

ELATERIDAE FROM SOME ISLANDS (SADO, TOBI AND AWA ISLAND) IN THE JAPAN SEA OFF THE COAST OF NIIGATA, HONSHU, JAPAN

By Kintaro Baba
Kurokawa-Mura, Kitakanbara-Gun, Niigata Prefecture
and Hitoo Ôhira
Entomological Laboratory, Aichi-Gakugei University, Okazaki City

I. SADO ISLAND

1. Introduction

Since 1931, Baba has endeavoured to collect the insects in Sado Island and has done several collecting trips in this island, though the period of each trip was short and not over ten days. Moreover, a few collectors employed by him have collected insects in Sado and sent them to him. And a few insect-lovers among his friends have brought their collections in Sado Island to his laboratory. Recently, Ôhira studied and identified all of the Elateridae-specimens among these collections. As a result of his study, Ôhira discovered some new facts on the taxonomy and biogeography.

According to these circumstances, the two authors, Baba and Ôhira, agreed to publish the Elateridae-fauna of Sado Island together with the description of a new genus and a new species by Ôhira.

The authors should state their cordial gratitude to Prof. Teiso Esaki, Dr. Keizô Yasumatsu, Prof. Shigeo Emura, Dr. Kazuo Kamiya and Mr. Takashi Kishii for their pertinent guidance in the publication of this study. And also they must express their hearty thanks to Prof. Zyûzô Sawano, Mr. Seiji Higuma and other members who were kind enough to offer their collections to the authors.

2. Historical Review

There are some records of Elateridae in Sado Island by different authors. These literature and the Elaterid-insects published in them are as follows:

- 1) Lewis, G.: On the Elateridae of Japan, Ann. Mag. Nat. Hist., XIII (6), p. 38, 1894.
Elater hypogastricus Candèze
- 2) Baba, K.: Insects collected in Sado Island, 1st report, Shizenkenkyu, no. 5, pp. 64-82, 1936. (in Japanese)
Athous secessus Candèze, *Lacon binodulus* Motschulsky, *Lacon scrofa* Candèze, *Melanotus lewisi* Schenkling, *Paracardiophorus sequens* Candèze, *Aeoloderma agnatus* Candèze
- 3) Baba, K.: ibid., 2nd report, Shizenkenkyu, no. 6, pp. 45-63, 1937. (in Japanese)
Agriotes sericeus Candèze, *Agriotes higonius* Lewis, *Corymbites daimio*

- Lewis, *Melanotus erythropygus* Candèze, *Elater hypogastricus* Candèze, *Megapenthes gracilis* Candèze, *Cardiophorus vulgaris* Motschulsky
- 4) Baba, K.: ibid., 3rd report, Shizenkenkyu, no. 7, pp. 59-67, 1938. (in Japanese) *Corymbites pruinus* Motschulsky, *Cardiophorus pullatus* Candèze, *Silesis musculus* Candèze
- 5) Baba, K.: ibid., 4th report, Shizenkenkyu, no. 8, p. 40, 1941. (in Japanese) *Elater carbunculus* Lewis, Gen.? sp.?
- 6) Yamamoto, S.: Insect-Fauna of the Sado Island (I), Kagaku-no-Nogyo, XVII (4), pp. 1-11, 1937. (in Japanese) *Paracardiophorus pullatus* Candèze, *Paracardiophorus sequens* Candèze, *Lacon binodulus* Motschulsky, *Lacon scrofa* Candèze, *Athous secessus* Candèze, *Silesis musculus flavipennis* Lewis, *Melanotus legatus* Candèze, *Melanotus lewisi* Schenkling, *Aeoloderma agnata* Candèze

(The Elateridae-species reported by Baba during 1936-1941 were identified by Dr. Yushiro Miwa who received these materials from Baba directly or through Dr. Teiso Esaki).

As mentioned above, Elaterid-insects recorded from the Island numbered 20 species.

In the present paper, the authors treated 29 species of Elateridae, and 13 of them were unrecorded from this island, containing a new genus, new species and an unrecorded species from Japan. Last-mentioned species, *Sephilus formosanus* Schwarz was only reported from Formosa and the Loo-Choos, and the discovery of this species in Sado Island leads the authors to conclude that the insect-fauna of this island is strongly influenced by the Tsushima Current, and it contains southern elements to a considerable degree.

3. List of the Elateridae-species

Genus *Agrypnus* Eschscholtz, 1829

1. *Agrypnus binodulus* (Motschulsky)

Lacon binodulus Motschulsky, Etud. Ent., vol. IX, p. 8, 1860.

Lacon binodulus Miwa, Dep. Agr., Gov. Res. Inst., Formosa, Rept. 65, p. 67, pl. I, fig. 5, 1934.

Sado: Mt. Kinpoku, 1 ♂, 12 VII 1934, K. Baba; ditto, 1 ♀, 7-8 VII 1936, Y. Suzuki et Z. Sawano; Aoneba-Tôge, 1 ♀, 6 VII 1936, K. Baba; Tassha, 1 ♂, 3 V 1955, S. Higuma.

