

Entomologica Basiliensia	12	83-91	1988	ISSN 0253-2484
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Types of Flatidae (Homoptera). IX. Lectotype designations, and three new genera for species in the Basel Museum

by J. T. Medler

Abstract: Lectotypes and paralectotypes were designated for species of Flatidae described by LALLEMAND (1935) from specimens collected during Handschin's 1930-32 Expedition to the Sunda Islands and Northern Australia. New synonymy: *Neomelicharia albida* Lallemand and *N. citrinella* Lallemand, each junior synonyms of *Sanurus dubius* Melichar. New combinations: *Neomelicharia handschini* Lallemand, monobasic type of *Lesabes* Medler, new genus; *Euphanta insignis* Lallemand, monobasic type of *Burnix* Medler, new genus; *Colgar punctata* Lallemand (n. stat.), monobasic type of *Karrama* Medler, new genus.

Key words: Homoptera Flatidae – lectotype designations – new synonymy – new combinations – new genera – Basel Museum.

Syntypes conserved in the Basel Museum that represented certain species described by LALLEMAND (1935) were examined in connection with my research on Flatidae in Southeastern Asia and New Guinea. LALLEMAND (l.c.) examined the specimens collected by E. Handschin during an expedition to the Sunda Islands and Northern Australia in 1930-32. LALLEMAND (l.c.) divided the syntypes of new species into two parts. One part was returned to the Basel Museum, and the second part was retained in the Brussels Museum (Royal Institute Sciences Naturelle Belgique). I had already completed my study of syntypes available in the Brussels Museum when the Basel Museum syntypes were obtained on loan.

As most species of Flatidae are identified accurately by using diagnostic characters of the male genitalia, my lectotype designations were based on male specimens where possible. The males were dissected and the genitalia illustrated.

The authenticity of the syntypes was verified by checking on citations of data given in the original description. To preserve the historical status of the specimens, the label data associated with each specimen were recorded precisely by the following format: (1), (2), etc., indicate the sequence of original labels on the pin from top to bottom. A slash (/) shows the separation of printed or written lines on each label. Lastly, a red label with my hand printed lectotype or paralectotype designation is attached to each specimen.

In the METCALF Catalog (1957) all of the name combinations used by Lallemand were listed as given in the original publication. I found that the syntypes of three of Lallemand's species names had been identified wrongly with respect to the genus. In each case the species represented a new genus. Three new genera are described in this report to receive these species.

Sanurus dubius Melichar

Fig. 1.

Sanurus dubius MELICHAR, 1902, *Annln naturh. Mus. Wien* 17: 29.

Neomelicharia albida LALLEMAND, 1935, *Rev. Suisse Zool.* 42: 665, figs 3-4, n. syn.

Neomelicharia citrinella LALLEMAND, 1935, *Rev. Suisse Zool.* 42: 666, n. syn.

The lectotype of *N. albida* Lallemand was compared with the lectotypes of *Neomelicharia citrinella* Lallemand and *Sanurus dubius* Melichar, and found to represent the same species. The lectotype and paralectotype in the Brussels Museum each are faded examples. *Sanurus dubius* and its synonyms show a range of color variation from strong lemon yellow to bleached off-white. Lectotype ♂ - (1) Endeh/Flores/Dez. 1931/Handschin; (2) Type; (3) *Neomelicharia/albida/Lallem.*

Measurements (mm): lectotype ♂:

Length: overall 8.00; vertex 0.33; frons 1.37; pronotum 0.42; mesonotum 1.49; tegmen 6.97; postclaval sutural margin 1.66.

Width: vertex 0.87; frons 1.20; tegmen apex 3.98.

A paralectotype female of *N. citrinella* Lallemand is in the Brussels Museum. The lectotype genitalia are illustrated in figure 1. The characters are the same as those of the lectotype of *Sanurus dubius* Melichar, which is the senior synonym. Lectotype ♂ - (1) Endeh/Flores/Dez. 1931/Handschin; (2) Type; (3) *Neomelicharia/citrinella* Lall. [Dissected].

Measurements (mm): lectotype ♂:

Length: overall 9.00; vertex 0.42; frons 1.45; pronotum 0.46; mesonotum 1.66; tegmen 7.47; postclaval sutural margin 2.16.

Width: vertex 0.91; frons 1.25; tegmen apex 4.07.

