

THE GENUS *AXIOLOGINA* HENDEL
(DIPTERA: OTITIDAE)

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ABSTRACT

The genus *Axiologina* is characterized, data concerning the type-species *Axiologina ferrumequinum* Hendel are brought together, including new records from South and Central America as well as North America (Florida), and a new species *A. aitkeni* is described from Pará, Brazil.

The discovery of the neotropical *Axiologina ferrumequinum* Hendel in considerable numbers in Florida, as well as an undescribed additional Brazilian species of this hitherto monotypical genus, prompts this review of our knowledge of the genus.

Hendel (1909a:268) described the genus as "*Axiologina* (n. g.) *ferrumequinum* n. sp.," a formula no longer permitted under the present rules of nomenclature, which also now require removal of the hyphen in the species name. The genus was at that time declared to be sufficiently characterized by its peculiar wing venation, and Hendel (1910:10, 43, Fig. 76-79) soon keyed the genus, gave an extended description, and figured the head, tip of female abdomen, and wing of the type-species.

Axiologina was separated from many other genera in Hendel's key by the position of the anterior crossvein (*ta* or *r-m*) over the basal one-sixth of the discal cell. The genus is similar to *Euxesta* and *Pareuxesta* (of which latter *Ulivellia* may be a synonym). The following combination of characters will distinguish *Axiologina* from all other Ulidiinae: antennae not lying at rest in margined facial grooves; 3rd antennal segment not over 3 times as long as wide, rounded apically; facial profile concave; front not pitted nor wrinkled, rather evenly covered with coarse setae; head higher than long; anal cell of wing well developed, with acute extension; anal vein extending to wing margin; vein r_1 without setae, but covered with fine, short, procumbent hairs; costa evenly arcuate; vein *r-m* basad of basal one-third of discal cell; 2nd vein (r_{2+3}) curved upward to apical dark brown mark and then bending rather sharply apicad and running close to costa; wing with 4 blackish crossbands, median 2 of which are conjoined along costa and form a U-shaped mark; humeral bristle strong; ovipositor slender.

Axiologina ferrumequinum Hendel
(Fig. 1)

The characteristic wing pattern (Fig. 1) will easily distinguish *A. ferrumequinum*. The types consist of "♀, Peru (Meshagua; November, Dezember), Koll. Schnuse, und Brasilien, Exped. Wettstein." A male specimen from Brazil labeled "Young, Iguape / Bras. Exped. Wettstein '91 / *Axiologina ferrum equinum* det. Hendel" has been located in the Naturhis-

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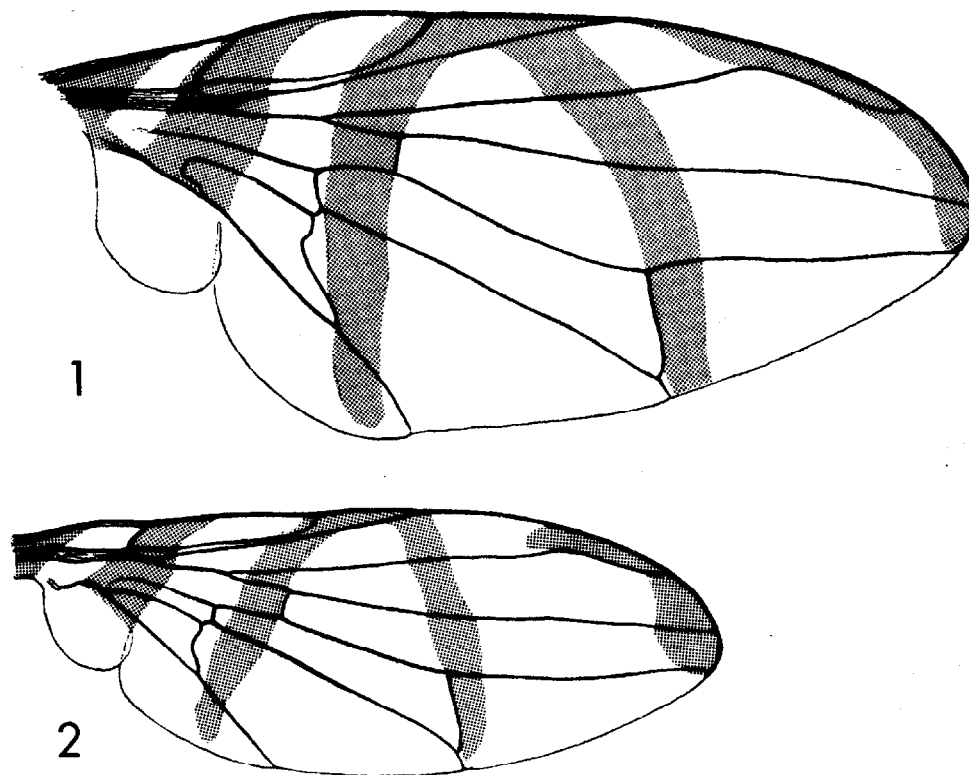


Fig. 1 and 2. Wings of *Axiologina* species: 1) *A. ferrumequinum* Hendel; 2) *A. aitheni* n. sp., paratype.

torisches Museum Wien by Dr. A. Kaltenbach and labeled lectotype at my request. The only other published record of the species is by Curran (1934:428) of a male specimen from Kartabo, Guyana, 30 October 1920.

