

Entomological Results from the Scientific Survey of the Tokara Islands.

III Coleoptera : Lamellicornia.¹⁾

By

TAKEHIKO NAKANE

With 2 Plates

In the present paper I have dealt with the results of my study on the Lamellicorn beetles out of the collection of the survey. The type-specimens of new forms described here are preserved in the collection of the Osaka Municipal Museum of Natural History and of the Entomological Laboratory of Kyushu University, as well as in my collection, unless otherwise indicated. Before going further I wish to express my sincere thanks to Mr. Yoshitaka Tsutsui and other members of the Tokara scientific survey for their kind help in offering me valuable material, and also to Dr. Syoziro Asahina, Prof. Dr. Teiso Esaki, Mr. Kaku Sato, Dr. Chihisa Watanabe, Dr. Keizo Yasumatsu and my friends for their favourable assistance given during the course of my study.

Family LUCANIDAE

Subfamily Lucaninae

(Cladognathinae)

Psalidoremus dissimilis Boileau, 1898 (Pl. II, Figs. 1, 2.)

Nakanoshima (1 ♂ 9. VI. 1953, 1 ♀ 10. VI. 1953, T. Nakane leg.).

A female individual and a dead male were obtained at Nakanoshima. This species was originally described from Amami-Oshima and also found in Okinawa.

(Dorcinae)

Macrodercas rectus (Motschulsky, 1857)

A head of male including moderately developed mandibles was found at Nakanoshima (VI. 1953, O. Tsuzimoto leg.).

Serrognathus titanus elegans (Boileau, 1899)

Takarajima (2 ♂ 29. V. 1953, S. Miyamoto & T. Nakane leg.).

Originally described from Amami-Oshima and now we have two male specimens from the Tokara Is.

Didier & Séguy (1953) included the above-mentioned two species in the genus *Eurytrachelelus* Didier, 1931, under which *Macrodercas* Motschulsky, 1862, and *Serrognathus* Motschulsky, 1861, are enumerated as synonyms in their catalogue. I cannot understand why Didier & Séguy assigned *Eurytrachelelus* as the generic name, because *Macrodercas* and *Serrognathus* are far antecedent to it.²⁾ I have examined the original description of *Serrognathus* and found that it fits well our *S. titanus platymelus* Saunders.

1) Scientific Survey of the Tokara Islands, Report No.24.

2) I am much indebted to Dr. Bernard Benesh and Mr. Yoshihiko Kurosawa for their kind suggestions on this problem.

Subfamily Figulinae

Figulus punctatus Waterhouse, 1872

Nakanoshima (1 ex. 25. V. 1953, S. Uéno leg.).

This species has been recorded from Kyushu and Formosa.

Family SCARABAEIDAE

Subfamily Scarabaeinae

Paraphytus dentifrons (Lewis, 1895)

Nakanoshima (1 ♂ 5. VI. 1953, O. Tsuzimoto leg.).

It was originally described from Amami-Oshima under new generic name *Maraxes* (Miwa & Chûjô, 1939, erroneously mentioned it as *Malaxes*) and Paulian (1945) reported it from Tonkin. I have now another specimen (♀) from Formosa collected by Dr. S. Asahina (Tyokakurai, Daibu, 26. VII. 1936).

Onthophagus lenzii Harold, 1875

Nakanoshima (3 ♂ 2 ♀ 5 & 9. VI. 1953, T. Nakane leg.).

Onthophagus viduus Harold, 1875

Nakanoshima (1 ♂ 9. VI. 1953, T. Nakane leg.); Takarajima (1 ♂ 2 ♀ 25. & 29. V. 1953, S. Uéno leg.; 7 ♂ 14 ♀ 26, 30 & 31. V. 1953, T. Nakane leg.).

This species was commonly found in dung at Takarajima.

