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日米科学協力研究：太平洋地域の昆虫類の地理的分布と生態
Japan-U. S. Co-operative Science Program : Zoogeography and Ecology of Pacific Area Insects

KEY AND ILLUSTRATIONS FOR THE IDENTIFICATION OF THE CURCULIONOID-BEETLES OF JAPAN AND THE RYUKYUS

I. Subfamily Nanophyinae

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So far as the author is aware, about 1000 species of the superfamily Curculionoidea have been recorded from Japan by many authorities, but it is estimated that this represents even half of those living in Japan.

During the preparation of "key and illustration" series concerning Japanese Curculionoidea, a great number of specimens from the Ryukyus were entrusted to the author for study. They were mostly collected by the members of expeditions to the Ryukyus under the Japan-U. S. Co-operative Science Program, and partly by Dr. K. Yasumatsu, Dr. T. Takara, Dr. K. Kojima, Messrs. S. Kuniyoshi, T. Hidaka, T. Shibata, M. Satô, M. Chûjô, and Y. Miyatake.

The author wishes to revise these species both from Japan and the Ryukyus, and the result will be published in a series of papers.

Subfamily **Nanophyinae**

Bovie, Genera Insectorum, 98, Coleoptera Curculionidae : Nanophyinae, 11 pp., 1 col. pl., 1909 (Subfamily character, catalog).

Marshall, Trans. Ent. Soc. London 1927 : 79–98, 1 pl., 1927 (Subfamily character, key to genera, South African species).

Klima, Coleopterorum Catalogus, 135, Nanophyinae, 26 pp., 1934 (Catalog).

Crowson, Ent. Month. Mag. LXXXIX : 238–246, 1953 (Systematic position, subfamily character).

Morimoto, Journ. Fac. Agr. Kyushu Univ. 11 : 331–373, 1962 (Comparative morphology) ; id. 12 : 21–34, 1962 (Systematic position).

As already pointed out by Crowson and Morimoto, this subfamily has a close relation to the subfamily Apioninae in having the following characters :

1. Trochanters large and intervened between femora and coxae.
2. Proventriculus without a distinct sclerite.
3. Aedeagus with a penis consists of dorsal and ventral plates, dorsal plate narrow; cap-piece large, more or less notched.
4. Mentum with a pair of projecting setae.
5. Larvae with the frontal suture reaching the articulating membrane of mandible; antennae completely enclosed by a frontal piece.

Nanophyinae is characteristic in having the geniculate antennae, two-segmented labial palpi and some larval characters. This subfamily comprises 7 genera and 210 species from the world. Unique genus occurs in Japan.

Genus **Nanophyes** Schönherr, 1838

Type-species: *Curculio marmoratus* Goeze.

All the species of Japan and the Ryukyus belong to the subgenus *Nanophyes* in having such characters as: antennae with funicle 5-segmented, club 3-segmented and loose; claws connate at the base.

Descriptions of new species

Nanophyes dimorphus sp. nov.

Brown form: entirely reddish brown, except for blackish 2nd–5th segments of funicle and club of antennae, eyes and the basal margin of elytra, often head blackish, rarely rostrum and the median area of pronotum fuscous.

Black form: entirely black, except for reddish yellow trochanters and scape of antennae, often the basal area of femora reddish yellow, rarely legs almost reddish brown.

Derm sparsely clothed with fine white hairs on pronotum, abdomen and elytra (1st interval and small triangular area around scutellum sparsely clothed with dark brown hairs), white hairs a little broader and closer on the under side of thorax and very closer on the lateral pieces of meso- and metathorax.

Rostrum straight at the basal half, a little shorter than head and pronotum taken together; dorsum tricarinate behind the antennal insertions, with two pairs of the rows of fine hairs in entire length. Antennae inserted into the one-third of rostrum from the apex, terminal segment 1.5 times as long as wide and nearly as long as the two precedings taken together.

Pronotum two-thirds as long as the basal width, slightly convex longitudinally, shiny.

Elytra broadest at the shoulders, one and half as long as wide, striae narrow and weak, intervals weakly convex; recumbent hairs as long as the width of interval, suberect setae longer.

Legs with femora armed with one short and two minute teeth.

Penis pointed at tip; inner sac with a sclerite near ostium and without a small spine; flagellum nearly as long as the apophysis of penis.

Length: 1.7–1.9 mm. (excl. rostrum).

Distribution: Ryukyus.

Holotype ♀, brown form, Banna, Ishigaki, 1. x. 1963, K. Morimoto leg.

Paratypes : Brown form—5♂7♀, Kuchinoshima, Tokaras, 22. v. 1962, M. Satô leg.; 1♀, Nakanoshima, Tokaras, 28. v. 1962, M. Satô leg.; 1♀, Yona, Okinawa, 19. x.1963, S. Miyamoto leg.; 1♀, Shimozato, Miyako, 22. vii. 1958, T. Hidaka leg.; 1♂1♀, Ôhama, Ishigaki, 23. viii. 1958, T. Hidaka leg.; 2♀, Ishigaki-Nagura, 24. xi. 1960, K. Yasumatsu leg.; 6♀, Banna, Ishigaki, 1. x. 1963, K. Morimoto leg.; 2♀, Mt. Omoto, Ishigaki, 14. x. 1963, K. Morimoto leg.; 1♀, Kabira, Ishigaki, 15. x. 1963, S. Miyamoto leg.; 2♂, Ôtomi, Iriomote, 21. xi. 1960, K. Yasumatsu leg.; 1♀, Sonai, Iriomote, 12. x. 1963, K. Morimoto leg. Black form—2♀, Kuchinoshima, Tokaras, 22. v. 1962, M. Satô leg.; 1♂3♀, Banna, Ishigaki, 1. x. 1963, K. Morimoto leg.; 1♀, Sonai, Iriomote, 8. x. 1963, K. Morimoto leg.

Holotype and some paratypes will be preserved in the collection of the Entomological Laboratory of Kyushu University, the remaining paratypes are in the author's cabinet.

This species may be separable from the known species by the number of femoral teeth, unicolored and immaculate dorsal surface of body, and short oval general shape.

Nanophyes mihokoae sp. nov.

