

A BIBLIOGRAPHY OF THE MELOLONTHINE GENUS *ECTINOHOPLIA* (SCARABAEIDAE).

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The fascinating asiatic melolonthine genus *Ectinohoplia* has been studied exclusively by Europeans, except for scattered observations written by Nipponese. Consequently, the literature concerning *Ectinohoplia* is confined to European and Japanese entomological journals.

Perhaps a bibliography of that literature, published in an Indian journal, will serve a two-fold purpose: first, that of presenting an adequate bibliology, for none exists; second, that of inciting interest in one of the most colorful and attractive scarabaeid genera, among entomologists who know the beetles in their indigenous habitat.

Since the publication of Junk's Catalogue of the Coleoptera, much information has accrued. Some of the insects which had been considered to belong to another group have been consigned to this genus; three of the beetles¹ which were described as *Ectinohoplia* have been found to be representatives of the *Hoplia*. Several new species have been named and a complete revision of the genus has appeared.

POLICY.

According to the present author's interpretation of the International Rules of Zoological Nomenclature, the term "variety" commands no nomenclatorial respect. As expressed elsewhere,² he feels that the usage of varieties is both unnecessary and an impediment to Linnean systematics. However, in a bibliography it is exigent to include all literature of the subject chosen, within certain limits. In compliance with these opinions, the following rule is adhered to in this bibliology: Synonymy of varieties before they have been promoted to species or subspecies will be ignored.

This bibliography includes references only to descriptions and revisions. Travel notes are not included.

EXPLANATORY NOTE.

Brenske, in 1895, considered *variegata* de Borre and *variolosa* Waterhouse to be the same species. In 1903, Reitter synonymized *variegata* and *variolosa* with *obducta* Motschulsky. However, Arrow judged *variegata* to be identical with *pavvae* Wollaston; he confirmed Reitter's consideration of *variolosa*. Arrow's adjudication is here held to be correct.

¹ *E. mus* and *E. hüttenbacheri* Nonfried and *E. latesurata* Fairmaire.

² Boyer, L. B., *Microentomology* V, part 1, pp. 1, 2 (1940).

GENERIC DESCRIPTION.

Redtenbacher, L., *Reise d. Novara, Zool.* II, Coleoptera, 1868, p. 63.

GENERIC REVISIONS.

de Borre, A. P., *Ann. Soc. Ent. Belg.*, 1886, p. 83.

Reitter, E., *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 108.

Arrow, G. J., *Proc. Zool. Soc. London*, 1921, p. 267

DESCRIPTION OF THE SPECIES.¹

affinis Arrow, *Proc. Zool. Soc. London*, 1921, p. 273, pl. i, fig. 9. Reported from India : Assam (Khasi Hills) ; S. W. China : Yunnan.

arrowi Miwa, *Rep. Dept. Agri., Govt. Res. Inst. Taihoku*, 1931, p. 359,

formosana Arrow, *Proc. Zool. Soc. London*, 1921, p. 269. (non Moser). Reported from Formosa.

auriventris Moser, *Deut. Ent. Zeit.*, 1915, p. 150. Reported from China : Fukien.

dauidis Fairmaire,* *Ann. Soc. Ent. France*, 1889, (6) IX, p. 15. Reported from Moupin.

domtrowskii Nonfried,* *Berl. Ent. Zeit.*, 1895, XL, p. 284 (*Hoplia*).

Moser, *Deut. Ent. Zeit.*, 1912, p. 325, relegated to *Ectinohoplia*.

Reported from India : Raliang.

flavicauda Arrow, *Proc. Zool. Soc. London*, 1921, p. 273, pl. i, fig. 7. Reported from Tonkin : Chapa.

formosana Moser,* *Stett. Ent. Zeit.*, 1919, LXXX, p. 362. Reported from Formosa : Tainan.

gracilipes Lewis, *Ann. Mag. Nat. Hist.*, 1895, (6) XVI, p. 389. (*Hoplia*).

Arrow, *Proc. Zool. Soc. London*, 1921, p. 268, lists with *Ectinohoplia*. Reported from Japan : Oshima.

hieroglyphica Moser,* *Deut. Ent. Zeit.*, 1912, p. 307. Reported from Tonkin : Montes Mauson.

hispidula Reitter, *Verh. Nat. Ver., Brünn*, 1902 (1903), XLI, p. 110.

Reported from China : Kiu Kiang, Chang Yang and Ichang.

imitatrix Nonfried,* *Berl. Ent. Zeit.*, 1895, XL, p. 285. (*Hoplia*).

Moser, *Deut. Ent. Zeit.*, 1912, p. 325, relegated to *Ectinohoplia*.

Reported from India : Raliang.

indica Moser, *Deut. Ent. Zeit.*, 1912, p. 305. Reported from India : Himalaya.

inscripta Arrow, *Proc. Zool. Soc. London*, 1921, p. 269, pl. i, fig. 12. Reported from China : Fukien.

latipes Arrow, *ibid.*, p. 271, pl. i, fig. 5. Reported from Tonkin : Chapa, Paklay.

nitidicauda Arrow, *ibid.*, p. 275, pl. i, fig. 10. Reported from Tonkin : Chapa.

nitidiventris Arrow, *ibid.*, p. 274, pl. i, fig. 6. Reported from India : Assam (Shillong and Gauhati).

¹ References marked with an asterisk are not included in Arrow's revision.

