

REVISION OF *YLASOIA* SPEISER, 1920  
(INSECTA: DIPTERA: BOMBYLIIDAE: LOMATIINAE)

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*Abstract.*—*Ylasoia* Speiser, 1920 is redescribed and the known neotropical species, are revised, based on examination of the types. *Y. abbreviata* (Wiedemann), 1830 and *Y. caloptera* (Macquart), 1834 are synonymized with *Y. pegasus* (Wiedemann), 1828, the type species of the genus.

Speiser (1920) erected the genus *Ylasoia* to include three south neotropical species: *Y. abbreviata* (Wiedemann), 1830, *Y. caloptera* (Macquart), 1834 and *Y. pegasus* (Wiedemann), 1828. The generic name was proposed as an anagram of the Australian genus *Alysoia* Rondani, 1863, one of the genera segregated from *Comptosia* Macquart, 1840 by Rondani (1863), based mainly on wing venation—number of sub-marginal cells and cross veins (both genera have two sub-marginal cells). Edwards (1930) stated that too much importance was placed on this character and that the genera previously included in *Comptosia* should be reunited. Speiser (1920) nevertheless characterized *Ylasoia* on other characters, compared it with *Alysoia*, and mentioned that these two genera were probably closely related.

Bowden (1971), Hull (1973), and Evenhuis (1980) have discussed the classification of *Comptosia* group. The first and the last papers treated the Australian genera.

Hull (1973) gave a detailed description of *Ylasoia* and stated that the genus “seems to be nearer the Australian genus *Oncodosia* Edwards, than to the South American genera like *Lyophlaeba* Rondani.” He examined a series of *Y. pegasus* from Brazil and according to him, two of the three *Ylasoia* species may perhaps be subspecies.

Since the original description, no more species have been included or described in this genus.

Painter & Painter (1974) made notes and redescrptions on the types of the three species.

The study of a material of *Ylasoia* spp. deposited at Museu Nacional (Rio de Janeiro) collection, showed that some specific characters cited in literature vary greatly when a long series is examined.

Examination of the types and direct comparisons with material at hand enabled a revision of the species and redescription of the genus.

*Ylasoia* Speiser

*Ylasoia* Speiser, 1920:213–214.—Hull, 1973:307, 356.—Painter & Painter, 1974:107.—Painter et al., 1978:29.

*Type species.*—*Anthrax pegasus* Wiedemann, 1828 (orig. desig.)

*Redescription.*—Length, 12–17 mm. Head: Eyes holoptic in male, separated at anterior ocellar level by a distance about twice ocellar diameter; face convex, slightly pronounced in profile; scape rectangular, 3–4 times the length of pedicel, with dark brown pile, pedicel globular, short, with pile as in scape; flagellomere long, bare, 5–6 times the length of pedicel; palpus broad basally, 1-segmented; proboscis dark brown, short, not extended beyond oral margin. Thorax: Scutum velvety black, with two brown longitudinal stripes anteriorly extended to 0.75 of it, bare dorsally, and with black bristles laterally; scutellum velvety black, with some

black lateral bristles; pleura light brown, katapisternum with bristles in upper third; anepimeron with pile in apical third of inferior half; meron bare; metepimeron with pile in the upper extremity near posterior spiracle; halter dark brown, long; knob yellow at dorsal apex and totally yellow ventrally. Legs: Brown with black bristles and few black scales; hind femur at anteroventral surface with 4–5 bristles at apical third; claws dark brown; pulvilli 0.65 from the length of claws. Wing: Brown with an anterior white and posterior hyaline submedian transverse band, other white or hyaline variable areas in cells; anal and axillary cells with a big hyaline area, (some males with darker marks) (Fig. 1); 2 sub-marginal cells ( $R_3$  and  $R_4$ ); 3rd posterior cell (2nd  $M_2$ ) narrowed marginally for a variable distance; fringe of wing brown, longer and darker at anterior margin, specially near base. Abdomen: Long, as wide as thorax; tergites concolorous with thorax; sparse pile dorsally and more evident laterally.

Female: Similar to male, except for eye distance, which is about 3 times ocellar diameter.

*Ylasoia pegasus* (Wiedemann)

*Anthrax pegasus* Wiedemann, 1828:298.—Walker, 1849:264.—Speiser, 1920:214.—Hull, 1973:356.—Painter & Painter, 1974:112.