General body form is similar to *marmoratus*, coloration and clothings to *pallipes* and *usuironis*.

Pale yellowish brown with brownish patches as illustrated in Pl. 3, metathorax dark brown, basal half of rostrum more or less fuscous, head often fuscous.

Derm sparsely clothed with greyish hairs, elytra with the bases of the 1st, 2nd, and 4th interval, and pale colored area clothed with greyish hairs and brownish area with brownish hairs, lateral pieces of meso- and metathorax closely covered with white hairs.

Rostrum a little slenderer than *pallipes* and *usuironis*, nearly as long as head and pronotum taken together, gently curved, tricarinate on the basal half. Antennae inserted into the middle (♀) or just before the middle (♂) of rostrum, terminal segment twice as long as wide and as long as the two precedings taken together.

Pronotum three-fifths as long as the basal width, slightly convex longitudinally, derm smooth and shiny.

Elytra one and half as long as wide, shoulders rounded, interval weakly convex, smooth; striae shallow.

Legs with femora edentate.

Penis rounded at tip; inner sac unarmed; flagellum much longer than the apophysis of penis; cap-piece shallowly notched and bearing several setae.

Length: 1.7–1.8 mm. (excl. rostrum).

Distribution: Shikoku, Kyushu.

Holotype ♂, Jinzenji, Kôchi City, 11. iii. 1954, K. Morimoto leg.

Paratypes: 8♂4♀, same locality as holotype, 27. iii. 1953; 11. iii. 1954; 24. iii. 1954, K. Morimoto leg.; 1♂, Mt. Sasa, Hata-gun, Kôchi, 29. iv. 1953, K. Morimoto leg.;

1♀, Mt. Wakasugi, nr. Fukuoka, 29. iv. 1953, S. Kimoto leg.

Holotype and five paratypes will be preserved in the collection of the Entomological Laboratory of Kyushu University, the remaining paratypes are in the author's cabinet.

This pale-colored species may easily be separable from *pallipes*, *usuironis*, *shaowuensis*, *kwangtsehensis*, etc. by the elongate general shape, and the position of antennal sockets.

Key to species

1 : Femora armed with one long and two or three short or minute teeth 2
1' : Femora edentate or with a short tooth 4
2 : Elytra distinctly maculate. Brown with dark brown patches as shown in Pl. 1.B, femora fuscous at the middle of the ventral surface. Derm clothed with white hairs on pronotum, abdomen, legs and pale area of elytra, white hairs very close on the ventral and lateral sides of meso- and metathorax. Rostrum a little shorter than head and pronotum taken together. Antennae inserted into the middle (♀) or apical one-third (♂) of rostrum, shape of the terminal segment variable but always robust. Femora armed with one long and three short teeth. Length: 2.0–2.2 mm ..... *Nanophyes formosensis* Kôno, 1930
2' : Elytra unicolored 3
3 : Body length 2.5 mm. Entirely black, often scape of antennae and trochanters reddish; dorsal surface sparsely clothed with black fine hairs, and undersurface with greyish hairs, greyish hairs a little closer on the meso- and metathorax. Rostrum slender, longer than head and pronotum taken together, in male dorsum with two pairs of punctured striae, which are shallowed before the antennal insertions, in female dorsum unpunctured and glossy except for two pairs of short punctured striae at the base. Antennae slender, inserted a little before (♂) or just behind (♀) the middle of rostrum, terminal segment slightly longer than the two precedings taken together. Legs with femora armed with one long and two or three short teeth ..... *Nanophyes plumbeus* Motschulsky, 1866
3' : Body length 1.7–1.8 mm. Reddish brown in general or black with reddish yellow trochanters and scape of antennae. Rostrum a little shorter than head and pronotum taken together, dorsum tricarinate behind antennal insertions in both sexes. Femora armed with one rather short and two minute teeth..... *Nanophyes dimorphus* Morimoto
4 : Femora armed with a short tooth 5
4' : Femora unarmed 6
5 : Legs entirely yellowish brown. Derm reddish brown to dark brown, head, rostrum, meso- and metathorax fuscous, pronotum and lateral and posterior margins of elytra often fuscous; derm clothed sparsely with white fine hairs, which are rather closer on meso- and metathorax; elytra with dark brown hairs and white patches. Rostrum a little shorter than head and pronotum taken together. Antennae inserted into the middle (♀) or a little before the middle (♂) of rostrum, terminal segment as long as the two precedings taken together. Length: 1.6–1.8 mm ..... *Nanophyes albovittatus* Roelofs, 1874
5' : Legs black with reddish yellowish trochanters and the base of femora. Derm

black, scape of antennae, and apex of rostrum reddish yellow; derm clothed with greyish hairs on head, pronotum, underside and legs; elytra clothed with black hairs as far as stria 8, except for a greyish oblique fascia, a greyish patch near the apex and greyish lateral intervals. Rostrum nearly as long as head and pronotum taken together. Antennae inserted into a little before the middle (♂) or behind the apical one-third (♀) of rostrum, terminal segment as long as the two precedings taken together. Length: 1.7–2.0 mm..... *Nanophyes proles* Heller, 1915

6 : Rostrum weakly gibbous above the antennal insertions and a little shorter than pronotum. Black, scape of antennae, tibiae and femora (apex fuscous) reddish; derm clothed with short recumbent white hairs on pronotum, legs, and the underside; lateral pieces of meso- and metathorax closely covered with white large hairs; elytra clothed with recumbent white hairs except for the brownish haired 1st and lateral intervals; Length: 1.5 mm..... .....*Nanophyes pubescens* Roelofs, 1874

6' : Rostrum simply curved 7

7 : Small species, 1.2 mm in length. Head, basal half of rostrum, pronotum, meso- and metathorax, 1st and 2nd segments of abdomen, basal and sutural margins dark brown to black, lateral margin of elytra fuscous, the remaining area reddish yellow. Rostrum slightly shorter than head and pronotum taken together. Antennae inserted a little before the middle of rostrum, terminal segment as long as the two precedings taken together...*Nanophyes suturalis* Pic, 1909