Genus *Colaulon* Arnett, 1952

2. *Colaulon* (*Cryptolacon*) *scrofa* (Candèze)

Lacon scrofa Candèze, Mém. Soc. Sc. Liège, (2) V, p. 4, 1873.

Lacon scrofa Miwa, loc. cit., p. 69, pl. I, fig. 9, 1934.

Sado: Ryotsu, 1 ♂, 4 V 1933, K. Baba; Kawaharada, 1 ♀, 11 VII 1934, K. Baba; Aoneba-Tôge, 1 ♀, 6 VII 1936, K. Baba.

Genus *Aeoloderma* Fleutiaux, 1929

3. *Aeoloderma agnata* (Candèze)

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

Aeoloderma agnata Miwa, loc. cit., p. 73, pl. I, fig. 19, 1934.

Sado: Ryotsu, 1 ex., 11 VII 1933, K. Baba; Hatano, 1 ex., 10 VII 1938, K.

Baba; ditto, 6 exs., 13 III 1955, M. Honma.

Genus **Malloea** Arnett, 1955

4. **Malloea akitu** (Kishii) (Pl. 5, fig. 1)

Actenicerus akitu Kishii, Akitu, vol. IV, no. 1, p. 21-22, figs. 2, 3, 7, 14, 20, 1955.

Sado: Aoneba-Tôge, 1 ♂, 1 ♀, 6 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Mt. Kinpoku, 1 ♂, 7-8 VII 1936, K. Baba, Y. Suzuki et Z. Sawano.

Genus **Anostirus** Thomson, 1859

5. **Anostirus daimio** (Lewis)

Corymbites daimio Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 256, 1894.

Corymbites (Anostirus) daimio Miwa, loc. cit., p. 114, pl. V, fig. 16, 1934.

Anostirus (Ipostirus) daimio Binaghi, Mém. Soc. Ent. Italiana, vol. XIX, p. 232, 1940.

Sado: Aoneba-Tôge, 1 ♀, 6 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Mt. Kinpoku, 1 ♀, 22 V 1936, K. Baba.

Genus **Corymbitodes** Buysson, 1904

6. **Corymbitodes obscuripes** (Lewis) (Pl. 5, fig. 10)

Corymbites obscuripes Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 264, 1894.

Corymbites (Metactenicerus) obscuripes Miwa, loc. cit., p. 125, pl. VI, fig. 9, 1934.

Sado: Hagenotaka-Tôge, 1 ♂, 1 V 1955, S. Higuma; Ogawa, 1 ♂, 2 V 1955, S. Higuma.

7. **Corymbitodes gratus** (Lewis)

Corymbites gratus Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 262, 1894.

Corymbites (Metactenicerus) gratus Miwa, loc. cit., p. 124, pl. VI, fig. 12, 1934.

Sado: Ogawa, 1 ♀, 2 V 1955, H. Yamazaki.

Genus **Hemicrepidius** Germar, 1839

8. **Hemicrepidius (Pseudathous) secessus** (Candèze)

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

Athous (s. str.) *secessus* Miwa, loc. cit., p. 110, pl. V, fig. 5, 1934.

Sado: Mt. Kinpoku, 2 ♂♂, 17 VII 1955, K. Baba.

Genus **Dolerosomus** Motschulsky, 1859

9. **Dolerosomus gracilis** (Candèze), comb. nov.

Megapenthes gracilis Candèze, Mém. Soc. Sc. Liège, (2) V, p. 10, 1873.

Megapenthes gracilis Miwa, loc. cit., p. 84, pl. III, fig. 3, 1934.

Agonischius gracilis Nakane, New. Ent., vol. I, no. 1, p. 14, 1951.

According to the study of J. A. Hyslop (Proc. U. S. Nat. Mus., vol. 58, pp. 621-680, ref. p. 641, 1921) the genotype of the genus *Dolerosomus* Motschulsky is *Dolerosomus flavipennis* Motsch., but afterwards W. J. Brown (Canad. Ent., vol. LXVI, pp. 30-39, 1934) established this species to be the synonym of *Sericus debilis* LeC. H. Ôhira could examine this *debilis* LeC. through the kindness of Mr. E. C. Becker of Canada.

The general characters of this species somewhat resemble the genus *Sericus* Esch. and *Agonischius* Cand., but may be recognized by the much slender body, projecting mouth organs, the first joint of hind tarsi being much longer than the second, and quite isolated male aedeagus. These two mentioned species and a North American *Sericus silaceus* Say should probably be placed in this genus.

Sado: Mt. Kinpoku, 1 ♂, 2 ♀♀, 22 V 1936, K. Baba; ditto, 1 ♀, 7-8 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Suizu, 1 ♂, 22 V 1937, K. Baba.

Genus *Ectinus* Eschscholtz, 1829

10. *Ectinus sericus* (Candèze)

Agriotes sericus Candèze, Elat. nouv., II, p. 49, 1878.

Agriotes sericeus Miwa, loc. cit., p. 132, pl. VI, fig. 22, 1934.

Sado: Mt. Kinpoku, 1 ♂, 1 ♀, 12 VII 1934, K. Baba; ditto, 2 ♀♀, 22 V 1936, K. Baba; Aoneba-Tôge, 1 ♀, 6 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Otowa-Ike, 1 ♂, 2 V 1955, H. Higuma.

