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REVISION OF SOME CERAMBYCIDAE ON THE BASIS
OF THE TYPES OF THE LATE DRS. KANO AND
MATSUSHITA, WITH DESCRIPTIONS
OF THREE NEW SPECIES

(COLEOPTERA : CERAMBYCIDAE)

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By the courtesy of Prof. Emeritus T. Uchida, Prof. C. Watanabe, Mr. H. Hasegawa and Dr. Y. Kurosawa, I have had the opportunity to study the Cerambycid collections including many type specimens of the late Drs. Tadao Kano and Masaki Matsushita who contributed greatly to the knowledge of the Cerambycidae of Japan and its surrounding regions. Matsushita's collection is preserved in the Entomological Institute, Hokkaido University, Sapporo (EIHU) and in the National Institute of Agricultural Sciences, Tokyo (NIAS), and Kano's collection in the National Science Museum, Tokyo (NSM). In this paper will be given the result of my own examination of these collections.

Before going further, I wish to express my hearty appreciation to the following gentlemen for their kindness in permitting to study freely the valuable specimens or in sending me the useful literature: Prof. Emeritus T. Uchida, Prof. C. Watanabe, Dr. S. von Breuning, Dr. N. N. Plavilstshikov, Mr. N. Tosawa, Dr. J. L. Gressitt, Prof. S. C. Chang, Mr. H. Hasegawa, Dr. Y. Kurosawa, Dr. S. Takagi, Dr. K. Umeya, Mr. T. Shibata, Mr. M. Amano and Mr. T. Akashi. Last but not least my sincere acknowledgment must be expressed to Prof. Watanabe for his kindness in reading through the manuscript.

1. *Rhagium inquisitor* (Linné)

Cerambyx inquisitor Linné, 1758, Syst. Nat. ed 10: 393.

Rhagium rugipenne: Hayashi, 1960, Niponius, 1 (6): 3, fig. 2 (nec Reitter).

As I have had the opportunity to examine the male specimen from Irkutsk, Siberia, determined by Plavilstshikov as *Rhagium rugipenne* Reitter (1898) at the Entomological Institute, Hokkaido University (Fig. 1 A), I have come to the conclusion that the specimens determined erroneously as *R. rugipenne* by Hayashi (1960) belong, in reality, to *R. inquisitor*. Indeed, *rugipenne* differs from *inquisitor* in the narrower prothorax, with less prominent lateral tubercles and a very narrow, median, longitudinal, shining, black line, the finer punctation, and the elytral disc wholly covered by sparser pubescence, with indistinct lighter markings. Furthermore, *R. rugipenne* has not yet been found in Japan.

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2. *Rhagium morrisonense* Kano, stat. nov.

Rhagium inquisitor morrisonense Kano, 1933, Kontyu 6: 262 (summit of Mt. Niitaka, Formosa); Gressitt, 1951, Longicornia 2: 55 (Hassenzan, Rokuritsuzan, Formosa).

This species differs from *R. inquisitor* (Linné) by the darker body, the narrower prothorax (ratio in length: width; 11:13; *inquisitor*, 11:14.5) with sharper lateral tubercles, a well-defined, median, longitudinal, shining, black line on the pronotal disc, more strongly raised costae on the elytra, the more closely punctured prothorax and the elytra with denser pubescence.

Specimens examined: Type of *morrisonense* Kano (NSM); 1 ♂, 2 ♀♀, mountains of central Formosa, S. C. Chang leg. (Hayashi coll.).

This species seems to be a relic of the Palearctic elements, inhabiting only high altitudes of Formosa.

3. *Corennys taiwana*, sp. nov. (Fig. 1B)

Black, genae red, both palpi yellowish brown, elytra light orange-yellow, the basal portion of elytra brownish, legs having light reddish brown markings on apices of all femora and 3rd tarsal joint; vertex, pronotum and elytra not densely covered with fine yellow pubescence; antennae furnished with dense black hairs on basal 5 (♂) or 8 (♀) joints; body beneath shining black, covered with fine light yellow pubescence, especially denser on breast and legs.

