

Elateridae of Is. Yakushima

“The Snappers of Island (I)”

By

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In the present paper, I wish to report the results of the study on the fauna of the elaterid or snapping beetles in Is. Yakushima which lies Lat. 30° 14' N. to Lat. 30° 28' N., Long. 130° 23' E. to Long. 130° 41' E., and about 62 kilometres to the south off the Cape of Sata, Ohsumi Pen., S. Kyushu, contains the main peak: Mt. Miyanoura-dake that stands at the central portion, attains the height of 1935.3 metres, and has no plain:—, and covers about 500 square kilometres in area.

Concerning the reserches of the snapping beetles from this island, the first work was done by Dr. Y. Miwa in 1929, in which he roported 8 species collected by Dr. S. Issiki, with the description of a new species (*Melanotus issikii* which belongs now to *M. correctus* Candèze as a subspecies indigenous to Is. Yakushima), and next, in 1933, he also recorded 3 species of the elaterids, besides he enumerated all the species stated above in his voluminous work “The Fauna of Elateridae in the Japanese Empire” in 1934. Moreover, there are found also some reports treating the Elaterid-fauna of this island by Dr. K. Takeuchi (1931), Late Dr. T. Esaki et al. (1938) and Messrs. T. Nakane et T. Kishii (1958), and now we know 37 species of snappers from Is. Yakushima as the results of studies mentioned above.

Through the kind courtesy of the Heian High School in Kyoto, a scientific expedition was carried out in 1957 from 31st of July to 14th of August at Yakushima Island (see Tab. I), under the management of Mr. Nobuzane Tamu, teacher in charge of the Biological Laboratory of the school. I had an opportunity to join this party and to collect insects, specially beetles, and I found finally 28 species of the elaterid-beetles which were representing about 200 examples and including a new species, a new subspecies, and 8 species recorded newly from this island. Moreover, in the middle of July of 1950, Prof. Takashi Shirôzu of Kyushu University captured a small number of the snappers from Is. Yakushima, and thereafter, in the fall of 1958, by the good offices of Prof. T. Shirôzu and Mr. Hitoo Ôhira of Aichi Gakugei University, I had a chance to study and was requested to identify these elaterid-beetles representing 10 species, of which 2 were new to the science and 3 were recorded newly to the fauna of Is. Yakushima.

This study brings together all of the knowledge of the Elateridae from Is. Yakushima mentioned above. As the results of this reserching, 13 subfamilies and 50 species of the snapping beetles are found in this island, and among them, as shown in the following description and in the table (Tab. II), 8 species or subspecies and 2 aberrant forms are endemic, 23 species have been known from Japan only, 25 take this island as the southmost habitat, and only one (*Mela-*

notus loochooensis Miwa from Is. Okinawa) as the northmost. Therefore, when we see the elaterid-beetles distributing in Is. Yakushima, we can clearly perceive that the fauna has the close affinity to Japan proper. But it is a fact that some peculiar modification about the members from this island has occurred as compared with the latter, though both of them are included in the same zoogeographical region.

The collection including the type specimens of new forms is preserved in the Biological Laboratory of the Heian High School, the Entomological Laboratory of Kyushu University, and also in T. Kishii's collection.

Before proceeding further, I wish to express my cordial thanks to Messrs. Ryôga Kondô, president of the Heian High School and Ryôtetsu Satouchi, assist. president of the school, Prof. T. Shirôzu of Kyushu University, Messrs. N. Tamu, Keiichi Tsukamoto and Sôji Inoué of the Heian High School, and H. Ôhira of Aichi Gakugei University for their kindness especially in placing the valuable collection at my disposal, and to Dr. M. Tokunaga, Profs. M. Sasakawa and T. Nakane of the Saikyô University, and Dr. K. Takeuchi in Yamashina, Kyoto for the courteous help given during the course of my study in various ways. And I wish also to acknowledge my indebtedness to the members of the Biological Club of the Heian High School for their many useful helps.

Some illustrations for this paper were prepared by Mr. H. Ôhira. (Pl. I, figs. 4, 5, 17-21, and Pl. III, fig. 11).

The Elaterid-Fauna of Yakushima Island

I. Subfamily AGRYPNINAE

1. *Compsolacon mäklini* Candèze (Pl. III, fig. 1) "Oh-sabi-kometsuki"

Adelocera mäklini Candèze, Elat. nouv., I (Mém. Acad. Belg.), p. 6 (1865) (Japan).

Alaotypus mäklini Nskane et Kishii, Coloured Illustr., Ins. Japan (Coleopt.), Enl. Rev. Ed. (Pub. Hoikusha), p. 207 (1955) (Japan).

Compsolacon mäklini Van Zwaluwenburg, Ins. Micronesia, XVI (1), pp. 4 & 10 (1957) (Bonin Is.: Chichi-jima).

New to the fauna of Is. Yakushima. The individual examined has a conspicuously voluminous and large body compared with the specimens from Japan proper (Yakushima's example: 21.2 × 6.5 mm., examples from Japan proper: 15-18 × 4.5-5.5 mm.), but in the other body characteristics the former is after all determined as *mäklini* of Candèze. It is, by some possibility, able to be considered as a forma or subspecies peculiar to Is. Yakushima, though, I think, the example is too few to be settled.

Specimen examined: 1♀, Sapling Plantation of Miyanoura Forestry Office, Aug. 1, 1957, T. Kishii leg.

2. *Agrypnus binodulus* Motschulsky "Sabi-kikori"

Lacon binodulus Motschulsky, Etud. Ent., IX, p. 8 (1860) (Japan).

Agrypnus binodulus Ôhira, New Ent., III (2-3), p. 4 (1954).

It has been hitherto reported from this island by Esaki et al. (1938) and Nakane et Kishii (1958).

Specimens examined: 2♀, Ambô, Aug. 5, 1957, K. Katô and T. Kishii leg.; 1♀, Issô

Table I

Reserching area in the expedition of the
Heian High School at Is. Yakushima



- | | | | | |
|---|------------------|-----------------|----------------------|---------|
| 1. Nagata | 2. Issô | 3. Miyanoura | 5. Kujukawa | 6. Ambô |
| 4. Sapling Station of Miyanoura Forestry Office | 7. Onoaida | | | |
| 8. Hirauchi | 9. Yudomari | 10. Kurio | 11. Kosugidani Vall. | |
| 12. Nagata Cape | 13. Nagata River | 14. Issô Vall. | 15. Miyanoura River | |
| 16. Shiratani Vall. | 17. Ambô River | 18. Hana-no-egô | | |
| 19. Mt. Miyanoura | 20. Mt. Nagata | 21. Mt. Kuromi | | |

Vall., Aug. 14, 1957, T. Kishii leg.

3. *Sabikikorius fuliginosus* Candèze "Hoso-sabi-kikori"

Lacon fuliginosus Candèze, Elat. nouv., I (Mém. Acad. Belg.), p. 10 (1865) (Japan).

Agrypnus fuliginosus Ôhira, New Ent., III (2~3), p. 4 (1954).

Agrypnus (Sabikikorius) fuliginosus Nakane et Kishii, Bull. Osaka Mun. Mus. Nat. Hist., (2) Coleopt. (Elat.), p. 3 (1955).

Sabikikorius fuliginosus Kishii, AKITU, VI (4), p. 84 (1957) (Nachi Sea Shore).

This species has been hitherto informed from Is. Yakushima by Miwa (1929, 1934), Takeuchi (1931), Esaki et al. (1938), and Nakane et Kishii (1958).

4. *Colaulon (Cryptolacon) miyamotoi tsukamotoi* Kishii "Hamabe-hime-sabi-kikori"

Cryptolacon miyamotoi tsukamotoi Kishii, AKITU, V (1), pp. 17 & 18 (1956) (Maritime provinces of S. W. Honshu and Kyushu).

Colaulon (Cryptolacon) miyamotoi tsukamotoi Kishii, AKITU, VI (3), p. 71 (1957) (Is. Sado).

This subspecies has been hitherto reported from this island by Kishii (1956) and Nakane et Kishii (1958). On the Pacific coast the northmost habitat of this subspecies is Wakayama Prefecture, but it has been found recently from Chiba Prefecture (2 exs., Tomiura, Chiba Pref., Oct. 9, 1957, K. Baba leg.; lex., ditto, May 13, 1958, K. Baba leg.). I am awfully grateful for Dr. K. Baba sending me this valuable samples.

Specimens examined: 1 ex., Issô Vall., Aug. 1, 1957, K. Tsukamoto leg.; 3 exs., ditto, Aug. 14, 1957, T. Kishii leg. All the specimens are captured by the beating of a frutex.

5. *Alaus berus* Candèze "Ubatama-kometsuki"

Alaus berus Candèze, Elat. nouv., I (Mém. Acad. Belg.), p. 15 (1864) (Nagasaki).

It has been already reported from this island by Nakane et Kishii (1958).

Specimens examined: 1♀, Nagata, Aug. 3, 1957, T. Kishii leg.; 1♀, Ambô, Aug. 5, 1957, T. Kishii leg.; 3♀, Yudomari, Aug. 14, 1957, T. Kishii et T. Arai leg.

6. *Alaus putridus pini* Lewis "Futamon-ubutama-kometsuki"

Alaus pini Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 30 (1894) (Nagasaki, Kumamoto, Konosé and Hagi).