11. *Ectinus higonius* (Lewis)

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

Agriotes higonius Miwa, loc. cit., p. 134, pl. VII, fig. 3, 1934.

Sado: Mt. Kinpoku, 1 ♂, 1 ♀, 22 V 1936, K. Baba.

12. *Ectinus insidiosus* (Lewis)

Megapenthes insidiosus Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 44, 1894.

Agriotes insidiosus Miwa, loc. cit., p. 134, pl. VII, fig. 4, 1934.

Agriotes hattorii Ôhira, Mushi, vol. 27, no. 6, p. 45, pl. IV, figs. 5, 7, 10, 1954. Synonym nov.

Sado: Mt. Kinpoku, 1 ♀, 7-8 VII 1936, Z. Sawano.

Genus *Sadoganus* Ôhira nov.

Genotype: *Sadoganus babai* Ôhira, sp. nov.

Body robust, moderately elongate and somewhat convex above; surface rather opaque, not shining nor glabrous; pubescence short, uniform, erect, and moderately sparse, neither patterned nor spotted in general.

Head small, with frons flattened and subvertical; clypeal margin entire, very much ridged, with anterior rim transversely straight; eyes small, not prominent; mouth parts open downwards; antennae short, usually shorter than that of posterior angles of pronotum, basal joint robust, but neither prolonged nor depressed, with second and third ones shortest, nearly equal in length to each other, from fourth to tenth strongly serrate.

Pronotum nearly quadrate with rounded sides, widest across middle; disk moderately convex, median line absent; lateral margins narrowly ridged in posterior half, absent or obsolescent in anterior half; posterior angles short, only bluntly produced, each bearing a short carina above. Scutellum flattened, not prominent.

Elytra almost parallel-sided on about basal two-thirds, thence gradually narrowing towards apices, with tips normal, not pointed; disk slightly depressed around first to fourth intervals; striae moderately impressed with somewhat coarse punctures.

Prosternal sutures almost straight to each other and broadly double, with the anterior portion having a shallow antennal groove; prosternal lobe very narrow,

opens outwards; mucro in lateral aspect slightly concave behind procoxae; middle coxal cavities not entirely enclosed by the sterna of meso- and metasternum, allowing the epimeron of mesosternum to reach the coxal cavity; basal plates rather narrow, more or less gradually narrowing outwards; legs rather stout, tarsi normal; claws simple, sickle-like shaped.

A typical form of the male aedeagus and the internal reproductive organ of the female as figured in the Plate 5.

This new genus somewhat resembles the genus *Ectinus* Eschscholtz, but may be recognized by the following points:— The pronotum widest across middle, with the lateral margins not visibly margined in anterior half; the posterior angles of pronotum very short, only bluntly produced, not divergent; clypeal margin of frons very strongly ridged; also much different in shape of the male aedeagus and the female bursa copulatrix.

13. *Sadoganus babai* Ôhira, sp. nov. (Pl. 4, figs. 4, 5, Pl. 5, figs. 5, 6, 7)

Male. Length 8.5–9.5 mm., widest 2.5–2.8 mm. Robust, moderately elongate and parallel-sided, somewhat convex above. Body above and beneath deep black, except prosternal sutures and fourth to fifth sternites of abdomen which are somewhat reddish; antennae obscure reddish brown, except basal joint which is densely black; legs concolorous with antennae, except tarsi and claws which are reddish brown; surface rather opaque, clothed with very short, erect, whitish pubescence, which are becoming somewhat longer and decumbent especially on abdomen.

Head subquadrate, coarsely, densely, somewhat rugosely punctured; frons gently convex between eyes, very scarcely impressed between antennae; clypeal margin entire, very strongly ridged; antennae nearly as long as head and pronotum combined together or a little shorter than that, basal joint robust, only slightly longer than wide, second joint shortest, subglobular, nearly as long as wide, third a little longer than second and obconic, these two together nearly as long as fourth, from fourth to tenth very strongly serrate, which are all triangular, apical one elongate, emarginated near the apex.

Pronotum scarcely longer than wide, widest across middle, narrowest across anterior angles, sides nearly straight and parallel in posterior one-fourth, slightly rounded at middle, thence narrowing archwise to anterior angles; disk moderately convex to side margins in middle; median line absent, but only slightly impressed in posterior one-third; surface minutely, densely, somewhat impressed punctures on the summit, but punctures becoming larger and coarser towards sides; posterior angles very weakly produced, obtusely angulate on the outsides, each bearing a short carina above and clearly reaching margin. Scutellum flattened, elongate tongue-shaped, with minutely punctate and finely pubescent.

Elytra a little wider than pronotum, about 2.5 times as long as wide, the sides straight and parallel to each other in about basal two-thirds, thence narrowing towards apices which are moderately rounded; striae clearly defined, somewhat coarsely, regularly punctured; intervals very slightly convex, with minute punctuations, and finely transversely rugose.