Body slender, almost parallel-sided (♂) or somewhat broader, weakly and gradually broadened posteriorly (♀); eyes relatively large; temples arcuately prominent, not dully angulate; antennae in ♂ reaching the posterior one-sixth of elytra, 3rd to 5th weakly triangularly dilated to apices, scape slightly longer than 3rd, as long as 4th and shorter than 5th, 6th the longest; and in ♀ surpassing the middle of elytra, 3rd to 8th strongly triangularly dilated posteriorly and the following joints almost cylindrical, very weakly dilated ectoapically, each longer than its width. Prothorax distinctly longer than broad in ♂, and slightly so in ♀, constricted rather strongly behind apex and shallowly before base, weakly prominent laterally, disc with a distinct, median, longitudinal concavity. Scutellum broad, abbreviated triangular. Elytra about 3.2 to 3.3 times (♂) and 3 times (♀) as long as the basal width, with 2 pairs of weakly raised costae, and completely dully impressed margins. Metasternum finely and sparsely punctulate, almost impunctate on its medio-posterior portion; metepisterna impunctate on large portions of the upper side, distinctly and closely so near the lower margin. Abdomen very finely and sparsely punctulate. Femora moderately clavate, 1st hind tarsal joint fairly longer than the following 2 united together, more longer in ♂ than in ♀. Length, 11.5–16 mm., width, 3–4 mm.

Holotype, ♂ (in NSM) & paratypes, 2 ♂♂, 2 ♀♀, Puli, Formosa (alt. 500 m.) (in NSM & Hayashi coll.).

This species is closely allied to *Pyrocalymma notatipes* Pic (1927) from Tonkin (N. Viet Nam), but it differs from the latter in having a deeper concavity on pronotum, complete elytral margins, and brownish marked apices of mid and hind femora. It is also set to *P. brevipennis* Pic (1927) from China, and its var. *prescutellaris* Pic (1947) from Tonkin,

but it differs from those by the brownish marked apices of mid and hind femora, more elongate elytra (about 2.6 times as long as the basal width in *brevipennis*), without reddish pubescence on body.

Note: It seems to be better that *P. brevipennis* Pic and *P. notatipes* Pic should be transferred from *Pyrocalymma* Thomson (1864) to *Coreennys* Bates (1884) by the antennal structure and posteriorly closed pro-coxal cavities.

