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JOHN T. MEDLER

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

TYPES OF FLATIDAE (HOMOPTERA) II. LECTOTYPE DESIGNATIONS AND TAXONOMIC NOTES ON SPECIES IN THE GENOVA MUSEUM

Type specimens of Flatidae have been examined in connection with my research on this family in Southeast Asia. Many of the types in the Genova Museum were based on specimens described by MELICHAR during the preparation of his monographic revision of the family, 1902. The material studied by Melichar was from the collections of Luigi Maria d'Albertis, Odoardo Beccari and Lamberto Loria. Information on the collecting expeditions of these early explorers in Southeast Asia and New Guinea is given by CAPOCACCIA and POGGI, 1982.

The Genova Museum contains a few syntypes of species named in the H. Dohrn collection by Edmund Schmidt, along with the holotype of a species from Nias Island collected by Hugo Raap. Also available are the types of species described by Victor Lallemand from material collected in Italian Somaliland by Saverio Patrizi.

The authenticity of the syntypes was verified by citations of data in the original publications. The label data associated with each specimen were 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 separation of the printed or written lines on each label. An exact reproduction of these data is given in the text that follows. Lastly, a red label with my hand printed lectotype or paralectotype designation has been attached to each specimen.

Many species of Flatidae can be identified accurately only by using diagnostic characters of the male genitalia. Therefore, male specimens were dissected and the genitalia illustrated whenever possible. The dissected male was designated as the lectotype when syntypes existed.

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TYPES IN THE GENOVA MUSEUM

alba Melichar, 1902, p. 86 (*Ormenis deducta* var.)

A male (dissected) and two females in the Genova Museum each are labelled (1) Pointe de Galle/9.I.1872/D'Albertis (2) *Ormenis deducta*/det. Melichar 1901. They undoubtedly are specimens from Ceylon cited in the original description under *deducta* var. *alba*. The male genitalia are the same as *Melicharia obtusangula* Distant shown by GHAURI, 1973, fig. 8. A male of *alba* from Java in the Stockholm Museum has been designated lectotype to fix the name *alba* as a junior synonym of *Idume plicata* Melichar.

composita Melichar, 1902, p. 114 (*Colgar*)

Holotype ♀ – (1) N. Guinea S.E./Moroka, 1300 m./Loria VII-IX 93 (2) Holo-/typus (red-bordered label) (3) *Atella*/*composita*/det. Melichar 1901.

This species is removed from *Neomelicharia* and assigned to the *Neodaksha* complex of genera. The black tegminal markings are variable, and some specimens do not show the typical pattern that was illustrated by MELICHAR (pl. III, fig. 17). The characters of the male genitalia must be used for correct identification of this species and its variants.

New combination (= *Neodaksha*)

dohrni Schmidt, 1904a, p. 188 (*Bythopsyrna*)

Paralectotype ♀ – (1) Cotype (orange label) (2) Dohrn/Sumatra/Sinabong (3) *Dohrni*/Schmidt (4) *Bythopsyrna*/*dohrni*/Schmidt/Dohrn 1904.

The paralectotype is very much the same as *circulata* Guérin, but differs in having considerable orange pigmentation basally in the costal cell. A paralectotype ♀ is in the Brussels Museum. A decision on the status of this species requires a study of the male genitalia of a syntype cited in the original description.

furtiva Melichar, 1902, p. 115 (*Colgar*)

Lectotype ♀ – (1) New Guinea mer./Bujakori/Agosto 1890/L. Loria (2) Mus. Civ./Genova (3) Typus (red-bordered label) (4) *Atella*/*furtiva* (5) Det. Melichar, 1901.

The lectotype belongs with a group of closely related species in the *Neodaksha* complex. Syntypes cited in the Paris Museum and Melichar's personal collection have not been examined.

New combination (= *Neodaksha*)

gestroi Lallemand, 1929, p. 161 (*Dendrona*)

Holotype ♂ – (1) Somalia It./P.na di Fungalango/III-IV-1923/Patrizi (2) Type (red label) (3) *Dendrona*/*gestroi*/Lallem. (Dissected)

The male genitalia are illustrated (Fig. 1). The locality label reads differently from the citation of « Belet Amin (Giuba) » given by Lallemand.

griseopustulata Schmidt (*Cerynia*)

Syntype ♀ – (1) Cotype (orange label) (2) Dohrn/Sumatra/Soekaranda (3) *griseopustu-*/*lata*/Schmidt (4) *Cerynia*/*griseopustulata*/Schmidt/Dohrn 1904.