Specimens are in the U. S. National Museum collection from PANAMA: Ancon, Canal Zone, 25 September 1922 (J. Zetek), no. Z-1758; Ancon, 20-24 April 1926 (C. T. Greene); El Cermeno, Dec., 1939 - Jan., 1940 (J. Zetek), in fly trap; Fort Kobbe, Camaron, Canal Zone, 23 June 1952 (F. S. Blanton); COSTA RICA: Higuito, San Mateo (Pablo Schild); GUATEMALA: Quirigua, 8 May 1926 (J. M. Aldrich); MEXICO: Colonia 23 de Marzo, Union Juarez, Chiapas, 11 July 1972 (H. Sánchez R.); and BOLIVIA: Rurrenabaque, Beni, 1921-1922, Mulford Biol. Exped. (Wm. M. Mann). The number with the specimens collected at Ancon by Zetek refers to a card in a file in USNM; on that card is "Z-1758 *Axiologina ferrum-equinum* Hendel. Det. JMA November 25, 1922. Diptera in trunk of *Phoenix datilifera* (sic, = *dactylifera*). Ancon, C. Z. September 25, 1922. This date palm was inoculated with red-ring disease nematodes. The palm was practically dead this date. It was dissected and the interior was found to be well rotted, the tough bundle fibres were loose. Within this dark brown mass we found a large number of dipterous larvae (jumping habit pronounced). These were reared to adult stage." The Mexican specimen was taken in a Steiner trap in an orange tree.

I am indebted to Howard V. Weems, Jr., for bringing to my attention 170 specimens of *A. ferrumequinum* mostly captured in Florida in McPhail traps

hung in several kinds of trees: various kinds of citrus, tropical almond (*Terminalia catappa*), mango, rose-apple (*Eugenia jambos*), sapodilla (*Manilkara zapota*), seagrape (*Coccoloba uvifera*), surinam cherry (*Eugenia uniflora*). Among the number is also a series collected 12 November 1971 and reared to adults between 16 November 1971 and 7 January 1972 from rotting inflorescence of a coconut palm dying from lethal yellows disease at Miami Beach (G. H. Gwin). The trapped material was taken in several places in Dade County (Hialeah, Miami, Miami Beach, Miami Bay Front Park, Miami Springs, Virginia Gardens) between 5 October 1971 and 10 January 1972. The material is in the Florida State Collection of Arthropods, Gainesville, with the exception of a few retained in the U. S. National Museum.

Axiologina aitkeni Steyskal, new species
(Fig. 2)

Female. Length of wing 2.5 mm. Very similar to *A. ferrumequinum*, but differing as follows: mesoscutum, scutellum, and dorsum of abdomen nearly glossy rather than decidedly dull with minute rugulosity; size perhaps smaller (wing of *A. ferrumequinum* 2.5 - 3.0 mm long); intradorsocentral rows of setulae 4 (rather than 8); halter with white capitulum (rather than blackish); wing as in Fig. 2, more regularly elliptical, arms of U-mark less curved, apicocostal band ending bluntly basally and expanded apically, extension of anal cell shorter, anterior crossvein farther from base of discal cell.

Holotype and one paratype, females, Belem, Pará, Brazil, October 1969, light trap (T. H. G. Aitken), no. 72113 in USNM.

Euxesta insolita Hendel (1909b:168), from Vilcanota, Peru, may also belong in *Axiologina*, but the wing as figured by Hendel (1910:pl. 2, Fig. 41), does not have vein r_2 bent near tip, crossvein r-m is at basal one-third of discal cell, and the median wing bands are scarcely U-shaped, inasmuch as the band passing through *im* is a little bent in a reverse direction to that in the *Axiologina* species. There is still the possibility that *Axiologina* may ultimately prove to be no more than a subgenus of *Euxesta*, but for the present the concept is at least easily recognizable.

The assistance provided by Arthur D. Cushman in drawing the figures of the wings is gratefully acknowledged.

LITERATURE CITED

- Curran, C. H. 1934. The Diptera of Kartabo, Bartica District, British Guiana. Bull. Am. Mus. Nat. Hist. 66:287-532.
Hendel, F. 1909a. Beitrag zur Kenntnis der Ulidiinen (Dipt.). Wien Entomol. Ztg. 28:247-270.
Hendel, F. 1909b. Ueber die Gattung *Euxesta* Loew (Dipt.). Ann. Mus. Natl. Hung. 7:151-172.
Hendel, F. 1910. Diptera, Fam. Muscaridae, Subfam. Ulidiinae. In P. Wytsman: Genera Insectorum, fasc. 106:1-76, pls. 1-4.