disc longitudinally raised near suture behind scutellum, densely and finely granulose. Ventral surface in large part sparsely and indistinctly punctured, though the mesothorax and the anterior part of metapisternum are scarabrously punctured. Legs moderate in length; hind legs 1.8 times as long as elytra, strongly bended at base of femora, with 1st tarsal segment a little more than twice as long as the following two segments combined.

Length: 9.2 mm; width: 2.3 mm.

Holotype, 9, Sulin, Fushin, Taoyuan Hsien, northern Taiwan, 27. IV. 1978, S. SAITO leg.

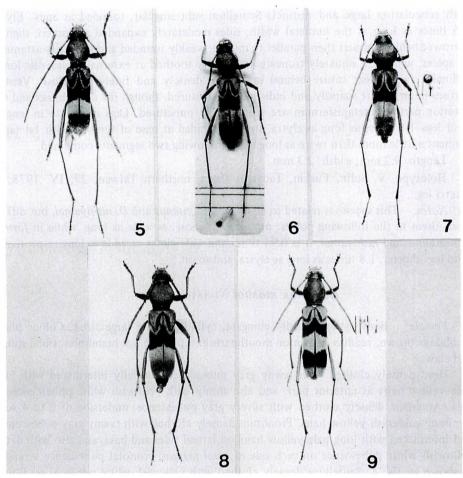
Notes. This species is related to *D. formosomontanus* and *D. nishiyamai*, but differs from them in the following points: pronotum globose, as wide as long, while in *formosomontanus* and *nishiyamai*, it is 0.94 times and 1.07 times as wide as long respectively; hind legs shorter, 1.8 times as long as elytra, and so on.

Demonax masaoi Niisato, sp. nov.

Female. Body rather broadly elongate, cylindrical and large sized. Colour black to blakish brown, reddish brown on mouthparts except for black mandibles, tibial spures and claws.

Head densely clothed with tawny gray pubescence, partially intermixed with long pale yellow hairs at anterior part, and also thinly with yellowish white pubescence on gula. Antennae densely clothed with silvery gray pubescence; underside of 2 to 4 with semilong goldenish yellow hairs. Pronotum densely clothed with tawny gray pubescence, and intermixed with long pale yellow hairs on lateral sides and base, and also with dense yellowish white pubescence on each side of basal margin; pronotal pubescence arranged as shown in fig. 4. Scutellum densely clothed with yellowish white pubescence. Elytra densely clothed with dull gray pubescence, each with the following maculation of black pubescence: a triangular spot on epipleuron behind humerous; a narrow V-shaped band, commencing just behind scutellum, slightly broadening and bending away from suture to middle of disc, then curving and narrowing forward to the preceding spot; a broad oblique band in basal third, zigzag anteriorly and oblique postriorly; a somewhat vague broad band in apical fourth, strongly projected anteriorly and almost transverse posteriority. Ventral surface densely clothed with yellowish white pubescence and sparsely with long pale yellow hairs intermixed; posteior margin of mesopimeron, metapimeron and basal margin of metasternum densely with white pubescence. Legs densely clothed with dull gray pubescence, with mid and hind femora and tibiae sparsely with short goldenish yellow hairs intermixed.

Head distinctly narrower than pronotum (HW/PW 0.74), rather densely and finely punctured, except for gula which is sparsely and coarsely punctured; from almost squarish, as wide as long, a little wider at apex than at base (1: 0.92), almost flattened except for the anterior depression, with median furrow extending to vertex, and also



Figs. 5-9. Demonax spp. - 5, D. formosomontanus IKEDA et NIISATO, male (holotype); 6, ditto, female (allotype); 7, D. nishiyamai NIISATO, female (holotype); 8, D. sulinensis NIISATO, female (holotype); 9, D. masaoi NIISATO, female (holotype).

with lateral boarders rather strongly sinuate; clypeus transverse, about 3 times as long as wide, narrower at apex than at base (1: 1.18); genae as deep as lower eye-lobes. Antennae stout and moderate in length, reaching about middle of elytra; scape slightly arched and shorter than 3; 4 a little shorter than scape and 0.76 times as long as 3; 5 as long as scape; 6 to 11 decreasing in length; 3 and 4 with distinct tooth at each apex. though the tooth in 4 is a little longer than in 3; relative lengths of segments — 2.2:0.7:2.5:1.8:2.1:1.8: 1.6:1.2:1.1:1.0:0.9. Pronotum longer than wide, widest at middle; PW/HW 1.34, PW/PL 0.79, PW/PB 1.29, PW/PA 1.48; disc moderately convex, with reticulation large and distinct. Scutellum rather large, rounded at apex. Elytra 2.7 times as long as the humeral width; sides almost parallel in basal four-fifths, and then gradually attenuate toward

apices; humeri moderately expanded; each apex transversely truncate, with a brief projection at external angle; disc slightly raised near suture behind scutellum, and very finely granulose. Ventral surface minutely and obsoletely punctured, with a few visible punctures on base of prosternum and mesepisternum. Legs stout and moderate in length, with hind legs about twice as long as elytra; 1st hind tarsal segment about 3 times as long as the following two segments combined.

Length: 13 mm; width: 3 mm.

Holotype, ♀, Mt. Nanfengshan (about 1000 m alt.), near Liukuei, Kaohsiung Hsien, southern Taiwan, 26. V. 1981, M. ITO leg.

Notes. This species is easily separable from the preceding three species by the robust and broad body.

All the type specimens treated in this study are preserved in the National Science Museum (Nat. Hist.), Tokyo.

摘 要

台湾より次のトゲヒゲトラカミキリ属Demonax の4新種を記載した.

- 1) Demonax formosomontanus Ikeda et Niisato, sp. nov. 中国東部に分布する D. similimus Gressitt に近縁な種と思われるが,体長は小さく,前胸背の表面が網目状になる点などから区別できる. 台湾中部南投縣及び中部産の詳細不明のそれぞれ 1 個体ずつの標本を検した.
- 2) $Demonax\ nishiyamai\ Nusato,\ sp.\ nov.$ 前種及び $D.\ similimus$ に非常に近縁な種と思われ、とくに翅鞘の斑紋は極めて良く似ているが、前胸はより幅広く、翅鞘両側は先端に向けて強く細まる特徴から識別は可能である。台湾中部南投縣産の1 ♀ を検した.
- 4) Demonax masaoi Niisato, sp. nov. 翅鞘の斑紋は前 3種にやや似るが、頑強で幅広い体から容易に識別できる. 台湾南部高雄縣産の1 早を検した.

Literature Cited

- GRESSITT, J.L., 1939. A collection of longicorn beetles from Tien-mu shan, East China (Coleoptera, Cerambycidae). Notes d'Ent Chinoise, 6: 81-133.
- - 1951. Longicorn beetles of China. Longicornia, 2: 1-667.
- HAYASHI, M., 1974. New and unrecorded longicorn beetles from Taiwan (Coleoptera: Cerambycidae) I. Bull. Osaka Jonan Women's Jr. Coll., 9: 1-36.
- MITONO, T., 1941. Monography of Clytini in the Japanese empire (Cerambycidae: Coleoptera) Part II. Bull. School Agr. For. Taihoku Imp., 3: 79-120. pls. 8-10.

台湾産ゴミムシダマシ科解説〔VI〕

益本 仁雄

Tenebrionidae of Formosa (6)

Kimio MASUMOTO

Higashikamigo-cho 15-9, Totsuka-ku, Yokohama-shi, Kanagawa, 247 Japan

Abstract The author describes 6 new species, Amarygmus hsiaohsingus (Tribe Amarygmini), Paramisolampidius kinugasai and P. tenghsiensis (Tribe Misolampini), Tetragonomenes hirasawai (Tribe Cnodalonini), and Platydema terusane and P. endoi (Tribe Diaperini) in this paper.

Description of New Species

Tribe Amarygmini

Amarygmus hsiaohsingus sp. nov.