7' : Larger species, longer than 1.5 mm in length..... 8

8 : Rostrum nearly straight, scarcely punctured excepting the base, with a weak median carina behind the antennal insertions (♂) or at the base (♀), much shorter than head and pronotum taken together. Elytra unicolored, clothed with greyish hairs, which are forming vague spots on the 2nd interval at the middle and the 4th interval a little before the middle. Black form:—black except for reddish yellow scape, tibiae, basal half of femora, and trochanters; abdomen, 1st segment of tarsi, coxae, and underside of head often reddish yellow. Brown form:—brown except for fuscous dorsal side of head, funicle and club of antennae, meso- and metathorax, and apical half of femora. Antennae inserted just before the middle of rostrum, terminal segment as long as the two precedings taken together. Length: 2.1–2.2 mm ... .*Nanophyes japonicus* Roelofs, 1879

8' : Rostrum more or less curved, nearly as long as head and pronotum taken together, dorsum with distinct three carinae behind the antennal insertions. Elytra maculate..... 9

9 : Form oblong oval, elytra one and half as long as wide..... 10

9' : Form short oval, elytra slightly longer than wide 11

10 : Pale yellowish brown, with brownish patches. Elytra uniformly clothed with greyish and brownish hairs, basal triangular V-shaped patch brownish. Length: 1.7–1.8 mm ..... *Nanophyes mihokoae* Morimoto

10' : Elytra almost denude, except for greyish haired three bands and lateral intervals. Head and rostrum black, legs reddish brown, remaining part variable in coloration. Antennae inserted a little before the middle of rostrum in both sexes. Length: 1.6–2.1 mm ..... *Nanophyes marmoratus* (Goeze, 1777)

11 : Elytra with shoulders rather prominent, the sides nearly straight and rapidly narrowed posteriorly. Elytra clothed with white hairs at the base of 1st, 2nd and 4th intervals, V-shaped fascia behind basal triangular brown patch, posterior one-third of 2nd, 4th and 6th intervals, and the lateral surface; the remaining area with brown hairs; in pale specimens posterior part of 3rd and 5th intervals clothed with white hairs. Rostrum rather robust, a little shorter than head and pronotum taken together. Pale yellowish brown, except for fuscous rostrum, head, funicle and club of antennae, meso- and metathorax, and patched on pronotum and elytra. Length: 1.6–1.9 mm..... ..... *Nanophyes pallipes* Roelofs, 1874

11' : Elytra with shoulders weakly prominent, the sides gently curved and narrowed posteriorly. Elytra clothed with greyish hairs except for brownish hairs on fuscous patches. Rostrum slenderer, a little longer than head and pronotum taken together. Pale yellowish brown, except for fuscous meso- and metathorax, patches on pronotum and elytra; often head rostrum, funicles and clubs fuscous. Length: 1.5–1.7 mm ... *Nanophyes usuironis* Kôno, 1930

Check list and systematic notes

1. **Nanophyes formosensis** Kôno オオチビゾウムシ

Nanophyes formosensis Kôno, Ins. Mats. IV: 153, 1930 (Formosa, ♂)—Klima, Col. Cat. 135 Nanophyinae: 20, 1934 (Formosa).
Nanophyes formosanus Kôno, Ins. Mats. IV: 151, 1930 (in key).

Distribution: Kyushu, Okinawa, Ishigaki, Formosa.

Specimens examined: 1♀, Mt. Takakuma, Kagoshima Pref., 13. ix. 1953, H. Maebara leg.; 1♀, Yona, Okinawa, 16. viii. 1958, T. Hidaka leg.; 1♀, Kunigami, Okinawa, 20. v. 1961, O. Nakachi leg.; 1♂2♀, Mt. Omoto, Ishigaki, 14. x. 1963, S. Miyamoto leg.

2. **Nanophyes plumbeus** Motschulsky オオクロチビゾウムシ

Nanophyes plumbeus Motschulsky, Bull. Soc. Nat. Moscou 2: 444, 1866 (Inde)—Bovie, Gen. Ins. Nanophyinae: 7, f. 12, 1909 (Inde)—Kôno, Ins. Mats., IV: 151, 154, 1930 (Formosa)—Klima, Col. Cat. 135 Nanophyinae: 21, 1934 (Indien, Formosa)—Morimoto, Kontyû, 26: 156, 1958 (Amami-Ôshima)—Morimoto, Bull. Fac, Agr. Kyushu Univ. 19: 180, 1962 (Amami-Ôshima, Formosa, India).

Distribution: Amami-Ôshima, Formosa, India.

Specimens examined: 1♂, Formosa; 5♀, Amami-Ôshima, 19–20. vii. 1955, T. Shirôzu & K. Matsuda leg.

3. **Nanophyes dimorphus** Morimoto リュウキュウチビゾウムシ

Distribution: Kuchinoshima, Nakanoshima, Okinawa, Miyako, Ishigaki, Iriomote.

4. **Nanophyes albovittatus** Roelofs シロモンチビゾウムシ

Nanophyes albovittatus Roelofs, Ann. Soc. Ent. Belg. XVII: 173, 1874 (Japon)—Lewis, Cat. Col. Jap. Archip.: 23, 1879 (Japan)—Schönfeld, Cat. Col. Jap.: 149, 1887 (Japan)—Bovie, Gen. Ins. Nanophyinae: 4, 1909 (Japon)—Kôno, Ins. Mats. IV:

151, 152, 1930 (Japan)—Klima, Col. Cat. 135 Nanophyinae: 3, 1934 (Japan)—Morimoto, Bull. Fac. Agr. Kyushu Univ.: 19: 180, 1962 (*albovittatus=testaceipes*; Honshu, Shikoku, Kyushu).

Nanophyes testaceipes Pic, Échange XXIII: 128, 1907 (Japon).

Distribution: Honshu, Shikoku, Kyushu.

Specimens examined: 21 specimens from Mie, Kôchi and Fukuoka Prefectures.

Note: There are two typical colour forms, reddish brown and blackish brown, and the intermediate forms combine them. Pic's *testaceipes* may be a blackish form of *albovittatus* Roelofs.

