

JOHN T. MEDLER

Bernice P. Bishop Museum, Honolulu, Hawaii, U.S.A.

Types of Flatidae (Homoptera) XII. Taxonomic notes  
on Guérin - Méneville types in the Naples Museum, with  
illustrations of male genitalia of plesiotypes  
for the respective species

Many of the species of Flatidae named by Guérin - Méneville were subsequently designated as the types of generic group names. My research on these genera required a better understanding of the true identity of Guérin - Méneville's species with respect to characters used in modern taxonomy, especially those of the male genitalia. I learned from HORN and KAHLE (1936) that the Guérin - Méneville collection of Hemiptera was preserved in the Naples Museum. An inquiry addressed to Prof. E. Tremblay at the Museum resulted in a study loan of the type specimens of Flatidae described by Guérin - Méneville.

Most of the types were the female sex, or lacked the abdomen. To provide knowledge of the male genitalia in such cases, I dissected a male from the type locality, if possible, and illustrated the specimen as a plesiotype. A blue plesiotype label has been attached to these males. The term plesiotype has no status under taxonomic rules, but specimens so labeled are accurately identified as having special treatment or use in relation to my published data. The depository of each plesiotype is cited so that future workers may locate the specimen for examination.

The flatids named by Guérin - Méneville in part were collected during the exploration voyage of the French ship *Coquille* under command of Captain Louis I. Duperry. During its circumnavigation of the globe the expedition visited New Guinea and Indonesia. Pertinent entries in the log of the *Coquille* record that « Waijoo » (vide *pyralis*) was visited during the latter part of 1823, after which the ship rounded Australia from the west, passing Van Dieman's Land on 10th January 1824. Doubling back and exploring the Caroline Archipelago, the course was then directed to the northern extremity of New Guinea, where some days were spent in the harbor

of « Dorei » (vide *iodipennis*). Passing on to Java through the Moluccas, the ship anchored at « Sourabaya » on the 29th of August. The Coquille left Java on the 11th of September 1824 for the Isle de France (Mauritius) and its return voyage to France.

I am unable to present information at this time on the specimens recorded from the Malaysia coast. These records may apply to Malacca, a town on the west coast of the Malay peninsula, 2° 14' N, 102° 12' E. The specimens must have originated from other sources than the early exploratory voyages, as French ships did not penetrate north of Java during the period 1817-1840.

The specimens collected during the French expeditions probably were passed to Guérin - Méneville for study through the Royal Academy of Sciences of France.

As the older types are of considerable historical importance, it is important to record the full context of the labels. Therefore, the data associated with each specimen are recorded precisely by the following format: (1), (2), (3), etc., indicate the sequence of original labels on the pin from top to bottom. A slash (/) shows the separation of the printed or written lines on each label.

#### ALPHABETICAL LIST OF TYPES EXAMINED

*albicosta* Guérin - Méneville, 1844, p. 360 (*Poeciloptera*).

Type of *Flatoptera* Melichar, 1901, by original designation. Type locality: Malacca (Malaysia Coast).

A syntype was not found and is presumed lost.

Plesiotype male - Malay Peninsula, SE Pahang, Rompin Mining Co., 42 km Railway Tracks, 25.11.1961, K. J. Kuncheria. Bishop Museum.

The plesiotype genitalia are illustrated (Fig. I, 5). The specimen was selected from Pahang as an alternative to the lack of material from the western coast of Malaysia adjacent to the Strait of Malacca. The genital characters are the same as found in dissected specimens from Malaysia, Sumatra and Borneo.

The specimen in the Stockholm Museum cited by MELICHAR (1901) is a female with smoky tegmina that contrasts sharply with the stramineous head and thorax. This specimen has the appearance considered typical of the species.

*aurora* Guérin - Méneville, 1834, p. 469 (*Poeciloptera* sic!).

Type of *Cenestra* Stal, 1862, by original designation. Type locality: Java (? Bengala, in error).

Lectotype female: (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18403 (2) *Poeciloptera/aurora* Guerin/Bengala/tresvoisine de *fulgora/pallida* Oliv. Stoll. pl. 26 fig. 145 (3) Type/Guer-Men. (green label). Plesiotype male: Indonesia, W. Java, Preanger, 22.viii. 1937, J. M. A. v. Groenendal. Amsterdam Museum.