Blackish brown; tarsi, pro- and mesosternum lighter in color; mouth organs yellowish; upper surface dark green with blassy or purplish tinge under certain light and strongly metallically shining. Ovoid and strongly convex above.

Head small, weakly convex forward, minutely punctate, punctures sparser in interocular space; fronto-clypeal suture fine and bisinuate, deeply impressed in middle; clypeus transverse, weakly convex, moderately closely punctate and shortly haired, truncate in front, with sides short and parallel in apical half, strongly widened in rest; genae small and oblique, obtusely produced laterad; eyes very large, strongly bulged into antero-inner portion, rather narrowly convex laterad, distance between them about 2/5 their diameter; antennae slender, reaching basal 1/6 of elytra, feebly thickened to apex, relative length of each segment (base to apex): 3.1, 1.3, 2.7, 1.7, 1.9, 1.8, 1.8, 1.8, 1.8, 1.8, 2.3.

Pronotum rather trapezoid, about twice as broad as long, broadest at base and roundly narrowed forward; front border feebly bisinuate and finely margined; basal border broadly arcuate posteriad and roundly produced in median 1/4; sides abruptly and roundly declined, so, front angles invisible in dorsal view, lateral margins finely margined; front angles subrectangular with rounded corners; hind angles obtuse; disk strongly convex, minutely punctate, punctures sparser in middle. Scutellum rather small, regular triangular, sparsely scattered with microscopic punctures on both sides.

Elytra large, 1.4 times as long as broad, about twice length of pronotum, broadest at middle; dorsum strongly convex, thickest before middle; disk with rows of small punctures, those often very finely striated, distance between them 2-3 times their diameter in inner portion, 3-4 times in lateral, 1st rows and 2nd connected to each other near base, 5th reaching base, 3rd and 6th, 2nd and 7th connected in apical portion; intervals flat and wide, scattered with very fine punctures and microscopic (visible in x 20) hairs; sides steeply and roundly declined and softly enveloping hind body, finely margined.

Mentum widely subcordate and shortly truncate at apex, microsculptured, raised in antero-median; gula triangular, microsculptured; maxillary palpus with antepenultimate segment dilated to apex, penultimate subquadrate, and terminal one strongly dilated and somewhat flabellate.

Prosternum very short, coriaceous; front border reflexed, intercoxal space wide and subcordate, gouged on both sides, prosternal process semicircular and declined posteriad; mesosternum coriaceous, raised in wide Y-shape in postero-median portion; metasternum coarsely punctate and weakly wrinkled in major portion, impunctate in postero-lateral. Abdomen shallowly wrinkled and microscopically (visible in x 20) punctate on 2 basal sternites and also 3rd in lateral, a little more closely punctate in middle of 3rd and on 4th, anal sternite microscopically punctate and shortly haired.

Legs medium-sized, relative length of each tarsal segment (base to apex): 2.2, 1.2, 1.0, 0.8, 1.8; 2.9, 1.4, 1.2, 1.0, 3.1; 6.2, 1.8, 1.2, 3.0.

Body length: ca. 4.2 mm.

Holotype: 9, Lienhwachih, Nantou Hsien, Formosa, 6. V. 1978, Y. Komiya leg.; paratype: 1 ex., Hsitzutou, Nantou Hsien, 1. VI. 1981, K. Kawada leg.

This new species somewhat resembles Amarygmus micans cyaneipennis Pic from the Philippines but differs from the latter in having a smaller and more convex body, very large eyes, bisinuate fronto-clypeal suture with remarkable median impression, antennae shorter and apical portions not flattened, scutellum regular triangular, elytra with rounded humeral angles, and interprocoxal space noticably wide.

Tribe Misolampini

Paramisolampidius kinugasai sp. nov.

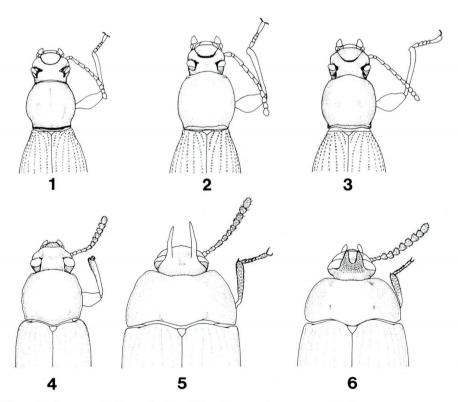
Piceous; apical half of antenna, mouth organs and tarsi lighter in color; upper surface moderately shining. Body rather strongly constricted between fore and hind bodies and somewhat gourd-shaped.

Head suboctagonal, rather strongly thickened in posterior half and gradually declined forward, closely and coarsely punctate, narrowly impressed medianly in middle, with frontal sulcus rather parabolic and reaching outer margin; genae raised, sloping forward and depressed in posterior portion, very finely punctate; eyes rather small, oblique and elliptic, distance between them about 5 times their diameter; ocular sulcus deeply emarginate and bisinuate in inner portion; vertex feebly swollen on both sides; antennae

reaching beyond middle of pronotum, moderately thickened to apex, 11th ovoid, relative length of each segment (base to apex): 3.6, 1.3, 3.8, 2.7, 2.6, 2.6, 2.5, 2.4, 2.2, 2.1, 3.2.

Pronotum rather barrel-shaped, as broad as long, broadest at a little before middle; front border weakly arcuate forward; basal border nearly straight and narrowly margined; sides convex laterad and freebly sinuate just before base; disk strongly convex above, closely and coarsely punctate, punctures often fused together and somewhat rugose, depressed along median and after middle on both sides. Scutellum very small, wide triangular, depressed, nearly impunctate.

Elytra 1.6 times as long as broad, 1.4 times broader than pronotum, broadest just after middle; disk with rows (often narrowly grooved) of strong punctures, these rather sparsely and irregularly set and somewhat fovea-like and transverse; intervals weakly convex, feebly microreticulate, rather closely scattered with microscopic (visible in x 20) punctures and bent hairs; sides strongly declined and enveloping hind body, so, outer rows from 7th invisible in dorsal view.



Figs. 1-6. — 1, Paramisolampidius kinugasai sp. nov.; 2, Paramisolampidius kagoshimensis NAKANE; 3, Paramisolampidius tenghsiensis sp. nov.; 4, Tetragonomenes hirasawai sp. nov.; 5, Platydema terusane sp. nov.; 6, Platydema endoi sp. nov.

Mentum trapezoid, strongly raised and pointed in antero-median portion, gouged in posterior on both sides; gula parabolic, feebly microsculptured, shortly impressed on anterior border on both sides; terminal segment of maxillary palpus securiform, with arcuate outer sides about 1.5 times length of inner and 1.2 times length of apical.

Prosternum finely but clearly margined, moderately closely punctate, intercoxal space raised and finely bisulcate, prosternal process ligulate, declined posteriad and rugosely punctate; mesosternum rugosely punctate, with moderate V-shaped elevation in postero-median; metasternum moderately closely punctate and shortly haired, shallowly wrinkled, swollen in antero-median and postero-lateral, roundly depressed across border between metasternum and 1st abdominal sternite, finely grooved postero-medianly. Abdomen moderately closely, finely punctate and microscopically haired on 4 basal sternites, punctures finer in each apical portion, rugose in basal half of 1st sternite and also along each basal border of 2nd and 3rd, anal sternite impunctate in basal 1/3, coarsely punctate in middle, closely and finely so in apical.

Legs rather slender, projection of protrochanter obtuse; relative length of each tarsal segment (base to apex): 3.0, 1.7, 1.6, 1.4, 4.8; 3.4, 1.9, 1.4, 1.3, 5.2; 6.7, 2.7, 2.0, 5.8.

Body length: ca. 12.5 mm.

Holotype: 9, Suleng, Taoyuan Hsien, Formosa, 3. V. 1981, K. KINUGASA leg.

