

Tropiduchidae described by Leopold Melichar (Hemiptera, Fulgoromorpha)

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WILSON M. R. & MALENOVSKÝ I. 2007: Tropiduchidae described by Leopold Melichar (Hemiptera, Fulgoromorpha). *Acta Musei Moraviae, Scientiae biologicae* (Brno) 92: 137–153. – Forty-two species and two varieties originally described by Leopold Melichar in the family Tropiduchidae are listed and details given of the specimen depositories. Many are syntypes but lectotype designations have not been made in this paper. A separate list of Tropiduchidae species described by other authors and contained in Melichar's personal collection is also given.

Key words. Leopold Melichar, Auchenorrhyncha, Tropiduchidae, planthoppers, syntypes

Introduction

Among the leafhoppers and planthoppers (Hemiptera: Auchenorrhyncha) the Tropiduchidae are one of the smaller planthopper (Fulgoromorpha) families with around 350 species now described in around 120 genera (METCALF 1954 included 280 species/106 genera). They are distributed in the Old and New World tropics and subtropics. One of the earliest monographs on the group was that by MELICHAR (1914a), and it formed the basis for further studies and descriptive work soon after. More recently FENNAH (1982) revised the tribal classification of the Tropiduchidae. However, there remains much descriptive and revisionary work to be carried out on this group. The present work intends to assist in making it clear where the types of Melichar's species can be located and the data associated with them.

Leopold Melichar (* 1856 – † 1924)

Leopold Melichar was born in Brno, Moravia, Czech Republic on December 5th 1856 and died in Brno on September, 2nd 1924. He studied medicine in Prague and graduated in 1881 and first worked as a medical doctor in Prague, Bosnia and Moravia before moving to Vienna in 1888, where he spent the rest of his professional career as a high official (councillor) with the Ministry of Health. An interest in Homoptera was suggested to him by Czech entomologist Ladislav Duda and by 1896 he had published work on the central European Auchenorrhyncha fauna. He began to publish on non-European species soon after and on most groups of Auchenorrhyncha, producing around 75 papers and monographs (METCALF 1942). After 1896 and until around 1915 he



produced a remarkable succession of monographic treatments on planthopper families (on Acanaloniidae and Flatidae in 1901–2, on Issidae in 1906, on Ricaniidae in 1908, Dictyopharidae in 1912, on Tropicuchidae in 1914 and Lophopidae in 1915). In 1912 he retired to Brno to allow more time to be spent of entomology, but during WWI he became chief of a Red Cross Hospital in Brno. During his life he was an enthusiastic collector and travelled to North Africa, Spain and elsewhere in the Mediterranean region. His last studies published after his death concerned his monographic treatment of the leafhopper subfamily Cicadellinae (see WILSON & TURNER 2007). On his death his insect collection was passed to the Moravian Museum in Brno (MMBC) where it is currently housed.

Material and Methods

The following list has been compiled largely as a result of a visit (by Michael R. Wilson) in June 2007 to Brno, Vienna and Budapest.

According to his monograph, Melichar described altogether 41 species and two varieties of Tropicuchidae (MELICHAR 1914a). From them, some genera (*Chiotasa* Melichar, 1914, *Habrotasa* Melichar, 1914) were later transferred to Achilidae (FENNAH 1982). *Trobolophya* Melichar, 1914 with one additional species described by MELICHAR (1914b) in Dictyopharinae was later placed as a synonym of *Neommatissus* Muir, 1913 into Tropicuchidae. Recently, GNEZDILOV (2007) have proposed to transfer the tribes Gaetuliini Fennah and Trienopini Fennah to Tropicuchidae. These two taxa include additional twenty-seven species which Melichar originally described in the families Issidae and Ricaniidae (MELICHAR 1898a, b, 1906) and which are not listed in our paper.