Alaus putridus Miwa (nec. Candèze, 1857), Mushi, VI (1), p. 29 (1933) (Tsushima).

Alaus putridus pini Nakane et Kishii, Coloured Illustr. Ins. Japan (Coleopt.) (Pub. Hoikusha), p. 15, Pl. 5, fig. 28 (1954) (Wakayama).

This subspecies has been so far reported from Is. Yakushima by Nakane et Kishii (1958).

Specimen examined: 1♀, Miyanoura, Aug. 14, 1955, K. Iwakawa leg.

II. Subfamily OXYNOPTERINAE

7. *Pectocera fortunei* Candèze (Pl. I, figs. 13~17) "Hige-kometsuki"

Pectocera fortunei Candèze, Mém. Soc. Sc. Liège, (2) V, p. 6 (1873) (China: Chusan and Japan: Hiogo).

This species is new to the fauna of this island. In the general outline, the individual from this island somewhat differs from the specimens from Japan proper in the structures as follows:—

1. The apical joint of each palpus different in shape (Pl. I, figs. 15, 16).
2. Antennal segment 3rd~9th rather robust and shorter (Pl. I, figs. 13, 14).

3. Pronotal punctation sparser, more minute; the interstices among punctures not shagreened, more or less shiny.
4. A pair of foveae on pronotum presenting transversely deep and large distinctly.
5. Scutellum strongly convex above anteriorly.
6. Body slender, much smaller (23×6 mm.).

Perhaps, the specimen from Is. Yakushima may be able to be asserted as a forma or sub-species endemic to this island, but, I think, for the conclusion the sample is too scant.

Specimen examined: 1♀, Ambô, July 15, 1950, T. Shirôzu leg.

III. Subfamily CTENICERINAE

8. *Corymbitodes gratus* Lewis "Dôgane-hirata-kometsuki"
Corymbites gratus Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 262 (1894) (Ichiuchi, Chiuzenji, Miyanoshita and Junsai).
Corymbites (Metactenicerus) gratus Miwa, Gov. Res. Inst. Formosa, Dept. Agr., Rep. 65, p. 124, Pl. VI, fig. 12 (1934) (Teshio, Sapporo, Nopporo, Junsai, Mt. Takao, Mukôgaoka, Subashiri, Mt. Tsurugi and Is. Yakushima).
Ctenicera (Corymbites) grata Fleutiaux, Arkiv. Zool., III A (18), p. 14 (1942).
Ctenicera (Metactenicerus) grata Ishihara *et al.*, Shikoku Ent. Soc., III, p. 75 (1953) (Omogo Vall. and Mt. Ishizuchi).
Actenicerus (Metactenicerus) gratus Nakane *et* Kishii, Sci. Rep. Ozegahara Moor, p. 731 (1954) (Oze).
Corymbitodes gratus Kishii, AKITU, IV (1), p. 21, fig. 9 (1955).
 This species has been already reported from this island by Miwa (1929, 1934), Takeuchi (1931), and Nakane *et* Kishii (1958).
9. *Malloea yaku* Nakane *et* Kishii (Pl. I, fig. 12) "Yaku-shimofuri-kometsuki"
Actenicerus yaku Nakane *et* Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.) II (5), p. 34, Pl. I, figs. 6, 11 (1958) (Is. Yakushima).
 This species is indigenous to this island only, and up to date the report of the collecting is only an original description by male example. Although, I fortunately could examine a female specimen through the expedition of the Heian High School. As the result, female differs from male in the structures as follows:—
 1. Body a little longer, relatively voluminous (19.0×4.8 mm.).
 2. Antennae (Pl. I, fig. 12) surely failing to attain to tips of prothoracic rear angles by one apical joint.
 3. Each antennal joint conspicuously different as compared with male in shape.
 4. Pronotal lateral sides subparallel to each other in the most range.
 5. Pronotal punctation sparser.
 Specimens examined: a female allotype and 1♂, Mt. Miyanoura, Aug. 8, 1957, S. Nagai leg.
- 9'. *Malloea yaku* ab. form. *koyamai* Nakane *et* Kishii
Actenicerus yaku var. *koyamai* Nakane *et* Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.), II (5), p. 35 (1958) (Is. Yakushima).
 This forma is also endemic to this island.

Specimen examined: 1♂, Mt. Miyanoura, Aug. 8, 1957, S. Nagai leg.

10. *Neopristilophus serrifer* Candèze "Akahige-hirata-kometsuki"

Corymbites serrifer Candèze, Mém. Soc. Sc. Liège, (2) V, p. 25 (1873) (Japan).

Corymbites (Neopristilophus) serrifer Miwa, Gov. Res. Inst. Formosa, Dept. Agr., Rep. 65, p. 118, Pl. VI, fig. 3 (1934) (Nikko, Tokyo, Minobu, Suzaka, Koyadaira and Konose).

Neopristilophus serrifer Nakane et Kishii, Coloured Illustr., Ins. Japan (Colept.), Enl. Rev. Ed. (Pub. Hoikusha), p. 209, fig. 1467 (1955) (Ohsugidani Vall.).

This species is a new member to the fauna of this island. The example is somewhat different from the specimens in Japan proper, to wit the former has a comparatively longer prothorax than that of the latter.

Specimen examined: 1♀, Hirauchi, Aug. 11, 1957, T. Kishii leg.

11. *Metaricus viridus elongatus* Nakane et Kishii "Midori-hime-kometsuki"

Sericus viridus Miwa (nec. Lewis, 1894), Trans. Nat. Hist. Soc. Formosa, XIX (103), p. 351 (1929) (Is. Yakushima).

Metaricus viridus elongatus Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.), II (5), p. 36 (1958) (Is. Yakushima).

This species is originally described from Is. Yakushima, and endemic. Hitherto has been reported by Miwa (1929), Takeuchi (1931), and Nakane et Kishii (1958).

IV. Subfamily NEGASTRIINAE

12. *Negastrius humeralis* Candèze (Pl. I, fig. 11, Pl. III, fig. 4) "Katamon-chibi-kometsuki"

Cryptohypnus humeralis Candèze, Mém. Soc. Sc. Liège, (2) V, p. 13 (1873) (Japan).

Crypnoideus humeralis Miwa, Gov. Res. Inst., Formosa, Dep. Agr., Rep. 65, p. 88, Pl. III, fig. 10 (1934) (Nagasaki).

Negastrius humerals Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.), II (5), p. 36 (1958) (Is. Yakushima).

This minute species has been already informed from this island by Nakane et Kishii (1958). In general, it has a distinct and well-defined orange-yellow maculation at humerus of each elytron (form. *typica*), but in some specimens it is very obscure and ill-defined plainly (form. *obscurus* nov.; specimens examined: 28 exs., Arashiyama and Kibune in Kyoto, Ohsugidani Vall. in Mié, and Mt. Ohdai-ga-hara in Nara, III~VII, 1948~'57), or entirely absent (form. *unicolorus* nov.; specimens examined: 5 exs., Arashiyama and Shūgakuin in Kyoto, Ohsugidani Vall., and Cape Shio-no-Misaki in Wakayama, IV~VIII, 1948~'57), and moreover very rarely having 2 maculations on each elytron (Pl. I, fig. 11) (form. *quadrimaculatus* nov.; specimen examined: 1 ex., Kibune Vall., Apr. 22, 1956, T. Kishii leg.).

Specimens examined: 1 ex., Hananoégô (alt. ca. 1600 m.), Aug. 8, 1957, T. Shyōji leg.; 10 exs., Miyanoura Sea Shore, Aug. 13 & 15, 1957, K. Katō et T. Kishii leg. Among them, 10 examples including that from Hananoégô are form. *typica*, and one example of the rest is form. *obscurus* nov.

13. *Negastrius albipilis* Candèze (Pl. III, fig. 3) "Shirake-chibi-kometsuki"

Cryptohypnus albipilis Candèze, Mém. Soc. Sc. Liège, (2) V, p. 12 (1873) (Japan).

Hypnoideus brevis Miwa, Ins. Mats., II (2), p. 107, f. 1 (1927) (Tamagawa).

Crypnooidus albipilis Miwa, Gov. Res. Inst., Formosa, Dep. Agr., Rep. 65, p. 89, Pl. III, fig. 11 (1934) (Nikaido and Osaka).

New to the fauna of this island. This species has been hitherto known from Honshu only, but it occurs also in Hokkaido and Shikoku:— specimens examined: 3exs., Lake Kuccharo, at the side, E. Hokkaido, Aug. 7, 1951, T. Kishii leg.; 2exs., river side of the Yoshino, Tokushima Pref., Shikoku, July 10, 1952, Y. Wada leg.

Specimens examined: ca. 50exs., Miyanoura Sea Shore, Aug. 13 & 15, 1957, T. Kishii and K. Katô leg.

Genus *Yukoana* new genus (Pl. II, figs. 1~10, 12~24, 26~29)

In the general outline, the present new genus is closely allied to *Quasimus* Gozis, 1886 (type species: *Cryptohypnus minutissimus* Germar, 1817 from Europe), but it may be easily separated from *Quasimus* by the combination of the peculiar shapes as following characteristics.