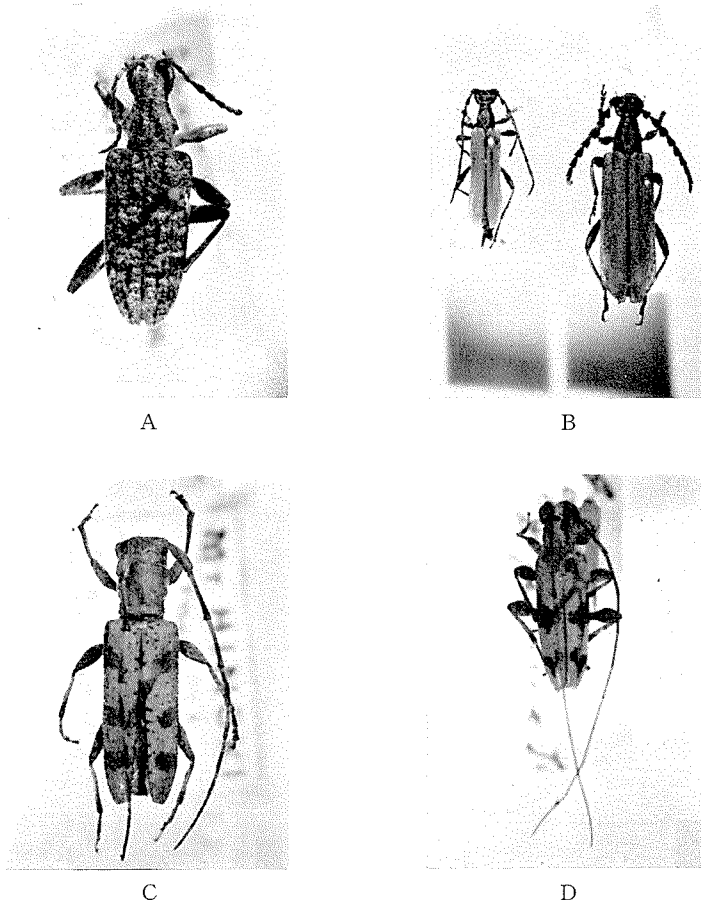


Fig. 1. A: *Rhagium rugipenne* Reitter; B: *Coreennys taiwana*, sp. nov.; C: *Eoporis (Eoporinimus) mitonoi* (Seki); D: *Eoporis (Eoporinimus) bifasciana* Schwarzzer.

Specimens examined of *P. brevipennis*: 1 ♀, Puli, Formosa (Hayashi coll.). The species is new to Formosa.

4. *Coreennys sanguinea* Kano

Coreennys sanguinea Kano, 1933, Kontyu 6: 271, pl. 4, f. 2; Hayashi, 1960, Niponius 1 (6): 26.

Coreennys sericata sanguinea: Gressitt, 1951, Longicornia 2: 122, 123, pl. 4, f. 8.

According to Gahan (1906) and Gressitt (1938), this species is closely allied to *Pyrocalymma conspicua* Gahan (1906) from Sikkim and W. China, but it differs from the latter by the more shallowly dilated 3rd to 5th antennal joints in ♂, with less densely tufted black hairs, fairly dully angulate temples, narrower elytra, and less extensively reddish body. As far as the original description shows, *Pyrocalymma diversicornis* Pic (1947) from Yunnan might be identical with *P. conspicua* Gahan.

Specimens examined: Types of *sanguinea* Kano (NSM); 1 ♂, 1 ♀, mountains of central Formosa, S. C. Chang leg.; 1 ♂, Mt. Nan-hu-pei Shan, alt. 3400 m., Formosa, June 17, 1961, S. Uéno leg.; 1 ♀, Mt. Shin Shan, West of Mt. Yü Shan, alt. 2300 m., July 3, 1961, S. Uéno leg. (Hayashi coll.).

Note: On account of the antennal structures of *P. conspicua* Gahan and *P. diversicornis* Pic, the two species should be better transferred from *Pyrocalymma* to *Corennys*.

5. *Molorchus (Linomius) plavilstshikovi* Gressitt

Molorchus (Linomius) plavilstshikovi Gressitt, 1951, Longicornia 2: 171 & 174, pl. 9, f. 3 (Kuatun, alt. 2300 m., Fukien, China).

Molorchus (Molorchus) fukiensis Plavilstshikov, 1952, Entom. Obozrenie 32: 288. **Syn. nov.**

Judging from the descriptions it appears that the two species, *plavilstshikovi* and *fukiensis*, were described from the same specimen collected by Klapperich at Kuatun and deposited in the A. Koenig Museum, Bonn.

Specimens examined: 1 ♂, Puli, Formosa (NSM).

This is new to Formosa.

6. *Molorchus (Linomius) fuscipennis*, sp. nov.

Shining black, apical antennal joints and tarsi brownish, inner portions of elytra behind scutellum slightly brownish; body furnished with long, erect whitish hairs and thinly covered with pale pubescence on scutellum and ventral surface.