In his monographs Melichar indicated from which localities and depositories he had seen specimens, but rarely stated how many specimens were involved. The choice of syntypes might normally be restricted to these Institutions and localities. Examinations of Melichar collection in MMBC however suggest that Melichar often kept some (duplicate?) specimens from other collections. Syntypes could be thus found also in MMBC, even though Melichar's original private collection was not listed as a depository in the original description (WILSON & TAKIYA 2007).

Some examples of type specimens of Tropicuchidae and their labels from MMBC are shown in Fig. 1–9. Most specimens bear a locality label and an original (partly and/or

fully handwritten) determination label by Melichar. Some specimens carry a small dark red “Typus” label which was attached to them by Melichar himself. However, Melichar did not use type labels in the modern sense. YOUNG & SOÓS (1964) stated “Melichar had adopted the practice of placing a ‘type’ label on one or more specimens of the most taxa, specimens presumably which he himself used for comparison. That they are no more than this in many cases is evidenced by the fact that ‘type’ labels are to be found on species previously described by other authors and determined by Melichar.” The same interpretation was followed by YOUNG & LAUTERER (1966), WEBB et al. (1990) and WILSON & TAKIYA (2007). Larger bright red „Syn-typus“ or „Holo-typus“ labels, as well as transcriptions of original determination labels, collection labels and database reference numbers were added later in the second half of the 20th century by MMBC curator Pavel Lauterer.

Species and varieties are given in their original genus by alphabetical order by species name. Localities of the type-series and information on their depositories are given by Melichar as original data. Label information of specimens studied is given, each label separated by a virgule (/). The following abbreviations are used to indicate their current depositories:

| | | |
|------|-------|---|
| HNHM | | Hungarian Natural History Museum, Budapest, Hungary |
| MMBC | | Moravské zemské muzeum [Moravian Museum], Brno, Czech Republic |
| NMW | | Naturhistorisches Museum, Wien, Austria |
| ZMHB | | Museum für Naturkunde der Humboldt-Universität, Berlin, Germany |

No lectotypes are designated in the present work.

In addition to named specimens of Melichar’s described species we have also listed separately the other Tropiduchidae species in Melichar’s own collection. These were usually indicated in his 1914a monograph.

List of Tropiduchidae species and varieties described by Melichar

***albosignata Barunoides* Distant, 1906: 284, var. *fusca* Melichar, 1914a: 60.**

Original data: Luzon.

MMBC: 1 ♂, Mt. Makiling Luzon, Baker/ *albosignata* v. *fusca* M. det. Melichar.

***apicalis Taxilana* Melichar, 1914a: 96.**

Original data: Luzon, Mt. Makiling (1 Pärchen in meiner Sammlung von Baker gesammelt).

MMBC: 1 ♂ 1 ♀ (2 pins), Mt. Makiling Luzon, Baker/ *Taxila apicalis* M det. Melichar./ Typus/ Syn-typus (Fig. 7).

***castigator Mulucha* Melichar, 1914a: 33.**

Original data: Fernando Poo, Bahia de S. Carlos (1 ♂ in meiner Sammlung).

MMBC: 1 ♂, Is. Fernando Poo, Bahia de S. Carlos I. 1902, 200–400 m. L. Fea/ *Mulucha castigator* det. Melichar./ Typus/ Holo-typus.

celebensis Thaumantia Melichar, 1914a: 28.

Original data: Nord-Celebes, Toli-Toli (1 ♂ von H. Fruhstorfer gesammelt, im Nat. Museum in Budapest).

HNHM: 1 ♂, Nord Celebes Toli-Toli Nov–Dez 1895. H Fruhstorfer/ *celebensis* Mel det. Melichar/ *Thaumantia* ng./ Typus.

ceylonica Eporiella Melichar, 1914a: 52.

Original data: Ceylon (Type im Naturhistorischen Hofmuseum in Wien).

NMW: 1 spec. (no abdomen) Felder Ceylon 1861/ *Eporiella ceylonica* M det. Melichar.

cruenta Taxilana Melichar, 1914a: 95.