This specimen is mislabeled. The same locality label is present on a paralectotype female of *Cerynia nigropustulata* Schmidt in the Dresden Museum.

haenschi Schmidt, 1904b, p. 356 (*Doria*)

Paralectotype ♀ – (1) Type (orange label) (2) Balzapamba/(Ecuad.)/R. Haensch S. (3) *Haenschi*/♀ Schmidt (4) *Doria*/*Haenschi*/♀ Schmidt/ D.H. Dohrn 1906.

Examination of the syntype male cited in the original description is necessary for knowing the status of this species. (= *Doriana*)

inclusa Melichar, 1902, p. 28 (*Flatomorpha*)

Lectotype ♂ – (1) Sumatra/Mte Singalang/Luglio 1878/O. Beccari (2) Museo Civ./Genova (3) Typus (red-bordered label) (4) *Flatomorpha* n. gen/*inclusa* n. sp/det. Melichar. (Dissected)
Paralectotype (no abdomen) – Same labels as the lectotype.

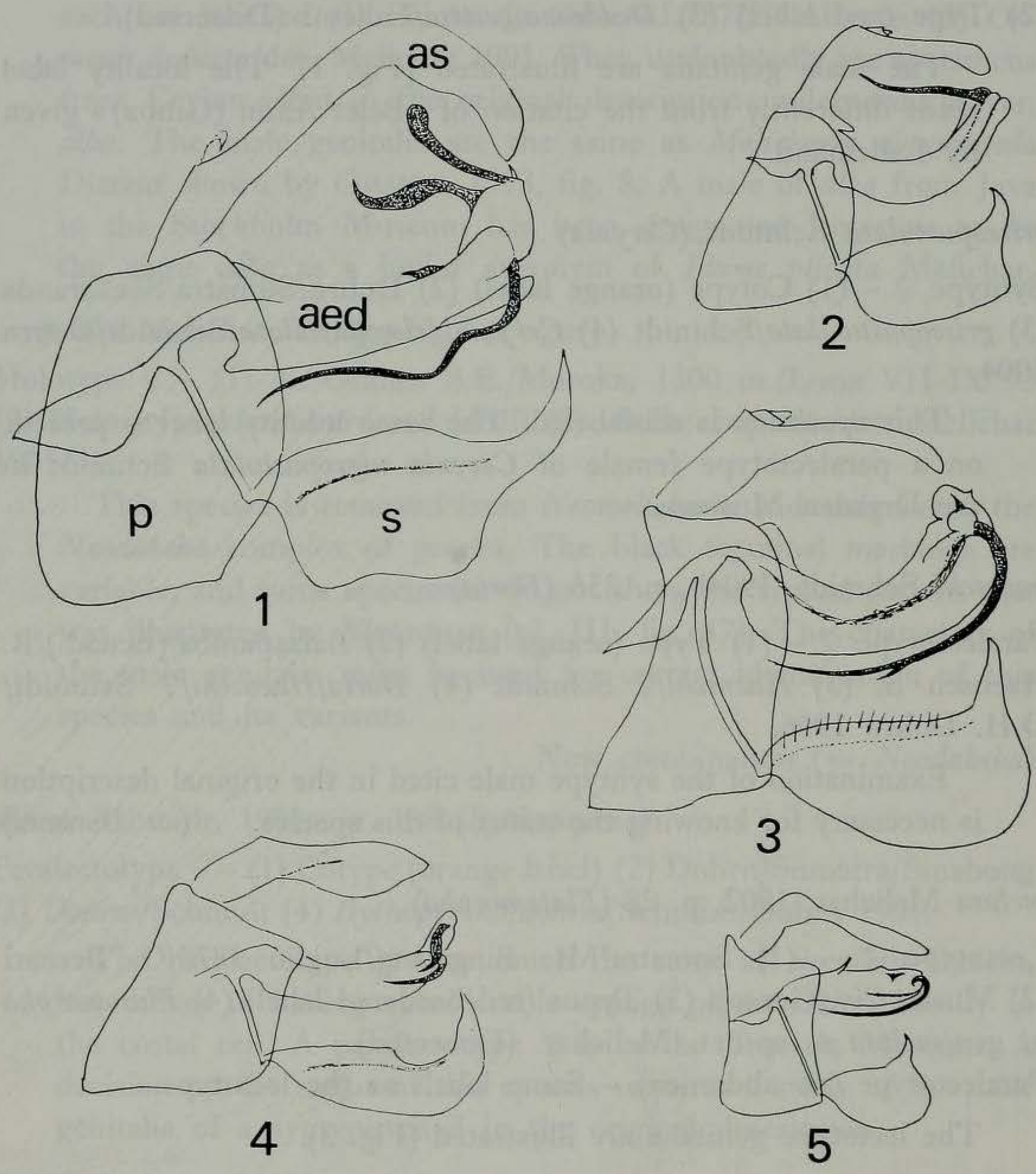
The lectotype genitalia are illustrated (Fig. 3).