Head coarsely and irregularly punctured, weakly concave between antennal insertions, with a fine median longitudinal furrow on frons. Antennae longer (♂) or shorter (♀) than body, relative length of each joint as follows:—10:4:6:8:13.2:14.2:16:14.2:14.2:13.5:16 (♂), and 10:3.2:6:8:10.8:10:10:9.2:8.8:8:8.8 (♀); scape to 4th joints coarsely punctured, shining, 5th to 11th mat, and 11th appendiculate in male. Prothorax fairly longer than broad (ratio, 5.5:4), shallowly and arcuately swollen laterally, broadest behind middle. Pronotal disc provided with a short, broad, shining median callosity on the basal half and a pair of narrow, curved ones near the lateral sides (♂); the latter callosities dully elevated, the median one almost vanished (♀), and coarsely and closely punctured, not reticulate, on the interspaces. Scutellum roundly triangular. Elytra 1.4 times as long as prothorax, 1.5 times as long as the basal width, gradually narrowed to the rounded apices; disc deeply punctured, less coarser than the punctures on pronotum; basal portion obliquely raised from shoulders to suture a short distance from behind scutellum. Femora pedunculate and clavate, sparsely punctured, shining; tibiae more closely punctured than femora, dull; 1st hind tarsal joint slightly longer than the following 2 united together. Length, 6-7 mm., width, about 1.3 mm.

Holotype, ♂ (in Hayashi coll.) & paratypes, 3 ♂♂, Mt. Daihi, Kyoto Pref., Honshu, Japan, June 9, 1957, T. Shibata leg.; 1 ♀, Himi, Is. Tsushima, May 2, 1961, T. Akashi leg. (in Hayashi coll. & Shibata coll.).

This species is closely related to *M. (Linomius) gracilis* Hayashi (1949) from which it differs by the longer body, the longer antennae, the more developed pronotal callosities and the black coloration.

7. *Chelidonium provosti* (Fairmaire)

Callichroma Provosti Fairmaire, 1887, Ann. Soc. ent. Fr. (6) 7, Bull.: liv; *ibid.*, 1887, Rev. Ent. 6: 328; Aurivillius, 1912, Col. Cat. 39: 312.

Embrik-Strandia provosti: Plavilstshikov, 1931, Folia Zool.-Hydrob. 3: 379.

Chloridolum provosti: Plavilstshikov, 1933, Ent. Nachrichtenb. 7: 131.

Chloridolum (Parachloridolum) provosti: Plavilstshikov, 1934, Best.-Tab. eur. Col. 112: 68.

Chelidonium provosti: Gressitt, 1951, Longicornia 2: 199.

Chelidonium quadricolle manchuricum Matsushita, 1943, Tr. N. H. Soc. Taiwan 33: 574; Gressitt, 1951, *op.c.*: 199. **Syn. nov.**

My own examination of the holotype of *C. quadricolle manchuricum* (in EIHU) has convinced me that this subspecies should be identical with *C. provosti*, as Dr. Gressitt (1951) already pointed out.

8. *Chelidonium gibbicolle* (White)

Callichroma gibbicolle White, 1853, Cat. Col. Brit. Mus. 8: 160.

Chelidonium gibbicolle: Gahan, 1906, Fauna Brit. Ind. Col. 1: 213, f. 80; Gressitt, 1939, Lingnan Sc. Jl. 18: 26; *ibid.*, 1940, Philip. Jl. Sc. 72: 64; *ibid.*, 1951, Longicornia 2: 196, 198.

Specimens examined: 1 ♂, Musha, Formosa, May 7, 1935 (EIHU); 1 ♀, near Hori (Puli) (alt. 400 m.), Formosa, June 1943, A. Aoki leg. (NIAS).

This is the first record of this species from Formosa.

9. *Clytus unicolor* (Kano), *comb. nov.*

Xylotrechus basalis unicolor Kano, 1933, Kontyu 7: 132 (Taroko, Formosa).

Xylotrechus unicolor: Mitono, 1940, Cat. Col. Japon. 8 (94), Ceramb.: 110.

Xylotrechus atronotatus unicolor: Mitono, 1941, Bull. School Agr. For. Taihoku Univ. 2: 89, 92; Gressitt, 1951, Longicornia 2: 233, 239.

Specimens examined: Type of *X. basalis unicolor* Kano (NSM); 1 ♂, Puli, Formosa (Hayashi coll.).

My own examination convinced me that *Xylotrechus basalis unicolor* Kano should be treated as a distinct species of the genus *Clytus* Laicharting.

