

ENTOMOLOGISCHE MITTEILUNGEN

aus dem

Zoologischen Museum Hamburg

Herausgeber: Professor Dr. HANS STRÜMPEL, Dr. GISELA RACK,

Professor Dr. RUDOLF ABRAHAM, Professor Dr. WALTER RÜHM

Schriftleitung: Dr. GISELA RACK

ISSN 0044-5223

Hamburg

10. Band

15. Juli 1992

Nr. 145

Types of Flatidae (Homoptera). XVI. A review of species in the Hamburg Museum with lectotype designations (Homoptera, Fulgoroidea)

JOHN T. MEDLER

(With 8 figures)

A b s t r a c t

Type specimens of Flatidae named by Matsumura, Melichar, Schmidt and Synave were examined. Genital characters of holotype and lectotype males are illustrated. New synonymy (junior synonym given first): **Atracis bokariana** Melichar = **Atracis vagans** Melichar (**Uysanus**); **Colgar tripunctata** Melichar = **Nephesa bistriguttata** Stål (**Neocromna**); **Sephena nigrifrons** Schmidt = **Paratella modesta** (Melichar) (**Dworena**).

I n t r o d u c t i o n

Type specimens of Flatidae in the Hamburg Zoological Museum were examined in connection with my research on genitalia of species named by early workers. Therefore, lectotype males were designated and drawings of genital characters made wherever possible. In cases where the syntypes were exclusively female, a representative male was selected for illustration of genitalia. This male was labeled plesiotype and serves as a reference specimen for future workers.

Authenticity of syntypes was verified by reference to data recorded in original publication. To better establish the historical status of labels, data associated with each syntype were recorded precisely by the following format: (1), (2), (3), etc., indicated the sequence of labels on the pin from top to bottom. A slash (/) showed the separation of the lines on each label. Lastly, a red label with my hand printed lectotype designation, or

yellow label with my paralectotype designation, was attached.

Measurements on the vertex (v), frons (f), pronotum (p), mesonotum (m), tegmen (t) and postclaval (pcl) sutural margin were made with a binocular microscope. The ocular scale units were converted to mm. A standardized format was used for presentation of the morphometric data, as follows: Length: overall; v; f; p; m; t; pcl. Width: v; f; t. Reference points for the measurements were illustrated by Medler, 1991, fig. 1.

The number of diagnostic black-tipped spines on the hind leg were indicated by formula; namely, the lateral and apical tibial spines and spines on the apical margin of the first tarsal segment; e.g., 1:6:6, 2:5:7, etc.

A l p h a b e t i c a l L i s t o f T y p e s E x a m i n e d

Type specimens are listed alphabetically by specific name followed by the original generic name-combination and reference to original publication. Where applicable, a subsequent generic combination or change in status of a name is given. The number in parentheses () following the name indicates the Hamburg Museum type number given by Weidner & Wagner (1968).

africana, Juba, Synave, 1957:8, figs. 5-6, 11-12.

Holotype (No. 167) male - (1) D.-SW.-Afrika/Farm Okosongomingo/am Kleinen Waterburg; (2) Hans Thompson/leg. VII-VIII.1912/ded. 26.ix.1913; (3) Type [red label]; (4) H. Synave det, 1957/**Juba africana**/sp. n. [genitalia in vial].

Measurements from holotype - Length: overall 9.0; v 0.66; f 1.33; p 0.54; m 2.32; t 7.30; pcl 1.66. Width: v 0.83; f 1.16; t 2.91. Spine formula: 2:8:9.

The basal dorsal process of the aedeagus shown by Synave (Fig. 12) is a distinctive character state. The processes arising from the apex of the aedeagus are broken off as shown, but in other specimens they normally extend almost to the pygofer.

angulatum, *Phleboterum*, Melichar, 1902:3, fig. 20.

Paralectotype (No. 243) female - (1) Loucoube/auf Nossi-Be/Carl Bosse leg./ded. 4.I.1892; (2) **angulatum**; (3) L. Melichar/determ. 1901; (4) Holotype [orange label]. The paralectotype here designated is the syntype that was illustrated by Melichar (Fig. 20). The syntype from Ivondro in the Paris Museum is a male; therefore it is here designated as the lectotype and the genitalia illustrated (Fig. 7).