Propleura densely, rugosely punctured; prosternum gently convex, rather sparsely punctured on the summit, but the punctures becoming much more dense towards sides; prosternal lobe narrow, opens outwards; each prosternal suture almost straight, broadly double and grooved anteriorly; mucro in lateral aspect

slightly concave behind procoxae; metasternum and abdomen minutely, finely punctured; basal plates rather narrow, gradually narrowing outwards. Legs rather stout, with tarsi normal; claws simple, narrow, and sickle-like shaped.

Female. Length 10-11 mm., width 2.5-3 mm. Differs from the male in being on the average only slightly broader and more robust, with the antennae slightly shorter than the male.

Habitat: Japan (Honshu).

Holotype: ♂, Tassha in Sado Island, 3 V 1955, S. Higuma leg.

Allotype: ♀, as above.

Paratypes: 1 ♂, Misugimura (near Mt. Miune) in Mie-Pref., 2 V 1955, Z. Narse leg. (in coll. Ôhira); 1 ♀, ditto, 1 V 1955, H. Ichihashi leg. (in coll. Ôhira); 1 ♀, Kobotoke near Asakawa, 7 V 1950, D. Matsushita leg. (in coll. Ôhira); 2 ♂♂, Hozukyo in Kyoto, 25 IV 1953, T. Kishii leg. (in coll. Kishii); 1 ♂, ditto, 11 IV 1952, T. Kishii leg. (in coll. Kishii); 1 ♂, Takanogawa in Kyoto, 19 I 1947, A. Kusakabe leg. (in coll. Kishii); 1 ♂, Minomo in Osaka, 22 IV 1944, T. Kishii leg. (in coll. Kishii); Mt. Kisokoma in Nagano-Pref., 12 VI 1949, T. Nakane leg. (in coll. Nakane)

The holotype and allotype are preserved in the collection of the Entomological Laboratory, Nagaoka Science Museum, Niigata Prefecture.

Genus *Silesis* Candèze, 1863

14. *Silesis musculus* Candèze

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

Silesis musculus Miwa, loc. cit., p. 137, pl. VII, fig. 11, 1934.

Sado: Mt. Kinpoku, 1 ♀, 12 VII 1934, K. Baba; Mt. Donden, 4 ♂♂, 18 VII 1955, K. Baba.

Genus *Ampedus* Dejean, 1833

15. *Ampedus hypogastricus* (Candèze)

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

Elater hypogastricus Miwa, loc. cit., p. 80, pl. II, fig. 13, 1934.

Sado: Mt. Kinpoku, 1 ♂, 22 V 1936, K. Baba; Suizu, 1 ♀, 22 V 1937, K. Baba; Kurine, 1 ♀, 1 II 1955, M. Honma; Otowa-Ike, 1 ♀, 2 V 1955, H. Yamazaki; Tassha, 1 ♂, 3 V 1955, S. Higuma.

16. *Ampedus carbunculus* (Lewis)

Elater carbunculus Lewis, Ent. Monthl. Mag., p. 156, 1879.

Elater carbunculus Miwa, loc. cit., p. 80, pl. II, fig. 16, 1934.

The male aedeagus of this species is somewhat isolated from the other members of the *Ampedus* group, but the shape of female bursa copulatrix and spermatheca are very similar to the *Ampedus* group, except more elongate spine-like hairs and the smaller number of such hairs. The third joint of male antennae is distinctly dilated, but in female it is not so dilated as in the male.

Sado: Mt. Kinpoku, 1 ♂, 7-8 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Hatano, 1 ♀, 9 VII 1955, M. Honma.

17. *Ampedus rufipes* (Lewis)

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

Elater rufipes Miwa, loc. cit., p. 80, pl. II, fig. 15, 1934.

Sado: Mt. Kinpoku, 1 ♀, 7-8 VII 1936, K. Baba.

Genus **Homotechnes** Candèze, 1881

18. Homotechnes ? plebejus (Candèze)

Ludius plebejus Candèze, Mém. Soc. Sc. Liège, (3) V, p. 28, 1873.

Neotrichophorus plebejus Miwa, loc. cit., p. 129, pl. VI, fig. 18, 1934.

Sado: Kawaharada, 3 ♀ ♀, 1 ♂, 27 VII, 2 VIII, 15 VIII 1955, H. Kuwano.

Genus **Sephilus** Candèze, 1873

19. Sephilus formosanus Schwarz (Pl. 4, fig. 6, Pl. 5, figs. 2, 3, 4)

Sephilus formosanus Schwarz, Deutsche Ent. Zeitschr., p. 319, 1902.

Sephilus formosanus Miwa, loc. cit., p. 191, 251, pl. VIII, fig. 6, 1934.

Female. Length 11.5 mm., width 3.5 mm. Robust, moderately elongate and somewhat convex above. Body above dusky brown, except posterior angles of pronotum, around the clypeal margin of frons, sutural intervals and external margins of elytra which are somewhat reddish brown; antennae and body beneath entirely reddish brown; legs clear yellowish brown, except tarsi which are somewhat dusky; surface moderately shiny, clothed with moderately long, erect, fulvous pubescence, which are becoming shorter, sparser, and more decumbent on abdomen.