10. *Grammographus kanoi*, *nom. nov.*

Chlorophorus monticola Kano, 1933, Kontyu 7: 136; Mitono, 1940, Cat. Col. Japon. 8 (94), Ceramb.: 118; *ibid.*, 1943, Bull. School Agr. For. Taihoku Univ. 3: pl. VIII, f. 9; Gressitt, 1951, Longicornia 2: 271 & 279 [nec *Grammographus monticola* (Gahan, 1906) lives in Assam].

Specimens examined: Type of *C. monticola* Kano (NSM); 1 ♂, Puli, Formosa (Hayashi coll.).

Having examined the type specimen of *Chlorophorus monticola* Kano and another male, I have come to the conclusion that this species should be transferred to the genus

Grammographus Chevrolat.11. *Chlorophorus kanoi*, sp. nov.

Body black, covered with light olive green pubescence throughout, especially densely on body and finely on appendages.

Vertex narrow, one-fifth as broad as the width of head (incl. eyes); antennae (♂) reaching the apex of basal two-fifths of elytra; 3rd joint as long as 4th and shorter than scape. Prothorax 1.1 times as long as broad, broadest just before middle, the base being a little broader than the apex (ratio, 8:7). Elytra broader than prothorax (ratio, 10:12) at the maximum width, and 2.4 times as long as the basal width, fairly rounded at humeri, straightly narrowed posteriorly and not fully covering abdomen, the apex obliquely truncate with acute external angles. Hind femora comparatively short, slightly surpassing elytral apex and not reaching at abdominal apex; 1st hind tarsal joint 1.25 times as long as the following two united together (ratio, 5:4). Length, 10–11 mm., width, 2.5–3 mm.

Holotype, ♂ (in Hayashi coll.) & paratypes, 1 ♀, Sata-cape, S. Kyushu, July 22, 1961, K. Ueda leg.; 1 ♂, 1 ♀, Sata-cape, July 17, 1960, M. Amano leg. (in Hayashi coll. & Shibata coll.); 1 ♂, 1 ♀, Sata-cape, July 11, 1961, T. Akashi leg. (in Akashi coll.); 1 ♀, Isso, Is. Yakushima, July 19, 1952, M. Kobayashi leg. (in NSM).

This new species is closely allied to *C. viridulus* Kano (1933) and *C. parvus* Matsushita (1933) from Formosa. It differs from *C. viridulus* by the narrower vertex (one-fourth in *viridulus*), not fairly anteriorly narrowed prothorax from behind middle with broader base, comparatively narrower and longer elytra without roundly prominent apex and weak external spines, and shorter 1st hind tarsal joint (1.5 times in *viridulus*). It differs from *C. parvus* in having a broader vertex (one-sixth in *parvus*), broader prothorax (1.22 times), shorter antennae, not almost transversely truncate elytral apex with short external spines, and olive green pubescence instead of olive grey.

12. *Rhopaloscelis maculatus* Bates

Rhopaloscelis maculatus Bates, 1877, Ent. Monthly Mag. 14: 38 (Japan).

Clytosemia kuwayamana Kano, 1933, Kontyu 6: 286 (Hokkaido). **Syn. nov.**

Clytosemia pulchra Bates var. *kuwayamana*: Mitono, 1940, Cat. Col. Japon. 8 (94), Ceramb.: 195.

Clytosemia apicalis: Matsushita (nec Pic), 1943, Ent. World, Tokyo 11 (110): 6.

My own examination of the type of *Clytosemia kuwayamana* Kano (in NSM) has convinced me that *kuwayamana* should be sunken as a synonym of *Rhopaloscelis maculatus* Bates.

13. *Eryssamena acuta* Bates

Eryssamena acuta Bates, 1884, Jl. Linn. Soc. London Zool. 18: 251 (Usui-toge, Honshu).