This new species differs from allied species *Paramisolampidius kagoshimensis* NAKANE from Japan in having small eyes with strongly emarginate sulci, closely punctate pronotum, small and depressed scutellum, and elytra with rows of sparser and somewhat fovea-like punctures.

Paramisolampidius tenghsiensis sp. nov.

This new species is closely allied to *Paramisolampidius wufengus* MASUMOTO from Formosa but differs from the nominate species in the following characteristics:

Black; elytra often dark blackish brown; fore body on upper surface somewhat sericeously shining; elytra moderately shining. Body a little shorter and more strongly convex above.

Head more transverse and flattened, more finely punctate, with frontal sulcus clearly widely arcuate; clypeus more sparsely and finely punctate, with front margin not truncate but moderately arcuate; genae raised in each outer portion, obtusely produced; antennae comparatively shorter, relative length of each segment (base to apex): 4.0, 1.5, 3.9, 3.1, 3.0, 3.0, 2.9, 2.9, 2.7, 2.6, 3.7.

Pronotum as broad as long; front border very slightly produced forward; basal border less strongly constricted and more narrowly margined; disk a little more convex above, more strongly punctate, with pair of large vague impressions or often remarkable spot-like ones after middle; sides less strongly convex laterad.

Elytra slightly shorter, nearly 1.6 times as long as broad, about 1.4 times broader than pronotum compared with each broadest point and 2.1 times longer than pronotum, more strongly produced posteriad in apical portion; disk with rows of punctures, these

more sparsely and irregularly set, not striated like *P. wufengus* but often narrowly and shallowly grooved, somewhat foveolate, 1st row and 2nd not connected with each other at base, 3rd and 8th connected at apical; scutellary strioles shorter and not angulate like *P. wufengus*; intervals weakly convex and feebly microreticulate.

Mentum slightly narrower, with sharply pointed projection at antero-median. Prosternum more strongly punctate, intercoxal space a little narrower, grooved in median, prosternal process closely and finely punctate and rugose; mesosternum more strongly raised in postero-median; metasternum often obliquely wrinkled in middle. Abdomen more clearly punctate.

Legs shorter; inner side of fore tibia more remarkably widened in middle; projection of protrochanter clearly sharply pointed forward; relative length of each tarsal segment (base to apex): 2.6, 2.2, 2.0, 1.8, 5.5; 3.3, 1.9, 1.7, 1.5, 5.5; 6.5, 2.6, 2.4, 7.4.

Aedeagus shorter; basal piece more strongly curved; lateral robes shorter and slender. Body length: 12.5–15.5 mm.

Holotype: &, Tenghsi, Kaohsiung Hsien, Formosa, 13. VI. 1983, K. MASUMOTO leg.; paratypes: 10 exs., same data as holotype, 8 exs., Tenghsi, 14. VI. 1983, K. MASUMOTO leg.; 1 ex., Tenghsi, 7. VIII. 1983, CHEN WENLUNG leg.

Tribe Cnodalonini

Tetragonomenes hirasawai sp. nov.

Dark reddish brown; legs (especially tarsi), gula and parts of ventral surface lighter in color; antennae and palpi yellowish brown; upper surface of head and pronotum dark bluish and moderately shining; elytra greenish or purplish and rather strongly shining. Elongate and subparallel-sided; strongly convex longitudinally.

Head somewhat transverse-hexagonal, strongly elevated in posterior half, flattened in front, moderately closely punctate; frons declined forward; frontal suture very fine and nearly straight, with both ends bent oblique-forward and reaching outer margin; clypeus broad, weakly convex, very slightly emarginate at median of front margin, with both ends rounded, finely punctate, punctures a little smaller than those on frons; genae medium-sized, weakly raised, with outer margin roundly produced oblique-laterad; eyes rather large, moderately convex laterad, distance between them about 1.8 times their transverse diameter; ocular sulcus very deep in inside of eye and straightly extended to rear; antennae medium-sized, reaching basal 1/3 of pronotum, 6 apical segments softly flattened and somewhat club-like, 11th rounded, relative length of each segment (base to apex): 2.4, 1.2, 2.2, 2.0, 1.9, 1.9, 1.9, 2.0, 2.1, 2.3, 2.6.

Pronotum 1.2 times as broad as long, broadest at middle; front border moderately arcuate forward; basal border bisinuate and margined; sides moderately declined, steeply declined in antero-lateral portions with each lateral margin narrowly margined and weakly sinuate in middle and hind portion; front angles subrectangular, pointing frontoventrally; hind angles a little obtuse, pointing oblique-posteriad; disk rather strongly convex, moderately closely punctate, punctures a little sparser than those on frons.

Scutellum triangular with rounded sides, scattered with microscopic punctures.

Elytra about 1.8 times as long as broad, 2.4 times length of pronotum, nearly subparallel, very feebly widened posteriad, broadest at posterior 5/12, then roundly narrowed to rear, narrowly and roundly produced in apexes; dorsum strongly convex longitudinally, faintly flattened after scutellum, thickest at middle; disk with rows (often striated) of punctures, distance between them about 1.5–3.5 times their diameter; intervals nearly flat, microreticulate, sparsely scattered with microscopic punctures; sides steeply declined, lateral margins hardly visible in dorsal view, clearly margined.

Mentum subcordate, shortly truncate at apex, asperate, raised in antero-median portion and ridge-like, bluntly pointed in front; gula parabolic, microshagreened, bordered by fine impressions in anterior portion; terminal joint of each maxillary palpus medium-sized, securiform, with arcuate outer side about twice length of inner and 1.2 times length of apical.

Prosternum microshagreened, coarsely punctate in lateral portions, narrowly margined in front, intercoxal space raised and bisulcate, declined posteriad, with prosternal process triangular and pointed to rear; mesosternum short and coriaceous, raised in V-shape along hind border; metasternum broad and microshagreened, coarsely punctate in anterior 1/3, shallowly wrinkled in antero-lateral portion, sparsely and finely punctate in posterior half. Abdomen rather closely punctate, punctures finer toward apical portion.

Legs comparatively large and slender, relative length of each tarsal segment (base to apex): 1.6, -, -, -, -;¹⁾ 2.5, 1.6, 1.4, 1.2, 4.8; 3.5, 2.0, 1.6, 6.0; claws falciform.

Body length: ca. 8 mm.

Holotype: &, Kuantao-shan, Nantou Hsien, Formosa, 2. VI. 1983, H. HIRASAWA leg. This new species somewhat resembles *Tetragonomenes semirufus* (Gebien) from Luzon Is., but is easily distinguishable from the latter by its larger body, large and slender legs and flat elytral intervals.

Tribe Diaperini

Platydema terusane sp. nov.

Blackish brown; cephalic horns, outer margins of pronotum and elytra, antennae, palpi and undersurface of fore body dark reddish brown; upper surface with coppery luster. Ovate and remarkably widened forward; strongly convex above.

Head nearly transverse-elliptic, moderately closely and finely punctate, with pair of slender and subparallel horns between eyes and wide Y-shaped groove in middle in male (instead of horns, with pair of low swellings between eyes in female); front margin semicircular and feebly pointed at median; clypeus weakly convex; genae depressed in inner portions; vertex strongly raised; eyes transverse, very narrowly, roundly produced laterad, distance between them a little less than twice of their transverse diameter; antennae medium-sized, reaching base of pronotum, gradually thickened to apex and

^{1) 4} apical segments were lost in the type specimen.

somewhat club-like, relative length of each segment (base to apex): 3.0, 1.2, 2.3, 2.5, 2.2, 2.1, 2.1, 2.2, 2.3, 3.2.

Pronotum nearly trapezoid, 2.6 times as broad as long, broadest at basal 1/3 and roundly narrowed to front and rear; front border broadly emarginate and nearly straight in median 1/3, very finely margined; basal border bisinuate; sides moderately declined, lateral margins clearly margined and very feebly sinuate at frontal 1/3; front angles rounded; hind angles subrectangular; disk rather strongly convex, moderately closely and finely punctate, punctures a little larger than those in elytral intervals, with pair of faint impressions near base. Scutellum triangular with rounded sides, sparsely scattered with microscopic (visible x 25) punctures.