Head rather large, gently convex between eyes, flattened between antennae, but with two large indistinct impressions near the clypeal margin of frons; surface moderately sparsely punctured, each punctuation somewhat large and umbilicate; clypeal margin much raised, rounded and somewhat projecting forwards, nasal area very broad, nearly as long (from the base of labrum to clypeal margin) as wide (between antennal insertions); eyes very large, globular and somewhat prominent; antennae short, slightly shorter than head and pronotum combined together, second joint shortest, bulbous, third and fourth almost of the same shape, but the former longer than the latter, apical one elongate, much longer than the preceding.

Pronotum slightly wider than long, including posterior angles; the sides feebly sinuous in posterior one-fourth, rounded at middle, thence gradually narrowing towards anterior angles; posterior angles rather strongly produced, weakly divergent, each bearing a short, strong carina above and not parallel to the margin; disk dome-like convex to side margins in middle, which are hidden from above; surface with sparse, rather large, umbilicate punctures on the summit, but they become denser, coarser, and somewhat rugose towards sides. Scutellum flattened, feebly prominent, not pointed.

Elytra at humeri about twice as long as wide, widest at a little behind middle; the sides almost straight in about basal two-thirds, thence gradually narrowing towards apices; striae well defined, coarsely, deeply punctured; intervals slightly convex, punctate and transversely rugose.

Prosternal sutures almost straight and broadly double, each bearing a shallow antennal groove in anterior half; mucro in lateral aspect very slightly excavated behind procoxae. Legs stout, with second and third joints of tarsi definitely lobed beneath, fourth very short; claws simple, sickle-like in shape.

The internal reproductive organ of the female have such a characteristic as figured in the Plate, bearing two small shallow plates on the bursa copulatrix, a pair of spermathecal accessory glands being very small.

The first specimen was found in Formosa by O. Schwarz in 1902 (loc. cit.), afterwards this species was recorded from the Loo-Choos (Iriomote Is.) by Dr. Y. Miwa in 1933 (Trans. Nat. Hist. Soc. Formosa, vol. XXIII, no. 124, pp. 4-15). The external features of this specimen treated by the author correspond very well with the original description made by O. Schwarz, but the description is very short, and moreover, the authors had never examined any credible specimen from Formosa or the Loo-Choos, so the authors determined the specimen only by consulting the description carefully.

Sado: Iwakubi, 1 ♀, 20 VIII 1954, S. Honma.

Genus *Spheniscosomus* Schwarz, 1892

20. *Spheniscosomus cete* (Candèze)

Melanotus cete Candèze, Mon. Elat., III, p. 332, 1860.

Spheniscosomus cete Miwa, loc. cit., p. 98, pl. IV, fig. 1, 1934.

Sado: Suizu, 1 ♂, 1 ♀, 8 VII 1938, K. Baba.

Genus *Melanotus* Eschscholtz, 1829

21. *Melanotus annosus* Candèze

Melanotus annosus Candèze, Elat. nouv., I, p. 48, 1894.

Melanotus annosus Miwa, loc. cit., p. 103, pl. IV, fig. 8, 1934.

Sado: Mt. Kinpoku, 1 ♀, 7-8 VII 1936, K. Baba, Y. Suzuki et Z. Sawano.

22. *Melanotus senilis* Candèze

Melanotus senilis Candèze, Elat. nouv., I, p. 47, 1867.

Melanotus senilis Miwa, loc. cit., p. 103, pl. IV, fig. 10, 1934.

Sado: Mt. Kinpoku, 1 ♀, 7-8 VII 1936, K. Baba, Y. Suzuki et Z. Sawano;
Ogura-Tôge, 1 ♂, 1 ♀, 9 VII 1938, K. Baba.

23. *Melanotus erythropygus* Candèze

Melanotus erythropygus Candèze, Mém. Soc. Sc. Liège, (2) V, p. 20, 1873.

Melanotus erythropygus Miwa, loc. cit., p. 100, pl. IV, fig. 11, 1934.

Sado: Mt. Kinpoku, 1 ♀, 22 V 1936, K. Baba; Aoneba-Tôge, 1 ♀, 6 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Suizu, 1 ♂, 22 V 1937, K. Baba.

24. *Melanotus legatus* Candèze

Melanotus legatus Candèze, Mon. Elat., III, p. 323, 1860.

Melanotus legatus Miwa, loc. cit., p. 102, pl. IV, fig. 5, 1934.

Sado: Mt. Kinpoku, 1 ♂, 13 VI 1936, K. Baba; ditto, 1 ♀, 7-8 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Aoneba-Tôge, 1 ♂, 6 VII 1936, K. Baba, Y. Suzuki et Z. Sawano; Kawaharada, 2 ♀ ♀, 15 VII 1955, H. Kuwano; ditto, 1 ♂, 16 VII 1955, H. Kuwano; ditto, 1 ♀, 25 VII 1955, H. Kuwano.

25. *Melanotus lewisi* Schenkling

Melanotus lewisi Schenkling, In Junk's Col. Cat., 88, Elat. II, p. 227, 1927.

(nom. nov)

Melanotus longipennis Lewis, Ann. Mag. Nat. Hist., (6) XIII, p. 192, 1894.

(nec. Küst in 1848)

Melanotus lewisi Miwa, loc. cit., p. 102, pl. IV, fig. 4, 1934.