Rhopaloscelis sapporensis Matsushita, 1933, Jl. Fac. Agr. Hokkaido Univ. 34: 375 (Sapporo, Hokkaido). **Syn. nov.**

Eryssamena saperdina Bates var. *sapporensis*: Matsushita, 1943, Ent. World, Tokyo 11 (110): 5.

Syn. nov.

Specimens examined: Type of *R. sapporensis* Matsushita (EIHU); 1 ♀, Maruyama, Sapporo, July 21, 1924, K. Tamanuki leg. (NSM); 2 ♂♂, Miomote, Niigata Pref., Aug. 7.

1960, S. Tsurumaki leg. (Hayashi coll.); 1 ♀, Mt. Tebako, Kochi Pref., July 26, 1959, K. Yoshinaga leg. (Kojima coll.).

R. sapporensis is fairly a synonym of *E. acuta*.

14. ***Eoporis (Eoporimimus) mitonoi*** (Seki), comb. nov. (Fig. 1C)

Rondibilis mitonoi Seki, 1946, *Ins. World*, Gifu 50 (573): 11, fig. ♂. (Hokuzanko, Formosa).

Specimens examined: 1 ♀, Mt. Hinoki, Formosa, June 28, 1935, Y. Izumi leg. (NSM).

This species should be transferred to the genus *Eoporis* Pascoe. Having examined a specimen (1 ♂, Kosempo, Formosa, in EIHU) identified with *Eoporis (Eoporimimus) bifasciana* Schwarzzer (Fig. 1D), I have been convinced that the present species is distinguished from *bifasciana* by the following characters:—

Body black, covered with olive grey pubescence; elytral disc with 3 pairs of black lateral markings. Under eye lobe longer than its width, and shorter than gena below it.

15. ***Exocentrus (Pseudocentrus) zikaweiensis*** Savio

Exocentrus zikaweiensis Savio, 1929, *Notes d'Ent. Chinoise* 1 (3): 3 (Shanghai, China).

Exocentrus satoi Matsushita, 1935, *Tr. N. H. Soc. Formosa* 25: 313, fig. (Korea). **Syn. nov.**

Having compared the type specimen of *E. satoi* (in EIHU) with the specimen which is probably a paratype of *E. zikaweiensis* (in NSM), I have come to the conclusion that *satoi* should be a synonym of *zikaweiensis*.

16. ***Miaenia fujiyamai*** (Matsumura et Matsushita)

Exocentrus fujiyamai Matsumura et Matsushita, 1933, *Ins. Matsum.* 7: 108 (Honshu).

Miaenia fujiyamai: Hayashi, 1949, *Tr. Kinki Col. Soc.* 4 (1): 1.

Exocentrus leiopodinus Matsushita, 1933, *Jl. Fac. Agr. Hokkaido Univ.* 34: 395 & 397 (Soya, Kitami, Hokkaido). **Syn. nov.**

Specimens examined: Types of *fujiyamai* and *leiopodinus* (EIHU).

17. ***Phloeopsis (Phloeopsis) bioculata*** (Matsumura et Matsushita)

Exocentrus sawadai Kano, 1930, *Bull. Biogeogr. Soc. Japan* 1: 242 (nom. nud).

Exocentrus bioculata Matsumura et Matsushita, 1933, *Ins. Matsum.* 7: 108 (Bonins).

Sciadella (Sciadella) bioculata: Gressitt, 1956, *Ins. Micronesia* 17: 158, 161.

Specimens examined: Type of *E. bioculata* (EIHU); 3 exs., Chichijima, Bonins, Feb.-May, 1918, A. Nohira leg. (Tosawa coll.); 1 ex., Ogasawara (no further data), H. Sawada leg. (NSM).

This species should be transferred to the genus *Phloeopsis* Blanchard, as Dr. Breuning formerly suggested [1958, *Bull. Inst. roy. Sc. nat. Belg.* 34 (22): 27].

18. ***Eumecocera lineata*** (Gressitt), comb. nov.

Stenostola lineata Gressitt, 1951, *Longicornia* 2: 608, 609, pl. 21, f. 8 (S. Shensi, China).