Measurements from lectotype and paralectotype - Length: overall 11.5, 13.0; v 0.87, 1.04; f 1.74, 1.99; p 0.50, 0.42; m 1.99, 1.99; t 9.79, 10.62; pcl [lost], 3.98. Width: v 1.16, 1.49; f 1.45, 1.49; t 6.14, 6.64. Spine formula: 2:6:8; 2:7:10/8.

antoniae, **Ormenis**, Melichar, 1902:94, pl. V, fig. 11.

Lectotype (No. 226) male - (1) Ormenis/Antoniae; (2) L. Melichar/determ. 1901; (3) Surinam/Ehrhardt vend.; (4) Type [red label]. [genitalia in vial]. The lectotype genitalia are illustrated (Fig. 3).

Measurements from lectotype - Length: overall 17.0; v 0.17; f 1.49; p 0.71; m 3.32; t 11.62; pcl 3.98. Width: v 1.66; f 2.08; t 6.31. Spine formula 2:6:7.

Melichar's illustration probably was based on the lectotype from Surinam. Its use as the model could not be confirmed, however, as the syntype cited in the St. Petersburg Museum has not yet been seen.

arabica, **Juba**, Synave, 1957:8, fig. 7, 9, 13.

Holotype (No. 168) male - (1) Arabien, Hadramaut/ Wadi Humum oder/ Himim bei Makalla/9-10.5.1931; (3) Type [red label]; (3) H. Synave det 1957/**Juba/arabica** n. sp. [genitalia in vial]. The holotype aedeagus was illustrated by Synave (Fig. 13), but I assembled the dissected parts to give the full configuration of the genital capsule (Fig. 2).

Measurements from holotype - Length: overall 10.0; v 1.00; f 1.83; p 0.46; m 1.83; t 7.47; pcl 2.32. Width: v 1.08; f 1.33; t 2.82. Spine formula: 2:8:9.

The morphology of the vertex differs considerably from that of **Juba africana**. My research on the named species of **Juba** indicates existence of undescribed generic complexes that differ in regard to characters of the head, tegmina, male and female genitalia.

bokariana, **Atracis**, Melichar, 1912:131, pl. II, fig. 10; **Betracis bokariana**, Medler, 1988, p. 144.

Holotype (No. 37) male - (1) Holotype [pink label]; (2) Süd-Kamerun/Bokari/ Dr. Arnold Schultze/leg. 30.III.1911; (3) L. Melichar/determ. 1914; (4) Inner-Afrika-Exped./d. Hr. Adolf-Friedrich/zu Mecklenburg/1910-1911; (5) 2. Zentr. Afr-Exped./Eing. Nr. 12. 1926; (6) **Atracis/bokariana**/n. sp. [genitalia in vial].

The holotype genitalia are illustrated (Fig. 4). The characters shown are the same as those found in **Uysanus vagans** (Melichar).

Measurements from holotype - Length: overall 19.0; v 1.25; f 2.99; p 0.83; m 3.65; t 13.45; pcl 5.31. Width: v 1.12; f 1.74; t 7.14. Spine formula: 1:6:7.

Melichar's illustration of the holotype did not show the presence of a submarginal line. This inaccuracy in venation led to my erroneous transfer of the species to **Betracis**. Examination of the holotype and study of its genitalia enabled correct disposition of the species as a junior synonym of **Uysanus vagans** (Melichar); here designated. NEW SYNONYMY.

cribrata, *Flatula*, Melichar 1902:63, pl. VI, fig. 9.

Holotype (No. 142) male - (1) Palembang/G. Wolker leg. 90./ded. 11.IX.91; (2) L. Melichar determ. 1901; (3) **Flatula/cribrata**; (4) Holo-Type [red label]. [genitalia in vial]. The genitalia are illustrated (Fig. 1).

The head and thorax of the holotype is compressed and deformed slightly, hence not measured. This condition was not shown in Melichar's illustration. The pattern of spots on the tegmen is distinctive.

electa, *Ityraea*, Melichar, 1901:203

Lectotype (No. 163) - female (1) 19.IX.88/coll Stuhlmann; (2) 175/Nord Usegua; (3) L. Melichar/determ. 1901; (4) A. Gerstaecker/determ. 1891; (5) **electa** n. sp./*Ityraea*; (6) Syntype [red label].

Measurements from paralectotype - Length: overall 26.0; v 0.83; f 1.83; p 1.16; m 3.65; t 19.92; pcl 5.96. Width: v 1.00; f 0.50; t 11.45. Spine formula: 2:10:8 in pad of minute spines.