Sado: Ogi, 1 ♂, 12 VII 1933, K. Baba; Kuwaharada, 1 ♀, 22 VII 1955, H. Kuwano.

26. *Melanotus spernendus* Candèze*Melanotus spernendus* Candèze, Mém. Soc. Sc. Liège, (2) V, p. 21, 1873.*Melanotus spernendus* Miwa, loc. cit., p. 101, pl. IV, fig. 7, 1934.

Sado: Ogura-Tôge, 1 ♂, 9 VII 1938, K. Baba et S. Mizutani; Hatano, 1 ♂, 23 V 1954, M. Honma; ditto, 3 ♂ ♂, 10 V, 23 V, 4 VI 1955, M. Honma.

Genus **Dicronychus** Brullé, 1832**27. *Dicronychus (Platynychus) pauper* (Candèze)***Cardiophorus pauper* Candèze, Mém. Soc. Sc. Liège, (2) V, p. 17, 1873.*Platynychus pauper* Miwa, loc. cit., p. 96, pl. III, fig. 23, 1934.

Sado: Ogura-Tôge, 1 ♂, 9 VII 1938, K. Baba.

Genus **Cardiophorus** Eschscholtz, 1829**28. *Cardiophorus vulgaris* Motschulsky***Cardiophorus vulgaris* Motschulsky, Schrenk's Reisen Amul., p. 11, t. 7, fig. 21, 1860.*Cardiophorus vulgaris* Miwa, loc. cit., p. 93, pl. III, fig. 26, 1934.

Sado: Mt. Kinpoku, 1 ♂, 22 V 1936, K. Baba.

Genus **Paracardiophorus** Schwarz, 1895**29. *Paracardiophorus pullatus* (Candèze)***Cardiophorus pullatus* Candèze, Mém. Soc. Sc. Liège, (2) V, p. 16, 1873.*Paracardiophorus pullatus* Miwa, loc. cit., p. 95, pl. III, fig. 27, 1934.

Sado: Mt. Kinpoku, 1 ex., 3 IX 1939, K. Baba; ditto, 1 ex., 14 VII 1939, K. Baba; Ogawa, 1 ex., 2 V 1955, H. Yamazaki.

II. TOBI ISLAND AND AWA ISLAND

Baba, one of the authors, has hitherto had only three insect collecting trips in these islands, once in Tobi Island and twice in Awa. Ôhira, his fellow worker, studied and identified all specimens of Elateridae in this collection from these islands. Fortunately, Ôhira discovered a new form in this small material. And so we, the two authors, determined to publish our study as the list of Elateridae in these islands with the description of the new form by Ôhira.

1. Tobi Island**1. *Agrypnus binodulus* (Motschulsky, 1860)**

Tobi: 2 ♀ ♀, 2-4 VIII 1939, K. Baba.

2. *Melanotus legatus* Candèze, 1860

Tobi: 1 ♂, 2-4 VIII 1939, K. Baba.

3. *Elater sieboldi* (Candèze)*Ludius sieboldi* Candèze, Mém. Soc. Sc. Liège, (2) V, p. 27, 1873.*Ludius sieboldi* Miwa, loc. cit., p. 127, pl. VI, fig. 19, 1934.

Tobi: 3 ♂ ♂, 2-4 VIII 1939, K. Baba.

2. Awa Island**1. *Pectocera fortunei* Candèze***Pectocera fortunei* Candèze, Mém. Soc. Sc. Liège, (2) V, p. 6, 1873.*Pectocera fortunei* Miwa, loc. cit., p. 72, pl. I, figs. 14, 14a, 1934.

Awa: 1 ♂, 7 VII 1937, K. Baba.

2. *Aeoloderma agnata* (Candèze, 1873)

Awa: 1 ex., 12 VII 1932, K. Baba.

3. *Hemicrepidius* (*Pseudathous*) *secessus* (Candèze, 1873)

Awa: 1 ♂, 7 VII 1937; 1 ♂, 1 ♀, 11 VII 1932, K. Baba et Z. Sawano; 1 ex., 12 VII 1932, K. Baba.

4. *Hemicrepidius* (*Ainuathous*) *jactatus babai* Ôhira, subsp. nov. (Pl. 4, figs. 1, 2, Pl. 5, fig. 9)

Male. Length 8-9.5 mm, width 2-2.5 mm. This new subspecies differs from the nominate form from Honshu in the following points:— Body more robust and more reddish brown-coloured in general; the elytra entirely yellowish brown; the posterior angles of pronotum more acutely produced, and quite lacking the carina in each above and flattened; the third joint of antennae relatively elongate and nearly clavate in form; male aedeagus relatively small, the median lobe broader, with the tip not pointed, and the lateral lobes smaller, with each external apical angle more acutely pointed.

Holotype: 1 ♂, Awa Island, 12 VII 1934, K. Baba leg.

Paratypes: 3 ♂♂, as above.

Holotype and two paratypes are preserved in the collection of the Biological Institute, Niigata University, and one paratype being in the collection of H. Ôhira.

5. *Spheniscosomus cete* (Candèze, 1860)

Awa: 1 ♂, 1 ♀, 11 VII 1932, K. Baba.