Elytra about 1.3 times as long as broad, 2.8 times length of pronotum, slightly broader than pronotum compared at base of each, broadest in basal 1/3, then roundly narrowed to rear; dorsum strongly convex, thickest at basal 1/3; disk with rows (often finely grooved) of small punctures, distance between them about 1-2 times their diameter in inner portion, 2.5-3.5 times in outer; intervals flat, scattered with very fine punctures, their diameter about 1/4 times of punctures in rows; sides rather steeply declined, canaliculate along reflexed margins.

Mentum subcordate and shortly truncate in apical portion, rather smooth, raised in antero-median portion, obliquely impressed near base on both sides; gula triangular, microshagreened, with pair of small oblique impressions on front border; terminal segment of maxillary palpus rather slender with arcuate outer side about 1.4 times length of inner side and 1.8 times length of obliquely truncate apical.

Prosternum asperate, ridged in antero-median, intercoxal space elevated and somewhat prolonged cordate with surface horizontal and shallowly bisulcate, prosternal process obtusely pointed to rear; mesosternum very short, with small V-shaped elevation at median of bind border; metasternum medium-sized, finely punctate in middle, rather closely and coarsely punctate and shallowly wrinkled in anterior portion, sparsely punctate in lateral, finely pubescent, with median impression in posterior 2/3. Abdomen rather closely and somewhat setaceously punctate, punctures finer on 2 apical sternites, longitudinally and shallowly wrinkled on 2 basal sternites and also in antero-lateral portions of 3rd sternite, strongly grooved along basal borders of 4th and 5th.

Relative length of each tarsal segment (base to apex): 2.0, 2.4, 1.3, 1.2, 5.3; 3.2, 1.6, 1.5, 1.4, 4.8; 5.4, 2.0, 1.8, 5.2; claws sharp.

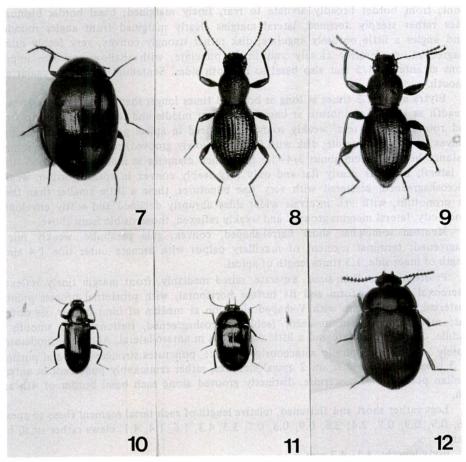
Body length: 6.5-7.8 mm.

Holotype: &, Tenghsi, Kaohsiung Hsien, Formosa, 14. VI. 1983, K. MASUMOTO leg.; paratypes: 5 exs., same data as holotype.

This new species differs from the allied species *Platydema higonium* LEWIS from Japan in having a body larger and remarkably widened forward and eyes very narrowly rounded laterad.

Platydema endoi sp. nov.

Dark reddish brown; apical half of head, margins of pronotum and elytra, undersurface of fore body lighter in color; antennae, palpi and legs yellowish brown. Upper



Figs. 7-12. -7, Amarygmus hsiaohsingus sp. nov.; 8, Paramisolampidius kinugasai sp. nov.; 9, Paramisolampidius tenghsiensis sp. nov.; 10, Tetragonomenes hirasawai sp. nov.; 11, Platydema terusane sp. nov.; 12, Platydema endoi sp. nov.

surface moderately shining. Ovate; strongly convex above.

Head small and somewhat elliptic, strongly raised and moderately closely and distinctly punctate in basal half, remarkably depressed and sparsely scattered with microscopic punctures in anterior, with pair of oblique subconical horns between eyes and concaved in middle in male, only with shallow median groove in female; clypeus wide, weakly convex, with front margin nearly straight; genae rather transverse, each weakly depressed in inner portion, and with oblique outer margin; eyes very large, roundly produced laterad, distance between them nearly their transverse diameter; antennae rather large, nearly reaching base of pronotum, 8 apical segments flattened and somewhat club-like, 11th ovoid, relative length of each segment (base to apex): 2.4, 1.5, 2.0, 2.2, 2.3, 2.3, 2.3, 2.3, 2.3, 2.2, 3.0.

Pronotum about 1.9 times as broad as long, broadest at base, roundly narrowed to

front; front border broadly arcuate to rear, finely margined; basal border bisinuate; sides rather steeply declined, lateral margins clearly margined front angles rounded; hind angles a little obtusely angulate; disk rather strongly convex, very feebly microshagreened, moderately closely and finely punctate, with shallow spot-like impressions at anterior 1/5 and also basal so on both sides. Scutellum nearly triangular and smooth.

Elytra about 1.3 times as long as broad, 3 times longer than pronotum, nearly same breadth as that of pronotum at base, broadest at middle and feebly narrowed to front and roundly so to rear, weakly roundly produced in apical portion; dorsum strongly convex, thickest at middle; disk with (often shallowly grooved) rows of small punctures, distance between them about 3/4-1.5 times their diameter in inner portion, 2-3 times in lateral; intervals nearly flat and only very feebly convex in apical portion, weakly microshagreened, scattered with very fine punctures, these a little smaller than those on pronotum, with 9th intervals wide; sides abruptly declined and softly enveloping hind body, lateral margins grooved and weakly reflexed, those visible from above.

Mentum somewhat short barrel-shaped, convex; gula parabolic, weakly microshagreened; terminal segment of maxillary palpus with arcuate outer side 1.4 times length of inner side, 1.5 times length of apical.

Prosternum medium-sized, asperate, raised medianly, front margin finely reflexed, intercoxal space fusiform and its surface horizontal, with prosternal process pointed posteriad, mesosternum with V-shaped elevation at median of hind border, its surface flat; metasternum medium-sized, feebly microshagreened, flattened and smooth in middle, coarsely punctate and a little coriaceous in antero-lateral. Abdomen moderately closely and microscopically setaceously punctate, punctures stronger in lateral portions of 3 basal sternites, finer on 2 apical sternites, rather remarkably pubescent in antero-median portion of 1st sternite, distinctly grooved along each basal border of 4th and 5th.

Legs rather short and flattened, relative length of each tarsal segment (base to apex): 1.6, 0.9, 0.9, 0.8, 2.4; 2.6, 0.9, 0.8, 0.7, 3.3; 4.3, 1.6, 1.4, 4.1; claws rather small but sharp.

Body length: 4.1-4.3 mm.

Holotype: of, Shanping, Kaohsiung Hsien, Formosa, 30. IV. 1981, T. Endo leg.; paratype: 1 ex., same data as holotype.

This new species somewhat resembles *Platydema yangmingense* MASUMOTO from Formosa, but is easily distinguishable by its smaller and less strongly convex body, upper surface more weakly punctate, elytral intervals nearly flat, and absence of metallic luster on the upper surface.

摘 要

台湾産ゴミダマシムシの6新種を記載した.