Siphanta patruelis Stål

Fig. 2

Siphanta patruelis STÅL, 1959, *Fregatten Eugenies Resa* 4: 283.

Siphanta toga var. *maculata* LALLEMAND, 1935, *Rev. Suisse Zool.* 42: 662.

Lectotype ♂ - (1) Marrakai N. T./May 1931/Handschin; (2) Typus [red label]; (3) *Siphanta/toga/var. maculata* Lall. [Dissected].

The second syntype cited by Lallemand appears to be a specimen from Burnside in the Brussels Museum. The lectotype genitalia are illustrated in figure 2. The brown markings on the tegmina give a distinctive pattern that separates *maculata* from other species in *Siphanta*, but I could find no difference in the genital characters from those of *S. patruelis* Stål. FLETCHER (1986) treated *maculata* Lallemand as a junior synonym of *patruelis* Stål.

Measurements (mm): lectotype ♂:

Length: overall 7.50; vertex 0.58; frons 1.08; pronotum 0.58; mesonotum 1.41; tegmen 6.47; postclaval sutural margin 1.33.

Width: vertex 0.79; frons 1.00; tegmen apex 3.65.

Colgaroides viridis Lallemand

Colgaroides viridis LALLEMAND, 1935, Rev. Suisse Zool. 42: 665.

Holotype ♀ – (1) Burnside, N. T./April 1931/Handschin; (2) Typus [red label]; (3) *Colgaroides/viridis* Lallemand./type.

Lallemand's figs 1–2 are captioned *Colgaroides acuminata* n. sp. in error, and actually represent the holotype of *Colgaroides viridis*. This holotype is similar to the holotype of *Poeciloptera acuminata* Walker in the British Museum, except noticeably shorter in overall length and vertex length. The hind leg spine formula of *viridis* is 1:6:7. A study of the male genitalia of a plesiotype from the Burnside locality will be required to help in determination of the status of this species.

Measurements (mm): holotype ♀:

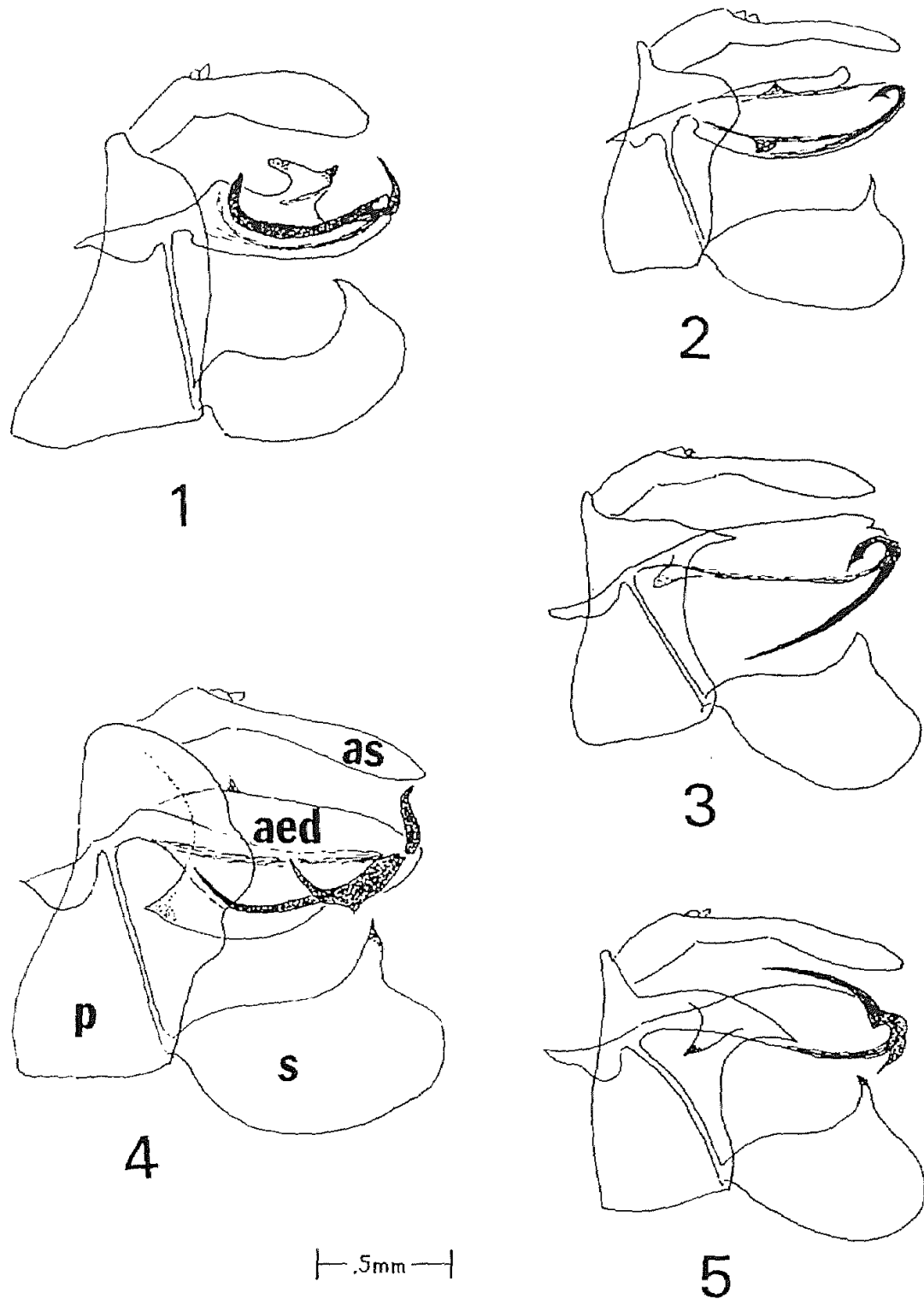
Length: overall 10.00; vertex 0.66; frons 1.66; pronotum 0.54; mesonotum 1.83; tegmen 8.13; postclaval sutural margin 2.49.