As previously mentioned by me (1947) a series of species described by Dr. S. Matsu-mura (1937) are synonymous with this species or at least conspecific and they are: *aequiperus**, *chibanus**, *futsukaichianus*, *hyuganus*, *jedensis**, *komabellus*, *minoi** *misujianus*, *miyazakianus*, *oishii*, *okushirianus*, *shurianus**, *spurius*, *takabayashii*, *yumigatanus*, *chosensis*, *amenthus*, *micellus*, *Caccobius jononis*, *narashinensis**. (* Matsumura et Yohena)

Subfamily Aphodiinae

Teuchestes brachysomus (Solsky, 1874)

Takarajima (1 ♂ 2 ♀ 29. V. 1953, S. Uéno leg.).

Pharaphodius marginellus (Fabricius, 1781)

Takarajima (2 ♀ 26 & 31. V. 1953, T. Nakane leg.).

There are two examples (♂) of this species from Okinawa before me (Isakanayama, 14. V. 1931, S. Asahina leg.).

Pharaphodius chokaiensis (Nomura et Nakane, 1951)

Takarajima (1 ♂ 30. V. 1953, T. Nakane leg.).

I found unexpectedly the above-mentioned example at Takarajima. This species has been known from Mt. Chokai, northern Honshu.

Aganocrossus urostigma (Harold, 1862)

Nakanoshima (3 ex. 25. V. 1953, T. Nakane leg.); Takarajima (8 ex. 26. V. 1953, T. Nakane leg.).

It is a very widely distributed species.

Aphodius (s. str.) *elegans* Allibert, 1847

Takarajima (1 ♂ 29. V. 1953, S. Uéno leg.).

Aphodius (Agrilinus) uniformis Waterhouse, 1875

Nakanoshima (1 ex. 9. VI. 1953, T. Nakane leg.; 1 ex. 11. VI. 1953, S. Uéno leg.); Takarajima (24 ex. 26-31. V. 1953, T. Nakane leg.; 1 ex. 1. VI. 1953, S. Uéno leg.).

This species was originally described from Hakodate, Hokkaido, and *A. maritimus* Nomura et Nakane may probably be identical with this species.

Aphodius (Nialus) sublimbatus (Motschulsky, 1860)

Nakanoshima (2 ex. 25. V. 1953, S. Uéno leg.).

Balthasar (1946) transferred this species from *Nialus* to *Calamosternus* by the presence of fine marginal line along the base of pronotum, but the line is very fine and only observable under high power lens and the general features are very closely related to other species of the subgenus *Nialus*.

Aphodius (Calamosternus) uniplagiatus Waterhouse, 1875

Takarajima (19 ex. 26-31. V. 1953, T. Nakane leg.; 2 ex. 26. V. 1953, S. Uéno leg.).

Saprosites japonicus Waterhouse, 1875

Nakanoshima (15 ex. 4-12. VI. 1953, T. Nakane & S. Uéno leg.); Takarajima (1 ex. 29. V. 1953, T. Nakane leg.).

Trichiorhyssemus asperulus (Waterhouse, 1875)

Takarajima (2 ex. 30. V. 1953, S. Uéno leg.).

Subfamily Dynastinae*Alissonotum pauper* (Burmeister, 1847)

Takarajima (2 ♂ 3 ♀ 29 & 30. V. 1953, S. Miyamoto & S. Uéno leg.).

This is the first record of *Alissonotum* species from Japanese territory. *A. pauper* has been known from Formosa, China and S. E. Asia.

The examples were found under sandy shore.

Subfamily Melolonthinae*Granida schönfeldti* (Brenske, 1890)

Takarajima (2 ♂ 1 ♀ 29. V. 1953, T. Nakane & S. Uéno leg.).

It was originally reported from Amami-Oshima and found also in Okinawa.