Original data: Luzon (zwei Exemplare in Museum in Berlin C. N. 7094), Luzon Mt. Makiling (♀ in meiner Sammlung), Larat (Muir).

MMBC: no specimen present and not noted on original inventory.

ZMHB: 1 ♂ 1 ♀, cat No 7094/ Luzon Jagor/ *Tambinia* spec./ *Taxila cruenta* M det. Melichar./ Typus.

culta Numicia Melichar, 1914a: 47.

Original data: Ostafrika, Tanga, Bomole, Maherangulu: Bumbuli (sechs Expl. in meiner Sammlung); Arusha-Ju 1905 (1 ♀ von Katona gesammelt; im Nat. Museum in Budapest).

MMBC: 1 ♂ 2 ♀ (one ♀ without abdomen), Bomole D. O. Afr./ *fuscopicta* det. Melichar./ *Numicia culta* M. det. Melichar./ Typ./ Syn-typus (Fig. 6). 3 ♀, O. Afrika Tanga/ Juli 903./ *fuscopicta* Mel det. Melichar./ *Numicia culta* M. det. Melichar./ Typus/ Syn-typus. 1 ♀, Bumbuli/ D O Afrika 15. VIII. 08/ Syn-typus. 1 ♀, Maherangulu/ Syn-typus.

HNHM: 1 ♀, Africa or. Katona/Arusha Ju 1905/ *Numicia culta* M det. Melichar.

dilatipennis Paricana Walker 1857: 159, var. frontalis Melichar, 1914a: 110.

Original data: no locality and depository specifically given for var. *frontalis*. *P. dilatipennis* is cited from Perak, Kwala-Kanger (zwei Exemplare ♂ ♀ in meiner Sammlung, ein Exemplar ♀ im Museum in Hamburg), Borneo (Walk.), Sumatra, Deli (Mus. In Wien).

MMBC: 1 ♂, Perak Malaccu/ *Paricana dilatipennis* W. det. Melichar. Small red label with no data. From three specimens of *P. dilatipennis* in MMBC only this one fits the original description of var. *frontalis*.

NMW: 1 ♀, Sumatra Deli ex coll. Fruhstorfer. No determination label. From two females of *P. dilatipennis* in NMW only this fits the original description of var. *frontalis*.

distanti Varma Melichar, 1914a: 38.

Original data: Khasia, Assam (vier Exempl. in meiner Sammlung).

MMBC: 3 ♂ 1 ♀, Khasia Assam [handwritten]/ *distanti* det. Melichar/ Syn-typus.

***elongata Athestia Melichar, 1914a:* 72.**

Original data: Paraguay, Altos de las Cruces (2 ♂ in meiner Sammlung).

MMBC: 1 ♂, Paraguay Altos de las Cruces [handwritten white label]/ *Athestia elongata* M. det. Melichar./ Typus/ Syn-typus. 1 ♂, Altos de las Cruces [handwritten blue label]/ Syn-typus.

***elongata Habrotasa Melichar, 1914a:* 136.**

Original data: Sumatra, Mte. Singalang (Type in meiner Sammlung).

MMBC: 1 ♀, Sumatra Mte Singalang, Luglio 1878, O. Beccari/ *Hebrotasa elongata* M det. Melichar./ *Hebrotasa* ng./ Typus/ Holo-typus (Fig. 2).

Comments. Genus transferred to Achilidae by FENNAH (1982). MELICHAR (1914) spells the genus name in two ways: *Habrotasa* and *Hebrotasa*. The correct original spelling is *Habrotasa* according to METCALF (1954).

***exoleta Tambinia Melichar, 1914a:* 86.**

Original data: Neu-Guinea, Moroka 1300 m (in meiner Sammlung).

MMBC: 1 ♀, N. Guinea S. E., Moroka, 1300 m. Loria vii–xi 93 / *Tambinia exoleta* M det. Melichar./ Typus/ Syn-typus.