The plesiotype genitalia are illustrated (Fig. I, 3). I have selected the plesiotype from Java because the « Bengala » locality may be erroneous. No specimen of *aurora* is known to me from Bengal or other parts of India. METCALF (1957) gives Java as the type locality. I believe this correct, as all specimens examined by me are from Indonesia, Borneo and southern Malaysia.

A second specimen in the Naples Museum is a female without labels, except « Type Guer-Men. (green label) » It does not have syntype status.

This species has color variation, including several shades of stramineous orange and red. Varietal names have been proposed for several of the color forms. I dissected specimens from various places in Indonesia and Borneo that differed in color, but characters of the genitalia were found to be the same.

*bombycoides* Guérin - Méneville, 1844, p. 361 (*Flata*).

In *Flatida* White, 1846. Type locality: Malacca.

Lectotype: (no abdomen): (1) M<sup>o</sup>. Zool/N<sup>o</sup>. 18398 (2) *Flata/bombycoides*/Guer. ic. R. A./Malac. (type) (3) Type Guer-Men.

The lectotype is a junior synonym of *Flata floccosa* Guer - Men.

The tegmina have a faint but distinct pattern of markings that is unmistakably the same as *floccosa*, except the dark spotlike accentuation of the bulla is not developed.

*circulata* Guérin - Méneville, 1844, p. 361 (*Poeciloptera*).

Type of *Bythopsyna* Melichar, 1901, by subsequent designation of Distant, 1906.

Type locality: Malaysia Coast. A syntype was not found and is presumed lost.

Plesiotype male: Indonesia, Solok Padang, 1908, P. O. Stolz. Amsterdam Museum.

The plesiotype genitalia are illustrated (Fig. I, 4). Numerous specimens were examined from Malaysia, Borneo and Indonesia that have more or less the same pattern of tegminal markings, but differ noticeably in size. A study on a wide selection of dissected males showed no differences in characters of the genitalia.

A female specimen in the Naples Museum (Acc. No. 23378) that was without data and green type label has no status as a syntype.

*dentifrons* Guérin - Méneville, 1844, p. 360 (*Poeciloptera*).

Type of *Lechaea* Stal, 1866, by subsequent designation of Stal, 1866a. Type locality: Malacca (Malaysia Coast.).

Holotype female: (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18045. (2) *Poeciloptera/dentifrons*/Guer ic. R. A./Malacca (Type) (3) Type/Guer-Men. (green label).

Plesiotype male: Malaya, Bentong Quarry Rd., vi. 1930, A. S. Corbet, B. M. 1948-411. British Museum (NH).

The plesiotype genitalia are illustrated (Fig. II, 1).

