

# REICHENBACHIA

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### Types of Flatidae. I. Lectotype Designations and Taxonomic Notes on Species in Staatliches Museum für Tierkunde Dresden (Homoptera, Auchenorrhyncha)

With 14 Figures

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The type specimens of Flatidae in the Dresden Museum were listed by EMMRICH (1982). Many of these types were examined in connection with my research on this family in Southeast Asia and New Guinea. Most 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. In most cases the dissected male was designated as the lectotype when syntypes existed.

The authenticity of the syntypes was verified by citations of data given in the original descriptions. The label data associated with each specimen were recorded precisely by the following format: numbers (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.

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#### Jacobi Types

*alba* JACOBI, 1915, p. 172 (*Mesophylla*)

Lectotype ♀ — (1) Luzon, O. Atimonan Micholitz, (2) 1908/13, (3) A. Jacobi/Typus (red label). Paralectotypes 2 ♀♀ — same labels as the lectotype.

The three syntypes are bleached examples of *Phylliana serva* (WALKER, 1851), which is a common species in Luzon, Philippine Islands (*syn. n.*).

*angulata* JACOBI, 1915, p. 169 (*Cryptoflata*)

Lectotype ♂ — (1) D. O. Afrika/Usambara, (2) Coll. A. Jacobi/1912-3, (3) A. Jacobi/Cotypus (buff label). (Dissected). Paralectotypes ♀ — (1) Deutsch O. Afrika, (2) Coll. A. Jacobi/1912-3, (3) A. Jacobi/Cotypus (buff label); ♀ — (1) Usambara/Nguelo, (2) Coll. A. Jacobi/1912-3, (3) A. Jacobi/Typus (pink label); ♀ — (1) Nguelo/Usambara/H. Rolle/Berlin, S.W ii, (2) Coll. A. Jacobi/1912-3, (3) A. Jacobi/Typus (pink label).

The genitalia of the lectotype (Fig. 4) enable recognition of this species, which has closer similarity to species in S.E. Asia than to those in West Africa, where a number of species have been described and illustrated by FENNAH (1957). Each of the syntypes has the black pigment spot at the tip of the clavus, and this spot seems to be characteristic of the African complex of species.

*angulifrons* JACOBI, 1915, p. 176 (*Seliza*)

Lectotype ♂ — (1) Formosa/Kosempo/H. Sauter '09, (2) 1909/7, (3) A. Jacobi/Typus (pink label). (Dissected). Paralectotype ♀ — (1) Koshun, (2) Formosa/H. Sauter '09, (3) 1909/7, (4) A. Jacobi/Typus (pink label).

The genitalia of the lectotype (Fig. 6) are the same as the genitalia of *Flatoides lignarius* WALKER, 1851, which is cataloged in the genus *Seliza* by METCALF (1957) (*syn. n.*). How-

ever, *lignarius* is not congeneric with *Pocilloptera vidua* STÅL, type of the genus *Seliza*, and should be transferred to a yet undescribed genus.

*bispinosa* JACOBI, 1915, p. 167 (*Gyaria*)

Holotype ♀ — (1) Erythraea/Asmara/VI, (2) Coll. A. Jacobi/1912-3, (3) A. Jacobi/Typus. The hind tibiae of the holotype have two preapical lateral spines, as mentioned by JACOBI in the original description. This character state excludes placement of this species in *Gyaria*, which has the hind tibiae unispinous. New combination: *Gyarina bispinosa* (JACOBI, 1915) **comb. n.**

*carinata* JACOBI, 1915, p. 169 (*Mimophantia*)

Lectotype ♂ — (1) Formosa/Takao/H. Sauter '07, (2) 1908/6, (3) A. Jacobi/Typus (red label). Paralectotypes ♂♀ — same labels as the lectotype (♂ dissected).

The genitalia of the lectotype (Fig. 9) differ from Japanese specimens determined provisionally as *Mimophantia maritima* MATSUMURA. The full length median longitudinal carina on the front helps to distinguish this species.