Width: vertex 0.83; frons 1.16; tegmen apex 5.40.

Burnix n. gen.

Type species: *Euphanta insignis* LALLEMAND, 1935, here designated.

Lectotype vertex weakly concave between lateral margins, anterior margin convex, carinate, tapered slightly from anterior margin to posterior margin, which is incompletely transversely carinate, the lateral triangles contiguous to pronotum well developed. Front with three strong longitudinal carinae, interspaces about equal, lateral carinae not merged with median carina dorsally. Pronotum strongly convex ante-



Figs 1-5: Left lateral view of male genitalia of: 1, *Neomelicharia citrinella* Lallemand. 2, *Siphanta toga* var. *maculata* Lallemand. 3, *Lesabes handschini* (Lallemand). 4, *Burnix insignis* (Lallemand). 5, *Karrama punctata* (Lallemand) (aed = aedeagus, as = anal segment, p = pygofer, s = style).

riorly, median longitudinal carina shallow. Mesonotum lateral carinae oblique anteriorly, merging with median carina at anterior margin. Tegmen R, S, and M veins arising together from the basal stem, S forked apicad of M fork position, Cu without fork or oblique branch, but with several transverse veins joining M and M_2 ; postclaval sutural margin elevated convexly; sutural and costal angles of similar obtusely rounded configuration; apical margin convex from the angles, discal and apical areas of the tegmen with strong cross veins that form rather large cells; R vein not merging with C apically, both veins terminating at costal margin. Metatibial spines 1:6 or 1:7.

Distribution: Australia.

The new genus resembles *Euryphantia* Kirkaldy in tegminal shape, venation and pustulation, but is colored green, not brown. The shape of the vertex and disposition of frontal carinae are different in *Burnix*. Any similarity in form of tegmina with *toga* Kirkaldy, that was mentioned by Lallemand in his description of *insignis*, is superficial, and the venation in *Burnix* is greatly different from *Siphanta*.

***Burnix insignis* (Lallemand) n.comb.**

Fig. 4.

Euphanta insignis LALLEMAND, 1935, Rev. Suisse Zool. 42: 663.

Overall color bright green to yellow ochraceous; many of the pustules in clavus, pre-costal marginal cell and on tegmen disc dark brown or reddish; vertex red on anterior margin on each side of middle line; pronotum anterior margin with lateral red or red brown spot inside lateral carinae; claval margin thickly red, apical margin thinly red; vein terminations reddish brown. The cells of tegmen may have central areas white, giving a mottled appearance. The large postclaval cell on sutural margin is mostly dark brown. Among the specimens examined the tibiae are completely or partially red. Hind leg spine formula 1:6:7 and 1:7:7 (some females).