A. Jedlička 博士によって記載された日本産ゴミムシ類の タイプ標本に関する再検討

佐藤 正孝・笠原 須磨生

Reexamination of the Type-Series of Some Carabid Beetles Described from Japan by Dr. A. Jedlicka

Masataka Satô* and Sumao Kasahara**

- * Biological Laboratory, Nagoya Women's University, Aichi 468, Japan
- ** Seifu-so, 4-9-13, Nishifuna, Funabashi city, Chiba 273, Japan

チェッコスロバキアの Dr. A. Jedlička がゴミムシ類に関する多くの業績を公表して、その研究発展に大きく寄与したことは周知の事実である。しかし残念なことに、彼が晩年に記載した種の中には、疑問に思われるものが少なからず含まれており、タイプ標本の再研究が望まれていた。幸いなことに、筆者らは中條道夫博士(香川大学名誉教授)のご好意で、博士のお手許に所蔵されている Jedlička (1955、'62a、'62b) 記載の模式系列の標本を検する機会を得ることができた。すでに分類学的処置をされた種もあるが、今回検討することのできた種のすべてについて写真で全形を示し、分類学的事実関係をはっきりとさせておきたい。

これらの種の中には、中條博士に献名されたものもいくつかあるが、検討の結果はシノニムとして使えなくなる学名が多く残念である。しかし、分類学発展のために、心よく標本の検討をお許し下さった中條道夫博士の絶大なご支援に心から感謝の意を表する次第である。また、日ごろ文献その他いろいろとご援助をいただいている黒沢良彦博士、上野俊一博士、田中和夫博士、森田誠司氏に、この機会に厚くお礼申し上げる。

Nippononebria chalceola (Bates) ミヤママルクビゴミムシ (Fig. 1)

Nebria chalceola Bates, 1883, Trans. ent. Soc. London, 1883: 219 (Hakone, Oyama, Niohozan). Nebria (Nippononebria) chalceola: S. Uéno, 1955, Ent. Rev. Japan, 6: 49.

Nippononebria chalceola: Habu, 1981, Ent. Rev. Japan, 35: 21.

Agonoamara chujoi Jedlička, 1962, Niponius, 1 (15): 2, fig. 2 (Aomori Pref., Aoni)

Jedlička (1962) は chujoi の記載にあたって、新属 Agonoamara を創設したが、Habu (1981) は、これがまったく別亜科の属・種ともに既知の Nippononebria chalceola (Bates) の シノニム であることを明らかにした. A. chujoi の原記載には zwei Weibchenとあるが、今回検したparatypeは雄であった.

檢視標本:1♂, Aoni, Aomori, Japan (Paratype).

分布:日本(本州).

Bembidion (Peryphus) cnemidotum BATES ウスモンミズギワゴミムシ (Fig. 2)

Bembidion cnemidotum Bates, 1883, Trans. ent. Soc. London, 1883: 273 (Sapporo). Bembidion (Peryphus) chujoianum Jedlička, 1962, Niponius, 1 (14): 1, fig. 1 (Aomori Pref., Kuzukawa). ——Jedlička, 1965, Ent. Abh., 32: 132 [chujoianus(!)], 136. syn. nov.

Jedlička (1962) は chujoianum の記載にあたって、Peryphus 亜属中の翅端溝が退化・痕跡的でこれによって翅端前孔点と翅端が連っていない、孔点が孤立しているグループのものとしてmisellumと trajectum を比較種にあげているが、なぜか同様の cnemidotum にまったく触れていない。しかし、後の東アジアの Bembidiini の総説 (1967) 中では、cnemidotum と比較して似ていると述べ、複眼側の点刻群、前胸背の形状、雌翅鞘の微細印刻などを区別点にあげているが、これらの特徴は cnemidotum の種内でもかなりの変化があって区別点とはなり得ないので、chujoianum はやはり cnemidotum のシノニムと考えざるを得ない。

檢視標本:1♀, Kuzukawa, Aomori Pref., Japan, VI. 58 (Holotype).

分布:日本(北海道,本州,四国,九州).

Allotriopus hoplites BATES クリイロナガゴミムシ (Fig. 6)

Allotriopus hoplites Bates, 1883, Trans. ent. Soc. London, 1883: 266 (Chiuzenji, Oyayama).

Pterostichus (Neohaptoderus) shimoyamai Jedlička, 1962, Niponius, 1(15): 3, fig. 3(Aomori Pref., Aani). syn. nov.

Pterostichus hirakai Jedlička, in litt. (nom. nud.).

中根(1979)は、shimoyamai が Neohaptoderus 亜属のものではなく、Allotriopus 属のものであろうことを示唆しているが、今回 shimoyamai の paratypes を検することによって確かに A. hoplites と同じものであるとの結論に達した。P. shimoyamai の原記載には、Aani(Aoni のの誤植)、Type drie Stück、Hiraka-chô 4 Stück とあるが、記述にない paratypes も存在している。また、今回検した paratypes にはすべて Pterostichus hirakai の同定ラベルが付いているので、投稿後にでも改名したものと考えられる。

檢視標本:1♂, Hirugaizawa, Aomori, Japan (Paratype); 1♀, Hirukaizawa, Hiraka-cho, Aomori, Japan (Paratype); 1♀, Aoni, Aomori, Japan (Paratype).

分布:日本(本州,九州),

Pterostichus (Adelosia) thunbergi Morawitz エゾナガゴミムシ (Fig. 4)

Petrostichus Thunbergi Morawitz, 1862, Mél. Biol., 4: 244 (Hakodate). Pterostichus (Subg. ?) habui Jedlička, 1962, Niponius, 1 (14): 3, fig. 3 (Aomori Pref., Kuzukawa).

Јерціčка (1962) が記載した habui は, thunbergi のシニノムであることを Нави (1980) がすでに報告している. habui の原記載には Kuzukawa, ein Männchen とあるだけで, paratype につ

いての記述はないが、今回検した標本には、Dr. Jedlička の筆になる paratypus のラベルが付されている.

檢視標本:1♂, 2♀♀, Hirukaizawa, Hiraka-cho, Aomori, Japan (Paratypes).

分布:日本(北海道,本州の東北部).

Pterostichus (Melanius) chujoiellus Jedlička エグリナガゴミムシ (Fig. 3)

Pterostichus (Melanius) chujoiellus Jedlička, 1962, Nipponius, 1 (14): 2, fig. 2 (Aomori Pref., Hiraka-chô, Kuzukawa).

Pterostichus chujoi Jedlička, in. litt. (nom. nud.)

原記載では、Männchen von Hiraka-chô, Weibchen von Kuzukawa となっているが、holotype、paratype ともに雌である。また、タイプ標本には Pterostichus chujoi の同定ラベルだけが付けてあるので、おそらく、校正中にでも P. (Paralianoe) chujoi Habu, 1959 に気付いて改名したものと思われる。

檢視標本:1♀, Kuzukawa, Aomori Pref., Japan, VI. 58 (Holotype); 1♀, Towada, Hiraka, Aomori Pref., Honshu, Japan, 3. VI. 1960, K. Shimoyama leg. (Paratype).

分布:日本(本州の中部以北).

Pterostichus (Subg, ?) mirificus BATES シリトゲナガゴミムシ (Fig. 5)

Pterostichus mirificus Bates, 1883, Trans. ent. Soc. London, 1883: 246 (Aomori). Pterostichus (Lianoe) chujoianus Jedlička, 1962, Niponius, 1(14): 4, fig. 4 (Aomori Pref., Hiraka-chô). syn. nov.

中根 (1983) が示唆したとおり、chujoianus は mirificus に他ならないことを今回前者の paratype を検することによって確認した。Jedlička (1962) は chujoianus の 記 載 に あ たって、P. aizuensis Jedlička (=P. spiculifer Bates ハラトゲナガゴミムシ) と比較しているが、これは近似種とはいえない。また、chujoianus の原記載には Hiraka-chô、ein Weibchen とあるだけで、他の標本には触れていないが、記述以外にもparatype を指定しているようで、今回検したそれは雄である。ほぼ同時に公刊された彼の東アジアの Pterostichini の総説 (1962) には、aizuensis とともに正しく mirificus の雄の腹板末節が図示されているだけにいささか不思議である。

檢視標本:1♂, Takinomata, Aomori Pref., Honshu, Japan, 24, V. 1952, K. Shimoyama leg. (Paratype).

分布:日本(本州の東北部),

Agonum (Nipponanchus) leucopus (BATES) タンゴヒラタゴミムシ (Fig. 9)

Anchomenus leucopus Bates, 1873, Trans. ent. Soc. London, 1873: 279 (Tango.).

Agonum (Hikosanoagonum) metax Jeplička, 1962, Niponius, 1 (15): 5, fig. 5 (Aomori Pref.,

Aoni).