Lachnosterna tokara sp. nov. (Pl. I, Fig. 12; Pl. II, Fig. 12)

Wholly blackish to reddish brown. Elongate-oblong, a little amplicated posteriorly, very convex above. Head rather small and strongly transverse, with anterior margin broadly rounded on both sides and slightly sinuate-emarginate at middle, surface moderately thickly and strongly punctured, the punctures on frons a little larger than those of clypeus and most of them opened behind, frontal suture fine but entire and slightly sinuous. Pronotum about one fourth wider than long, widest at middle, sides slightly arched from middle to front angles and nearly straight behind middle, with a few slight notches along margin, disc irregularly and not so closely punctured as head with a feeble longitudinal impression in middle of anterior two-thirds, the punctuation somewhat closer on both sides in front. Scutellum broadly triangular with rounded apex, distinctly but finely punctured. Elytra a half again as long as wide, at base as wide as base of prothorax, gradually widened to middle, then gently narrowing posteriorly and broadly rounded at apex, each bearing 4 costae, of which outer two are very obsolete and arising from behind humeral prominence, surface not so uneven and at apex strongly wrinkled, rather closely punctured, but the punctures are less defined than those of pronotum. Pygidium rather shallowly and not closely punctured, transversely convex behind

base in male, or convex before apex in female. Pectoral surface rather densely bearing yellowish testaceous hairs, prosternum rugose at middle and at both sides and between two areas impunctate, propleura not closely, mesosternum very thickly and metasternum finely and moderately densely, punctured. Abdominal sternites sparsely bearing fine punctures and short hairs, but penultimate one with a transverse sulcus and more coarse punctures along apical margin and with a hairy opaque area on both sides of basal half, and anal one transversely concave in male and coarsely punctured in female. Legs normal, fore tibiae with 3 outer teeth, claws with a strong tooth rectangularly branching from middle and the tooth being broader and fully as long as apical tooth.

Body length: 19-22 mm.

Holotype (♂), allotype (♀) & 14 paratypes (♂ ♀): Takarajima, 29 & 30. V. 1953, T. Nakane & S. Uéno leg.; 1 paratype (♂): Nakanoshima, 4. VI. 1953, T. Nakane leg.

The present new species is a close ally to *L. kiotonensis* Brenske from Japan, but differs from it in the following points: 1. punctures on frons larger and closer and each opened behind; 2. pronotal side margins less strongly reflexed and much more slightly and sparsely notched; 3. metasternum more finely punctured; 4. apical appendages of male genitalia differently-formed.

Apogonia bicarinata Lewis, 1896

Takarajima (1 ♂ 29. V. 1953, S. Uéno leg.).

Apogonia bicavata Arrow, 1913

Nakanoshima (1 ♂ 1 ♀ 3. VI. 1953, H. Y. Kono leg.).

Subfamily Rutelinae

Anomala albopilosa gracilis Schönfeldt, 1890

Nakanoshima (1 ♀ 6. VI. 1953, S. Uéno leg.); Takarajima (4 ♂ 1 ♀ 29 & 30. V. 1953, T. Nakane & S. Uéno leg.).

Anomala triangularis Schönfeldt, 1890

Takarajima (3 ♂ 3 ♀ 26 & 29. V. 1953, T. Nakane & O. Tsuzimoto leg.).

Anomala rufocuprea motschulskyi Harold, 1877

Nakanoshima (33 ex. 4-12. VI. 1952, S. Miyamoto & T. Nakane leg.).

The specimens from Nakanoshima are relatively smaller than usual and the colouration of body is fairly constant in each sex. In the female the head, pronotum and scutellum are dark green and the elytra are dusky testaceous with greenish tinges, whereas in the male the body above is dark green or the elytra are brownish with greenish lustre.

Anomala (Rhombonyx) testaceipes (Motschulsky, 1860)

Nakanoshima (5 ex. 4-9. VI. 1953, T. Nakane & S. Uéno leg.).

Subfamily Cetoniinae

Protaetia (Pyropotosia) pryeri tsutsuii subsp. nov.