1. Body robust, distinctly large, not shorter than 2.5 mm., and generally about 3 or 3.5 mm. in length.
2. Antennae more or less stout, joint 2 always smaller and shorter conspicuously than 3 (Pl. II, figs. 1~6).
3. Scutellar excavation usually vanishing anteriorly or surely attaining to frontal margin of scutellum (Pl. II, figs. 20~24).
4. Prosternal sutures flattish, not foveate ahead.
5. Hind coxal plate not pointed outwards sharply at lateral apex (Pl. II, figs. 12~15).

Genotype: *Cryptohypnus ellipticus* Candèze, 1873.

Next 3 Japanese species, at least, are included in this new genus: genotype designated above, *Cryptohypnus carinicornis* Lewis, 1894, and *Yukoana tamui* sp. nov. described beneath. New generic name is based on name of my daughter who was born at December 17th, 1958, in Miyazu City, and is feminine.

14. *Yukoana elliptica* Candèze (Pl. II, figs. 1, 2, 11, 12, 20, 29) "Hoso-mame-kometsuki"
Cryptohypnus ellipticus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 14 (1873) (Japan).
Quasimus punctatus Miwa, Ins. Mats., II (2), p. 107, fig. 2 (♂) (1927) (Tamba).
Quasimus ellipticus Miwa, Gov. Res. Inst., Formosa, Dep. Agr., Rep. 65, p. 93, Pl. III, fig. 21 (1934) (Gifu, Kobe, Koyadaira, Hitoyoshi and Kirishima-Shinyu-Myoban).

This species has been already reported from Is. Yakushima by Nakane et Kishii (1958).

15. *Yukoana carinicornis* Lewis "Herimune-mame-kometsuki"
Cryptohypnus carinicornis Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 188 (1894) (Torii-toge, Miyanoshita and Subashiri).
Quasimus carinicornis Miwa, Mushi, VI (2), p. 70 (1933) (Is. Yakushima).

This species has been hitherto reported from this island by Miwa (1933).

16. *Yukoana tamui* new species (Pl. II, figs. 5, 6, 10, 13, 21, 26) "Nise-hosomame-kometsuki"
Male: 2.8×0.8 mm. Elliptic, subparallel-sided, widest behind elytral humeri, moderately convex above, shining. Wholly black except tips of mandibles, trochanters, both the ends of femur, majority of tibiae, tarsi more or less brownish. Pubescence fulvous to white, relatively long, dense, recumbent, on under surface rather finer, more regularly clothed than on surface above.

Head very broad, convex, declivous suddenly antero-downwards, with a simple, large concave between eyes, rather deeply excavated along frontal margin; punctation single, dense, somewhat irregular in size, being progressively denser, more minute posteriorly, interstices among punctures smooth; frontal margin well-definedly carinate, conspicuously, rather transversely projecting downwards; ends of frontal margin before eyes moderate, not divided into a small area limited by carination. Epistome narrow in middle, but explicitly broad, concave slightly and sculptured scabrously by minute granulation near each antennal sulcus. Labrum rugose, spindle-formed, a little convex ahead. Eyes large, but hardly projected outwards, each ocellus convex manifestly.

Antenna (Pl. II, fig. 6) elongate, not slender, distinctly exceeding tip of hind prothoracic corner by 2 apical joints or more; joints 4-10 ill-serrate, becoming long and long gradually, more slender apically; joint 1 robust, plainly voluminous; 2 smallest, cylindrical, 1.5 times as long as wide or more; 3 expanded feebly towards apex, but similar generally to 2 in shape, 1.5 times as long as 2 or less; 4 triangular, slightly longer and visibly wider than 3; 11 elongately rhombic, about 1.3 times as long as 10.

Pronotum distinctly wider than length, simple convex above; sides parallel behind middle, thence gradually narrowing roundly forewards; punctation at summit similar to that on head in size and density, being dense and dense gradually laterally, more minute posteriorly; each hind corner divergent slightly, tip sharpened, having an acute, very distinct, well-defined carination, which begins from tip, runs anteriorly, fore end of the carina scarcely attains to pronotal frontal margin.

Scutellum (Pl. II, fig. 21) broad, rather tongue-formed, flat entirely, with a pair of very conspicuous, deep, outcurved slightly, not so strait grooves along lateral margins, otherwise weakly excavated medianly, anterior ends of the grooves not confluent mutually, but the posterior converged at last to each other to scutellar hind apex; punctation larger, sparser than that on pronotal disc, but at anterior half smooth perfectly; anterior edge a little emarginate; hind apex obtuse.

Elytra at base a trifle wider than across between tips of pronotal rear angles, rather subparallel-sided but in a sense spread weakly near middle, then gently conjointly narrowing roundly from posterior 2-5ths to each apex, which is obtusely pointed, rather transverse; punctation more minute, slightly denser, finer than that on pronotal disc.

Prosternum distinctly broader than propleuron in median size, about 1.3 times as wide as long or more, broadly convex below, having a clearly deep, rugose, wide, transverse concavity along anterior rim, which is declivous obliquely downwards, ill-developed, straight transversely; lateral sides expanded outwards; mucro straightly projecting rearward; punctation ocellate faintly, denser, more irregular in size than that on pronotal disc; hind border of the frontal excavation impunctate narrowly. Each prosternal suture very broad, triple, plane comparatively, subparallel or slightly narrowing posteriorly; each area among these 3 carinae shagreened or in a sense rather rugosely sculptured; at anterior part slightly concave. Propleuron narrow; punctation ocellate, very denser than that on prosternal disc, partly reticulate mutually, each lateral border shagreened, posterior area impunctate but finely sculptured by minute creases. Metasternum punctate finely, more minutely, sparsely than that on prosternal disc, having 2 carinae behind each mesocoxa (Pl. II, fig. 10), the carinae always perfectly failing to conjoin one another at

posterior ends; moreover having 3rd carina, extending from mesocoxal-cavity to lateral side, thence curving backwards, the end at last confluent obviously to lateral side near middle. Hind coxal plate (Pl. II, fig. 13) rather moderate.

Leg not slender, 4th tarsal joint dilated, conspicuous relatively.

Male genitalia as figured (Pl. II, fig. 26).

Female: 3.0×0.8 mm. General outline similar to male, but antenna (Pl. II, fig. 5) usually short, scarcely exceeding tip of each pronotal hind angle by one joint or less, each joint gloss comparatively; punctation on whole surface more or less sparser, more minute.

Described from a holotype, male, Kosugidani Vall., Aug. 7, 1957, T. Arai leg.; an allotype, female, Hananoégô, Aug. 8, 1957, K. Matsumoto leg.; a paratype, female, Mt. Miyanoura, ditto, K. Tsukamoto leg.; a paratype, female, Kosugidani Vall., July 17, 1950, T. Shirôzu leg.; a paratype?, male, Mt. Miyanoura, Aug. 8, 1957, T. Arai leg. Holo-, allo- and a paratype are in my collection, a paratype in coll. Biol. Lab., Heian High School, and a paratype in coll. Ent. Lab., Kyushu University.

This new species is intimately allied to *Y. elliptica*, but is easily separable from it by the different shape of each antennal joint (Pl. II, figs. 1, 2, 5, 6), denser punctation on disc of pronotum, prosternum, and propleuron, form and surface appearance of scutellum (Pl. II, figs. 20, 21), shapes of mesosternal carinae behind mesocoxae (Pl. II, figs. 10, 11), structure of male genitalia (Pl. II, figs. 26, 29) etc. New name is dedicated to Mr. N. Tamu, manager of the expedition.

Subgenus *Miquasus* new subgenus (Pl. II, figs. 19, 25) (Genus *Quasimus* Gozis)

The present new subgenus of *Quasimus* is intimately allied to subgenus *Quasimus* s. str., but the former may be divided from the latter by the combination of the unique characteristics, and as follows:—

1. Punctation on whole body surface manifestly minute, sparser, especially on surface above.
2. Scutellar disc always completely simple, neither excavated nor carinate (Pl. II, fig. 19).

Subgenotype: *Cryptohypnus luteipes* Candèze, 1873.

New name is an anagrammatic one of *Quasimus* and is masculine.

17. *Quasimus (Miquasus) luteipes* Candèze (Pl. II, figs. 19, 25) "Kiashi-mame-kometsuki"
Cryptohypnus luteipes Candèze, Mém. Soc. Sc. Liège, (2) V, p. 15 (1873) (Japan).

Quasimus luteipes Miwa, Trans. Nat. Hist. Soc. Formosa, XX (106), p. 4 (1930) (Formosa).

This minute species is a new member to the fauna of Is. Yakushima. In the original description, the elytra of this species are dark brown, though the individual from Yakushima and 2 examples from Kyushu district in my collection are wholly black, but other body characteristics of the latter are generally combined together to the former. I will name this form here ab. form. *nigripennis* nov.

Specimens examined: lex., Hirauchi, Is. Yakushima, Aug. 9, 1957, T. Kishii leg.; lex., Mt. Hikosan, Kyushu, Aug. 2, 1953, M. Uéda leg.; lex., Mt. Sobosan, Kyushu, July 26, 1932, T. Shirôzu leg. I am very much grateful for Mr. T. Horio sending me the second example.