6. *Spheniscosomus restrictus* (Candèze)*Melanotus restrictus* Candèze, Mém. Acad. belg., p. 47, 1865.*Spheniscosomus restrictus* Miwa, loc. cit., p. 98, pl. IV, fig. 3, 1934.

Awa: 1 ♀, 7 VII 1937, K. Baba et Z. Sawano.

7. *Dicronychus* (*Platynychus*) *adjutor* (Candèze)*Cardiophorus adjutor* Candèze, Mém. Soc. Sc. Liège, (2) V, p. 17, 1873.*Platynychus adjutor* Miwa, loc. cit., p. 97, pl. III, fig. 24, 1934.

Awa: 1 ♀, 11 VII 1932, K. Baba.

Explanation of Plates

Plate 4

Fig. 1. *Hemicrepidius* (*Ainuathous*) *jactatus babai* Ôhira, subsp. nov.

Fig. 2. Ditto, male antenna.

Fig. 3. *Ampedus carbunculus* (Lewis), male.Fig. 4. *Sadoganus babai* Ôhira, gen. et sp. nov.

Fig. 5. Ditto, pronotum in lateral aspect.

Fig. 6. *Sephilus formosanus* Schwarz, female.

Plate 5

Fig. 1. *Malloea akitu* (Kishii), bursa copulatrix.Fig. 2. *Sephilus formosanus* Schwarz, ditto.

Fig. 3. Ditto, female antenna.

Fig. 4. Ditto, right hind tarsus, female.

Fig. 5. *Sadoganus babai* Ôhira, gen. et sp. nov., bursa copulatrix.

- Fig. 6. Ditto, male antenna.
 Fig. 7. Ditto, male aedeagus.
 Fig. 8. *Hemicrepidius (Ainuathous) jactatus* (Lewis), bursa copulatrix.
 Fig. 9. *Hemicrepidius (Ainuathous) jactatus babai* Ôhira, subsp. nov., male aedeagus.
 Fig. 10. *Corymbitodes obscuripes* (Lewis), male aedeagus.

日本産の3種のハエについて

堀 克 重

1. 筆者は 1952 年 8 月 15 日白山で *Protocalliphora azurea* (Fallén) の雄一頭を採集した。雄の交尾器の形態等は Engel ('20) の記載によく一致する。本邦から最初の記録である。

2. 筆者 (1951) は本邦産 *Ophyra* 属の既知 2 種の外になお本邦未記録と思われるこの属の一種を採集したことを述べた。其の後筆者はこの種類が本邦各地にかなり広く分布していることを知った。この種類は Malloch ('23) の報文等を参照してみると *O. chalcogaster* Wied. の記載に極めてよく一致している故、恐らく本種と同定して良いものと思う。

3. 筆者 (1951) はさらに *Orthellia* 属の同定未了の 1 種が本邦に産することを述べた。この種類は本邦各地で極めて普通に見られるにもかかわらず筆者は従来の諸家の報文中に本種に該当するものを見出すことができなかった。ところで最近 Zimin ('51) が奄美及中国より得た材料に基づいて報告した新種 *O. latipalpis* の記載が本土産のこの種類に一致することを知った。恐らく本土産の *Orthellia* の普通種はこの種類と同一とみて良いと思う。

ホソミモリトンボを尾瀬で採集

安 藤 尙

Somatochlora arctica Zetterstedt ホソミモリトンボは従来、上高地・奥日光・諏訪湖周辺の高層湿原から採集されているにもかかわらず、尾瀬ヶ原を中心とする尾瀬地方からは採集されたという記録がなく頗る不思議なことでされてきた。