***extrema Sogana Melichar, 1914a:* 115.**

Original data: Tenasserim, Meetan (ein ♀ in meiner Sammlung).

MMBC: 1 ♀, Tenasserim, Meetan Fea. Apr. 1887/ *Cappavox* [?] *extremas* M det Melichar./ Typus/ Holo-typus.

***fasciculosa Tambinia Melichar, 1914a:* 86.**

Original data: Neu-Guinea, Moroka 1300 m (in meiner Sammlung).

MMBC: 1 ♂, N. Guinea S. E. Moroka, 1300 m. Loria VII-XI 93/ *Tambinia fasciculosa* M det. Melichar./ Typus/ Syn-typus (Fig. 3).

***fulcrata Taxilana Melichar, 1914a:* 94.**

Original data: Luzon (1 ♀ im Museum in Berlin C. N. 462).

ZMHB: 1 ex. (without head and abdomen) Luzon Jagor/ 4621/ *Taxila fulcrata* M. det. Melichar./ Typus [holotype?].

MMBC: 2 ♂ (2 pins) Mt. Makiling Luzon Baker / *Taxila fulcrata* det. Melichar/ Typus [not part of type series?].

***fulgurans Alcectis Melichar, 1914a:* 65.**

Original data: Brasilien (zwei ♀ im Berliner Museum C. N. 7677), Espir. Santo (ein ♀ und ein ♂ im Nat. Mus. in Budapest).

MMBC: 1 ♂, Esp. Santo Staud. 98./ *fulgurans* M det. Melichar./ Typus/ Syn-typus.

HNHM: 1 ♀, Esp. Santo Staud. 98./ *fulgurans* M det. Melichar./ Typus.

ZMHB: 2 ex. Brasil coll. Germ./ 7677/ *Alcestis spec./ Alcestis fulgurans* M det. Melichar./ Typus.

NMW: 1 ♀, Espirito Santo Brasil ex coll. Fruhstorfer/ *Alcestis fulgurans* m det. Melichar [probably not part of the type series].

***fuscatus Tropiduchus Melichar, 1914a:* 41.**

Original data: Luzon Mt. Makiling (1 ♂ von Baker gesammelt; in meiner Sammlung).

MMBC: 1 ♂, Mt. Makiling Luzon, Baker/ 2033/ *Tropiduchus fuscatus* M. det. Melichar./ Holo-typus.

***jacobsoni Trobolophya Melichar, 1914b:* 94 [= *Neommatissus*].**

Original data: 1 exemplar (♀), Nongkodjadjar, Jänn. 1911.

MMBC: 1 ♀, E. Jacobson, Java Jan. 1911, Nongkodjadjar/ *Trobolophya Jacobsoni* M det. Melichar./ Typus/ Holo-typus.

Comments. Originally described in Dictyopharinae.

***latipennis Thymbra Melichar, 1914a:* 22.**

Original data: Neu-Guinea, Sattelberg, Huon Golf (zwei Exemplare ♂ ♀ von Biró 1899 gesammelt, im National-Museum in Budapest). Bujakori (Neu-Guinea mer.). (1 ♂ in meiner Sammlung).

MMBC: 1 ♀, N. Guinea Biró 1899./ Sattelberg Huon Golf./ *Thymbra latipennis* M. det. Melichar./ Syn-typus (Fig. 8). 1 ♂, N. Guinea mer. Bujakori, Agosto 1890, L. Loria/ Typus/ Syn-typus.

HNHM: 1 ♂, N. Guinea Biró 1899./ Sattelberg Huon Golf./ *Thymbra latipennis* det. Melichar./ Typus.

***lepida Garumna Melichar, 1914a:* 98.**

Original data: Celebes; Kandari (zwei Exemplare in meiner Sammlung); Toli-Toli, Nov.–Dez. 1895 von H. Fruhstorfer ein ♂ (im Nat. Museum in Budapest).