*castaneiceps* JACOBI, 1917, p. 538, tab. 32, fig. 2 (*Phalaenomorpha*)

Lectotype ♂ — (1) Madagascar/Tamatave/Voeltzkow, (2) 1914/3, (3) A. Jacobi/Typus (pink label). (Dissected).

The genitalia of the lectotype (Fig. 8) supplement JACOBI's illustration in providing for correct identification of this species. It belongs now to *Atracis*.

*circumcincta* JACOBI, 1928, p. 21 (*Colgaroides*)

Paralectotypes 2 ♂♂ 1 ♀ — (1) Kimberley/district, (2) N. V. Austr./Mjöberg, (3) nov., (4) 1927/5, (5) Cotypus (red label) on one male only (dissected).

The genitalia of the paralectotype (Fig. 12) are the same as the genitalia of specimens from Australia that I have determined as *Pocilloptera acuminata* WALKER. I am unable to confirm this synonymy on the basis of genital characters, as the abdomen of the holotype in the British Museum (Natural History) is mutilated. Additional syntypes of *Colgaroides circumcincta* are in the Stockholm Museum.

*declivis* JACOBI, 1941, p. 289 (*Lawana*)

Paralectotype ♀ — (1) Sunda-Exp. Rensch/W.-Soembawa/Soembawa Besar/24. 4. — 2. 5. 1927, (2) 1940/2, (3) Typus (red label).

The paralectotype has only one posttibial preapical spine. This excludes the species from *Lawana*. Characters of the head and tegmina are the same as found in *Phyllyphanta* of authors. The species differs from *producta* SPINOLA as given in the METCALF Catalog, being smaller in size and with a shorter not so acute head. The lectotype female is in the Zoological Museum of the Humboldt University in Berlin. New combination: *Phyllyphanta declivis* (JACOBI, 1941) **comb. n.**

*formosana* JACOBI, 1915, p. 177 (*Atracis*)

Lectotype ♀ — (1) Formosa/Takao/H. Sauter '07, (2) 1908/6, (3) A. Jacobi/Typus (red label). Paralectotype ♀ — (1) Formosa/Fuhosho/H. Sauter '09, (2) 1909/7, (3) A. Jacobi/Typus (red label).