I agree with Synave (1954) that **electa** is nothing more than a color variant of *Ityraea nigrocincta* (Walker).

errudita, *Paratella*, Melichar 1902:118; **Taparella doryca** (Boisduvall), Medler, 1991, p. 116.

Paralectotype (No. 234) female - (1) H. Fruhstorfer/vend. 15.IV.1898; (2) L. Melichar/determ. 1901; (3) Neu-Guinea/Finschhafen 1891/Coll. Fruhstorfer; (4) **Paratella/errudita**.

The lectotype male in the Brussels Museum was illustrated by Medler, 1987, p. 37, fig. 1, and designated a junior synonym of **Nephesa decolor** Walker. Further study on type materials revealed that **decolor** was a junior synonym of **Flata doryca** Boisduval (**Taparella**).

exsoleta, *Phyma*, Melichar 1902:45; **Lawana exsoleta** (Melichar), Melichar, 1923, p. 48.

Holotype (No. 246) female - [Voguma, W.Afr.]

The holotype was not found in the Hamburg collection.

According to Medler, 1988, p. 126, fig. 10, **exsoleta** Melichar is a West African species that was misidentified by authors as **adscendens** Fabricius. A revision of **Lawana** is needed. Until it appears, determination of the species is enabled by Medler's illustration of the male genitalia.

incriminata, *Lichena*, Schmidt 1905:380; **Lichenopsis incriminata** (Schmidt), Schmidt, 1912, p. 99.

Lectotype (No. 173) female - (1) **Lichena/trispinosa**/Schmidt/Edm. Schmidt/determ. 1905; (2) Nossi-Be/P. Frey leg./ded. 23.XI.1898; (3) Lectotypus/ausgew. 5.I.66/W. Wagner [red label]. Paralectotype female [without head and abdomen] - (1) Type [faded pink label]; (2) Zanzibar/Kpt. Doherr/ded. 5.XII.1898; (3) **Lichena/trispinosa**/Schmidt/Edm. Schmidt/determ. 1905; (4) Paratypoid. (5) Dieses vorher gute Stück ist in zerbrochenem Zustande von E. Schmidt zurück gelangt (Siehe auch Etikette). Die übrigen Stücke hatten nicht gelitten.

All known syntypes are females. Therefore, a plesiotype male - Madagascar: Nosy-Be, Paris Museum, is here designated, and the genitalia illustrated (Fig. 8).

Measurements from plesiotype and lectotype - Length: overall 17.0, 22.0; v 2.16, 2.66; f 3.49, 3.82; p 1.16, 1.33; m 3.32, 3.49; t 12.78, 16.43; pcl 2.32, 4.65. Width: v 95, 1.33; f 2.16, 2.49; t 5.96, 7.30. Spine formula: 3:6:15; 3:6:16. The tarsal spines have noticeably irregular alignment.

The syntype from Rumena Val. in the Brussels Museum was listed erroneously as holotype (No. 23) by Synave, 1980, p. 7. Also, the designation of lectotype and paralectotype females in the Genoa Museum by Medler (1986a), are erroneous and herewith invalidated, as the specimens were not syntypes cited in the original publication.

maritima, Mimophantia, Matsumura, 1900:212

Syntype (No. 204) female - (1) 7/19; (2) Japan/Dr. Matsumura; (3) Type [white label]; (4) **Mimophantia/maritima** Mats.; (5) Type [pink label].

Matsumura deposited specimens of **maritima** from Japan in several European Museums, including females at Wien and Budapest. Future research on the status of available syntypes is needed. Especially required is designation of a male lectotype and elucidation of its genital characters to fix the name. A preliminary study of **Mimophantia** males in the Bishop Museum revealed that a complex of species exists along the Pacific Rim from New Guinea to Japan.

nigrifrons, Sephena, Schmidt 1905:378.

Lectotype (No. 277) female - (1) Type [red orange label]; (2) Australien/A.L.Schrader/25.IX.1896; (3) **Sephena/nigrifrons** Schmidt/Edm. Schmidt/determ. 1905; (4) Lectotypus/ausgewählt/5.I.66/W. Wagner. Designated lectotype by Wagner (see Weidner & Wagner 1968, p. 154).

Measurements from lectotype - Length: overall 9.0; v 0.21; f 1.25; p 0.46; m 1.83; t 7.47; pcl 2.16. Width: v 0.87; f 1.16; t 3.65. Spine formula: 1:6:7.