5. **Nonophyes proles** Heller ハスオビチビゾウムシ

Nanophyes (s. str.) *proles* Heller, Philipp. J. Sci. X, D: 25, 1915 (Luzon)—Klima, Cat. Col. 135 Nanophyinae: 21, 1934 (Philippinen)—Voss; Tijdschr. Ent. 83: 81, 1940 (Key; Java)—Voss, Decheniana, Beihefte 5: 99, 1958 (characters; China-Fukien).

Distribution: Okinawa, Ishigaki, Iriomote, China (Fukien), Philippines, Java.

Specimens examined: 31 specimens from Okinawa, Ishigaki and Iriomote collected by K. Yasumatsu, T. Hidaka, S. Miyamoto and the author.

6. **Nanophyes pubescens** Roelofs ハナコブチビゾウムシ

Nanophyes pubescens Roelofs, Ann. Soc. Ent. Belg. XVII: 172, 1874 (Japon)—Lewis, Cat. Col. Jap. Archip.: 23, 1879 (Japan)—Schönfeldt, Cat. Col. Jap.: 149, 1887 (Japan)—Bovie, Gen. Ins. Nanophyinae: 4, 1909 (Japon)—Kôno, Ins. Mats. IV: 152, 1930 (Japan)—Klima, Col. Cat. 135 Nanophyinae: 15, 1934 (Japan)—Morimoto, Enum. Ins. Mt. Hikosan II: 78, 1959 (Mt. Hiko)—Morimoto, Bull. Fac. Agr. Kyushu Univ. 19: 180, 1962 (Honshu, Shikoku, Kyushu).

Distribution: Honshu, Shikoku, Kyushu.

Specimens examined: 6 specimens from Osaka, Kôchi and Fukuoka Prefectures.

7. **Nanophyes suturalis** Pic ケシチビゾウムシ

Nanophyes suturalis Pic, Échange XXIII: 127, 1907 (Kioto)—Klima, Col. Cat. 135 Nanophyinae: 16, 1934 (Japan)—Morimoto, Bull. Fac. Agr. Kyushu Univ. 19: 180, 1962 (Honshu, Shikoku).

Distribution: Honshu, Shikoku.

Specimens examined: 44 specimens from Mie and Kôchi Prefectures.

8. **Nanophyes japonicus** Roelofs ヒシチビゾウムシ

Nanophyes japonicus Roelofs, Ann. Soc. Ent. Belg. XXIII. Compt. Rend.: liv., 1879 (Japon)—Roelofs, Ann. Soc. Ent. Belg. XXIII: 20, 1880 (redescription; Japon)—Kôno, Ins. Mats. IV: 151, 153, 1930 (Japan)—Klima, Col. Cat. 135, Nanophyinae: 9, 1934 (Japan)—Morimoto, Bull. Fac. Agr. Kyushu Univ. 19: 180, 1962 (*japonicus=testaceus*; Honshu, Kyushu)—Nakane, Icon. Ins. Jap. col. nat. ed. II: 358, pl. 179, f. 21, 1963 (Kyushu).

Nanophyes testaceus Roelofs, Deut. ent. Zschr. XXIII: 298, 1879 (Japon)—Schönfeldt,

Cat. Col. Jap.: 149, 1887 (Japan)—Kôno, Ins. Mats. IV: 151, 153, 1930 (Japan)—Klima, Col. Cat. 135 Nanophyinae: 9, 1934 (Japan).

Distribution: Honshu, Kyushu.

Specimens examined: Many specimens from Osaka and Fukuoka Prefectures.

Host plant: Larvae live in the petiole of *Trapa natans* in summer.

Note: *N. testaceus* is nothing but the other color form of *japonicus*.

9. **Nanophyes mihokoae** Morimoto ホソウスイロチビゾウムシ

Distribution: Shikoku, Kyushu.

10. **Nanophyes marmoratus** (Goeze) ホソチビゾウムシ

Curculio marmoratus Goeze, Ent. Beitr.: 413, 1777 (Europe).

Nanophyes marmoratus Nakane, Icon. Ins. Jap. col. nat. ed. II: 358, pl. 179, f. 22, 1963 (Honshu).

Distribution: Hokkaido, Honshu, Siberia, Europe.

Specimens examined: 18 specimens, Lake Tôfutsu, Hokkaido, 4. vii. 1958, H. Ichihashi leg.

Note: This species is very variable in coloration and more than 20 forms were named. Coloration of Japanese specimens is as follow: Head, rostrum and metathorax black; antennae, pronotum, elytra and legs reddish brown; abdomen dark reddish brown; lateral margin of pronotum, lateral margin of elytra and suture excepting the middle often fuscous; rarely the base of elytra fuscous.

11. **Nanophyes pallipes** Roelofs モンチビゾウムシ

Nanophyes pallipes Roelofs, Ann. Soc. ent. Belg. XVII: 173, 1874 (Japon)—Lewis, Cat. Col. Jap. Archip.: 23, 1879 (Japan)—Schönfeldt, Cat. Col. Jap.: 149, 1887 (Japan)—Bovie, Gen. Ins. Nanophyinae: 98, f. 10, 1909 (Japon)—Kôno, Ins. Mats. IV: 151, 1930 (Honshu, Kyushu)—Klima, Cat. Col. 135 Nanophyinae: 15, 1934 (Japan)—Kôno, Icon. Ins. Jap.: 1273, f. 3671, 1950 (Honshu, Shikoku, Kyushu)—Chûjô & Morimoto, Ins. Niigata, II: 6, 1957 (Niigata)—Morimoto, Bull. Fac. Agr. Kyushu Univ. 19: 180, 1962 (Honshu, Shikoku, Kyushu)—Nakane, Icon. Ins. Jap. col. nat. ed. II: 358, pl. 179, f. 23, 24, 1963 (Honshu).

Biology: *Apion* sp. Higuti, Collecting & Breeding 15: 28, 1953.

Distribution: Honshu, Shikoku, Kyushu, Kuchinoshima, Okinawa, Ishigaki.

Specimens examined: Very common species, many specimens from the above noted islands.

Host plant: Larvae are the gall-maker on the stem of *Rotala indica* in summer. Adults feed on various latifoliate trees in spring.