Quasimus (s. str.) *japonicus* new species (Pl. II, figs. 4, 8, 15, 17, 23, 28)

"Nihon-mame-kometsuki"

Male: 2.3~1.8×0.6~0.5 mm., female: 2.6~2.0×0.8~0.6 mm. Elongately ovate, convex

above, visibly shiny, widest at humeri of elytra, then roundly narrowing rather suddenly forwards, gradually converging backwards. Whole surface pitchy black with somewhat brownish mouth parts partly, all the legs exclusive of trochanters and tarsi more or less paler. Pubescence relatively long, dense, very softy, subrecumbent, silver white.

Head very large, broad, convex simply, inclined obliquely, perpendicular frontally; punctation very fine, single, not so sparse, regular in size, clothed similarly on whole surface, interstices among punctures smooth explicitly; frontal carina extending plainly downwards, roundly in middle, thence somewhat continuing sinuately to eye; before each eye present a small elongate triangular area (Pl. II, fig. 17) limited by well-defined carina. Eyes comparatively large, not so protruding outwards; each ocellus very manifestly projecting. Epistome distinctly broad, but somewhat narrow in middle, a little concave rather shallowly; surface scabrous shagreenedly by minute granulations. Labrum small, convex weakly, spindle-formed, sculptured as that on epistome. Palpus rather large, apical joint short hatchet-formed.

Antenna (Pl. II, fig. 4) slender, short otherwise failing to attain to tip of each rear angle of prothorax by one joint; joints 4~10 somewhat voluminous, subtriangular or in a sense subglobular; joint 1 longest, very stout, voluminous; 2 cylindrical simply, 2 times as long as wide or less; 3 smallest, alike in form to 2, but smaller feebly than 2; 4 about 1.5 times as wide as 3 and a little longer; 11 rhombic, 1.7 times as long as 10.

Pronotum wider clearly than length medianly, convex simply; sides subparallel behind middle, gradually narrowing roundly ahead from middle; rear corners visibly divergent outwards, each apex projecting backwards, not obtuse, having a conspicuous, well-defined carination which diverges slightly from prothoracic side, then almost extends slightly forwards, anterior end of the carina attaining surely to pronotal fore edge; punctation very fine, single, a little sparser than that on head, being progressively more minute, denser posteriorly, along anterior rim scabrous narrowly by large punctures, interstices among punctures explicitly smooth.

Scutellum (Pl. II, fig. 23) in a sight rather broad, but the largest length as well as width, flattish, having a big distinct subelliptic excavation, of which margins are feebly carinate, well-defined anteriorly as well as laterally, but posteriorly confluent entirely to apex of scutellum; punctation more minute, denser distinctly than that on pronotal disc.

Elytra at base subequal to distance across tips of prothoracic hind corners, broadly expanded to posterior 1-5th hardly, thence narrowing slight-roundly rearwards to about 4-5ths, near apices suddenly converging to each apex; punctation generally similar to that on pronotal disc, denser gradually postero-laterally; interstices among punctures smooth.

Prosternum broad, convex distinctly, lateral sides spreading roundly outwards; punctation larger surely, denser than that on pronotal disc; a longitudinal impunctate area present narrowly in median part; along frontal rim sculptured very scabrously by large punctures and minute creases. Mucro wide, straightly extending backwards from between procoxae. Prosternal suture broad clearly, outcurved, triple, carinate well-definedly at sides, concave faintly, in special at fore end grooved rather strongly, shagreened plainly. Propleuron visibly straiter than prosternum medianly; punctation very finer, sparser than that on prosternum at anterior half, impunctate perfectly and smooth antero-inner part, shagreened manifestly by minute creases at postero-outer part. Metasternum punctate more sparsely, finely than that on prosternum, with 2 visible

carinae (Pl. II, fig. 8) behind each mesocoxal cavity, these carinae at last not confluent mutually at each posterior end, moreover another carination beginning from outside of each mesocoxal cavity, thence running along lateral margin of metasternum, approaching gradually and converging finally to each other entirely near hind corner of metasternum. Metacoxal plates (Pl. II, fig. 15). Ventral segment punctate densely, granulately a little.

Leg moderate, 4th tarsal joint expanded moderately.

Male genitalia as figured (Pl. II, fig. 28).

Described a male holotype, a female allotype, and 30 isotypes, Serio Vall. near Kyoto, May 31, 1958, T. Kishii leg.; 1 paratype, Hanase Pass, Kyoto, July 20, 1956, T. Kishii leg.; 14 paratypes, Azoke Vall. near Serio Vall., May 20, 1956, T. Kishii leg.; 1 paratype, Sugi Pass, Kyoto, June 10, 1956, T. Kishii leg.; 1 paratype, Yase Vall., Kyoto, June 10, 1951, H. Ishida leg.; 1 paratype, Ofuse, Kyoto, June 23, 1951, H. Ishida leg.; 1 paratype, Daihizan Vall., Kyoto, May 30, 1953, T. Kishii leg.; 1 paratype, Arashiyama, Kyoto, June 23, 1957, T. Kishii leg.; 5 paratypes, Ohsugidani Vall., Mié Pref., June 9, 1952, H. Ishida et T. Kishii leg.; 2 paratypes, Mt. Daisen, Tottori Pref., June 30, 1951, T. Kishii leg. All the types are in my collection.

In the general body appearances this new *Quasimus* is closely related with European species *Q. minutissimus* Germar, though *japonicus* may be separable from it by a little large body measurements, larger and denser punctation on whole surface, very conspicuous, usually large, triangular area before each eye, narrower and clearer excavation on scutellum, different shapes of metasternal carinae behind each mesocoxal cavity etc. (Pl. II, figs. 3, 4, 7, 8, 14~17, 23, 24, 27, 28).

18. *Quasimus* (s. str.) *japonicus yakuensis* new subspecies (Pl. II, figs. 9, 18, 22).

“Yaku-mame-kometsuki”

Present new subspecies may be easily divided from the typical subspecies described above in the combination of following characteristics.

1. Body a little smaller (1.8×0.5mm.)
2. Parallel-sided, not ovate.
3. Before each eye simple, having no triangular area (Pl. II, fig. 18).
4. Pronotal and elytral punctation larger, strongly punctate.
5. Scutellar excavation distinctly broader (Pl. II, fig. 22).
6. Scutellar punctation finer, sparser a little.
7. Propleuron clothed with denser, larger punctation, which occupies 3-4ths in area.
8. Metasternal carinae behind each mesocoxal cavity different in form (Pl. II, fig. 9).

Described from a male holotype and a male isotype, Yudomari, Is. Yakushima, Aug. 10, 1957, T. Kishii leg.

V. Subfamily CONODERINAE

19. *Aeoloderma agnata* Candèze “Madara-chibi-kometsuki”

Aeolus agnatus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 8 (1873) (Japan).

Heteroderes agnatus Candèze, Cat. Elat., p. 83 (1891) (Japan).

Monocrepidius agnatus Schwarz, Gen. Ins., XLVI, Elat., p. 100 (1906).

Conoderus agnatus Schenkling, in Junk's Col. Cat., 80, Elat. I, p. 109 (1925) (Japan).

Aeoloderma agnata Miwa, Trans. Nat. Hist. Soc. Formosa, XIX (103), pp. 341, 344 (1929)
(Is. Kuchinoérabu-shima).

Prodrasterius agnatus Matsumura, 6000 Illustr. Ins. Japan, 441, p. 188 (1931) (Japan).

This species has been hitherto informed from this island by Nakane et Kishii (1958).

Specimens examined: 13exs., Issô Vall., Aug. 14, 1957, N. Tamu, T. Kishii et K. Katô leg., collected by the beating.

Up to date this species has been not known from Hokkaido district, but resently I examined 2 individuals there: lex., Otaru, June 16, 1943; lex., Sapporo, June 5, 1954, the collector of both the examples is indistinct, of which pronotum except rear corners brownish and the 1st~5th intervals of elytra are usually black, I wish the form will be named here ab. form. *nigricollis* nov.

20. *Aeoloderma brachmana* Candèze "Tatesuji-chibi-kometsuki"

Aeolus brachmanus Candèze, Mon. II, pp. 283, 345 (1859) (Hindustan and Ceylon).

Aeolus pardus Candèze, Mon. II, p. 345, pl. 6, f. 34 (1859) (India).

Aeolus tessellatus Motschulsky, Bull. Nat. Moscow, p. 518 (1860).

Heteroderes multilineatus Candèze, Ann. Mus. Genova, p. 118 (1878) (Celebes).

Heteroderes brachmanus Candèze, Ann. Mus. Genova, p. 676 (1888) (Birma).

Heteroderes ancoralis Schwarz, Deutsche Ent. Zeit., 24 (1901).

Aeolus vittatus Matsumura, Mem. Soc. Ent. Belg., XVIII, p. 144 (1911) (Formosa).

Aeolus beccarii Fleutiaux (*nec.* Candèze, 1878), Philipp. Journ. Sc., p. 441 (1914) (Philippines).

Aeoloderma brachmana Fleutiaux, Encycl. Ent. Col., p. 34 (1929) (Indo-China).

This species has been reported by Nakane et Kishii (1958).

VI. Subfamily HEMICREPIDIINAE

21. *Hemicrepidius* (*Pseudathous*) *secessus* Candèze (Pl. I, fig. 21) "Kuro-tsuyahada-kometsuki"

Athous secessus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 23 (1873) (Hiogo).