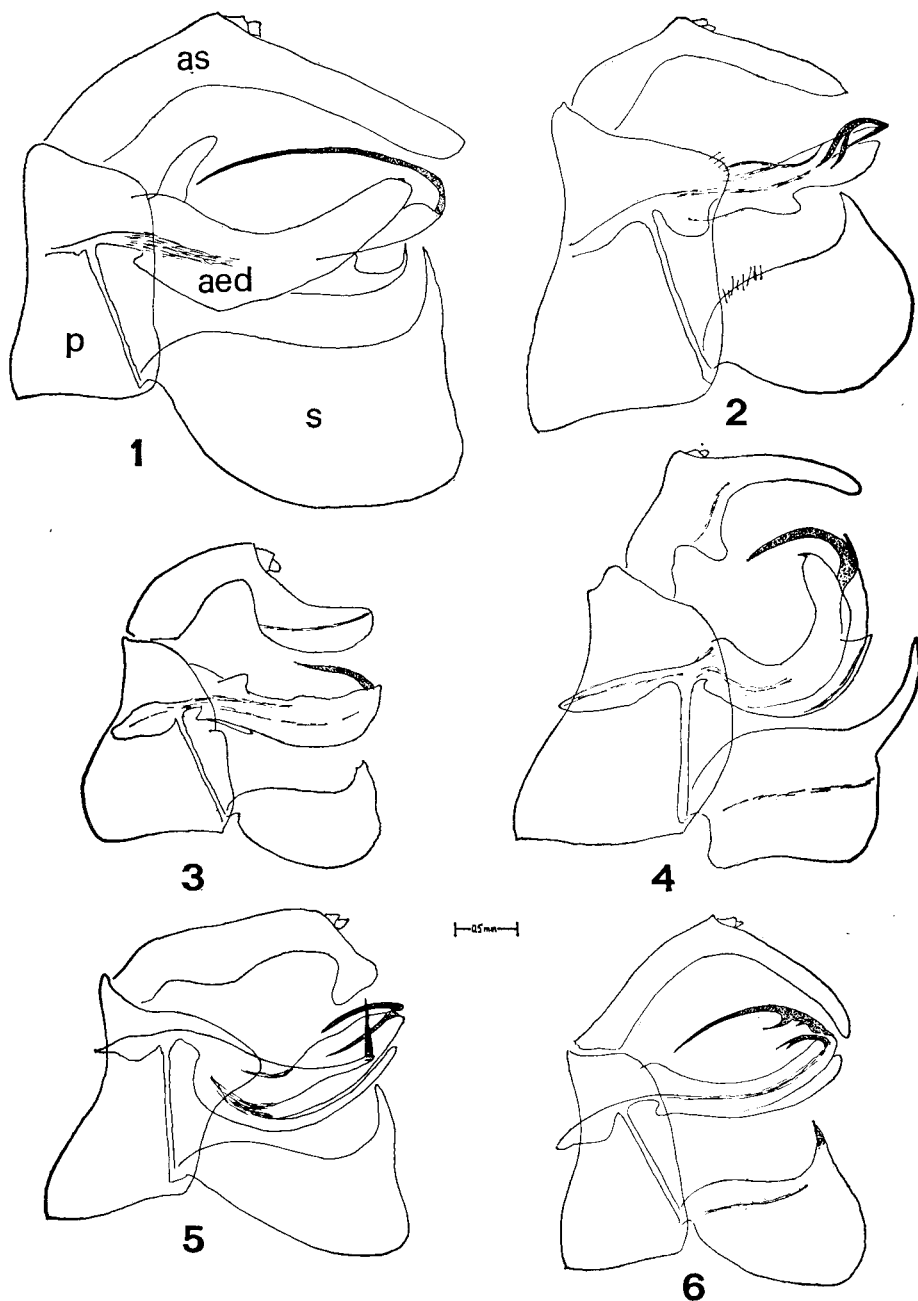


Fig. I - Left lateral view of male genitalia. 1, *Poeciloptera falcata* Guérin-Ménéville. 2, *Flata floccosa* Guérin-Ménéville. 3, *Poeciloptera aurora* Guérin-Ménéville. 4, *Poeciloptera circulata* Guérin-Ménéville. 5, *Poeciloptera albicosta* Guérin-Ménéville. 6, *Poeciloptera maculata* Guérin-Ménéville. aed = aedeagus, as = anal segment, p = pygofer, s = style.

*falcata* Guérin - Méneville, 1834, p. 469 (*Poeciloptera sic!*).

Type of *Colobesthes* Amyot & Serville, 1843, monobasic. Type locality: Malaysia Coast. Holotype female ? (abdomen damaged): (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18402 (2) *Poeciloptera/falcata* Guer/Balanger/Cote Malaise (3) Type/Guer-Men. (green label). Plesiotype male: S. Malaya, Buloh, 8.i.1930, A. S. Corbet, B. M. 1948-411. British Museum (NH).

The plesiotype genitalia are illustrated (Fig. I, 1).

Specimens examined from Malaysia, Sumatra, Java and Borneo had the same genitalia. The surface of the tegmina usually has waxy dust which forms scattered dotlike spots in both the green and white forms. However, in the green form, these are lost in the heavy bands and single larger spot formed by the wax deposit. The color variation ranges from a completely white transparent tegmina to a dark green white banded and spotted variant (*semanga* Distant, s. str.). The latter variant is sometimes bleached to ochraceous or stramineous color with the waxy spots still discernible.