Types: Lectotype ♂ – (1) Burnside/N. T./26.4.32; (2) Typus [red label]; (3) *Euphanta/insignis* Lalle. [Dissected]. (NHM-Basel). Paralectotypes, 1♂, 2♀ – (1) Same label as the lectotype. Eight syntypes were cited by Lallemand in the original description. Four were found in the Basel Museum, two were in the Brussels Museum, and the remaining two were not located. The genitalia of the lectotype are illustrated in figure 4. The characters of a paralectotype in the Brussels Museum are the same.

The lectotype genitalia are illustrated in figure 4.

Measurements (mm): lectotype ♂, paralectotype ♀:

Length: overall 9.00, 10.50; vertex 0.33, 0.33; frons 1.41, 1.58; pronotum 0.50, 0.58; mesonotum 1.83, 1.99; tegmen 7.80, 8.96; postclaval sutural margin 1.33, 1.99.

Width: vertex 0.83, 1.04; frons 1.12, 1.20; tegmen apex 4.32, 4.98.

The only specimens known to me are six of the syntypes collected by Handschin and named by Lallemand.

Karrama n. gen.

Type species: *Colgar laraticus* var. *punctata* LALLEMAND, 1935, here designated.

Lectotype head in dorsal view conical, apex convexly truncated; vertex convex laterally, apical margin defined by frontal U carina; front mostly flattened, elongated dorsally, margins of projection formed by U carina, which is evanescent basally; median longitudinal carina on front, vertex, pronotum and mesonotum weakly developed or evanescent, likewise the mesonotum lateral carinae. Tegmen R, S and M veins arising from basal stem, R not forked, S forked opposite discal cell, M forked at about one quarter distance from base to apex, Cu forked, the oblique branch joining M_2 ; costal and sutural angles obtusely rounded, apical margin weakly convex, slightly oblique from sutural to costal angle. Metatibial spines 1:6.

Distribution: Australia.

The new genus differs from *Colgar* Kirkaldy in head morphology. Certain aspects of tegminal coloration, such as a red spot on the discal cell cross vein and red margins, are found in several generic complexes, including *Colgar* and *Sephena*.

Karrama punctata (Lallemand) n. comb., n. stat.

Fig. 5.

Colgar laraticus var. *punctata* LALLEMAND, 1935, Rev. Suisse Zool. 42: 664.

Tegmina green ochraceous; costal, sutural and apical margins bright red, a large red spot at center of discal cell crossvein. Vertex and pronotum with median longitudinal red band; mesonotum entirely tawny orange; tarsi and tibiae pink. Hind leg spine formula 1:6:7.

The distinctive characters of the male genitalia shown in figure 5 were the same in 3 dissections.

Specimens exist that have faded red margins, but usually the red discal spot persists, and to a certain extent, the median red band on the

vertex and pronotum.

Types: Lectotype ♂ – (1) Marrakai, N. T./May 1931/Handschin; (2) Colgar/laraticus Kirk (NHM-Basel). Paralectotypes, 2♂, 3♀ – Same label as the lectotype, except (2) Colgar peracuta Walk., attached to one female. The lectotype genitalia are illustrated in figure 5. The six specimens in the Basel Museum undoubtedly are syntypes of the variety named by Lallemand, but none are labeled properly. Lallemand recorded 7 examples. There are 6 specimens listed above, and 5 specimens in the Brussels Museum, all with identical locality labels. It appears that Lallemand first attached his determination label as «*Colgar peracuta*» but later changed his mind and named the specimens as a variety of *Colgar laraticus*, neglecting to attach *punctata* labels on the specimens.

Measurements (mm): lectotype ♂, paralectotype ♀:

Length: overall 8.50, 10.00; vertex 0.66, 0.91; frons 1.49, 1.83; pronotum 0.50, 0.54; mesonotum 1.74, 1.91; tegmen 6.64, 7.97; postclaval sutural margin 1.66, 2.16.

Width: vertex 0.75, 0.83; frons 1.08, 1.16; tegmen apex 3.65, 4.32.