MMBC: 1 ♀ and 1 ex. [tip of abdomen damaged], Celebes Kandari IV.74 O. Beccari/ *Garumna lepida* M det. Melichar./ Typus/ Syn-typus. 1 ♂, P. Princesa Palawan Baker/ *Garumna lepida* M det. Melichar. [probably not conspecific and not part of type series].

HNHM: 1 ♂, Nord Celebes Toli-Toli Nov.–Dez 1895. H Fruhstorfer/ *Garumna lepida* M det. Melichar. Syntype label added.

***maculata Chiotasa Melichar, 1914a:* 137.**

Original data: Sumatra, Mt. Singalang (Typen in meiner Sammlung).

MMBC: 2 ♂ 2 ♀ (4 pins), Sumatra Mte Singalang, Luglio 1878, O. Beccari/ *maculata* M det. Melichar./ Typus/ Syn-typus.

Comments. Genus transferred to Achilidae by FENNAH (1982).

mendosa Alcestis Melichar, 1914a: 64.

Original data: Rio de Janeiro (Type im Museum in Berlin). Brasilien S. Cruz. (1 ♀ im Nat. Mus in Budapest).

HNHM: 1 ♂ (not female), S. Cruz Brasil/ *mendosa* M det. Melichar./ *Alcestis* [handwritten]/ Typus.

ZMHB: RioJaneiro 14.ii.[18]99/ *Alcestis mendosa* M det. Melichar./ Typus.

nasutus Daradax Melichar, 1914a: 27.

Original data: Borneo, Banguay (1 ♂ im Nat. Museum in Budapest).

MMBC: P. Princesa, Palawan, Baker/ 4400/ *nasutus* Mel. det. Melichar. [probably not part of the type series].

HNHM: 1 ♂, Borneo Banguay/ *Daradax nasutus* M det. Melichar./ Typus.

notatus Tropiduchus Melichar, 1914a: 41.

Original data: Süd-Celebes, Samanga; Nord-Celebes, Toli-Toli (1 ♀ von Fruhstorfer gesammelt; im Nat. Museum in Budapest).

MMBC: 1 ♀, Samanga S. Celebes Nov. 1895. H. Fruhstorfer/ *Tropiduchus notatus* M det. Melichar./ Typus/ Syn-typus (Fig. 5).

HNHM: 1 ♀, Nord-Celebes Toli-Toli Nov–Dez 1895. H. Fruhstorfer/ *Tropiduchus notatus* M det. Melichar./ Typus label.

obiensis Leptovanua Melichar, 1914a: 20.

Original data: Obi (1 ♀ in meiner Sammlung).

MMBC: 1 ♀, Obi Doherty ex coll. H. Fruhstorfer/ *Leptovanua obiensis* Mel det. Melichar./ Typus/ Holo-typus.

obiensis Tropiduchus Melichar, 1914a: 42.

Original data: Obi, Doherty (1 ♂ im Nat. Mus. in Budapest).

HNHM: 1 ♂, Obi Doherty ex coll. Fruhstorfer/ *Tropiduchus obiensis* M det. Melichar./ Typus.

oblonga Parasthesa Melichar, 1914a: 132.

Original data: West-Afrika, Kamerun, von L. Conradt 1899 ♂ ♀ gesammelt (zwei Exemplare in meiner Sammlung).

MMBC: 1 ♂ 1 ♀ (2 pins), Kamerun. L. Conradt. 1899. Lab. ent. Escalera./ *Parasthesa oblonga* M det. Melichar./ Typus/ Syn-typus. 1 ♂, N.Kamerun Johann-Albrechtshöhe L.Conradt 1896/ Syn-typus [not part of syntype series?].

ornata Amapala Melichar, 1914a: 74.

Original data: Süd-Amerika: Honduras, Amapala, Guatamala, Champerico; Salvador, Acajutha, von R. Paessler am 12.xi.1907 in fünf Exemplaren vier ♂ ein ♀ gesammelt (Typen im Museum in Hamburg).