(Pl. I, Figs. 1, 9; Pl. II, Fig. 5.)

This new subspecies of *P. pryeri* may be separated from the typical in the following points: 1. body above dark bronzy green or dark bronzy 2. elytra plentifully dotted or speckled with dirty white tomentum, 3. tarsi black or blackish brown with greenish or bluish tinges (with strong coppery red tinges in *pryeri pryeri*) and tibiae bearing bronzy to greenish or bluish lustre (green with reddish tinges or reddish coppery in *pryeri*).

Body length: 16–23 mm.

Holotype (♂), allotype (♀) and 16 paratypes (♂ ♀): Nakanoshima, 4. VI. 1953, T. Nakane leg. Some other paratypes from the same island in the collection of Mr. M. Iga, as well as of mine.

In this opportunity I will name another subspecies of *P. pryeri* from southern Kyushu as follows:

Protaetia (Pyropotosia) pryeri esakii subsp. nov.

(Pl. I, Fig. 10; Pl. II, Fig. 6.)

It may be distinguishable from the typical form in the following characteristics: 1. body bright metallic green above and beneath, 2. anterior margin of clypeus much more strongly reflexed, 3. median gibbosity of clypeus more narrowly limited, 4. lateral ridge of head more sharply elevated, 5. punctures on pronotum much finer, 6. punctures in dorsal impression of elytra more close and irregular in shape, 7. tarsi black with faint bluish or violaceous tinges, and tibiae with green lustre and not coppery.

Body length: 22 mm.

Holotype (♂): Sata, Ohsumi, Kyushu, 30. V. 1952, S. Asahina leg. (in coll. Nakane). Several paratypes from Birojima, Kyushu, are preserved in the collection of the Entomological Laboratory, Kyushu University.

Protaetia (Potosia) exasperata nakana subsp. nov.

(Pl. I, Figs. 3, 5, 11; Pl. II, Fig. 7)

♂. Coppery, bronzy to greenish bronzy (f. *typica*), or above black with bluish, violet to greenish tinges (f. *tsuzimotoi* nov.), without mat green covering above. Punctuation of body above distinctly coarser than that of typical *exasperata*. Pronotum bearing a few small tomentous white spots on both sides, as well as two pairs of spots on disc and a marginal stripe on each side. Elytral tomentous white spots more developed than those of *exasperata*.

Body length: 19–23 mm.

Holotype (♂) and 2 paratypes (♂): Nakanoshima, 6. VI. 1953, T. Nakane & O. Tsuzimoto leg.; 3 paratypes (♂) (f. *tsuzimotoi*): Nakanoshima, 9. VI. 1953, O. Tsuzimoto & S. Uéno leg. A few other paratypes are in the collection of Mr. M. Iga.

Mr. Kaku Sato has kindly lent me a pair of examples of *exasperata* from Okinawa and Mr. Yoshio Ichio presented me a male example of the same species from Amami-Oshima (type-locality of *exasperata*). Comparing these specimens with each other I have found some, though slight, differences between them. The male of Okinawa has somewhat broader body form, less strongly reflexed front margin of head, a pair of white tomentous spots behind anterior margin along sides of pronotum and uniformly impressed marginal lines of metasternum along mesocoxae converging to base of metasternal process. The last character is found also in female. I will name the form of Okinawa:

Protaetia (Potosia) exasperata satoi subsp. nov.

(Pl. I, Figs. 4, 6; Pl. II, Fig. 8.)

Holotype (♂) & allotype (♀): Izumi, Okinawa, 1. VII. 1952, K. Sato leg. (in coll. Yokohama Plant Protection Station)

Oxycetonia jucunda forticula (Janson, 1881)

Nakanoshima (6 ex. 4–6 & 12. VI. 1953, T. Nakane leg.); Takarajima (16 ex. 26–31. V. 1953, S. Miyamoto & T. Nakane leg.).