Athous (s. str.) *secessus* Reitter, Best.-Tab. Col., LVI, pp. 37, 115 (nota 1) (1905).

Hemicrepidius (*Pseudathous*) *secessus* Baba et Ôhira, Kontyu, XXIV (1), p. 10 (1956) (Is. Sado).

Pseudathous secessus Nakane, Bull. Res. Sci., Nos. 46~47, p. 86 (1958) (Aomori).

This species has been already known from this island by Nakane et Kishii (1958). In general, the examples captured from Is. Yakushima have 2 types in body measurements, one is very large (16~20×5~6 mm.), plainly voluminous, and is usually collected about less than 800 m. above the sea-level (for instance at Kosugidani, Miyanoura sea shore etc.), and the other is very small 9~11×2.5~3 mm.), distinctly slender, and is always found only over 1600 m. in the height (for examples at Hananoégô or Mt. Miyanoura).

Specimens examined: 2exs., Kosugidani Vall., July 22~23, 1950, T. Shirôzu leg.; 1♀, ditto, Aug. 7, 1957, T. Shyôji leg.; 11 exs., Mt. Miyanoura, Aug. 8, 1957, S. Nagai leg.; lex. (prothorax only without legs), Miyanoura Sea Shore, from under the sandy ground, Aug. 13, 1957, T. Kishii leg.

22. *Hemicrepidius* (*Heterathous*) *dessertor* Candèze, ab. form. *virens* Candèze

"Hime-kuro-tsuya-hada-kometsuki"

Athous virens Candèze, Mém. Soc. Sc. Liège, (2) V, p. 24 (1873) (Hiogo).

Athous (Heterathous) virens Miwa, Gov. Res. Inst., Formosa, Dep. Agr., Rep. 65, p. 112, Pl. V, f. 10 (1934) (Chiuzenji, Wada-toge, Hakone, Kyoto, Mt. Daisen, Koyadaira, Kagoshima and Takachihonome).

Athous (Heterathous) dessertor Candèze, form. *virens* Nakane et Kishii, Coloured Illustr. Ins. Japan, (Col.), Enl. Rev. Ed. (Pub. Hoikusha), p. 73 (1955).

Hemicrepidius (Heterathous) dessertor Candèze, var. *virens* Kishii et Ôhira, AKITU, V (3), p. 75 (1956) (Niigata).

This form of *dessertor* has been already known from this island by Nakane et Kishii (1958).

22. *Hemicrepidius (Heterathous) dessertor* Candèze, ab. *rufoabdominalis* Nakae et Kishii
Hemicrepidius (Heterathous) dessertor Candèze, ab. *rufoabdominalis* Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.), II (5), p. 37 (1958) (Kurio: Is. Yakushima).
This form of *dessertor* is endemic to this island.

23. *Scutellathous comes yakuensis* Nakane et Kishii "Yaku-chyairo-tsuya-hada-kometsuki"
Scutellathous comes yakuensis Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.), II (5), p. 36, Pl. I, figs. 20, 22, 27 (1958) (Hananoégô: Is. Yakushima).

This subspecies of *comes* has been hitherto reported originally by Nakane et Kishii (1958) from this island.

Specimen examined: 1ex., Ambô~Kosugidani, Aug. 5, 1957, N. Tamu leg.

24. *Harminathous nakanei* Kishii "Futo-chya-tsuya-hada-kometsuki"
Harminathous nakanei Kishii, AKITU, IV (3), p. 79, figs. 7, 12, 19, 22 (1956) (Yachi Spa, Hirakura, Mt. Tsurugi and Mt. Aoi).

This species is a new fellow to the fauna of this island.

Specimen examined: 1♀, Ambô, Aug. 5, 1957, T. Kishii leg.

VII. Subfamily PHYSORHININAE

25. *Anchastus aquilus* Candèze (Pl. III, fig. 2) "Kuriiro-nise-kometsuki"
Anchastus aquilus Candèze, Mém. Soc. Sc. Liège, p. 8 (1873) (Japan).
Up to date, this species has been informed from this island by Nakane et Kishii (1958).
Specimen examined: 1♂, Kosugidani Vall., Aug. 7, 1957, T. Kishii leg.

VIII. Subfamily AMPEDINAE

26. *Procræus helvolus* Candèze (Pl. I, figs. 18~20) "Chibi-hosoki-kometsuki"
Agriotes helvolus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 30 (1873) (Nagasaki).
Megapenthes flavus Fleutiaux, Bull. Mus. Hist. Nat. Paris, VIII (1), p. 19 (1902) (Japan).
Procræus helvolus Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.), II (5), p. 37 (1958) (Kosugidani: Is. Yakushima).

This minute *Procræus* has been hitherto known from this island by Nakane et Kishii (1958). *P. helvolus* differs from the type-species of this genus: *Megapenthes tibialis* Lacordaire, 1835, in the structure of claw, for instance in *helvolus* the claw is entirely simple, but in *tibialis* that is clothed with the pubescence at the base and has some minute teeth at the inside (Pl. I, figs. 18, 19). I don't know if these differentiations of claw are valid to be divided in the category of

genus.

Specimen examined: lex., Kosugidani Vall., July 24, 1950, T. Shirôzu leg.

27. *Ganoxanthus pallidus* Lewis (Pl. III, fig. 5) "Hosoki-kometsuki"

Megapenthes pallidus Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 46 (1894) (Nikko and Natakusugawa!).

Pengamethes pallidus Miwa, Gov. Res. Inst., Formosa, Dep. Agr., Rep. 65, p. 84, Pl. VIII, fig. 23 (1934) (Nikko, Yunoyama and Hananoegawa).

Ganoxanthus pallidus Nakane et Kishii, Coloured Illustr., Ins. Japan (Col.), Enl. Rev. Ed. (Pub. Hoikusha), p. 238, fig. 1459 (1955) (Kuroson).

It has been hitherto informed from Is. Yakushima by Miwa (1933, 1934) and Nakane et Kishii (1958).

Specimens examined: 3 ♀, Shiratani Vall., Aug. 3, 1957, K. Tsukamoto, S. Inoué and S. Yoshida leg.

28. *Megapenthes shirozui* new species (Pl. I, figs. 1~10) "Shirôzu-hoso-kometsuki"

Male: 8×1.6 mm. Slender, rather flattish, subparallel-sided, less shining. Dusky brown to yellow, with black eyes, posterior border of head but light and light ahead progressively, more or less dark brown mouth parts, mucro basally, prothoracic lateral sides medianly. Pubescence long comparatively, dense, semierect, golden-whity.

Head convex faintly, gently declivous obliquely ahead, having an obscure broad depression at summit; punctation dense, large generally, variable in size, ocellate manifestly, reticulate partly one another, interstices among punctures shagreened conspicuously by minute granulation. Frontal margin curved roundly, strongly, carinate well-definedly. Epistome narrow in middle, in a sense connected incompletely to each side, antennal sulcus not so deep, broad plainly, sculptured granulatedly, sparsely a little. Labrum hemispherical, convex weakly, shagreened, with large variable punctures at borders. Mandibles very large, stout. Palpus slender, apical joint triangular elongately (Pl. I, fig. 8). Eyes large explicitly, spherical, prominent outwards distinctly.

Antenna (Pl. I, fig. 2) slender, elongate, exceeding clearly tip of each pronotal rear angle by 3 apical joints or more; joints 4~11 filiformed, otherwise wedge-formed elongately, hardly shortening apically; joint 1 voluminous clearly but not so stout; 2 globular, a little longer than 3; 3 smallest, similar in shape to 2; 4 longest, twice as long as length of 2 and 3 combined together; 11 rhombic elongately, subequal to 10 in length as well as in width.

Pronotum distinctly longer than width in median measurements, convex weakly, having a shallow medio-longitudinal fovea at base; each lateral side straight, narrowing ahead gradually from tip of hind angle; apex of each rear corner pointed backwards obtusely a little, hardly divergent, having a brief well-defined carina; hind corners having a pair of small circular concavities at bases; basal declivity abrupt; punctation generally alike to that of head, but sparser, larger, not reticulate to each other, interstices among punctures much more shagreened distinctly than that of head.

Scutellum tongue-shaped, declivous, convex, granulated rather sparsely; apex obtuse relatively; anterior margin emarginated slightly.

Elytra at base nearly equal to tips across prothoracic hind angles, subparallel-sided to 2-3rds or beyond, then gradually narrowing conjointly to apices; each apex a trifle truncate transversely

(Pl. I, fig. 6); posterior end of each suture mucronate minutely; punctate striations 9, grooved straightly, clothed with deep elongate punctures; intervals among striae elevated feebly, granulate sparsely, interspaces among granules shagreened obscurely by minute creases.

Prosternum convex below, narrowing rearwards strongly; fore rim declivous oblique-downwards faintly; anterior margin carinate well-definedly, rounded ahead; process having bicarination which begins from each procoxal cavity, runs posteriorly, at last confluent mutually near apex; punctation moderate, small, ocellate, intervals among punctures shagreened enoughly, but at antero-outer area smooth perfectly. Prosternal sutures double narrowly, impunctate, smooth, incurved. Propleuron flattish; hind edge emarginate clearly; fore corner rounded; punctation sparser, more minute than that on prosternum, interstices among punctures shagreened finely. Mesosternal punctation very scabrous, large, dense posteriorly, impunctate at inner and fore borders. Mesepimeron clothed with small ocellate punctures densely, of which interspaces are shagreened. Metepimeron impunctate, shagreened distinctly, having countable granules (4 or 6) partly. Metasternum feebly unicanaliculate medio-longitudinally; punctation single, denser conspicuously, deeper than that on prosternum, intervals among punctures shagreened.