ところが 1955 年夏、筆者はこの地で本種を採集することができたので記録しておきたいと思う。発表を勧められた朝比奈正二郎博士に厚く御礼申上げる。

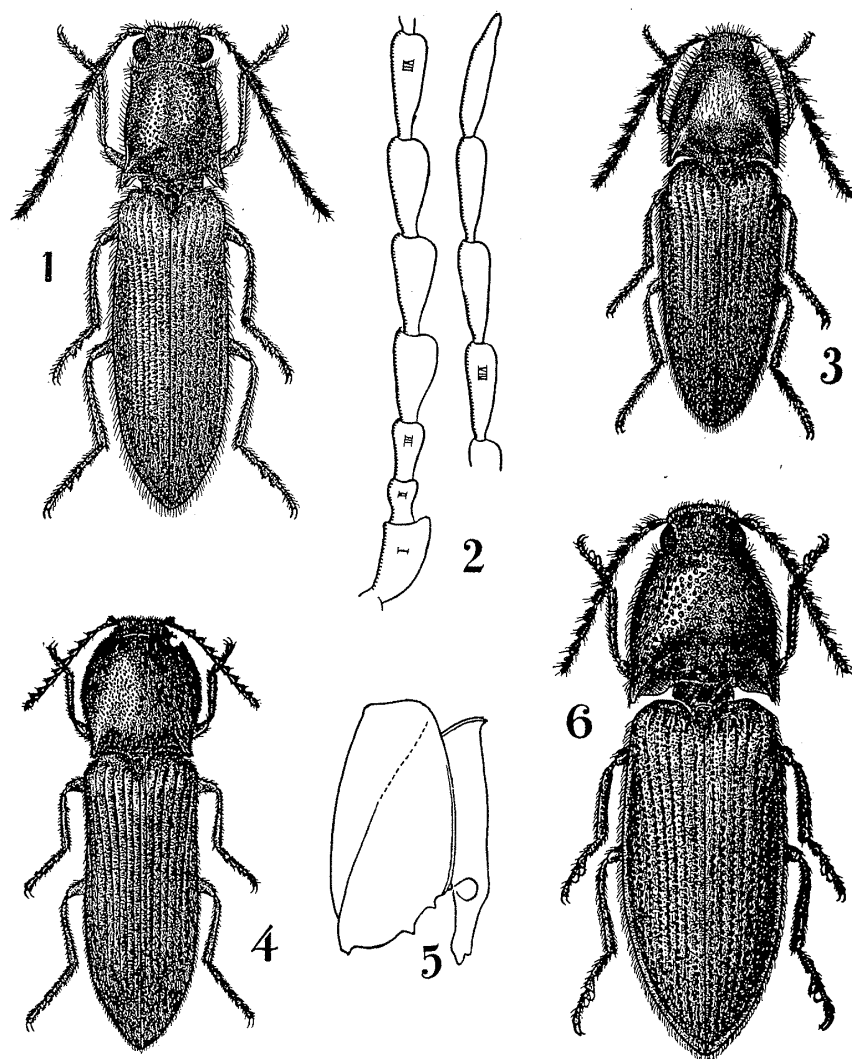
Somatochlora arctica Zetterstedt

ホソミモリトンボ

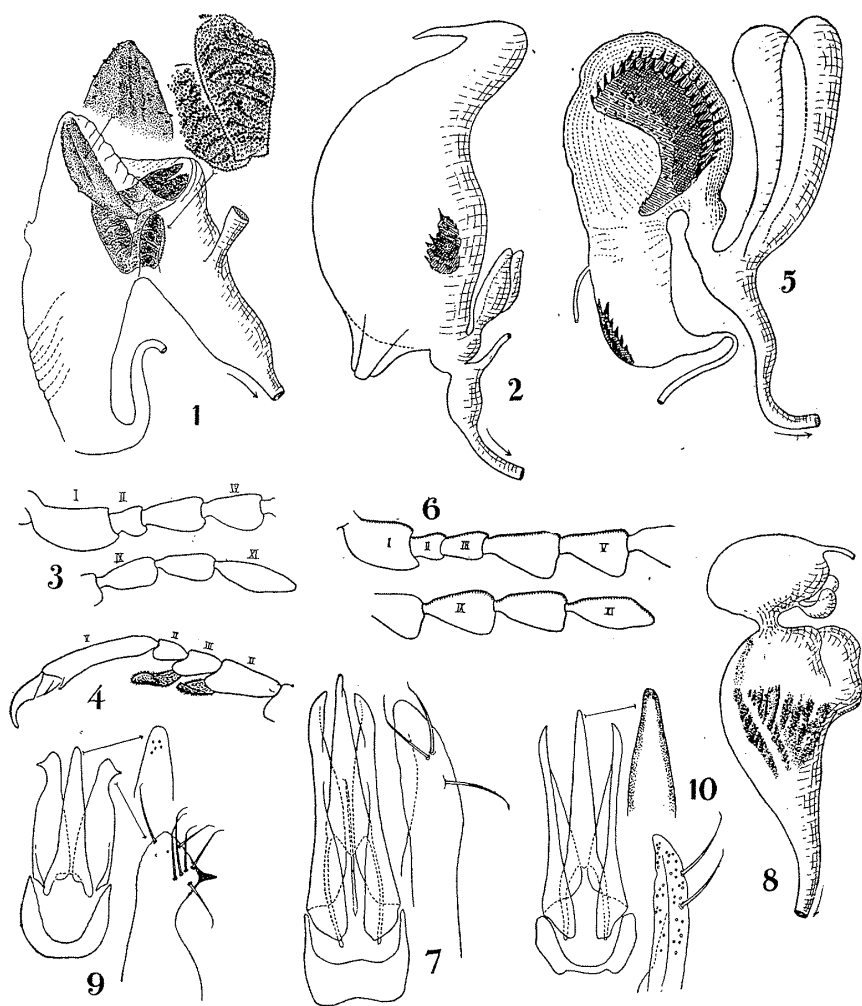
〔産地〕 福島県尾瀬沼沼畔；2 ♂♂；10. viii. 1955；筆者採集（1 ♂を朝比奈正二郎博士、他の 1 ♂を筆者が所蔵）

午前 9 時半頃、沼畔の草原上 1～3 m を徘徊しているのをみつけて採集した。採集した 2 ♂♂の外にこの場所で、数回 *Somatochlora* 属のものを目撃したが本種であろう。

尙、草原中を歩いていたら足許から交尾中（いわゆる「ほかけ」になつた）の本種らしい ♀ が一直線に樹梢高く飛び去るのを認めている。



Baba and Ôhira — Elateridae from Sado, Awa and Tobi Island



Baba and Ôhira — Elateridae from Sado, Awa and Tobi Island