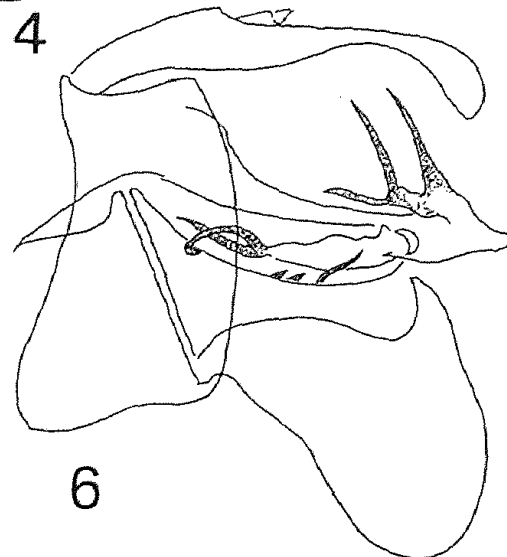
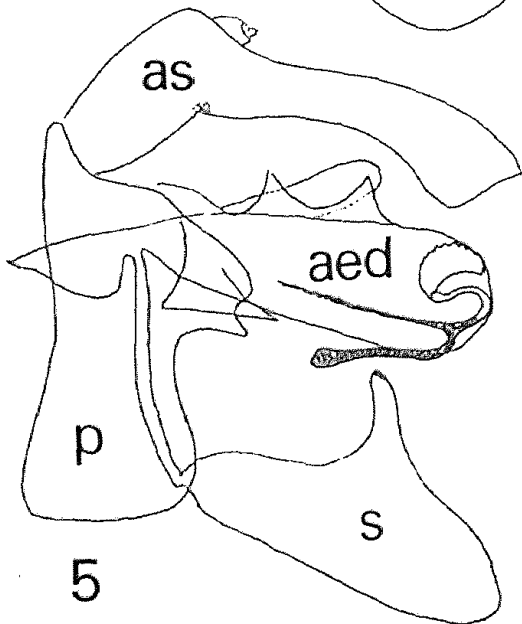
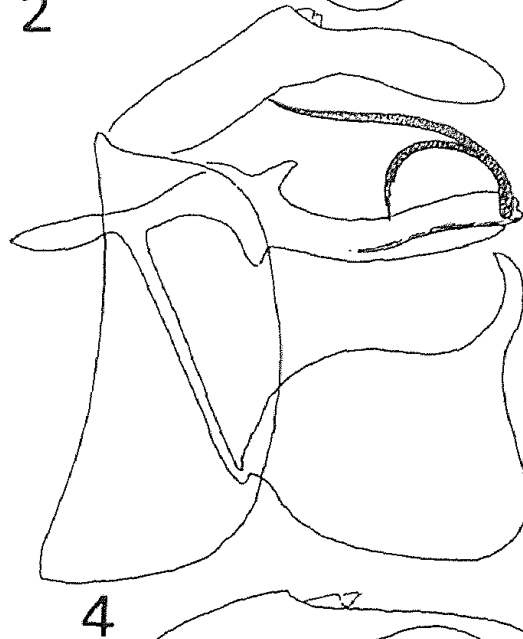
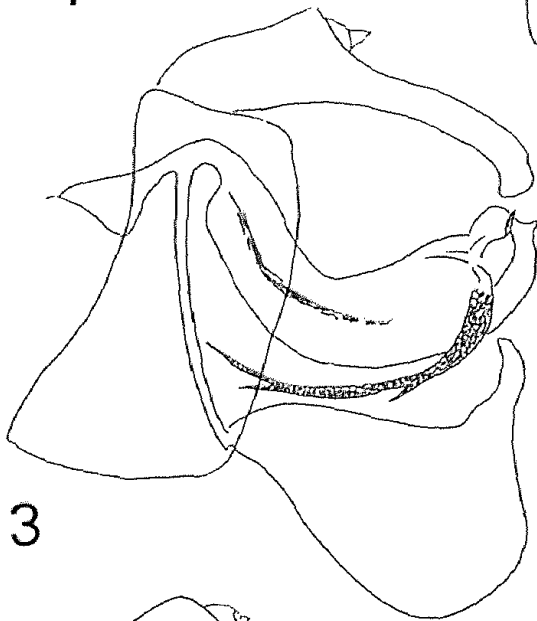
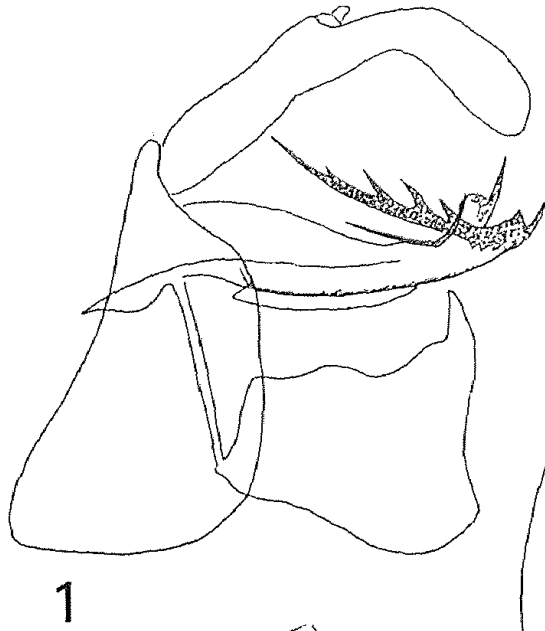
The lectotype differs from other species of *Atracis* known to me in Japan and China. A study of the genitalia of a male associated with the female is needed to understand the species.