JEDLIČKA (1962) 記載の metax については, すでに HABU (1969)が leucopus のシノニムとしている.

A. metax の原記載には, zwei Weibchen とあるが, 今回検することのできた paratype は 雄 であった.
検視標本:1♂, Aoni, Aomori, Japan (Paratype).

分布:日本(北海道,本州,四国,九州),台湾.

Agonum (Agonum) chuji Jedlička チュウジョウヒラタゴミムシ (Fig. 7)

Agonum chuji Jedlička, 1955, Acta Ent. Mus. Nat. Prage, 30: 215 (Hokaido). Agonum chujoi Jedlička, 1963, Reichenbachia, 1: 307 (emendation for chuji).

原記載には、ein Weibchen in Coll. Chujo とあり、検視した標本は雌で、TYPUS と印刷された赤ラベルと、*Agonum chuji* sp. n. と記された Dr. Jedlička 自筆の赤ラベルが付いているので、これが holotype に相当するものであろう。ただし、記載には Long. 10mmとあるが検視標本は7.5mmで、本種としてはかなり小型の個体であることが気になる。

検視標本:1♀, Nishi……判読不能……mura, Hokkaido, Japan 24. № 1949 (Type). 分布:日本(北海道,本州の東北部).

> Agonum (Xestagonum) xestus (BATES) ツヤモリヒラタゴミムシ (Fig. 10)

Anchomenus (Platynus) xestus Bates, 1883, Trans. ent. Soc. London, 1883: 256 (Nikko).

Colpodes depressus Jedlička, 1936, Acta Soc. ent. Čsl., 33: 48, 50 (Chuzenji).

Colpodes edai Jedlička, 1952, Acta Mus. Silesiae, 2 (A): 53 (Mt. Norikura).

Colpodes chujianus Jedlička, 1955, Acta Ent. Mus. Nat. Pragae, 30: 215 (Aomori Pref.) Colpodes xestoides Nakane, 1962, Sci. Rep. Kyoto Pref. Univ. (Nat. Sci. & Liv. Sci.), 3 (4): A204 (Mt. Jônen).

Colpodes chujoianus Jedlička, 1963, Rechenbachia, 1: 307 (emendation for chujianus). Colpodes chuji Jedlička (det. Breuning), in litt. (nom. nud.).

Colpodes chujoi Jedlička (nec Jedlička, 1962), in litt. (nom. nud.).

A. xestus (Bates) は地域変異が多く、それらについてJedlička (1936, '52, '55) や Nakane (1962) が記載したものは、Habu (1969, '78) がシノニムとして処理している。

ここで以下に述べる 1 個のタイプ標本は、Dr. Jedlicka のかかわる中條博士所蔵標本の中で最も問題のあるもので、これについては、すでにHabu (1969) が触れていることではあるが、いささか筆者らの見解もそえて改めて紹介しておきたい。

この標本は雄で、Type と記された赤ラベルと、Dr. Jedlička 自筆の Colpodes chujoi Jedl. および Dr. Breuning による Colpodes chuji Jedl. の 2 枚の同定ラベルと、2 枚に分けて記入された産地ラベルが付いている。しかしながら、このタイプ標本は、Habu (1969) が述べているように C. chujoi Jedlička, 1962 [= Agonum speculator (Harold) ホソモリヒラタゴミムシ] の原記載にはまったく適合せず、これより7年前に記載された C. chujianus Jedlička, 1955 [= Agonum xestus (Bates)] のそれによく合致する。Habu (1969) も chujoiの Type とは思えないと述べており、筆者らの所見でもこの標本は xestus そのものである。 chujoi の原記載には ein Weibchen とあるだけでタイプの所在が明らかでなく、 chujianus のそれには ein Weibchen in meiner Sam-

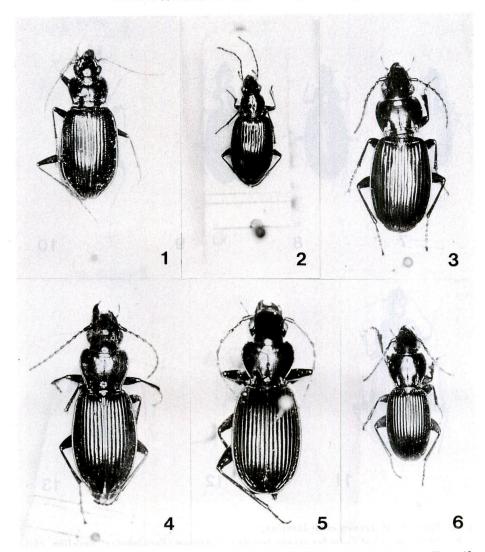
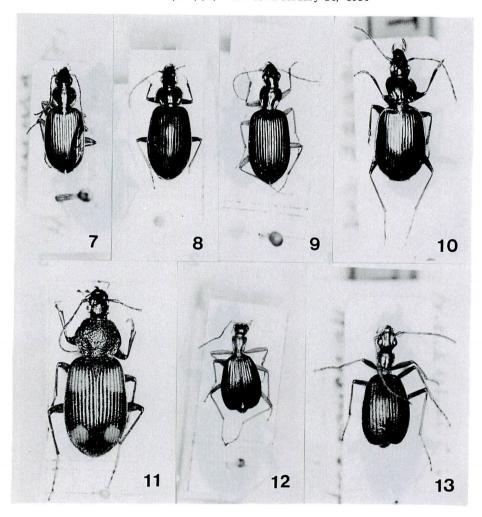


Fig. 1. Paratype (3) of Agonoamara chujoi Jedlička [=Nippononebria chalceola (Bates)].

- Fig. 2. Holotype (?) of Bembidion (Peryphus) chujoianum Jedlička [=Bembidion (Peryphus) cnemidotum Bates].
- Fig. 3. Holotype (?) of $Pterostichus\ chujoi\ Jedlička$ in litt. $[=P\ terostichus\ (Melanius)\ chujoiellus\ Jedlička].$
- Fig. 4. Paratype (?) of Pterostichus (Subg. ?) habui Jedlička [=Pterostichus (Adelosia) thunbergi Morawitz].
- Fig. 5. Paratype (3) of Pterostichus (Lianoe) chujoianus Jedlička [=Pterostichus(Subg. ?) mirificus Bates].
- Fig. 6. Paratype (3) of Pterostichus hirakai Jedlička in litt. = Pterostichus (Neohaptoderus) shimoyami Jedlička [= Allotriopus hoplites Bates].



- Fig. 7. Type (♀) of Agonum chuji Jedlička;
- Fig. 8. Paratype (♀) of Colpodes irenae Jedlička [=Agonum (Eucolopodes) aurelium chibi Habu].
- Fig. 9. Paratype (3) of Agonum(Hikosanoagonum) metax Jedlička [=Agonum (Nipponanchus) leucopus (Bates)].
- Fig. 10. Type (3) of Colopodes chujoi Jedlička (nec Jedlička, 1962), in litt. [=Agonum (Xestagonum) xestus (Bates)].
- Fig. 11. Paratype (3) of Craspedophorus japonicus Jedlička [=Panagaeus japonicus Chaudoir].
- Fig. 12. Paratype $(\stackrel{\circ}{+})$ of Brachynus (Pseudaptinus) japanensis Jedlička [=Barachinus stenoderus Bates].
- Fig. 13. Paratype (?) of Brachynus (Psedaptinus) chuji Jedlička [=Brachinus stenoderus Bates].

mlungとあるので、中條博士所蔵標本は両者いづれかのparatypeとして後に指定されたものに違いないが、Dr. Breuningによるchuji の同定ラベルと、標本自体から推して chujianus の paratype であろう。因に、晩年のDr. Jedlička は記載の際またはその前後に種小名をよく変更したようで、このことはタイプ標本のラベルにもうかがえるが、後に混乱を招きやすく、また改名して公表された学名は "不当な訂正"として無効となっている。xestus のシノニムである chujianus も後により正しい音訳である chujianus と改名されたが、これが命名規約上無効であることは言うまでもない。問題の標本は初め Dr. Breuningによって chuji (chujianus の誤記または誤解) の同定ラベルを付されて後に Dr. Jedlička にまわされたようで、かねてより chujiをchujoiに(Agonum と Brachinus で実行された)、chujianus を chujoianus に改名する積りでいたことから同定ラベルのchujiをもほとんど機械的?にchujoiと改めてしまったのではなかろうか。初めにDr. Breuning が正しく chujianus と記していれば問題は起きなかったであろう。以上はあくまで推論の域を出ないが、ひとつの根拠として、chujoi (= speculator)とchujianus (= xestus) は、言うまでもなく相互にまったく姿形の異った種であり、特に後者について三度も命名記載した Dr. Jedlička が両者を混同誤認したとは考えられないからである。筆者らは、このタイプ標本の実体は C. chujianus Jedlička, 1955 のparatype に相当するものと考える。

檢視標本:1♂, Akataki, Yamagita mura, Aomori-Ken, Honshu, Japan, 6. № 1947. (Type) 分布:日本(本州, 四国, 九州).