Hind coxal plate (Pl. I, fig. 7) pointed backwards sharply near inner one-3rd, thence narrowing suddenly to lateral apex, which is visibly pointed sharply, failing to attain to epimeron of elytron.

Punctation of ventral segments single, finer, a little denser than that on prosternum, interstices among punctures shagreened manifestly. The last (5th) segment (Pl. I, fig. 9) at sides sinuate weakly near apex, having a pair of broad shallow impressions near lateral sides medianly.

Leg simple, moderate, rather slender.

Male genitalia as figured (Pl. I, fig. 3).

Female: 9.5×2 mm. Generally similar to male, but more voluminous, convex strongly, deeper in colour. Antenna (Pl. I, fig. 1) exceeding tip of each prothoracic rear angle by one joint or less. Punctation on whole surface, in general, denser. The 5th abdominal segment moderate (Pl. I, fig. 10). Internal reproductive organ as figured (Pl. I, fig. 5).

Described from a male holotype and a female allotype, Kosugidani Vall. ~ Hananoegô, Is. Yakushima, July 23, 1950, T. Shirôzu leg. Holotype is in coll. of Ent. Lab. Kyushu Univ., and allotype is in my coll.

This new *Megapenthes* is easily separated from the known members from Japan, Loo-Choo and Formosa, by the colouration of the body except *M. koshunensis* Miwa (1926) from S. Formosa, but it is smaller (6×1.5 mm.) than the former. Sometimes *Pengamethes oblongicollis* Miwa (1929) from Formosa is also allied to *shirozui*, though it may be divided from the latter by having densely granulated and finely scabrous interstices among the elytral punctate-striae, and dark legs. According to the literature it resembles *M. conicus* Fleutiaux (1928) from Indo-China and *M. birmae* Fleutiaux (1942) from N. Birma, but it can be easily separated from the one by longer 3rd antennal joint than 2nd, and from the other having black antennae except base yellowish, almost black pronotal disc. New name is dedicated to Prof. T. Shirôzu having collected it first.

29. *Ampedus* (s. str.) *rufipes* Lewis "Akaashi-kokuro-kometsuki"

Elater rufipes Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 40 (1894) (Miyano-shita, Hakone,

Oyama and Konose).

Ampedus rufipes Kishii, AKITU, IV (4), p. 109 (1955) (Kibune).

It has been hitherto reported by Nakane et Kishii (1958).

30. *Ampedus* (s. str.) *tenuistriatus* Lewis "Hoso-kuro-kometsuki"

Elater tenuistriatus Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 39 (1894) (Kiga, Miyanoshita, Chiuzenji, Nikko and Yuyama).

Ampedus tenuistriatus Nakane et Kishii, Sci. Rep. Ozegahara Moor, (1954) p. 731, (Ozegahara).

This has been hitherto known from this island by Nakane et Kishii (1958).

31. *Ampedus* (s. str.) *hypogastricus* Candèze "Aka-hara-kuro-kometsuki"

Elater hypogastricus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 9 (1873) (Japan).

Ampedus hypogastricus Ôhira, New Ent., III (2~3), p. 9 (1954).

This species has been hitherto informed by Nakane et Kishii (1958).

Specimens examined: 2exs., Kosugidani Vall., July 17, 1950, T. Shirôzu leg.; 1 ♀, ditto, Aug. 7, 1957, T. Shyôji leg.

32. *Ampedus* (s. str.) *vestitus* Lewis "Kuro-kometsuki"

Elater vestitus Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 39 (1894) (Miyanoshita, Hakone, Hitoyoshi and Yuyama).

It is a new member to the fauna of this island.

Specimen examined: 1 ♀, Ambô~Kosugidani, July 16, 1950, T. Shirôzu leg.

33. *Ectamenogonus*? *bicarinatus* Candèze (Pl. III, fig. 11) "Chyairo-kometsuki"

Elater bicarinatus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 9 (1873) (Japan).

Elater (Ectamenogonus) bicarinatus Miwa, Gov. Res. Inst. Formosa, Dep. Agr., Rep. 65, p.

81. Pl. II, f. 18 (1934) (Shizuoka, Ichinotani and Koyadaira).

Ampedus? *bicarinatus* Kishii et Ôhira, AKITU, V (3), p. 76 (1956) (Niigata).

Ectamenogonus? *bicarinatus* Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.) II (5), p. 38 (1958) (Is. Yakushima).

This species has been hitherto reported by Nakane et Kishii (1958). The samples from this island have always large and voluminous body (14~11×4~3.5 mm.) compared with ones from Japan proper (11.5~8.5×3.5~2½ mm.). But in other structures both of them are intimately similar mutually.

Specimens examined: 4exs., Ambô, July 14, 1950, T. Shirôzu leg.; 1 ♀, Kusakawa, Aug. 3, 1957, S. Inoué leg.; 3 ♀, Ambô, Aug. 4~5, 1957, T. Kishii and T. Shyôji leg.; 1ex., Yudomari, Aug. 10, 1957, N. Tamu leg.

34. *Homotechnes*? *plebejus* Candèze "Konaga-kometsuki"

Ludius plebejus Candèze, Mém. Soc. Sc. Liège, 2 (V), p. 28 (1873) (Japan).

Crigmus plebejus Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 266 (1894) (Nagasaki, Ashiwo! and Sapporo).

Trichophorus plebejus Schwarz, Gen. Ins., XLVI, Elat., p. 259 (1906).

Neotrichophorus plebejus Miwa, Ins. Mats., III (1), p. 42 (1928) (Tokyo, Nishikibe, Koyadaira, Corea, Loo-Choo and Formosa).

Homotechnes? *plebejus* Kishii et Ôhira, AKITU, V (3), p. 76 (1956) (Niigata).

It has been hitherto known by Nakane et Kishii (1958).

IX. Subfamily MELANOTINAE

35. *Melanotus senilis* Candèze "Kuro-kushi-kometsuki"

Melanotus senilis Candèze, *Elat. nouv.*, I (Mém. Soc. Acad. Belg.), p. 47 (1864) (Japan).

It has been already reported by Miwa (1929, 1934), Takeuchi (1931), and Nakane et Kishii (1958).

36. *Melanotus correctus issikii* Miwa "Yaku-hirata-kushi-kometsuki"

Melanotus issikii Miwa, *Trans. Nat. Hist. Soc. Formosa*, XIX (103), p. 346 (1929) (Is. Yakushima).

Melanotus correctus issikii Nakane et Kishii, *Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.)*, II (5), p. 38 (1958) (Miyamura, Kurio, Ambo: Is. Yakushima).

This subspecies endemic to this island has been already reported by Miwa (1929, 1934), Takeuchi (1931), and Nakane et Kishii (1958).

37. *Melanotus spernendus* Candèze "Naga-chya-kushi-kometsuki"

Melanotus spernendus Candèze, *Mém. Soc. Sc. Liège*, (2) V, p. 21 (1873) (Nagasaki).

It has been hitherto known by Miwa (1929, 1934), Takeuchi (1931), and Nakane et Kishii (1958).

38. *Melanotus loochooensis* Miwa "Ryūkyū-kushi-kometsuki"

Melanotus loochooensis Miwa, *Trans. Nat. Hist. Soc. Formosa*, XIX (103), p. 347 (1929) (Loo-Choo).

This species has been already informed by Nakane et Kishii (1958).

39. *Melanotus legatus* Candèze "Kushi-kometsuki"

Melanotus legatus Candèze, *Mon.*, III, p. 323 (1860) (Japan).

Melanotus laticollis Motschulsky, *Etud. Ent.*, IX, p. 9 (1860) (Japan).

Melanotus annosus Okamoto (*nec.* Candèze, 1894), *Bull. Agr. Ex. St.*, I (2), p. 182 (1924) (Is. Saishuto).

It has been hitherto reported by Nakane et Kishii (1958).

Specimen examined: lex., Shiratani Vall., Aug. 3, 1957, S. Inoué leg.

40. *Spheniscosomus cete* Candèze "Aka-ashi-ohkushi-kometsuki"

Melanotus cete Candèze, *Mon.*, III, p. 332 (1860) (Japan).

Spheniscosomus cete Schwarz, *Deutsche Ent. Zeit.*, p. 150, nota 1 (1891).

Melanotopsis cete Lewis, *Ann. Mag. Nat. Hist.*, (6) XIII, p. 192 (1894) (Nagasaki, Kobe and Yokohama).

It has been hitherto reported by Nakane et Kishii (1958).

X. Subfamily ELATERINAE

41. *Neotrichophorus junior* Candèze "Hige-naga-kometsuki"

Ludius junior Candèze, *Mém. Soc. Sc. Liège*, (3), p. 27 (1873) (Japan).

Crigmus junior Lewis, *Ann. Mag. Nat. Hist.*, (6) XIII, p. 266 (1894) (Yuyama, Ichiuchi, Kashiwagi and Sapporo).

Trichophorus junior Schwarz, *Gen. Ins.*, XLVI, *Elat.*, p. 256 (1907).