Medler's (1986b) tentative assignment of **nigrifrons** to **Dworena** was confirmed by examination of the lectotype. The species is a junior synonym of **Paratella modesta** (Melichar) (**Dworena**). NEW SYNONYMY.

ricanoides, *Ormenis testacea* var., Melichar, 1902:80; *Ormenis testacea* var. *varicosa* Walker, Metcalf, 1957, p. 298.

Lectotype (No. 227) male - (1) Espirito-Santo/Brasil/ex coll Fruhstorfer; (2) H. Fruhstorfer/vend. 30.IX.1897; (3) L. Melichar/determ. 1901; (4) Type [pink label]; (5) *Ormenis* /v. ricanoi-/dus; (6) *Ormenis/testacea*/var/*ricanoides*/Mel; (7) *Ormenis/testacea*/var/*varicosa* Walk. [genitalia in vial]. Paralectotype (# 227) female - (1) Espirito-Santo/Brasil/ex coll Fruhstorfer; (2) H. Fruhstorfer/vend. 15.IV.1898; (3) L. Melichar/determ. 1901; (4) Type [pink label]; (5) *Ormenis/testacea*/var/*ricanoides*/Mel; (6) *Ormenis/testacea*/var/*varicosa* Walk.

Two female syntypes in the Budapest Museum are here designated as paralectotypes.

The lectotype genitalia are illustrated (Fig. 5).

subflava, *Paratella*, Melichar 1902; p. 119, pl. III, fig. 8; *Sabaethis subflava* (Melichar), Medler, 1987, p. 39.

Paralectotype (No. 235) female - (1) Flores/Fruhstorfer; (2) H. Fruhstorfer/vend. 15.IV.1898; (3) L. Melichar/determ. 1901; (4) *Paratella/subflava*; (5) Syntype [pink label].

The lectotype female is in the Brussels Museum, Synave, 1980, No. 48. The male syntype cited by Melichar in the original description has not been found.

This species was transferred to *Sabaethis* on the basis of the female anal segment which is twice longer than broad, whereas only oval in *Paratella* Melichar.

tripunctata, *Colgar*, Melichar 1902:116; *Neomelicharia tripunctata* (Melichar), Jacobi, 1915, p. 175.

Lectotype (No. 86) female - (1) Takar/Holl. Neu Guinea/Fruhstorfer; (2) *Colgar*/3 *punctata*; (3) H. Fruhstorfer/vend. 14.IV.1898; (4) L. Melichar/determ.; (5) Syntype [red label]; here designated. The syntype from Flores cited in the original description was not found in the Hamburg Museum.

Measurements from the lectotype - Length: overall 16.5, v 0.95; f 2.66; p 0.75; m 2.66; t 14.44; pcl 5.15. Width: v 1.04; f 1.49; t 9.30. Spine formula: 1:6:7.

The lectotype is a junior synonym of *Nephesa bistriguttata* Stal (*Neocromna*), here designated. NEW SYNONYMY.

unispinosus, *Ormenis*, Schmidt, 1906:212; *Chaetormenis unispinosus* (Melichar), 1923, p. 74.

Holotype (No. 228) female - (1) Type [red label]; (2) *Ormenis/unispinosa*/Schmidt/Edm. Schmidt/determ. 1905; (3) Barikiwa/(Donde-Gebiet)/

D.-O.Afrika./Ch. Schroeder/leg./vend. 13.I.1902. Plesiotype male - Mocambique: Prov. du Gorongoza, Foret d'Inhanconde, G. Vasse, Paris Museum; here designated. The plesiotype genitalia are illustrated (Fig. 6).

Measurements from plesiotype and holotype - Length: overall 9.0, 9.0; v 0.33, 0.17; f 1.33, 1.33; p 0.46, 0.50; m 1.99, 1.99; t 7.30, 7.80; pcl 2.32, 2.66. Width: v 0.79, 0.79; f 1.08, 1.08; t 3.32, 3.49. Spine formula: 1:6:8; 1:6:7.

This species was assigned by Melichar to **Chaetormenis**, but it properly belongs to an undescribed genus that has one lateral metatibial spine. There is no close relationship to **Ulundia** Distant and **Afromenis** Fennah that have 2 spines.

A c k n o w l e d g e m e n t s

I express my grateful appreciation to Prof. Dr. Hans Strümpel for arranging loans of the type specimens reported in this article. Facilities for my research were provided by the J. Linsley Gressitt Center for Research in Entomology, Bishop Museum. I am pleased to acknowledge help given by the Department of Entomology during the course of my work.