Agonum (Eucolpodes) aurelium chibi HABU チビモリヒラタゴミムシ (Fig. 8)

Agonum chibi Habu, 1958, Kontyu, 26: 5, fig. 13 (Mt. Hiko).

Agonum aurelium chibi: Habu, 1969, Kontyu, 37: 386, fig. 9.

Agonum (Platynus) minor: Habu, 1954, Bull. Nati. Inst. Agr. Sci., (c) 4:337, fig. 2, pl. 1-4. Colpodes irenae Jedlička, 1962, Niponius, 1(15): 7, fig. 6 (Osaka).

Jedlička (1962) が記載した irenae は、すででに Habu (1969) が aurelium chibi のシノニムとして取り扱った.

検視標本:1º, Towada, Hiraka, Aomori Pref., Honshu, Japan, 4. VI. 1944, K. Shimoyama leg. (Paratype).

分布:日本 (関東と隣接地域を除く本州, 四国, 九州).

Panagaeus japonicus Chaudoir ヨツボシゴミムシ (Fig. 11)

上記のシノニム関係については,すでに Habu (1978) が報告している.C. japonicus の原記載にはタイプの指定がないが,paratypus のラベルを付された標本を検することができた.

檢視標本:2♂♂, Aoni, Aomori, Japan (Paratypes).

分布:日本(北海道,本州,四国,九州),中国,東シベリア.

Brachinus stenoderus BATES コホソクビゴミムシ (Figs. 12, 13)

Brachinus stenoderus Bates, 1873, Trans. ent. Soc. London, 1873: 305 (Nagasaki, Kawachi). Brachynus longicornis Motschulsky. 1860, Schrenk's Reis. Forsch. Amur. 2: 92, pl. 6-13 (fl. Amour: Daourie) nec Fabricius.

Brachynus macrocerus Chaudoir, 1876, Ann. Soc. ent. Belgique, 19: 51, (new name for longi-icornis).

Brachynus (Pseudaptinus) chuji Jedlička, 1955, Acta Ent. Mus. Nat. Pragae, 30: 219 (Honshu, Mt. Komochi).

Brachynus (Pseudaptinus) japanesis Jedlicka, 1962, Niponius, 1 (14): 5, fig. 6.a (Guiàma Pref., Doai).

Brachynus (Pseudaptinus) shimoyamai Jedlička, 1962, Niponius, 1 (14): 6, fig. 6b (Aomori Pref., Kuzukawa.)

Brachinus osakaensis Nakane, 1963, Fragm. Coleopt., 6: 25 (Ikeda near Osaka).

Brachinus incomptus: Yokoyama, 1932, Icon. Ins. Japonic.: 823, fig. 1620.

Brachynus (Brachynidius) chujoi: Jedlička, 1963, Ent. Abh., 28: 546, pl. 6-54.

個体変異の幅が大きく、その上分布の広い種であることから、多くのシノニムが知られており、Habu (1967) によってよく整理されている。Jedlička (1955, '62) 記載の種もすでにシノニムとして処理されている。なお蛇足ながら、chujiのタイプ標本には、Dr. Jedlička の同定ラベルでなく、Dr. Breuning の同定ラベルが付されていることを触れておきたい。

検視標本:1², Mt. Komochi, Numata, Gumma-ken, Honshu, Japan, 5. 5. 50(Type of *chuji*); 1², Doai-Gamma(!), Honshu-Japan (Paratype of *japanensis*).

分布:日本(北海道,本州,四国,九州),朝鮮半島,東シベリア.

Summary

Through the courtesy of Emeritus Prof. Michio Chûjô, we could examine some type-series of Carabidae described from Japan by Dr. A. Jedlička in 1955 and 1962. Their taxonomic status are enumarated as mentioned above based on the present knowledge. Following new synonymies and nomina nuda are proposed in the present paper.

Bembidion (Peryphus) cnemidotum Bates, 1883 = Bembidion (Peryphus) chujoianum Jedlička, 1962, syn. nov.

Allotriopus hoplites Bates, 1883 = Pterostichus (Neohaptoderus) shimoyamai Jedlička, 1962, syn. nov. = Pterostichus hirakai Jedlicka, in litt., nom. nud.

Pterostichus (Melanius) chujoiellus Jedlička, 1962 — Pterostichus chujoi Jedlička, in litt., nom. nud.

Pterostichus (Subg.?) mirificus Bates, 1883 — Pterostichus (Lianoe) chujoianus Jedlička, 1962, syn. nov.

Agonum (Xestagonum) xestus (Bates) = Colpodes chuji Jedlička: Вкечніка, in litt., nom. nud. = Colpodes chujoi Jedlička (nec Jedlička, 1962), in litt., nom. nud.

All the type-series of them are illustrated herewith by photographus.

参考文献

BATES, H. W., 1883. Supplement to the Geodephagous Coleoptera of Japan, chiefly from the collec-
tion of Mr. Geoge Lewis, made during his second visit, from February, 1880, to Sep-
tember, 1881, Trans. ent. Soc. London, 1883: 205-290.
Habu, A., 1967. Carabidae, Truncatipennes group (Insecta: Coleoptera). In Fauna Japonica, xiv $+$
338 pp., 27 pls. Biogeograph. Soc. Japan, Tokyo.
——————————————————————————————————————
Carabidae). Kontyu, 37: 384-394.
1978a. Carabidae, Platynini (Insecta: Coleoptera). In Fauna Japonica, viii + 447 pp., 36
pls., Keigaku Publ. Co., Tokyo.
1978b. Some rare species of ground-beetles found by Mr. S. Kasahara in the Ryukyus
(Coleoptera, Carabidae). Ent. Rev. Japan, 32: 61-80.
———— 1980. Synonymical notes on two Pterostichus species from Japan (Coleoptera, Carabid-
ae). Ent. Rev. Japan, 34: 51-52.
1981. Identity of Agonoamara chujoi Jedlička, 1962 (Coleoptera, Carabidae). Ent. Rev.
Japan, 35: 21-22.
Јерціčка, А., 1955. Beitrag zur Kenntnis der palearktischen Carabiden (Coleoptera). Acta Ent.
Mus. Nat. Pragae, 30: 207-220.
1962b. Zweiter Beitrag zur Kenntnis der Carabiden aus Japan. Niponius, 1 (15): 1-7.
————1962c. Monographie des Tribus Pterostichini aus Ostasien (Pterostichi, Trigonotomi,
Myadi) (Coleoptera, Carabidae), Ent. Abh., 26: 177-346.
303 – 307.
——————————————————————————————————————
Abh., 32: 81–199.
中根猛彦, 1979. 日本の甲虫 (56), ゴミムシ科10. 昆虫と自然, 14(4): 11-15.

より高度な蒐集・研究は文献から!