Note: This species is considerably variable in coloration, and the revisional study on the relation of *pallipes, usuironis, chibizo, kwangtsehensis* and *shaowuensis* is needed.

12. **Nanophyes usuironis** Kôno ウスイロチビゾウムシ

Nanophyes usuironis Kôno, Ins. Mats. IV: 152, 1930 (Honshu)—Klima, Col. Cat. 135, Nanophyinae: 18, 1934 (Japan)—Morimoto, Bull. Fac. Agr. Kyushu Univ.: 19,

180, 1962 (Honshu, Shikoku, Kyushu).

Distribution: Honshu, Shikoku, Kyushu.

Specimens examined: 15 specimens from Kôchi and Fukuoka Prefectures.

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摘　　要

日本産のゾウムシ類が容易に同定できるように，私は，これらの検索表と図解を準備中であつたが，今回行なわれた日米共同の琉球列島昆虫調査により，非常に沢山のゾウムシ類が採集され，私にその研究が委託されたので，琉球産のものを加えて，上記表題のもとに，研究の纏つた群から順次発表することとした．

チビゾウ亜科は，我国から1属8種が知られていたが，この論文で2新種を記載し，新たに2種を記録した．この類はいずれも水辺の草を強くスウイープすることと，冬期に水田周辺の藁とか枯草の束の中で越冬中の成虫を探すことにより採集することができる．

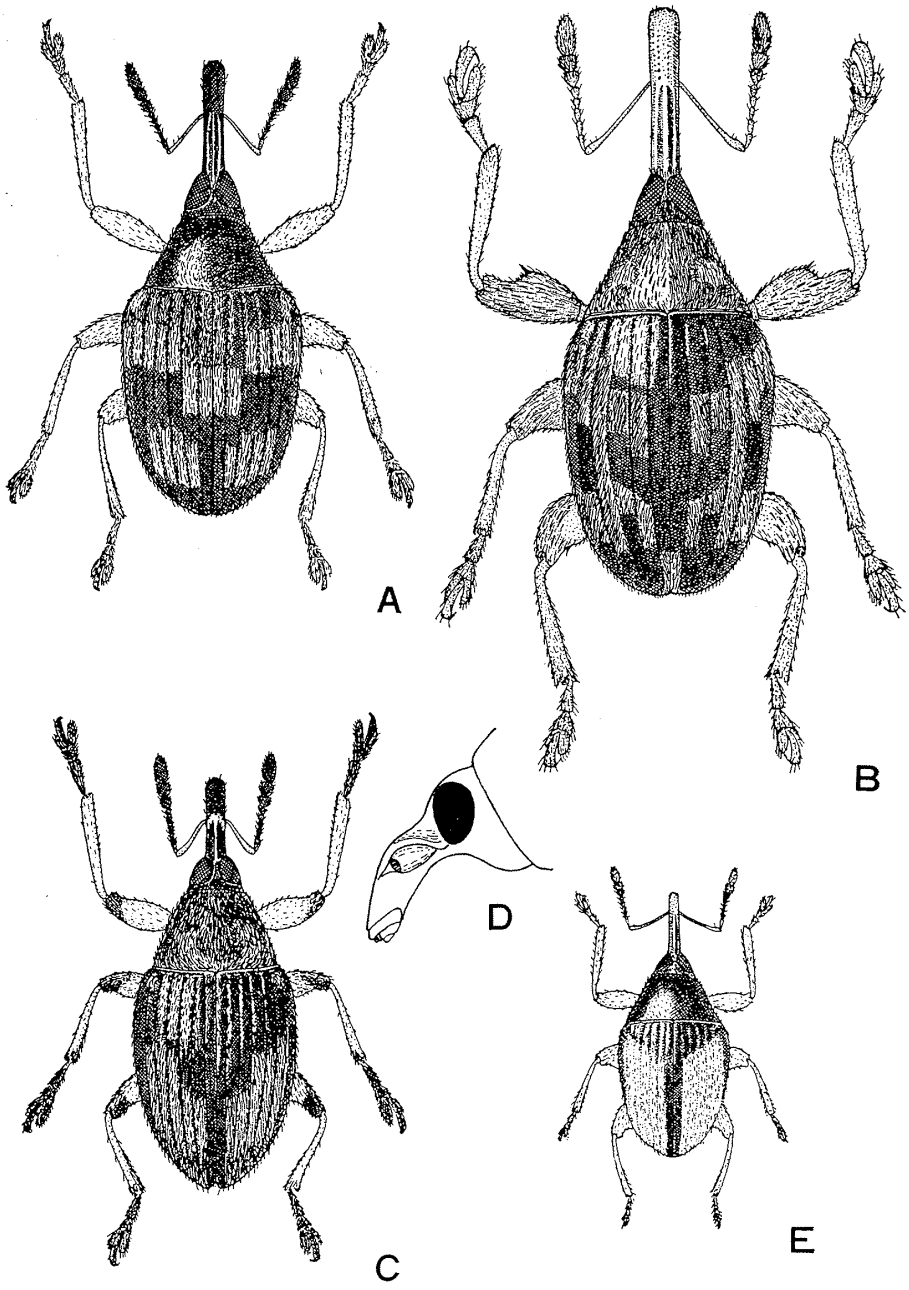
Explanation of Plates.

Plate 1.
A: *albovittatus*. B: *formosensis*. C: *pubescens*. D: rostrum of *pubescens*. E: *suturalis*.