*Anthrax abbreviata* Wiedemann, 1830:637.—Osten-Sacken, 1887:140.—Aldrich, 1905:228.—Speiser, 1920:215.—Painter & Painter, 1974:109.

*Lomatia caloptera* Macquart, 1834:612.—Speiser, 1920:215.

*Comptosia caloptera* Macquart, 1834:412.—Painter & Painter, 1974:110.

*Ylasoia pegasus* Speiser, 1920:214.—Hull, 1973:358, figs. 148, 367, 659, 670, 985, 986, 987.—Painter et al., 1978:29.

*Ylasoia abbreviata* Speiser, 1920:215.—Painter & Painter, 1974:109–110.—Painter et al., 1978:29.

*Ylasoia caloptera* Speiser, 1920:215.—Painter & Painter, 1974:110–112.—Painter et al., 1978:29.

*Ylasoia pegasus* Painter & Painter, 1974:112–113.

*Holotype*.—(Fig. 2). Female: *A. pegasus* m./ Mus. rog. Berol. [handwritten label]. *Anthrax pegasus* Wiedemann. Holotype [rose label]. *Pegasus*/ coll. Wiedem. (Fig. 3). Deposited at Naturhistorisches Museum, Wien. The specimen lacks both flagellomeres, both fore legs, left middle leg and the tarsi of the hind leg.

*Diagnosis*.—Wing with the white/hyaline transverse band reaching posterior margin or not; hyaline areas at anal and axillary cells with variable extensions, sometimes faint, specially in some males, elongated hyaline area distal half of second basal cell present or not; other hyaline areas variable. (Figs. 1, 2, 5 and 7). Male genitalia (Fig. 4) in lateral view with basistylus linear ovate; dististylus long, hooklike apically; aedeagus sclerotized, large in base; epandrium triangular; cerci long.

*Material examined*.—(deposited at Museu Nacional, Rio de Janeiro): BRAZIL. Minas Gerais: Poços de Caldas, Morro S. Domingos, 1 ♀, 15 Sep 1968, J. Becker, O. Roppa e O. Leoncini; Morro do Ferro, 3 ♂, 29–30 Mar 1964, 3 ♂ and 1 ♀, 27 Jan 1965, 1 ♂ and 3 ♀, 22 Mar 1966, 1 ♂, 24 Mar 1966, J. Becker, O. Roppa e O. Leoncini; Cambuquira, 2 ♀, Dec 1933, A. Marques, 1 ♀, Feb 1942, H. S. Lopes, Cambuquira, 1 ♂, Feb 1941, Lopes & Gomes; Serra do Caraça, Santa Barbara, 1 ♂, Feb 1976, H. S. Lopes. São Paulo: Ypiranga, 2 ♀ e 2 ♂, Mar 1936, Santos, Leme, Fazenda Graminha, 1 ♀, Alceu e Santos; Rio Grande do Sul: Pelotas, 1 ♀, Mar 1957, C. Biezanko (MNRJ); Rio de Janeiro: Friburgo, 2 ♂ and 2 ♀, Feb 1933, C.F.M.L., 2 ♂, Feb 1932, Prof. M.-L.; Nova Friburgo (900M), 2 ♂, Jan 1946, Wigod., Itatiaia, 1 ♀, 18 Feb 1933, 1 ♂, Feb 1959, W. Zikán; Itaguay, Serra da Caveira 600M, 1 ♂ and 1 ♀, 25 Feb 1948, W. Zikán; Pe-



Figs. 1-8. 1-4, *Ylasoia pegasus*, 1, Wing of holotype; 2, holotype; 3, labels of holotype; 4, male genitalia; 5-6, *Ylasoia abbreviata*, 5, holotype; 6, labels of holotype; 7-8, *Ylasoia caloptera*, 7, holotype; 8, labels of holotype.

trópolis, Le Vallon, Alt. Mosella, 1 ♂, 24 Jan–23 Feb 1958, D. Albuquerque.

*Comments.*—Although some characters, such as the position of crossvein r-m in relation with discal cell; length of ending of first posterior, anal and third posterior cells and width of axillary and anal cells, mentioned by Painter & Painter (1974) as diagnostic ones were observed in the types of the three species, considerable variation is evident when a series is examined. In addition, the examined specimens show a combination of other characters mentioned as distinct, especially the patterns of wing coloration.