- obducta* Motschulsky, *Etudes Entomol.*, 1857, VI, p. 33 (*Hoplia*).
 Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 108, includes with *Ectinohoplia*.
 Yokoyama, *Coleoptera of Japan*, Nishigihara Publishing Ass., 1937, p. 97, pl. xii, fig. 6, describes in Japanese.
 Takeuchi, *Monog. Beetles Iwate Prefect. Japan*, 1940, # 1, p. 112, describes in Japanese.
- sabulicola* Motschulsky, *Etudes Entomol.*, 1857, VI, p. 34 (*Hoplia*).
 Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 108, synonymized; considered a variety.
- variolosa* Waterhouse, *Trans. Ent. Soc. London*, 1875, (4) VIII, p. 99, pl. iii, fig. 2.
 Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 108, synonymized.
- var. *caminaria* Reitter, *ibid.*, p. 108.
 Takeuchi, *Monog. Beetles Iwate Prefect. Japan*, 1940, # 1, p. 112, describes in Japanese.
- obducta* has been reported from Japan : Karafuto, Hokaido, Honshu and Shikoku.
- oculicauda* Arrow, *Proc. Zool. Soc. London*, 1921, p. 272, pl. i, fig. 4.
 Reported from Tonkin : Chapa.
- paivae* Wollaston, *Ann. Mag. Nat. Hist.*, 1859, (3) IV, p. 430 (*Hoplia*).
 de Borre, *Ann. Soc. Ent. Belg.*, 1886, XXX, p. 85, relegated to *Ectinohoplia*.
- guttaticollis* Fairmaire, *Ann. Soc. Ent. France*, 1899, LXVIII, p. 620.
 Arrow, *Proc. Zool. Soc. London*, 1921, p. 268, synonymized.
- nigrotincta* Fairmaire, *Notes Leyden Museum*, 1897, XIX, p. 243.
 Arrow, *Proc. Zool. Soc. London*, 1921, p. 268, synonymized.
- tonkinensis* Moser, *Deut. Ent. Zeit.*, 1912, p. 306.
 Arrow, *Proc. Zool. Soc. London*, 1921, p. 268, synonymized.
- variabilis* Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 110.
 Arrow, *Proc. Zool. Soc. London*, 1921, p. 268, synonymized.
- variabilis* var. *ichangensis* Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 110.
- variegata* de Borre, *Ann. Soc. Ent. Belg.*, 1886, XXX, p. 84.
 Arrow, *Proc. Zool. Soc. London*, 1921, p. 268, synonymized.
- paivae* has been reported from China : Shanghai, Ichang, Chang Yung and Sze-chouen ; Tonkin : Montes Mauson.
- pictipes* Fairmaire,* *Ann. Soc. Ent. France*, 1889, (6) IX, p. 15. Reported from Moupin.

quadrituberculata de Borre, *Ann. Soc. Ent. Belg.*, 1886, XXX, p. 86.

quadrituberculata Brenske, *Mem. Soc. Ent. Belg.*, 1894, II, p. 34.

Brenske, *Ann. Soc. Ent. Belg.*, 1895, XXXIX, p. 119, synonymized.

Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 109, described.

quadrituberculata has been reported from Shanghai.

rufipes Motschulsky, *Reisen u. Forsch. Amur-Lande*, Schrenk., 1860, II, p. 133 (*Decamera*).

Reitter, *Deut. Ent. Zeit.*, 1890, p. 375, listed with *Ectinohoplia*.

Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 110.

Reported from East Siberia; Gensan; Daurien.

scutellata Arrow, *Proc. Zool. Soc. London*, 1921, p. 275, pl. i, fig. 11.

Reported from Tonkin: Chapa.

sinuaticollis Moser, *Deut. Ent. Zeit.*, 1912, p. 305. Reported from India: Assam.

soror Arrow, *Proc. Zool. Soc. London*, 1921, p. 270, pl. i, fig. 2. Reported from China: Fukien.

sulphuriventris Redtenbacher, *Reise d. Novara, Zool. II, Coleoptera*, 1868, p. 63, pl. ii, fig. 10.

de Borre, *Ann. Soc. Ent. Belg.*, 1886, XXX, p. 84.

Fairmaire, *Ann. Soc. Ent. France*, 1899, LXVIII, p. 619.

Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 109.

sulphuriventris has been reported from Hong Kong; China: Shanghai; Japan: Fou Tcheon.

suturalis de Borre, *Ann. Soc. Ent. Belg.*, 1886, XXX, p. 85.

Arrow, *Proc. Zool. Soc. London*, 1921, p. 267, pl. i, figs. 1 and 3 (male and female).

crysurata Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 109.

Arrow, *Proc. Zool. Soc. London*, 1921, p. 268, synonymized.

var. *diabolica* Reitter, *Verh. Nat. Ver. Brünn.*, 1902 (1903), XLI, p. 109.

luteostriata Brenske, *Mem. Soc. Ent. Belg.*, 1894, II, p. 34.

Brenske, *Ann. Soc. Ent. Belg.*, 1895, XXXIX, p. 119, synonymized.

suturalis has been reported from India: Khasi Hills.

tibialis Arrow, *Proc. Zool. Soc. London*, 1921, p. 271, pl. i, fig. 8. Reported from India: Assam.

trichota Jacobson,* *Rev. Russe. Entom.* 1914, XIV, p. 1. Reported from China: Peking.

triplagiata Fairmaire, *Notes Leyden Museum*, 1897, XIX, p. 211. Reported from Tibet: Hoang-Ho.

yunnana Moser,* *Stett. Ent. Zeit.*, 1919, LXXX, p. 361. Reported from Yunnan.