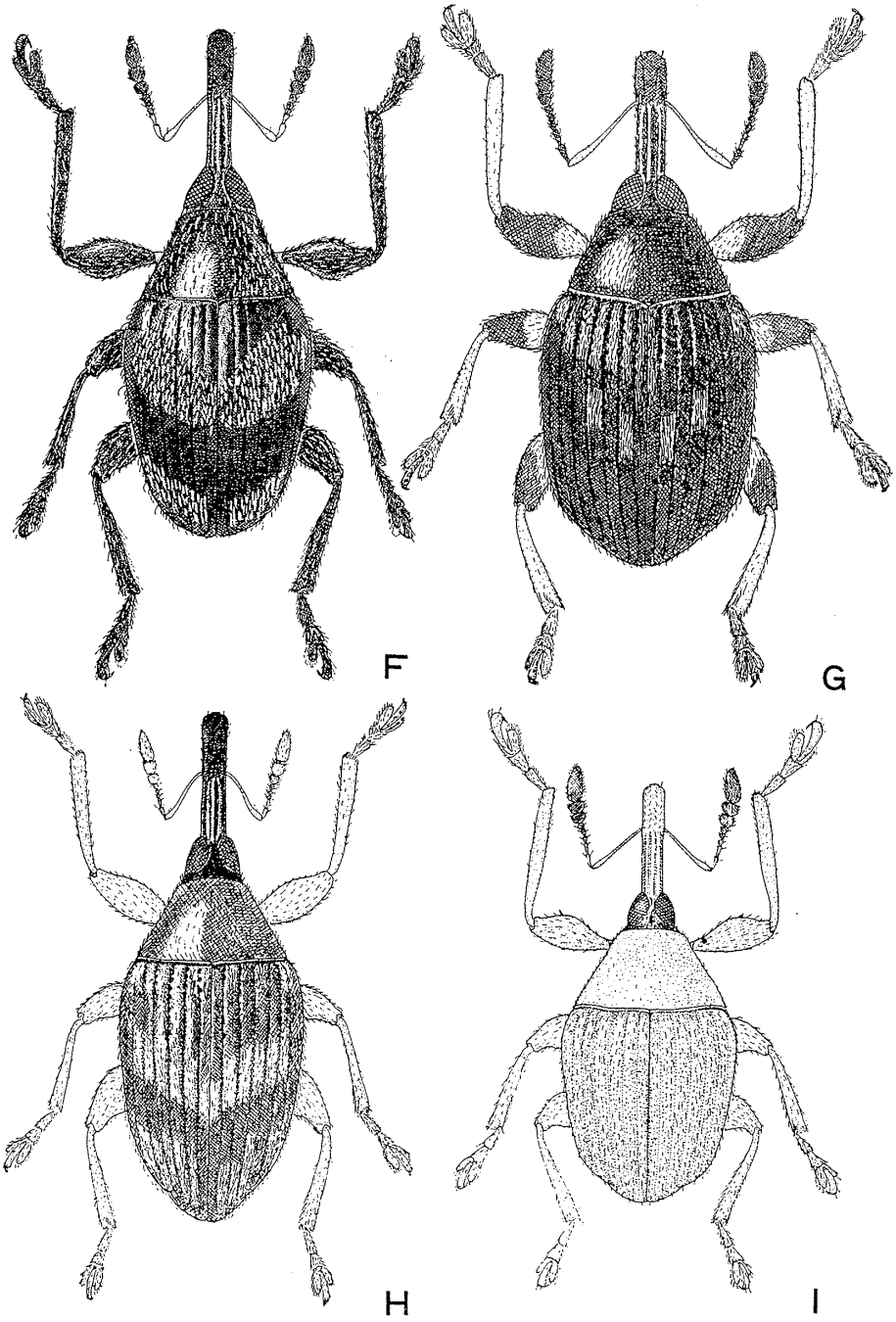
Plate 2.
F: *proles*. G: *japonicus*. H: *marmoratus*. I: *dimorphus*.

Plate 3.
J: *pallipes*. K: *usuironis*. L: *mihokoae*.

Plate 4 and 5. Penis and antenna.
M: *formosensis*. N: *dimorphus*. O: *pubescens*. P: *suturalis*. Q: *albovittatus*. R: *proles*. S: *usuironis*. T: *japonicus*. U: *mihokoae*. V: *pallipes*. W: *marmoratus*.



Morimoto—Curculionid-beetles from Japan and the Ryukyus.



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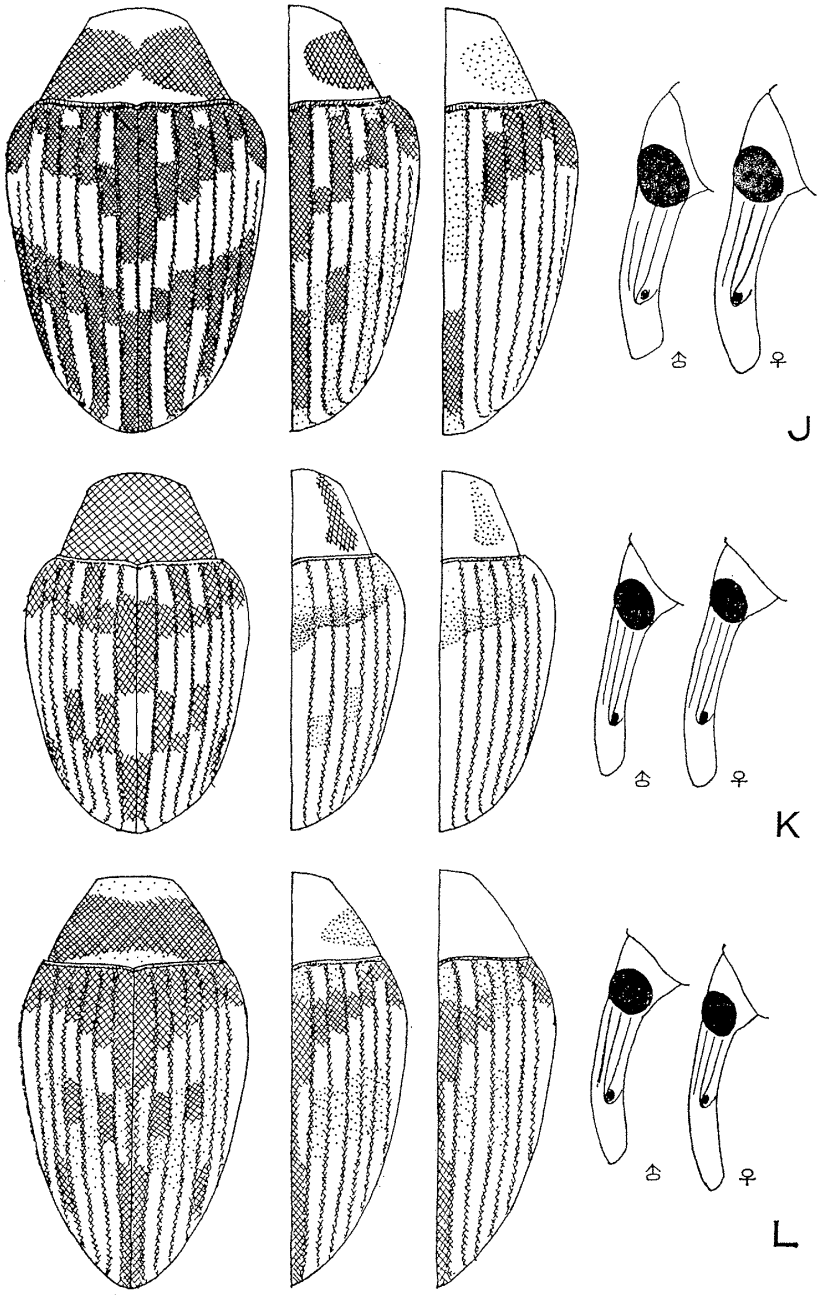