Specimens examined: 1 ♂, near Musha (alt. 1100 m.), Formosa, June 9, 1943, A. Aoki leg. (NIAS).

On account of the prosternal process dilated posteriorly and the appendiculate tarsal claws, this species should be transferred to the genus *Eumecocera* Solsky. It is new to Formosa.

19. *Penthides flavus* Matsushita

Penthides flavus Matsushita, 1933, Jl. Fac. Agr. Hokkaido Univ. 34: 431, pl. 5, f. 8 (Baibara, Formosa.).

Hirakura rufoflava Hayashi, 1957, Entom. Rev. Japan 8: 48, f. 3 (Hirakura, Mie, Honshu). **Syn.**

nov.

Specimens examined: Type of *P. flavus* (EIHU) and type of *H. rufoflava* (Hayashi coll.).

The type of *Hirakura rufoflava* merely differs from that of *Penthides flavus* in the following points:—

Body black (instead of brown), large part of pronotum, scutellum and elytra reddish brown-yellow (instead of yellow). Punctures on pronotum irregular and sparser, not closer.

I am much inclined, therefore, to the opinion that these species should be united into a single one. Accordingly, *Hirakura* Hayashi has to become a junior subjunctive synonym as follows:—

***Penthides* Matsushita**

Penthides Matsushita, 1933, Jl. Fac. Agr. Hokkaido Univ. 34: 430. [Type: *P. flavus* Matsushita, lives in Formosa].

Hirakura Hayashi, 1957, Entom. Rev. Japan 8: 47. [Type: *H. rufoflava* Hayashi, lives in Japan]. **Syn. nov.**

SYNONYMIC NOTES ON A GRACILLARIID MOTH. The type of *Dryadulla aioniella* Matsumura is deposited in the collection of the Entomological Institute, Hokkaido University. After my careful examination of the type I have come to the conclusion that *D. aioniella* does not belong to the family Lyonetiidae but to, in reality, the family Gracillariidae and that it should be sunken as a synonym of *Leucospilapteryx omisella* (Stainton) which has been known to occur in Europe and Japan.

***Leucospilapteryx omisella* (Stainton)**

Argyromiges omisella Stainton, 1848, Zoologist: 2163.

Leucospilapteryx omisella: Spuler, 1913, Kleinschmett. Europas: 408; Kuroko, 1961, Science Bull. Fac. Agric. Kyusyu Univ. 18: 318, fs. 6 A & 7, pl. 36, fs. 17 & 18.

Dryadulla aioniella Matsumura, 1931, 6000 Ill. Ins. Jap.: 1105, f. 2305. **Syn. nov.**

Specimens examined: 1 ♀ (holotype of *Dryadulla aioniella*), Sapporo, Hokkaido, 29. VIII, 1918, S. Matsumura leg.; 1 ♀, Reibun Is., 3 ♂♂ & 2 ♀♀, Sapporo, and 2 ♂♂ & 5 ♀♀, Teine, Hokkaido, on *Artemisia montana*; 2 ♂♂ & 3 ♀♀, Asizuri-misaki, Sikoku, on *Artemisia* sp. (*capillaris* ?); 1 ♀, Sata-misaki, Kyusyu; 1 ♂ & 1 ♀ (determined by Prof. E. M. Hering as *Leucospilapteryx omisella*), Europe, on *Artemisia* sp.

Although the type of *aioniella* is in bad condition, the scales of the fore wing being almost entirely fallen off, it agrees very closely with the authentic European examples of *omisella* and any other Japanese examples examined in the venation of the wings, the structure of the genitalia, and any other characters which are possible to compare.

Host plants: *Artemisia montana* Pampanini, *Artemisia* sp. (*capillaris* Thunberg ?) and *Artemisia princeps* Pampanini (after H. Kuroko) in Japan; *Artemisia* spp. in Europe.

Distribution: Japan (Hokkaido; Honshu; Sikoku; Kyusyu) and Central Europe.

TOSIO KUMATA