*floccosa* Guérin - Méneville, 1829, pl. 58, fig. 8 (*Flata*).

In *Flatida* White, 1846. Type locality: Java. A syntype was not found and is presumed lost. Neotype male: Java, Soekaboemi, LeMoult. North Carolina State University.

The genitalia of the neotype are illustrated (Fig. I, 2). A specimen was selected that shows the same distinctive pattern of the tegmen that was illustrated by MELICHAR (1902), pl. I, fig. 9). A similar basic pattern of marking was found in a large array of specimens from Indonesia, Borneo, Malaysia and the Philippine Islands. However, superimposed on the design was a wide range of color variation and/or color fading, and concealment by wax deposits. Viewing of the tegmen with transmitted light usually revealed the basic pattern. Darker variants were red or green, but most of the specimens examined had a tawny or pale ochraceous appearance. Dissection of specimens from different places and showing color variation revealed only one species. The specimens had a remarkable sameness in the genital characters.

*iodipennis* Guérin - Méneville, 1838, p. 191 (*Ricania*).

Type of *Paratella* Melichar, 1902, by original designation. Type locality: Dory (=Manokwari, Irian Jaya).

Holotype (fragmented): (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18441 (2) G. M./*iodipennis*/Gu. Coq. (3) Dory/N. Guinee (round label) (4) Type/Guer-Men. (green label).

Plesiotype male: New Guinea (Neth.): Vogelkop, Manokwari, 75 m., 22.vii.1957, D. Elmo Hardy. Bishop Museum.

The plesiotype genitalia are illustrated (Fig. II, 2).

*maculata* Guérin - Méneville, 1829, pl. 58, fig. 7 (*Poeciloptera*).

Type of *Copsyrna* Stal, 1862, by subsequent designation of Melichar, 1901. Type locality: Java.