This species was found abundantly in both islands. *O. forticula* was described from Amami-Oshima and H. Sawada (1950) treated it as a subspecies of *O. jucunda* Faldermann, but more precise investigation would be necessary.

Subfamily Valginae

Nipponovalgus angusticollis maedai subsp. nov.

(Pl. I, Fig. 15; Pl. II, Fig. 10)

The present new form may be at once distinguishable from the typical one in having reddish brown body with metasternum, abdomen partly and sometimes vertex blackish, and usually ochraceous pale scales on body surface, as well as blackish ones.

Body length: 5-6 mm.

Holotype (♂) and 3 paratypes (♂): Nakanoshima, 6. VI. 1953, T. Nakane leg.

In appearance it may be more closely allied to *N. yonakuniensis* Sawada, but in the latter species the colour pattern of scales on the upper surface is somewhat different, and a pair of propygidial tufts consists of pale scales (ex figure shown by H. Sawada).

EXPLANATION OF PLATE I.

Figs. 1-4: Latero-dorsal view of left elytron.

Fig. 1. *Protaetia pryeri tsutsui* Nakane subsp. nov.

Fig. 2. *Protaetia exasperata exasperata* Fairmaire ♂.

Fig. 3. *Protaetia exasperata nakana* Nakane subsp. nov. ♂

Fig. 4. *Protaetia exasperata satoi* Nakane subsp. nov. ♂

Figs. 5-7: Dorsal view of pronotum.

Fig. 5. *Protaetia exasperata nakana* Nakane subsp. nov. ♂

Fig. 6. *Protaetia exasperata satoi* Nakane subsp. nov. ♂

Fig. 7. *Protaetia exasperata exasperata* Fairmaire ♂

Figs. 8-11: Dorsal view of head.

Fig. 8. *Protaetia pryeri pryeri* Janson ♂

Fig. 9. *Protaetia pryeri tsutsui* Nakane subsp. nov. ♂

Fig. 10. *Protaetia pryeri esakii* Nakane subsp. nov. ♂

Fig. 11. *Protaetia exasperata nakana* Nakane subsp. nov. ♂

Figs. 12-14: Lateral view of male genitalia.

Fig. 12. *Lachnosterna tokara* Nakane sp. nov. (basal part omitted)

Fig. 13. *Lachnosterna kiotonensis* Brenske (basal part omitted)

Fig. 14. *Lachnosterna loochooana* Sawada

Fig. 15: *Nipponovalgus angusticollis maedai* Nakane subsp. nov. ♂

EXPLANATION OF PLATE II.

Figs. 1, 2: *Psolidoremus dissimilis* Boileau ♂

Fig. 1. Mandibles and anterior margin of head (minor ex. from Nakanoshima)

Fig. 2. Outline of clypeus (ex. from Okinawa)

Fig. 3: Outline of clypeus in *Psolidoremus inclinatus* Motschulsky f. minor.

Figs. 4-9: Dorsal view of male genitalia (parameres and apex of basal piece)

Fig. 4. *Protaetia pryeri pryeri* Janson

Fig. 5. *Protaetia pryeri tsutsui* Nakane subsp. nov.

Fig. 6. *Protaetia pryeri esakii* Nakane subsp. nov.

Fig. 7. *Protaetia exasperata nakana* Nakane subsp. nov.

Fig. 8. *Protaetia exasperata satoi* Nakane subsp. nov.

Fig. 9. *Protaetia exasperata exasperata* Fairmaire

Figs. 10, 11: Caudal view of male genitalia (parameres and ventral lamella)

Fig. 10. *Nipponovalgus angusticollis maedai* Nakane subsp. nov.

Fig. 11. *Nipponovalgus angusticollis angusticollis* Waterhouse

Fig. 12: Male genitalia of *Lachnosterna tokara* Nakane sp. nov.

a. lateral view; b. dorsal view of apical portion.

(Received September, 1955)