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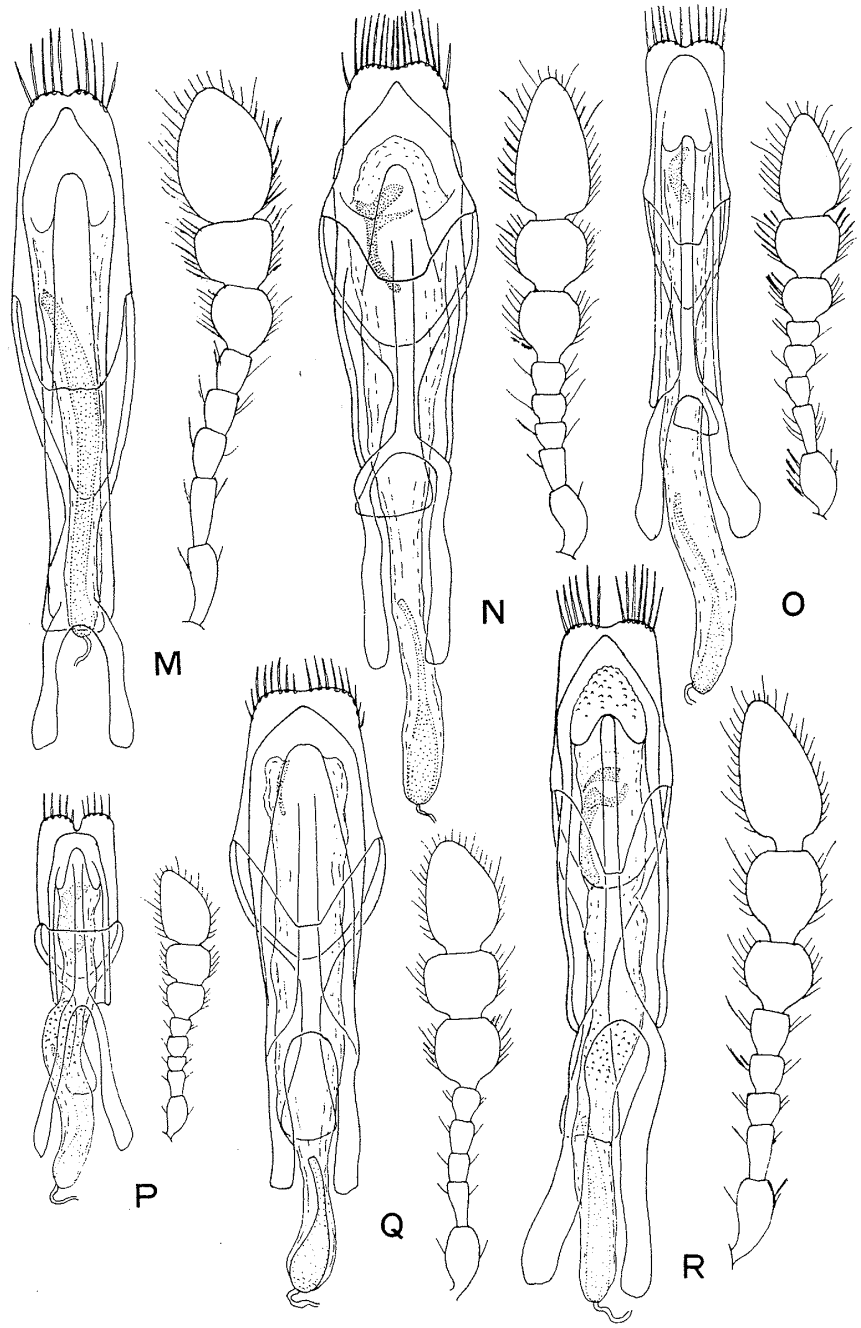