Specimens examined: Australia, N. T.: Marrakai, V. 1931, E. Handschin, (3♂ and 3♀ syntypes, NHM-Basel; 3♂ and 2♀ syntypes, Brussels Museum); Edith Creek, 2.XII.1963, J. Sedlacek (1♂, Bishop Museum); Katherine, 1.XII.1963, J. Sedlacek (2♀, Bishop Museum).

Australia, Prince Wales Islands: Cape York Isl., VIII.1920, J. A. Kutsche, (1♂ and 1♀, Bishop Museum).

Australia, N. Q.: Redlynch, 30.X.1939, R. G. Wind (1♀, North Carolina State University).

Lesabes n.gen.

Type species: *Neomelicharia handschini* LALLEMAND, 1935, here designated.

Vertex shallowly concave between lateral margins, without median carina, anterior margin carinate; front median carina and U carinae weak, merging dorsally without touching anterior margin of vertex; pronotum median carina evanescent, mesonotum median carina weak, as also lateral carinae. Tegmen R, S, and M arising from basal stem, R joining C, together terminating at costal margin, S fork about opposite spot on discal cell crossvein, M branches forming strong discal cell, Cu forked, the oblique branch merging with M₂; sutural margin nearly straight to angle, apical margin nearly straight between angles, both angles almost acutely rounded. Metatibial spines 1:6.

Distribution: Northern Australia.

The new genus differs from *Neomelicharia* Kirkaldy in morphology of the vertex, and the frontal carinae have different development. Specimens of *Lesabes* are distinctly smaller than representatives of *Neomelicharia* in the Indonesian Region.

***Lesabes handschini* (Lallemand) n. comb.**

Fig. 3.

Neomelicharia handschini LALLEMAND, 1935, Rev. Suisse Zool. 42: 666.

Holotype overall color ochraceous green, ventral surfaces of body lighter in color than dorsum and tegmina. Tegmen margins faintly pink, center of discal cell crossvein covered by round red brown spot. Hind leg spine formula 1:6:7.

This species is strikingly dimorphic in intensity of red pigmentation. In males, the red spot is very large, the costal margin is widely red, about twice the width of the procostal margin, and the vertex is red. Female specimens have green predominant and the red appears brownish-red. Tawny forms accentuate the bright red pigmentation.

Holotype ♀ –(1) Darwin, N. T./April 1931/Handschin; (2) *Neomelicharia/Handschini/Lall./type* (NHM-Basel). Plesiotype ♂: Holmes Jungle nr. Darwin, Gressitts (Bishop Museum). The right tegmen of the holotype is missing, perhaps being lost after detachment for drawing Lallemand's figure 6. The illustration of the head, pronotum and mesonotum in Lallemand's figure 5 approximates the appearance of the holotype. The plesiotype has been designated to make known the characters of the male genitalia illustrated in figure 3.

Measurements (mm): plesiotype ♂, holotype♀;

Length: overall 7.50, 8.50; vertex 0.17, 0.25, frons 1.29, 1.37; pronotum 0.42, 0.42; mesonotum 1.66, 1.41; tegmen 6.47, 7.30; postclaval sutural margin 1.58, 1.83.

Width: vertex 0.79, 0.83, frons 1.08, 1.16; tegmen apex 3.82, 4.32.

Specimens examined: Australia, N.T.: Darwin, IV.1931, E. Handschin, (1♀ holotype, NHM-Basel).

Specimens from the Bishop Museum, as follows: Arnhem Land, Maningrida, 5 m, 17.III.1961, J.L. & M. Gressitt (2♂ and 3♀); Berry Springs, 50 km SE of Darwin, 12.III.1961, J.L. & M. Gressitt (1♂ and 3♀); Darwin, 0–50 m, XI.1968, N.L.H. Krauss (1♀); Darwin, 24.IX.1958, tall fan palm, R. Straatman (1♂); Darwin, 2 m, 2.IX.1960, J.L. & M. Gressitt (1♀); Darwin, Nightcliff, 2 m, 2.X.1960, J.L. Gessitt (1♂ and 1♀); Holmes Jungle Palm Cr., 15 km NE of Darwin, 5 m, 13–15.III.1961, J.L. & M. Gressitt (2♂ and 3♀).

Acknowledgment

I wish to express appreciation to Dr. M. Brancucci for authorizing the loan of types and conducting a search for certain other specimens needed for my study.

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