日本産甲虫目録 第5集 No.20~24 ¥2,500 (\(\frac{7}{2}\)50). 5冊セット

カミキリムシ科(3)、ハムシ科(3)、ナガハナノミ科、テントウムシダマシタ科、チビシデムシ科を収録。

★既刊分: 第1集 No.1~7 (クワガタ, クロツヤムシ, ハンミョウネホソガムシ, マルドロムシ, ヒラタドロムシ各科) 7冊組 ¥800 (〒200).

第2集 No.8~14 (ドロムシ, ヒメドロムシ, ダエンマルドロムシ, コメツキムシ 1 タムシ, カクホソカタムシ各科) 7冊組 ¥8 第3集 No.15~17 (コガネムシ科-1-, カミキリムシ科-1-, ハムシ科-1-) 1, ミジンキスイムシ, ホソカ 7冊組 ¥800 (〒200).

3冊組 ¥900 (〒200). ¥1,500 (\(\frac{1}{2}\)00). 第4集 No.18~19 (ハムシ科-2-, カミキリムシ科-2-) 2 冊組

A. И. УЕРЕПАНОВ УСАЧИ СЕВЕРНЙ АЗИИ (Cerambycidae of North Asia) 北アジアのカミキリムシ Vol.2 Part 1(Cerambycinae) & Vol.2 Part 2(Cerambycinae:Clytini;Stenaspini & etc.) B5, 475pp. 288 figs. cl. カミキリムシ亜科 2 冊組 ¥14,480 (〒400) M.

VOL. 3 (Lamiinae:Dorcadinonini-Apomecynini) フトカミキリ亜科 1-B5, 224pp. 120 figs. cl.

¥4,400 (〒300) M. ッ連の本は原則として計画限定出版ですので、お早めにお求め下さい。尚来年第4巻の出版が予定されています。

TTSより移転と名称変更のお知らせ-

1月5日から新住所になります 昆虫洋書·図鑑·学術書·地方出版物

TTS昆虫図書

〒214 川崎市多摩区登戸新町14 (156 東京·千歳郵便局私書箱33号) TEL 044-911-8511(代) 郵便振替 東京0-73156 定休日: 毎水曜日・祝日

12月20日まで 東京通販サービスを〒156東京・千歳郵便局私書箱33号 ビス社 TEL 03-426-6012 郵便振替 東京0-73156 12月5日まで「経堂サヨナラ謝恩セール」

ご注文はハガキに署名捺印の上(18才未満は保護者印)ご注文下さい。直ちにお送 りいたします。代金は到着後5日以内にご送金下さい。送料は2冊以上になると安 くなります。

ELYTRA Vol. 11, Nos. 1/2

昭和59年2月10日 印刷 昭和59年2月14日 発行

編集者 新 里 達 也

発行者 草間慶一

発行所 日本鞘翅目学会

> Japanese Society of Coleopterology 東京都台東区東上野4-26-8

> > 福田惣一方(〒 110)

c/o, Fukuda, 4-26-8, Higashi-Ueno, Taitō-ku, Tōkyō Japan

印刷 (株)大和印刷



 新製品/最上質ステンレス製シガ有頭昆虫針 VV、00、0、1、2、3、4、5、6号発売中 VV、00、0、1、2、3、4、5、6号発売中 VV、00、0、1、2、3、4、5、6号発売中 VV、00、0、1、2、3、4、5、6号発売中 VV、00、0、1、2、3、4、5、6号発売中 VV、00、0、1、2、3、4、5、6号発売中 で業種目 採集瓶・採集箱、幼虫胴乱・採集バンド、展翅板類、標本瓶、植 営業種目 採集瓶・採集箱・幼虫胴乱・採集バンド・調査・標本瓶、植 飼育用具・顕微鏡・標本箱各種・三角ケース・捕虫網・ピンセット・ 飼育用具・殺虫管・プレパラート製作用具・名箋・ピンセット・ 物採集用具・殺虫管・プレパラート製作用具、名の他 平均台・液浸用管瓶・ルーペ類、コルク類、その他 平均台・液浸用管瓶・ルーペ類・コルク類、その他 日:毎日曜、祝祭日、10月1日 休日:毎日曜、祝祭日、10月1日

むし のことは むし 社へ!

○月刊むし

「月刊むし」は、1971年3月の0号を創刊号とする昆虫専門月刊誌で、1983年8月に150号を数えました。蝶、蛾、トンボ、セミ、甲虫などを中心に、解説記事、入門の手引き、採集記、同好会紹介、ニュース、短報記録が満載されています。定価は1冊750円ですが、予約購読の場合は送料無料で、次のように誌代を割引しております。

- 3ヶ月前納……2250円を2200円に (誌代割引)
- 6ヶ月前納……4500円を4200円に (")
- 12ヶ月前納……9000円を8000円に (")
- ◎バックナンバーも全号揃っています (含むコピー版)。

○むし社の昆虫用品

あくまで虫屋さんの立場に立って製作した、使いやすく丈夫な昆虫用品 を比較的安価で販売しております。

▶取り扱い品目:ドイツ型標本箱(大型、中型)、ユニットボックス式ドイツ箱、標本箱ダンス(10箱用、24箱用)、蝶額、傾斜展翅板(生展翅用、軟化展翅用)、四折金具、スプリング金具、ネット、つなぎ竿(6m、7.5m、ミニつなぎ竿)、ビーティングネット、三角紙……その他。

○むし社標本部

むし社の標本部では、日本産の昆虫はもとより、世界各地の昆虫標本を、 愛好者の皆さんに比較的廉価で販売しております。ぜひ一度、当社の標本 部より標本をお買い求め下さい。詳しくは当社標本部発行の「標本ニュー ス」(年6回発行、年間予約1500円)をご購読下さい。

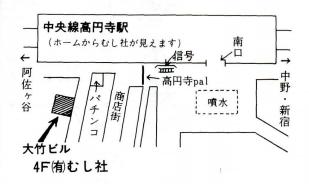


▲「月刊むし」



▲標本箱ダンス(10箱用)

※) 詳しくは60円切手を添えて、当社パンフレットをご請求下さい。

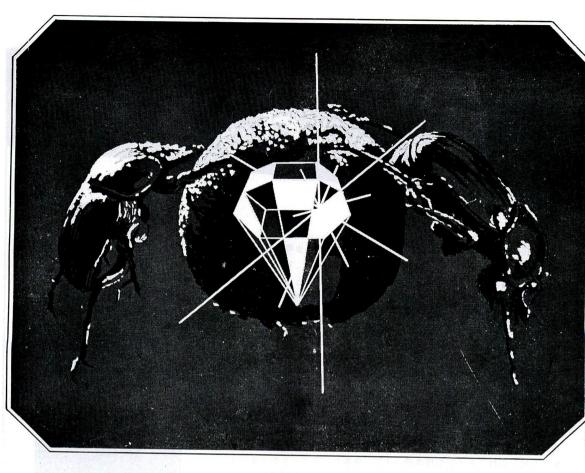


お申し込み先

- ○本社連絡先:〒164 東京都中野区中野郵便局 私書箱10番、예むし社
- ○振替口座:東京6-159262番、예むし社

営業時間

- ○編集部:9:00~17:00 Tel.03(316)1462
- ○昆虫用品部:14:00~19:00 Tel.03(316)1462
- ○標本部:12:00~19:00 Tel.03(316)1461
- 休日――日曜・祭日はお休みです。



大切な標本を永久ダイヤより価値が真珠より美しく

《トイツ型標本箱》

けします。 自然はますます大切なものとなってきました。 自然はますます大切なものとなってきました。 自然はますます大切なものとなってきました。

*すばらしい特長

- くるいのこない良質な木材を使用
- る白色プラスチック底)パラゾールにも変化せず、標本がより美しく見え湿気や乾燥にも強い独特の構造

侑タツミ製作所

大型 5,000円 (送料別) 中型 4,500円 (送料別) この価格は昭和52年11月現在のものです