*formosanus* JACOBI, 1915, p. 171 (*Salurnis*)

Holotype ♂ — (1) Formosa/Taihanroku/H. Sauter '09, (2) 1909/7, (3) A. Jacobi/Typus (pink label). (Dissected).

The characters of the holotype genitalia (Fig. 1) help to distinguish this species from closely related species in *Salurnis*.

Figs. 1-6. Left lateral view of male genitalia. 1, *Salurnis formosanus* JACOBI; 2, *Geisha sauteri* JACOBI; 3, *Melicharia specularis* JACOBI; 4, *Cryptoflata angulata* JACOBI; 5, *Cromna notata* MELICHAR; 6, *Seliza angulifrons* JACOBI. aed = aedeagus, as = anal segment, p = pygofer, s = style.



*insularis* JACOBI, 1941, p. 289 (*Siphanta*)

Paralectotype ♀ – (1) S.-Mittelflores Ende 10.–16. 6. 27 B. Rensch S. G., (2) Typus (red label), (3) 1940 2, (4) Coll. A. Jacobi, (4) *Sanurus venosus* Melichar det. M. J. Fletcher.

A comparison of this species with the types of *Sanurus* in the Budapest and Paris Museums showed that the valid name is *Sanurus dubius* MELICHAR. The lectotype female is in the Zoological Museum of the Humboldt University in Berlin.

*lilacina* JACOBI, 1915, p. 172 (*Lawana*)

Holotype ♂ – (1) Sumatra Alahan Micholitz c., (2) Coll. A. Jacobi 1912–13, (3) A. Jacobi Typus (pink label). (Dissected).

The holotype has one posttibial preapical spine, and therefore is excluded from *Lawana* which is characterized by two spines. The genitalia of the holotype (Fig. 7) is the same as that of *Oryxa extendens* MELICHAR, 1902 (**syn. n.**).

*micholitzii* JACOBI, 1915, p. 170 (*Semidalis*)

Holotype ♀ – (1) Mindanao Davao W. Micholitz, (2) 1910 12, (3) A. Jacobi/typus (pink label).

*Sabaethis* JACOBI is the replacement name for *Semidalis* JACOBI, which is preoccupied. JACOBI lapsed in citing a male in the original description.

*mucida* JACOBI, 1915, p. 177 (*Atracis*)

Holotype ♀ – (1) Formosa, Alikang/H. Sauter 1909, (2) 1911/9, (3) A. Jacobi Typus (red label).

The holotype more closely resembles certain forms of *Cerfennia* than *Atracis* of authors. A study of the genitalia of a male that has been correctly associated with the female holotype is necessary for proper understanding of this species.

*parcisparsuta* JACOBI, 1941, p. 288 (*Lawana*)

Holotype ♂ – (1) Sumatra, (2) 1912/8, (3) Typus (red label).

JACOBI apparently lapsed in recording a female holotype. The male holotype is the same as *Phyllyphanta producta* of authors in the Indonesian Region (**syn. n.**). The status of *Poeciloptera producta* SPINOLA, 1839, type of the genus *Phyllyphanta*, must be determined before the species in Sumatra is named properly.

*rufula* JACOBI, 1915, p. 168 (*Phantia*)

Holotype ♂ – (1) Erythraea Shinda, (2) 1909/3, (3) A. Jacobi Typus. (Dissected).

The genitalia of the holotype are illustrated (Fig. 11).