Neotrichophorus junior Miwa, Ins. Mats., III (1), p. 42 (1928) (Tokyo, Chichibu, Narita, Sapporo and Formosa).

This has been hitherto known by Nakane et Kishii (1958).

42. *Elater sieboldi* Candèze (Pl. III, fig. 10) "Ohnaga-kometsuki"

Ludius sieboldi Candèze, Mém. Soc. Sc. Liège, (2) V, p. 27 (1873) (Japan).

Elater sieboldi Ôhira, New Ent., III (2~3), p. 9 (1954).

This species is a new member to the fauna of this island.

Specimen examined: lex. (only prothorax), Miyanoura Sea Shore, under the sandy ground, Aug. 15, 1957, T. Kishii leg.

XI. Subfamily AGRIOTINAE

43. *Ectinus higonius* Lewis (Pl. III, fig. 8) "Kuro-munaboso-kometsuki"

Megapenthes higonius Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 43 (1894) (Ichibusayama and Oguma).

Agriotes higonius Miwa, Trans. Nat. Hist. Soc. Formosa, XIX (103), p. 350 (1929) (Is. Yakushima).

Ectinus higonius Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.) II (1), A ser., p. 45 (1955) (Shimashima, Ashiu, Serio, Kibune and Matsuo).

It has been hitherto reported by Miwa (1929, 1933) and Takeuchi (1931).

44. *Dolopius exilis* Kishii "Naga-nakaguro-kometsuki"

Dolopius marginatus var. *ferrugineipennis* Miwa (nec. Motschulsky, 1866), Trans. Nat. Hist. Soc. Formosa, XIX (103), p. 350 (1929) (Is. Yakushima).

Dolopius exilis Kishii, AKITU, V (1), pp. 18, 20, figs. 1, 5, 8 (1956) (Sukayu Spa, Marunuma, Shibuyu Spa, Mt. Kasagadake, Mt. Iizuna, Shimashima Vall., Tokugo Pass, Kamikochi, Mt. Yatsugadake, Hirayu Spa, Mt. Ontake and Mt. Ohdai-gahara).

It has been already informed from this island by Miwa (1929, 1934), Takeuchi (1931), and Nakane et Kishii (1958).

Specimens examined: 6exs., Mt. Miyanoura, Aug. 7~8, 1957, N. Tamu, K. Katô and S. Nagai leg.

XII. Subfamily ADRASTINAE

45. *Silesis musculus* Candèze "Kuchibuto-kometsuki"

Silesis musculus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 31 (1873) (Japan).

This species is new to the fauna of this island.

Specimens examined: lex., Kosugidani Vall., July 23, 1950, T. Shirôzu leg.; lex., ditto, Aug. 7, 1957, T. Shyôji leg.; lex., Issô Vall., Aug. 1, 1957, S. Inoué leg.

46. *Glyphonyx kurosawai* Nakane et Kishii "Yaku-nise-kuchibuto-kometsuki"

Glyphonyx kurosawai Nakane et Kishii, Sci. Rep. Saikyo Univ. (Nat. Sci. Liv. Sci.), II (5), p. 39, Pl. II, figs. 5, 15, 17, 19 (1958) (Kosugidani and Hananoégô).

This *Glyphonyx* is indigenous to this island.

Specimens examined: 9exs., Hananoégô~Mt. Miyanoura, Aug. 8, 1957, K. Katô and K. Matsumoto leg.

XIII. Subfamily CARDIOPHORINAE

47. *Dicronychus (Platynychus) adjutor* Candèze (Pl. III, fig. 7) "Aka-ashi-hana-kometsuki"
Cardiophorus adjutor Candèze, Mém. Soc. Sc. Liège, (2) V, p. 17 (1873) (Japan).
Paracardiophorus adjutor Schwarz, Deutsche Ent. Zeit., p. 37 (1895).
Platynychus adjutor Miwa, Mushi, VI (1), p. 29 (1933) (Tsushima).
Dicronychus adjutor Nakane et Kishii, Coloured Illustr. Ins. Japan (Col.), Enl. Rev. Ed. (Pub. Hoikusha), p. 210, fig. 1480 (1955) (Kyoto).
Dicronychus (Platynychus) adjutor Kishii, AKITU, V (3), p. 77 (1956) (Niigata).
 It has been already known by Nakane et Kishii (1958).
 Specimen examined: lex., Kosugidani Vall., July 23, 1950, T. Shirôzu leg.
48. *Dicronychus (Platynychus) nothus* Candèze (Pl. III, fig. 6) "Ôhana-kometsuki"
Cardiophorus nothus Candèze, Elat. nouv., I (Mém. Soc. Acad. Belg.), p. 43 (1865) (Japan).
Cardiophorus pauper Candèze, Mém. Soc. Sc. Liège, (2) V, p. 17 (1873) (Japan).
Cardiophorus rameus Lewis, Ent. Monthl. Mag. XVI, p. 156 (1879) (Kashiwagi and Kii).
Platynychus pauper Miwa, Mushi, VI (1), p. 28 (1933) (Kiushiu!).
Platynychus nothus Miwa, Gov. Res. Inst. Formosa, Dep. Agr., Rep. 65, p. 96 (1934).
Dicronychus nothus Nakane et Kishii, Coloured Illustr., Ins. Japan (Col.), Enl. Rev. Ed. (Pub. Hoikusha), p. 210, fig. 1481 (1955) (Gifu).
Dicronychus (Platynychus) nothus Kishii, AKITU, V (3), p. 77 (1956) (Niigata).
Dicronychus (Platynychus) pauper Baba et Ôhira, Kontyu, XXIV (1), p. 16 (1956) (Is. Sado).
 It has been already known by Nakane et Kishii (1958).
 Specimen examined: lex., Issô Vall., Aug. 1, 1957, K. Tsukamoto leg.
49. *Paracardiophorus pullatus* Candèze "Kohana-kometsuki"
Cardiophorus pullatus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 16 (1873) (Japan).
Paracardiophorus pullatus Schwarz, Deutsche Ent. Zeit., p. 48 (1895) (Japan).
 It has been hitherto reported by Nakane et Kishii (1958).
50. *Paracardiophorus sequens* Candèze (Pl. III, fig. 9) "Akaashi-kohana-kometsuki"
Cardiophorus sequens Candèze, Mém. Soc. Sc. Liège, (2) V, p. 16 (1873) (Japan).
Paracardiophorus sequens Schwarz, Deutsche Ent. Zeit., p. 40 (1895).
 This species is a new fellow to the fauna of Is. Yakushima.
 Specimens examined: 4exs., Miyanoura Sea Shore, Aug. 13, 1957, T. Kishii leg.

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Explanation of Plate I

- Figs. 1~10: *Megapenthes shirozui* Kishii, sp. nov. (Is. Yakushima).
- Fig. 11: *Negastrius humeralis* Candèze, ab. form. *quadrimaculatus* Kishii, ab. nov. (Kibune Vall. : Kyoto).
- Fig. 12: *Malloea yaku* Nakane et Kishii, allotype. (Is. Yakushima).

- Figs. 13~17 : *Pectocera fortunei* Candèze (figs. 14 & 16: Specimen from Shûgakuin, Kyoto; figs. 13, 15 & 17: Specimen from Is. Yakushima).
 Fig. 18 : *Procræus tibialis* Lacordaire. (Europe).
 Figs. 19 & 20 : *Procræus helvolus* Candèze. (Is. Yakushima).
 Fig. 21 : *Hemicrepidius (Pseudathous) secessus* Candèze. (Is. Yakushima).
 Figs. 1, 12~14 : female antenna ; 2 : male antenna ; 3 : male genitalia ; 5, 17, 20 & 21 : internal reproductive organ of female (bursa copulatorix) ; 6 : apex of left elytron ; 7 : hind coxal plate ; 8, 15 & 16 : right palpus ; 9 : 5th ventral segment of male ; 10 : ditto of female ; 11 : left elytron ; 18 & 19 : tarsal claw.

Explanation of Plate II

- Figs. 1(♀), 2(♂), 11, 12, 20 & 29 : *Yukoana elliptica* Candèze. (Azoke Vall., Kyoto).
 Figs. 3, 7, 14, 16, 24 & 27 : *Quasimus* (s. str.) *minutissimus* Germar. (Kaukasus, Europe).
 Figs. 4, 8, 15, 17, 23 & 28 : *Quasimus* (s. str.) *japonicus japonicus* Kishii, sp. nov. (Azoke Vall., Kyoto : isotype).
 Figs. 5(♀), 6(♂), 10, 13, 21 & 26 : *Yukoana tamui* Kishii, sp. nov. (Is. Yakushima : cotype).
 Figs. 9, 18 & 22 : *Quasimus* (s. str.) *japonicus yakuensis* Kishii, subsp. nov. (Is. Yakushima : cotype).
 Figs. 19 & 25 : *Quasimus (Miquasus) luteipes* Candèze. (Is. Yakushima).
 Figs. 1~6 : antenna ; 7~11 : right half of mesosternum ; 12~15 : hind coxal plate ; 16~18 : head in profile ; 19~24 : scutellum ; 25~29 : male genitalia.