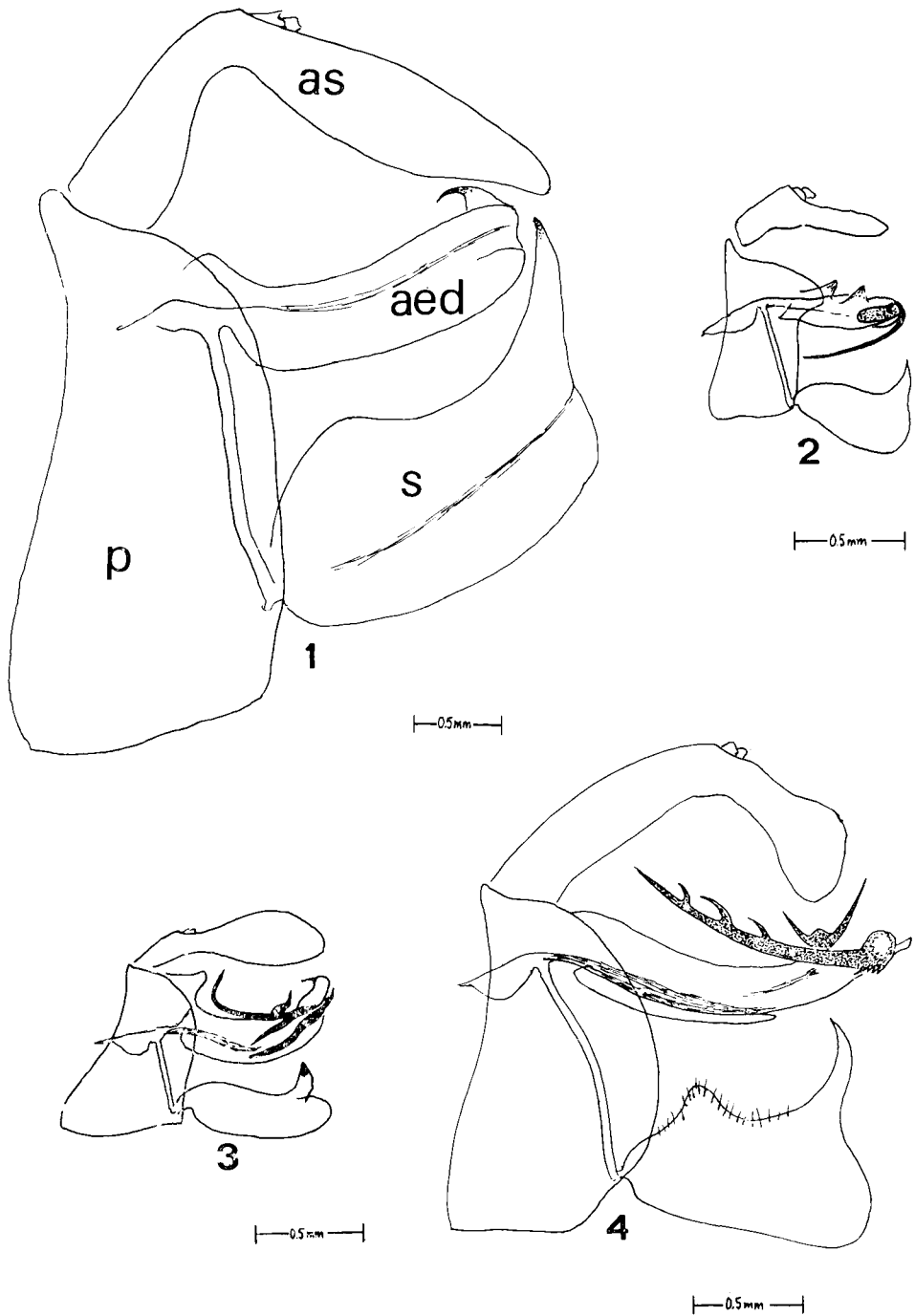


Fig. II - Left lateral view of male genitalia. 1, *Poeciloptera dentifrons* Guérin-Ménéville. 2, *Ricania iodipennis* Guérin-Ménéville. 3, *Flata pyralis* Guérin-Ménéville. 4, *Ricania marginella* Guérin-Ménéville. aed = aedeagus, as = anal segment, p = pygofer, s = style.

Lectotype (no abdomen): (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18407 (2) *Poeciloptera/maculata* Guerin/Voy d Ballanger et/iconogr R. A. pl. 58. (3) Type/Guer - Men. (green label).

Plesiotype male: Indonesia, W. Java. Djampang Tengah, Preanger, iv-1935, E. LeMoult. ~~Amsterdam~~ Museum.  
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The plesiotype genitalia are illustrated (Fig. I, 6). Specimens were dissected that had a wide range in size, but no difference was found in the genital characters. The color pattern is fairly uniform, but variability exists in the intensity of tegminal markings, especially the orange coloration basally in cells between the costal and radial veins. The plesiotype selected from Java is representative of the type both in size and markings. It has a much fresher appearance than the older specimen. A second specimen in the Naples Museum (Acc. No. 9973) without a green type label has no status as a syntype.

*marginella* Guérin - Méneville, 1829, pl. 58, fig. 6 (*Ricania*).

In *Salurnis* Stal, 1870. Type locality: Cochin China (=Viet Nam).

Holotype (no abdomen) - (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18444 (2) *Ricania/marginella*/Guer/iconogr. R. A./et Voy. Coquille./Cochin China. (3) Type/Guer - Men. (green label).

Plesiotype male: S. China, Fukien, ChungAn, Bohea Hills, 26.vii.1939, T. C. Maa. Bishop Museum.

The plesiotype genitalia are illustrated (Fig. II, 4). Specimens dissected from Taiwan, S. China, and Indo - China showed the same characters of the genitalia as the plesiotype. Southern China appears to be the center of distribution of the species.

✓ *pulverulenta* Guérin - Méneville, 1844, p. 361 (*Poeciloptera*).

Type of *Hansenia* Melichar, 1901, by original designation. Type locality: Campeche, Mexico. Holotype female: (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18408 (2) Campeche (3) *Poeciloptera/pulverulenta*/Guer. ic. R. A./Campeche (type) (4) Type/Guer - Men.

FOWLER (1900, pl. 7, fig. 18) illustrated a specimen from Rinconada, Mexico, under the name *Ormenis pulverulenta*. The figure has a resemblance to the holotype. Fowler commented on size variability in specimens he examined, with expanse of wings ranging from 23 - 38 mm. The overall length of the holotype is 20 mm, which is at the estimated upper size limit given by Fowler. I do not have sufficient material at this time for dissections. Therefore, information on the male genitalia of this species is delayed until a future revision of the genus.