*sauteri* JACOBI, 1915, p. 169 (*Geisha*)

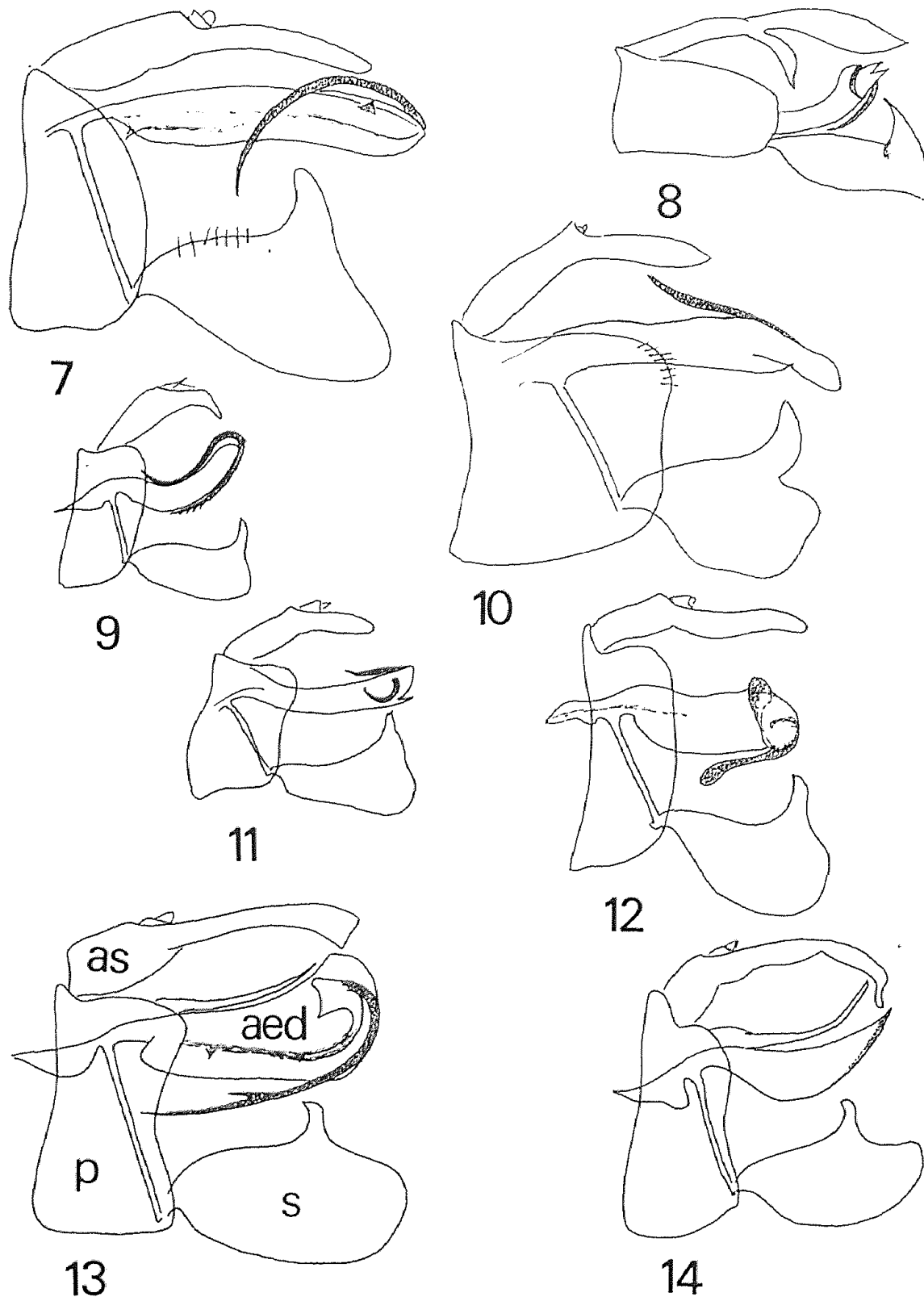
Lectotype ♂ – (1) Koshun, (2) Formosa/H. Sauter '09, (3) 1909/7, (4) A. Jacobi Cotypus (buff label). (Dissected). Paralectotypes ♀ – same labels as the lectotype, except (4) A. Jacobi/Typus (pink label); ♂ – (1) Formosa/Hoozan/H. Sauter 1910, (2) 1911/9, (3) A. Jacobi/Cotypus (buff label); ♂ – (1) Formosa/Taihanroku/H. Sauter '09, (2) 1911/9, (3) A. Jacobi/Typus (pink label); 1 ♂ 1 ♀ – (1) Chikutoge, (2) Formosa/Sauter '09, (3) 1909/7, (4) A. Jacobi/Cotypus (buff label); ♀ – (1) Chikutoge, (2) 1909/7, (3) Typus (pink label).