Explanation of Plate III

- Fig. 1 : *Compsolacon mäklini* Candèze. (Mt. Yôtei, Hokkaidô).
 Fig. 2 : *Anchastus aquilus* Candèze. (Is. Kammuri-jima, Kyoto).
 Fig. 3 : *Negastrius albipilis* Candèze. (Is. Yakushima).
 Fig. 4 : *Negastrius humeralis* Candèze. (Is. Yakushima).
 Fig. 5 : *Ganoxanthus pallidus* Lewis. (Mt. Iwawaki, Osaka).
 Fig. 6 : *Dicronychus (Platynychus) nothus* Candèze. (Kyoto).
 Fig. 7 : *Dicronychus (Platynychus) adjutor* Candèze. (Arashiyama, Kyoto).
 Fig. 8 : *Ectinus higonius* Lewis. (Kyoto).
 Fig. 9 : *Paracardiophorus sequens* Candèze. (Is. Kammuri, Kyoto).
 Fig. 10 : *Elater sieboldi* Candèze. (Is. Kammuri, Kyoto).
 Fig. 11 : *Ectamenogonus? bicarinatus* Candèze. (Is. Yakushima).
 Figs. 1~10 : male genitalia ; 11 : internal reproductive organ of female (bursa copulatorix).

摘 要

本研究は、丹 信実・塚本珪一・井上宗二及び筆者の共同研究“日本列島周辺の小島嶼の生物地理学的研究”の一部で、屋久島の叩頭虫科甲虫類について、その分類学的見地から、本島の分布相について論述せるものである。その結果、13亜科50種(4新種又は新亜種、8個有種、25南限分布種、1北限分布種が含まれる)が本島から知られるにいたった。

PLATE I

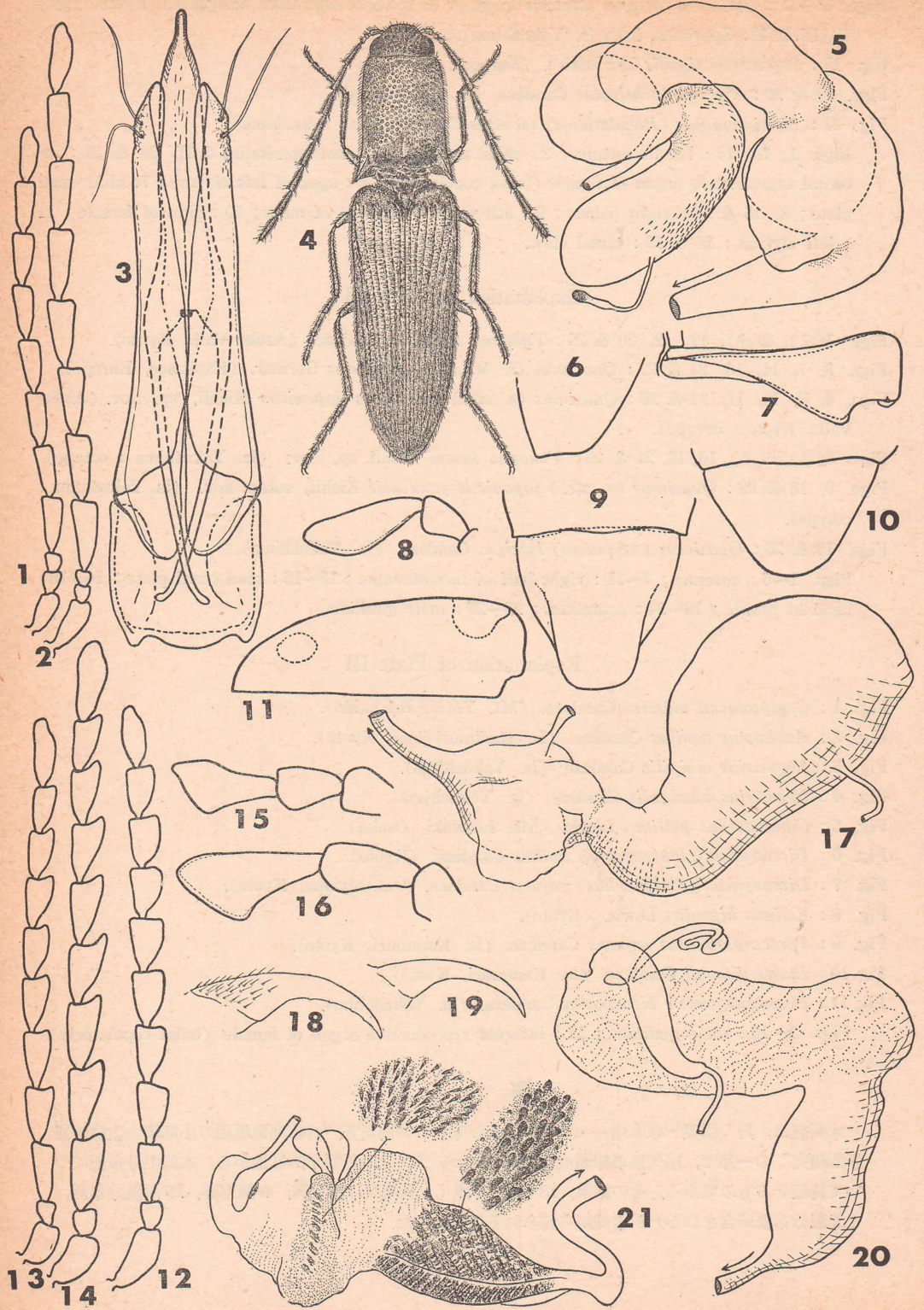


PLATE II

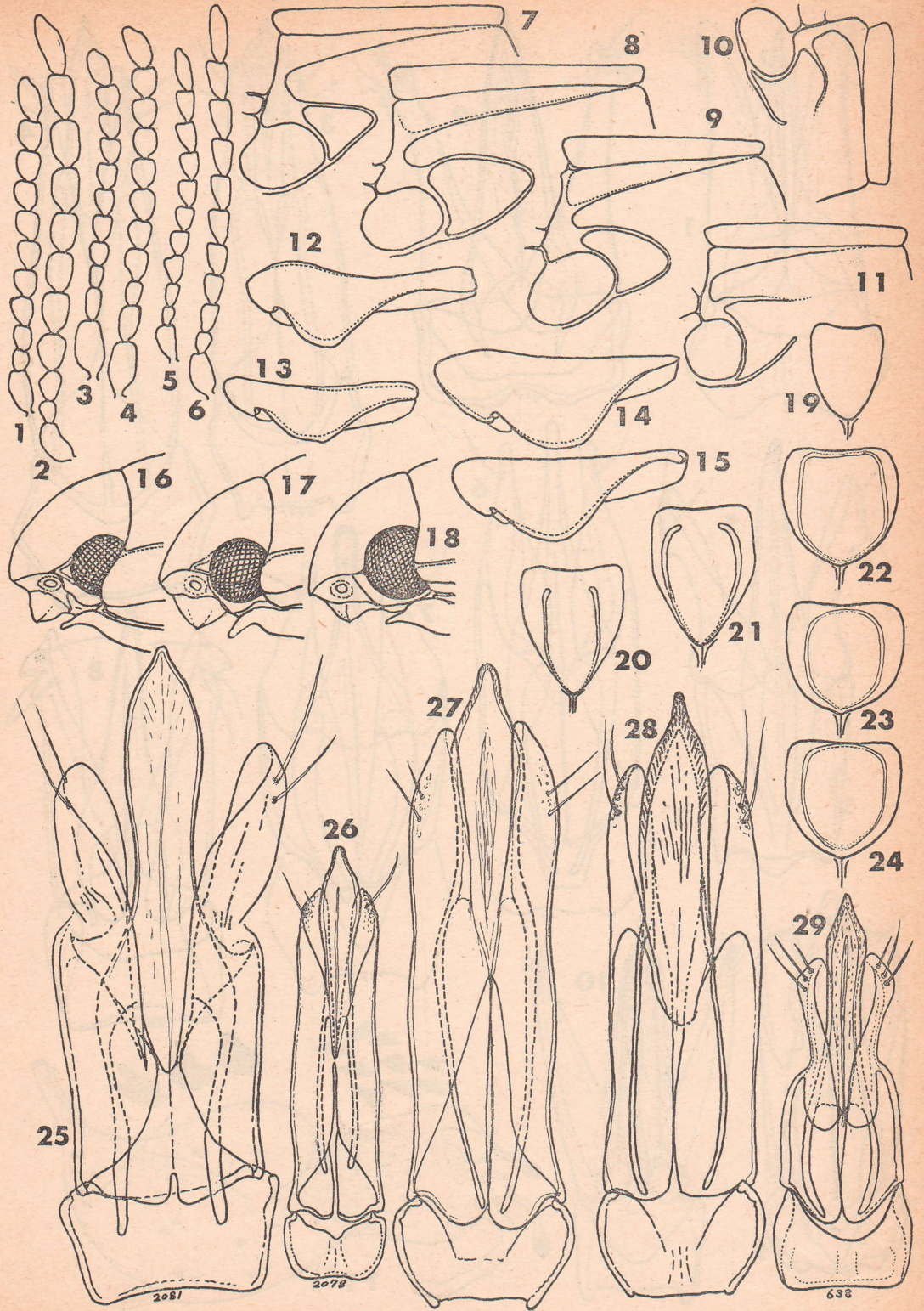


PLATE III