Hull's (1973:495, fig. 367) illustration of *Y. pegasus* wing shows also another pattern of coloration, differing from the holotype. On the other hand, the male genitalia as illustrated in fig. 985 (p. 568) is very similar in all material we dissected, and there is no reason to treat them as separate species.

The holotypes of *Y. abbreviata* and *Y. caloptera* (Fig. 5 and Fig. 7), here synonymized with *Y. pegasus*, were also examined:

*Ylasoia abbreviata*: Male. "Brasil V. Olf" [Brasil, von Olfers] / *abbreviata* Wied. [handwritten labels]. Typus [red label]. Zool. Mus. Berlin. 1612. (Fig. 6). Deposited at Berlin Museum. The specimen is in good condition except abdominal segments beyond the sixth are missing. Wiedemann (1830) incorrectly specifies Mexico as the type locality.

*Ylasoia caloptera*: Male. *Comptosia* / *fascipennis* / ♂ Macq. [handwritten labels]. Brazil ? / ex Bigot coll. / BM 1960 - 539. ? HOLOTYPE ? / *Comptosia* / *caloptera* Macquart / det. J. E. Chainey, 1987 [handwritten labels]. *Ylasoia* / *caloptera* / (Mq.) / Det. R. H. Painter [19]60 [handwritten labels; this label with left wing glued to corner]. Type ? [red circle label]. Holotype ? [red circle label]. (Fig. 8). Deposited at The Natural History Museum, London. The specimen lacks its head, the fore and middle pair of legs, and part of the thorax has been eaten.

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## Literature Cited

- Aldrich, J. M. 1905. Catalogue of North American Diptera.—Smithsonian Miscellaneous Collections, XLVI:679 pp.
- Bowden, J. 1971. Notes on some Australian Bombyliidae in the Zoological Museum, Copenhagen (Insecta, Diptera).—*Steenstrupia* 1:295–307.
- Edwards, F. W. 1930. Bombyliidae, Nemestrinidae, Cyrtidae, in British Museum (Natural History), Diptera of Patagonia and South Chile 5(2):162–197, London.
- Evenhuis, N. L. 1980. Studies in Pacific Bombyliidae (Diptera) V. Notes on the *Comptosia* group of the Australian region, with Key to genera and descriptions of new genus and three new species.—*Pacific Insects* 21(4):328–334.
- Hull, F. M. 1973. Beeflies of the world. The genera of the family Bombyliidae.—*United States National Museum Bulletin* 286:1–687.
- Macquart, J. 1834. Histoire naturelle des Insectes. Diptères. Tome premier. Diptera 1:578 pp., in N. E. Roret, ed., Collection des Suites à Buffon. Paris.
- Osten-Sacken, C. R. 1887. Diptera, Vol. I. Pp. 129–160, 161–176, 177–208, 209–216, pl. 3, in F. D. Godman & O. Salvin, eds., *Biologia Centrali Americana, Zoologia-Insecta-Diptera* 1:378 pp., 6 pls. London.
- Painter, R. H., & Painter, E. M. 1974. Notes on, and redescrptions of, types of South American Bombyliidae (Diptera) in European and United States Museums.—*Research Publications Kansas State University Experiment Station* 168:1–322.
- , ———, & J. Hall. 1978. Family Bombyliidae: 1–92. A catalogue of Diptera of the Americas south of the United States. Departamento de Zoologia, Universidade de São Paulo.
- Rondani, A. C. 1863. Diptera exotica revisa et annotata.—Modena, 99 pp.
- Speiser, P. 1920. Zur Kenntnis der Diptera Orthor-

rhappha Brachycera.—Zoologische Jahrbucher (Abteilung fur Systematik) 43:195–220.

Walker, F. 1849. List of the specimens of dipterous insects in the collection of the British Museum 2:231–484; 4:689–1172. London.

Wiedemann, C. R. W. 1828. Aussereuropäische zweiflügelige Insekten 1:xxxii + 608 pp., 7 pls.

———. 1830. Aussereuropäische zweiflügelige Insekten 2:XII + 684 pp., 5 pls.

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