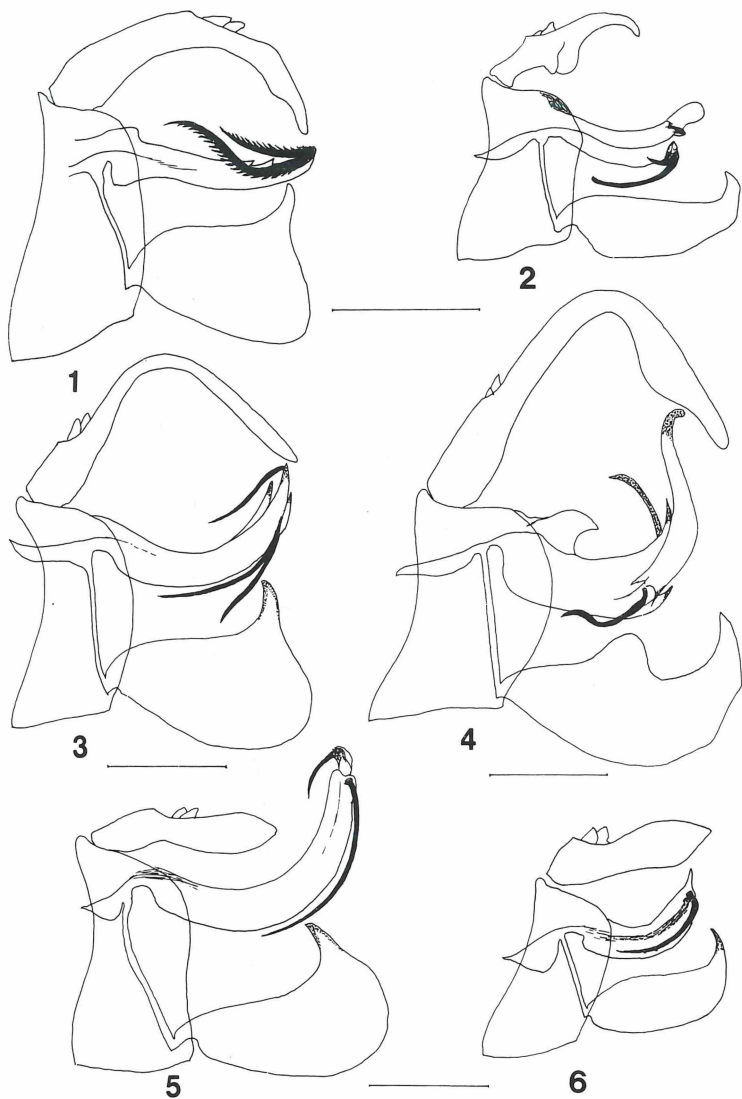
L i t e r a t u r e c i t e d

- Jacobi, A., 1915: Kritische Bemerkungen über die Flatinae (Rhynchota Homoptera). - Dtsch. ent. Zeit., **1915**: 157-178. Berlin.
- Matsumuru, S., 1900: Übersicht der Fulgoriden Japans. - Ent. Nachr., **26**: 205-213. Berlin.
- Melichar, L., 1901: Monographie der Acanaloniiden und Flatiden (Homoptera). - Annln naturh. Mus. Wien, **16**: 178-258.
- Melichar, L., 1902: Monographie der Acanaloniiden und Flatiden (Homoptera) (Fortsetzung). - Annln naturh. Mus. Wien, **17**: 1-253, Pl. I-IX.
- Melichar, L., 1912: Homoptera, Flatinae. - Wiss. Ergebn. dt. ZentAfr.-Exped. (1910-1911), **1**: 130-132, pl. II, Leipzig.
- Melichar, L., 1923: Homoptera, Flatidae. In Genera Insect., **182**: 12-119. Bruxelles.
- Medler, J. T., 1986a: Types of Flatidae (Homoptera) II. Lectotype designations and taxonomic notes on species in the Genova Museum. - Annali Mus. Civ. Storia Nat. Genova, **85**: 299-306. Genova.
- Medler, J. T., 1986b: **Anzora** and **Dworena**, two new genera for Australian species (Homoptera, Flatidae). - Insecta Mundi, **1** (4): 206-208. Gainesville, Florida.