The genitalia of the lectotype (Fig. 2) show the same characters as the lectotype of *Poeciloptera distinctissima* WALKER, 1858, in the British Museum (**syn. n.**). The genus *Geisha* KIRK. is based on this species.

*specularis* JACOBI, 1915, p. 173 (*Melicharia*)

Lectotype ♂ – (1) Padang Pandjang/West Sumatra, (2) H. Rolle/Berlin W., (3) Coll. A. Jacobi 1912–13. (Dissected). Paralectotypes 1 ♂ 2 ♀♀ – same labels as the lectotype.

A comparison of the lectotype genitalia (Fig. 3) with the genitalia of *Flatomorpha inclusa* MELICHAR, 1902, showed that the two species are the same (**syn. n.**). In the syntype series the semihyaline spot in the dark tegmina is variable. When the spot is not developed, *specularis* closely resembles *inclusa*. Following appearance of his publication on this species, JACOBI deleted in his copy of the publication the heading "*Melicharia specularis*" and changed it to "*Flatomorpha inclusa* MEL." He wrote in the margin "Das Synonym verschuldet M. durch seine falsche Angabe der adernlosen Costalzelle." Apparently, JACOBI never published on this synonymy. (EMMRICH, personal communication).



Figs. 7-14. Left lateral view of male genitalia. 7, *Lawana lilacina* JACOBI; 8, *Phalaenomorpha castaneiceps* JACOBI; 9, *Mimophantia carinata* JACOBI; 10, *Ityraea viridis* JACOBI; 11, *Phantia rufula* JACOBI; 12, *Colgaroides circumcincta* JACOBI; 13, *Sephena rufomarginata* MELICHAR; 14, *Sephena rubrovenosa* MELICHAR. aed = aedeagus, as = anal segment, p = pygofer, s = style.

*subclavata* JACOBI, 1917, p. 537 (*Ormenis*)

Paralectotype ♀ – (1) Madagascar/Tamatave/Voeltzkow, (2) A. Jacobi Typus (pink label). MELICHAR (1923) included *subclavata* along with two of his own species when he erected the genus *Panormenis*. It will be necessary to examine the male genitalia of species placed in this genus in order to determine their status.

*viridis* JACOBI, 1910, p. 302 (*Ityraea*)

Lectotype ♂ – (1) Uganda/Entebbe, (2) Coll. A. Jacobi/1912–3, (3) A. Jacobi Typus (pink label). (Dissected). Paralectotype ♀ – same labels as the lectotype.

The lectotype genitalia (Fig. 10) enable recognition of the species, which has color variation. The right tegmen of the lectotype is missing.

*vivida* JACOBI, 1928, p. 22 (*Dascalina*)

Paralectotype ♀ – (1) Kimberley/district, (2) N. V. Austr./Mjöberg, (3) Jan., (4) 1927/5, (5) Typus/Co – (red label), (6) Coll. A. Jacobi.

The lectotype ♂ is in the Stockholm Museum.

#### Melichar types

*discoidalis* MELICHAR, 1902, p. 120 (*Paratella*)

Lectotype ♀ – (1) Borneo, (2) 906, (3) Melichar det. Paralectotype ♀ – same labels as the lectotype.

The syntypes are a color variant of *Poeciloptera amata* WALKER, 1870 (= *Paratella*) (**syn. n.**). A paralectotype female is in the Budapest Museum, but the male specimen cited in the original description was not found at either Dresden or Budapest.