*pyralis* Guérin - Méneville, 1831, pl. 10 fig. 11 (*Flata*).

Type of *Atracis* Stal, 1866, by subsequent designation of Distant, 1906. Type locality: Of-fak (=Fofak Harbor, Waigeo).

Holotype (no abdomen): (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18401 (2) *Flata pyralis*/Guer (type)/Voy. Coquille/Offak Papous (3) Type/Guer - Men. (green label).

Plesiotype male: N. Dutch New Guinea, Waigeu, Camp Nok, 2500 ft., v.1938, L. E. Cheesman, B.M. 1938-593. British Museum (NH).

The plesiotype genitalia are illustrated (Fig. II, 3). The name « Offak » given in the original description and shown also on the label of the type, is presently called Fofak. This locality is a harbor on Waigeo, 00° 02' S., 130° 44' E.

According to METCALF (1957) all authors have included *pyralis* in the genus *Atracis*, except MELICHAR (1902) who placed the species in *Uxantis* STAL (1870) erected *Uxantis* as a subgenus of *Atracis*. BANKS (1910) subsequently designated *consputa* Stal from the Philippine Islands as the type of *Uxantis*. Melichar's treatment of *Uxantis* as a valid genus was justified at the time, as name represented a distinct taxon of species in Southeast Asia, whereas *Atracis* auctorum sens. lat. had distribution mostly in India, Africa and the New World. The specimen of *pyralis* sensu Melichar recorded from Mysol in the Stockholm Museum compares closely with *patula* (Walker) from Roon Island and *consputa* Stal from the Philippine Islands. As *consputa* and *pyralis* are congeneric, the genus *Uxantis* Stal, 1870, falls as a junior synonym of *Atracis* Stal, 1866. This synonymy was actually brought about when DISTANT (1906) designated *pyralis* as the type of *Atracis* without a clear understanding of the type species.

*Staliana* Medler, **new name**, with *Elidiptera inaequalis* Walker, 1858, designated as type of the genus, is proposed as the replacement name for *Atracis* of authors. The genus will include all species assigned to *Atracis* in the METCALF Catalog (1957). Other name combinations may be necessary when the genus is revised.

✓ *tortrix* Guérin - Méneville, 1856, p. 181 (*Phalaenomorpha*).

Type of *Pseudoflatoides* Metcalf, 1938, by original designation. Type locality: Cuba.

Holotype female: (1) M<sup>o</sup>. Zool./N<sup>o</sup>. 18422 (2) *Phalaenomorpha/tortrix* Guer./Var (Cuba) type (3) Type/Guer - Men. (green label.).

METCALF and BRUNER (1948) apparently selected the wrong species to represent *tortrix* Guérin - Méneville in their generic revision. The length of the specimens they selected as typical were 9-10.5 mm. The type is 16 mm. There are other larger species in the genus, e.g., *fasciculosus* Melichar, that may have been better candidates, sizewise.

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#### SUMMARY

Types of 10 species conserved in the Naples Museum of Zoology that were named by Guérin-Méneville were examined. The specimens were either female or without abdomen. To make the species better known, male plesiotypes were selected and the genitalia illustrated. *Uxantis* Stal, 1870, was found to be a junior synonym of *Atracis* Stal, 1866. *Staliana*, with *Elidiptera inaequalis* Walker, 1858, as type species, was proposed as replacement name for *Atracis* auctorum.



RIASSUNTO

Sono stati esaminati i tipi di 10 specie conservati nel Museo di Zoologia di Napoli, che furono designati da Guérin-Ménéville.

I campioni erano o femmine o senza addome. Per una migliore conoscenza delle specie, sono stati selezionati i plesiotipi maschili ed illustrati gli organi genitali. *Uxantis* Stal, 1870, è stato ritenuto sinonimo di *Atracis* Stal, 1866. *Staliana*, con *Elidiptera inaequalis* Walker, 1858, come specie tipo, è stata proposta come nome sostitutivo per *Atracis* auctorum.

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