incriminata Schmidt, 1905, p. 380 (*Lichena*)

Lectotype ♀ – (1) Nord/Madagaskar (2) *Lichena*/*incriminata*/♀ Schmidt/ D.H. Dohrn/1906.

Paralectotype ♀ – (1) Madagascar/Mont D'Ambre/Hammerstein S. (2) D. Dohrn/1907 (3) *Lichena*/*incriminata*/Schmidt/♀ Edm. Schmidt/ determ. 1907.

Paralectotype nymph – (1) Nord/Madagaskar.



Figures 1-5 - Left lateral view of male genitalia. 1, *Dendrona gestroi* Lallemand. 2, *Mesophylla lineata* Lallemand. 3, *Flatomorpha inclusa* Melichar. 4, *Uysanus lestagei* Lallemand. 5, *Sephena punctula* Melichar. aed = aedeagus, as = anal segment, p = pygofer, s = style.

The tegmina of the lectotype have black markings that are not present in the paralectotype, but morphologically the syntypes appear to be conspecific. The presence of three posttibial spines in this species is unique in the Flatidae. The species is the monobasic type of the genus *Lichenopsis* Schmidt. (= *Lichenopsis*)

lestagei Lallemand, 1929, p. 161 (*Uysanus*)

Lectotype ♂ – (1) Somalia It./Bidi-Scionde/Basso Giuba/Patrizi 1924 (2) Typus (3) *Uysanus/Lestagei*/typi Lallem. (4) *Uysanus somalianus* Lallem./*Lestagei* Lall. (Dissected)

Paralectotype ♂ – (1) Same label as the lectotype (2) *Uysanus/lestagei* Lalle.

The genitalia of the lectotype are illustrated. (Fig. 4)

lineata Lallemand, 1935, p. 79 (*Mesophylla*)

Lectotype ♂ – (1) Somalia It./Mogadiscio/Patrizi VI-34 (2) 1/48 (3) *M. lineata*/Lalle. (Dissected)

Paralectotypes 3 ♂♂ 2 ♀♀ – (1) Same label as the lectotype (2) respectively 1/47, 1/51, 1/52, 1/54, 1/55 (3) *M. lineata*/Lalle.

Paralectotypes 3 ♂♂ 2 ♀♀ – (1) Oltregiuba/Costa Bagiuni/Patrizi VIII-34 (2) respectively 6/69, 6/70, 6/71, 6/72, 6/73.

For specimen 6/71 also: (3) Bur Gao/su « Gandal »

For specimen 6/73 also: (3) Typus (4) *Mesophylla* type/*lineata* Lallem./Dr. V. Lallemand det., 193.

The genitalia of the lectotype are illustrated (Fig. 2). Eleven of the 17 syntypes cited in the original description are in the Genova Museum. Four syntypes are in the Brussels Museum. *Phylliana* Metcalf is a replacement name for *Mesophylla* Melichar, which is preoccupied. (= *Phylliana*)

punctula Melichar, 1902, p. 124 (*Sephena*)

Lectotype ♂ – (1) N. Guinea S. E./Moroka, 1300 m./Loria VIII-IX 93 (2) Museo Civ./Genova (3) Typus (red label) (4) *Paratella/punctula/* det. Melichar. (Dissected)

Paralectotype ♀ – Same labels as the lectotype.