*miniata* MELICHAR, 1902, p. 120 (*Paratella*)

Lectotype ♀ – (1) Borneo, (2) 905.

The lectotype is a color variant of *Poeciloptera amata* WALKER, 1870 (= *Paratella*) (**syn. n.**). The male syntype recorded in the original description was not found at either the Dresden or Budapest Museums. The syntypes of *miniata* and *discoidalis* (above) represent the westernmost distribution of *amata*, which with its several different color phases is a common and widespread species in New Guinea.

*notata* MELICHAR, 1902, p. 60 (*Cromna*)

Holotype ♂ – (1) Gazelle Hibins/915, (2) Melichar det., (3) Coll. A. Jacobi. (Dissected).

The holotype shows clearly the tegminal alignment of 3 large red spots, plus one small red spot at one side, as illustrated by MELICHAR (1902), pl. III, fig. 3. The genitalia of the holotype (Fig. 5) enable recognition of this species, which is distributed in both New Britain and New Guinea. After MELICHAR (1923) it belongs to the genus *Colgar* KIRK.

*rubrovenosa* MELICHAR, 1902, p. 126 (*Sephena*)

Holotype ♂ – (1) Gazelle Hibins/917, (2) Typus (red label), (3) Melichar det., (4) Coll. A. Jacobi. (Dissected).

This species is recognized by characters of the genitalia of the holotype (Fig. 14). The species is distributed in both New Britain and New Guinea. MELICHAR undoubtedly lapsed in citing a female in the original description.

*rufomarginata* MELICHAR, 1902, p. 129 (*Sephena*)

Lectotype ♂ – (1) Gazelle Hibins/916, (2) Melichar det., (3) Coll. A. Jacobi. (Dissected).

The lectotype genitalia (Fig. 13) and characters of the head and tegmina are distinctive. The species belongs to the genus *Papuanella* DISTANT along with about two dozen undescribed new species in New Guinea. New combination: *Papuanella rufomarginata* (MELICHAR, 1902) **comb. n.**

*surrectum* MELICHAR, 1902, p. 59 (*Cromna*)

The syntype from Roon that was cited in the original description was not found in the Dresden Museum. A lectotype female from Erima, Astrolabe Bay, is in the Budapest Museum. It belongs to the genus *Colgar* KIRK.

## Schmidt Types

*nigropustulata* SCHMIDT, 1904, p. 184 (*Cerynia*)

Paralectotype ♀ — (1) Dohrn/Sumatra/Soekaranda, (2) Coll. A. Jacobi/1912–3, (3) Type (red label).

The paralectotype belongs to a complex of Indo-Malayan forms with similar markings but variable coloration. Study of the male genitalia will be needed to determine the status of the various forms.

*unipunctata* SCHMIDT, 1904, p. 196 (*Phyma*)

Paralectotype ♂ — (1) Dohrn/Sumatra/Soekaranda, (2) Coll. A. Jacobi/1912–3, (3) Type (red label), (4) *Phyma unipunctata*/Schmidt/♀ (sic!) Edm. Schmidt/determ. 1908. (Dissected). Paralectotype ♂ — (1) Soekaranda/Januar 1894/Dohrn, (2) Coll. A. Jacobi/1912–3, (3) Type (red label), (4) *Phyma/unipunctata*/Schmidt/♂ E. Schmidt/determ. 1908.

A study of the paralectotype genitalia showed that this species is the same as *Lawana partita* (MELICHAR).

*variegata* SCHMIDT, 1904, p. 370 (*Paratella*)

Paralectotype ♀ — (1) Obi/S. 1902, (2) Coll. A. Jacobi/1912–3, (3) Type (red label), (4) *Paratella/variegata*/Schmidt/♀ Edm. Schmidt/determ. 1908.

The paralectotype is not a *Paratella*, but belongs in the genus *Neomelicharia*. The status of the species will be known when the genitalia of a syntype male is studied.

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