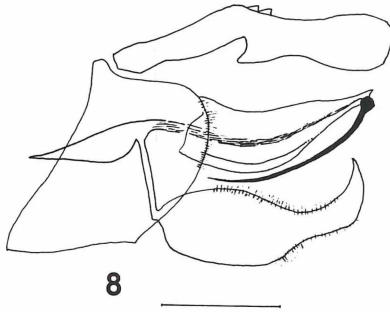
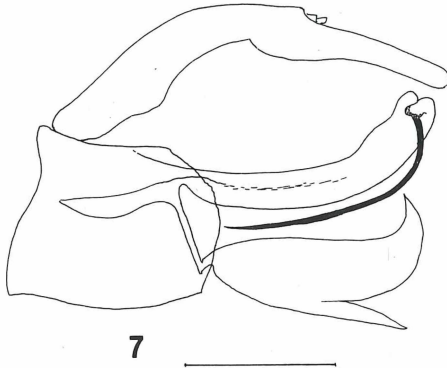
- Medler, J. T., 1987: Types of Flatidae (Homoptera) V. Lectotype designations and taxonomic notes on species in the Brussels Museum. - Bull. Inst. R. Sci. Nat. Belg.: Entomologie, **56**: 35-40. Bruxelles.
- Medler, J. T., 1988: Flatidae from the Tai Forest, Cote d'Ivoire, and taxonomic notes on the family in West Africa (Homoptera, Auchenorrhyncha, Fulgoroidea). - Revue fr. Ent. (N. S.), **10**: 117-148. Paris.
- Medler, J. T., 1991: Review of **Paratella** Melichar and **Taparella** Medler in New Guinea, with descriptions of new species (Homoptera: Flatidae). - Bishop Mus. Occ. Pap., **31**: 106-121. Honolulu.
- Metcalf, Z. P., 1957: General Catalogue of the Homoptera, Fasc. IV, Part 13, Flatidae. 565 pp. North Carolina State College, Raleigh, N. C.
- Schmidt, Ed., 1905: Beitrag zur Kenntnis der Fulgoridae. Anhang. - Stettin. ent. Ztg, **66**: 376-383. Stettin.
- Schmidt, Ed., 1906: Beitrag zur Kenntnis der Fulgoriden. - Stettin. ent. Ztg, **67**: 183-213. Stettin.
- Schmidt, Ed., 1912: Diagnosen neuer Fulgoriden-Gattung und Arten nebst einigen Bemerkungen. - Stettin. ent. Ztg, **73**: 67-182. Stettin.
- Synave, H., 1954: Flatidae. In Explor. Parc natn. Upemba, Miss. G. F. de Witte, **32**: 21-47. Bruxelles.
- Synave, H., 1957: Contribution a l'etude des Cixiidae et Flatidae africaines (Homoptera-Fulgoroidea). - Bull. Inst. r. Sci. nat. Belg, **33** (12): 10 pp, Bruxelles.
- Synave, H., 1980: Liste du materiel typique conserve dans les collections entomologiques d l'Institut Royal des Sciences Naturelles de Belgique. Homoptera - Flatidae. - Bull. Inst. r. Sci. nat. Belg., **52**:1-15. Bruxelles.
- Weidner, H. & Wagner, W., 1968: Die Entomologischen Sammlungen des Zoologischen Staatsinstituts und Zoologischen Museums Hamburg. VII. Teil. - Mitt. Hamburg. Zool. Mus. Inst., **65**: 123-179. Hamburg.

Address of the author:

Prof. emeritus Dr. John Medler, Honorary Associate, Dept. Entomology, Bishop Museum, The State Museum of Natural and Cultural History, P.O. Box 19000A, Honolulu, Hawai'i, 96817-0916, U.S.A.



Figs 1-6: ***Flatula cribrata*** Melichar (1); ***Juba arabica*** Synave (2); ***Ormenis antoniae*** Melichar (3); ***Atracis bokariana*** Melichar (4); ***Ormenis testacea*** var. ***ricanoides*** Melichar (5); ***Ormenis unispinosus*** Schmidt (6); Scale bar = 1 mm.



Figs 7-8: ***Phleboterum angulatum*** Melichar (7); ***Lichena incriminata*** Schmidt (8); Scale bar = 1 mm.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Entomologische Mitteilungen aus dem Zoologischen Museum Hamburg](#)

Jahr/Year: 1990

Band/Volume: [10](#)

Autor(en)/Author(s): Medler John T.

Artikel/Article: [Types of Flatidae \(Homoptera\). XVI. A review of species in the Hamburg Museum with lectotype designations \(Homoptera, Fulgoroidea\) 177-186](#)