The genitalia of the lectotype are illustrated (Fig. 5). This species is a junior synonym of *Sephena obtusa* (Walker). New synonymy

raapi Schmidt, 1912, p. 96 (*Bythopsyrna*)

Holotype ♀ – (1) Is. Nias/1897-98/U. Raap (2) Type (orange label) (3) *Raapi*/♀ Schmidt (4) *Bythopsyrna*/*Raapi*/♀ Edmund Schmidt/determ. 1911.

The holotype closely resembles *circulata* Guérin in the pattern of black markings, but the black pigmentation of the tegmina is bleached.

rosea Atkinson, 1886, p. 64 (*Cerynia maria* var.)

Paralectotype ♀ – (1) Sikkim (2) Museo Civ./Genova (3) *Cerynia*/*maria* White/var. *rosea*/Atkins. (4) 134 (small pink label) (5) Syntypus/var. *rosea* (red label) (6) *Cerynia*/v. *rosea*/det. Melichar 1901.

Paralectotype ♀ – (1) Sikkim (2) Museo Civ./Genova (3) Syntypus/var. *rosea* (red label) (4) *Cerynia maria*/var. *rosea* Mel./det. Melichar 1901.

These are authentic syntypes donated to the Genova Museum by Atkinson in 1888. MELICHAR, 1901, lapsed in listing this variety as his own, but later MELICHAR, 1923, corrected his error.

roseoalba Melichar, 1902, p. 119 (*Paratella*)

Paralectotype ♀ – (1) Orocolo/XII-95/Loria (2) Mus. Civ./Genova (3) *Paratella*/*roseoalba* (4) Typus (5) *Paratella*/*roseoalba*/det. Melichar.

The lectotype male is in the Budapest Museum. Paralectotypes are in the Brussels and Vienna Museums. This species is a junior synonym of *Paretella decolor* (Walker).

unipunctata Schmidt, 1904a, p. 196 (*Phyma*)

Paralectotype ♂ – (1) Cotype (orange label) (2) Soekaranda/Januar 1894/Dohrn (3) *unipunctata*/Schmidt (4) *Phyma*/*unipunctata*/Schmidt/Dohrn/1904. (Dissected)

Paralectotype ♂ – (1) Cotype (orange label) (2) Dohrn/Sumatra/Sinabong (3) *unipunctata*/Schmidt. (Dissected)

Study of the male genitalia of both specimens showed that they are the same species as *Lawana partita* (Melichar).

variegata Schmidt, 1904b, p. 370 (*Paratella*)

Paralectotype ♀ – (1) Type (orange label) (2) Obi/5. 1902 (3) *variegata*/♀ Schmidt (4) *Paratella*/*variegata*/♀ Schmidt/D.H. Dohrn 1906.

The paralectotype is transferred to the genus *Neomelicharia*. Another paralectotype female is in the Dresden Museum. The status of this species requires knowledge of the male genitalia.

(= *Neomelicharia*)

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ABSTRACT

The type specimens of 18 species of Flatidae described by Lallemand, Melichar and Schmidt were studied. The genitalia of 5 holotype or lectotype males were illustrated.

New synonymy is: *Sephena punctula* Melichar, a junior synonym of *Sephena obtusa* (Walker).

New combinations: *Neodaksha composita* (Melichar) and *Neodaksha furtiva* (Melichar) each from *Neomelicharia*.

RIASSUNTO

I tipi dei Flatidae (Homoptera). II. Designazione di lectotipi e note tassonomiche sulle specie conservate nel Museo di Genova

Sono studiati gli esemplari tipici di 18 specie di Flatidae descritti da Lallemand, Melichar e Schmidt.

Vengono illustrati i genitali di 5 olotipi o lectotipi.

È stabilita la nuova sinonimia: *Sephena obtusa* (Walker, 1870) = *Sephena punctula* Melichar, 1902.

Neomelicharia composita Melichar e *Neomelicharia furtiva* Melichar sono trasferite nel genere *Neodaksha*.