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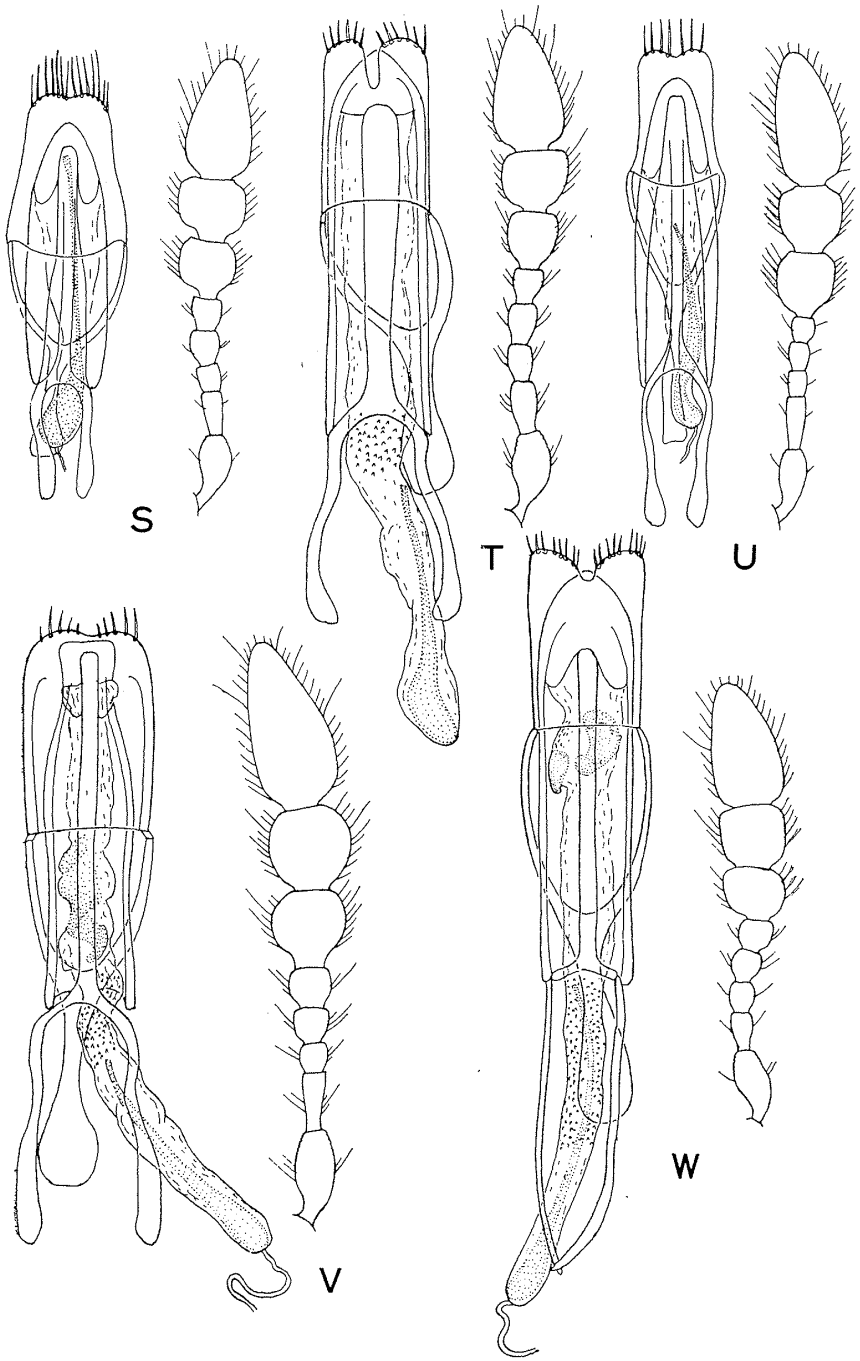

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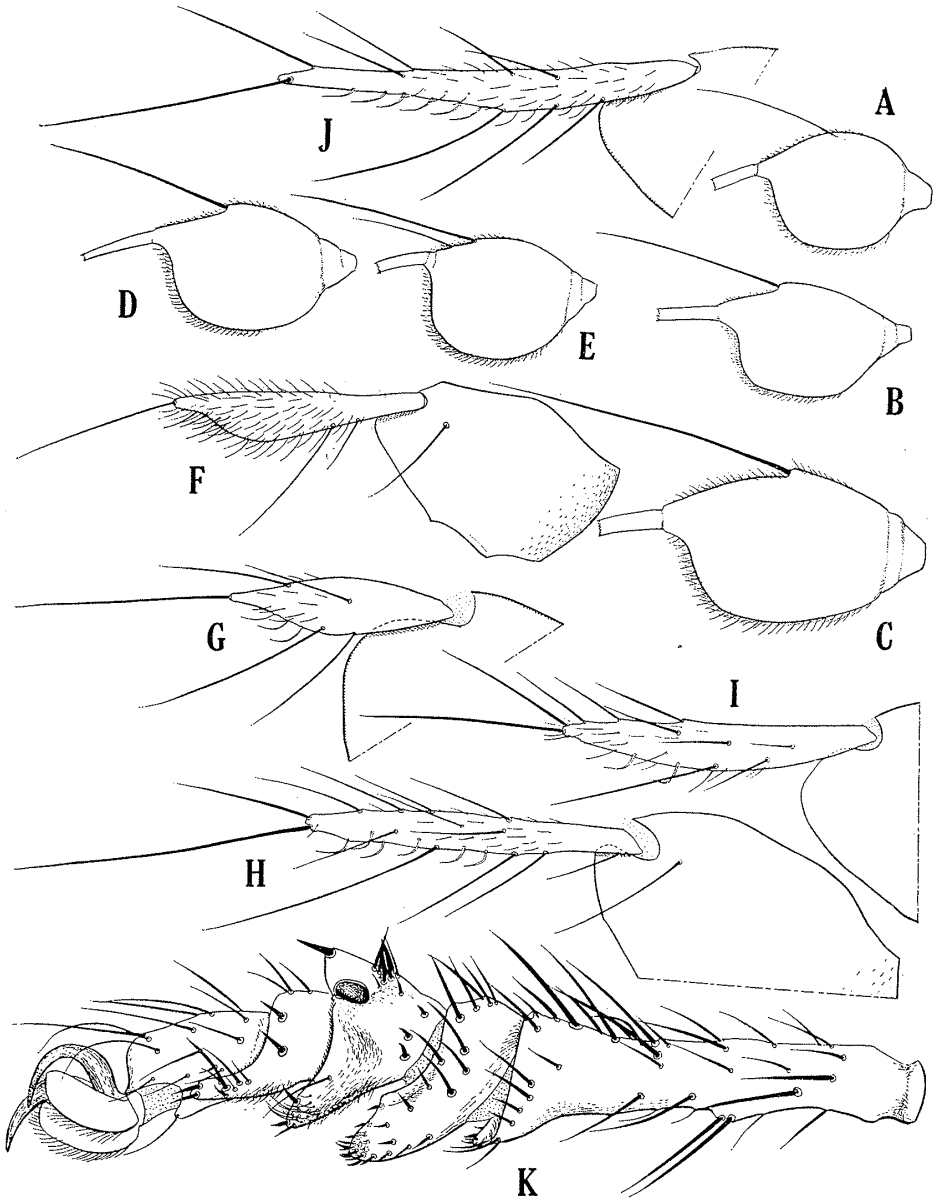

Saigusa — Taxonomic studies of Empididae from the Ryukyus.