MMBC: 1 ♂, Amapala, Honduras. R. Paessler, leg. 12.XI.1907, ded, 11.III.1908./ *Amapala ornata* M det. Melichar./ Typus/ Syn-typus (Fig. 9). 2 ♂ (2 pins), Honduras [handwritten]/ coll. Breddin/ Syn-typus. 1 ♀, Guatamala [handwritten]/ Syn-typus. Hamburg museum not checked.

pallida Leptovanua Melichar, 1914a: 20.

Original data: Amboina (Type ♂ im Naturh. Hofmuseum in Wien).

NMW: 1 ♂, Dr Doleschal 1859 Amboina/ *Leptovanua pallida* M det. Melichar.

philippinus Tropiduchus Melichar, 1914a: 42.

Original data: Philippinen, Los Banos (1 ♀ von Baker in meiner Sammlung).

MMBC: 1 ♀, Los Banos P.I. Baker/ *philippinus* M det. Melichar./ Holo-typus.

psyllomorpha Paruzelia Melichar, 1903: 51.

Original data: [Ceylon] Henaratgoda, am 12. Februar 1902 1 Exemplar ♂ von Dr. Uzel erbeutet.

MMBC: 1 ♂, Ceylon Henaratgoda 12.II.902 leg. Dr. Uzel/ *psyllomorpha* Mel det. Melichar./ Typus/ Holo-typus (Fig. 4).

punctula Numicia Melichar, 1914a: 47.

Original data: Madagaskar, Tamatave (zwei Exemplare in meiner Sammlung).

MMBC: 2 ♀, Dint. di. Tamatava Pipitz 85/ *Numicia punctula* M det. Melichar./ Typus/ Syn-typus.

solitaria Alcestis Melichar, 1914a: 67.

Original data: Paraguay, Asuncion (zwei ♀ im. Nat. Museum in Budapest), San Luis (Museum in Wien). Argentinien, Buenos Aires (ein ♀ im Nat. Museum in Budapest).

MMBC: 1 ♂ 1 ♀ (2 pins), Reimoser Paraguay San Luis/ Typus/ Syn-typus. 1 ♀, Paraguay Vezényi/ Asuncion 1904 xi.21./ *solitaria* M det. Melichar./ Typus/ Syn-typus.

NMW: 1 ♂ 4 ♀, and 1 ex. with no abdomen, Reimoser Paraguay San Luis/ *Alcestis solitaria* m det. Melichar.

HNHM: 1 ♀, Paraguay Vezényi/ Asuncion 1904 xi.21./ *solitaria* M det. Melichar. 1 ♀, Buenos-Aires Silvestri/ *solitaria* M det. Melichar.

solitaria Peggioga Melichar, 1914a: 10.

Original data: ♂, Erima, Astrolabe Bay, Neu-Guinea Friedrich-Wilhelmhafen (♀ in meiner Sammlung).

MMBC: 1 ♂ 1 ♀, N. Guinea Biró 1899/ Erima Astrolabe Bay/ *Peggioga solitaria* M det. Melichar./ Typus/ Syn-typus (Fig. 1).

***stativa* Oechalina Melichar, 1914a: 29.**

Original data: Neu-Guinea, Ighiberei, Tapoto (♂ ♀ in meiner Sammlung). Erima, Astrolabe Bay, Stephansort (3 ♀ 1 ♂ im Nat. Museum in Budapest).

MMBC: 1 ♂ 1 ♀, N. Guinea Ighiberei Loria. VII.VIII.90/ *Oechalia stativa* M. det. Melichar./ Typus/ Syn-typus. 1 ♀, N. Guinea Biró 96./ Erima Astrolabe B./ *stativa* Mel. det. Melichar./ Syn-typus.

HNHM: 1 ♂ 1 ♀, N. Guinea Biró 96/ Erima Astrolabe B./ *stativa* M det. Melichar. 2 ♀, N. Guinea Biró 96/ Stephansort Astrolabe B./ *stativa* M det. Melichar./ Typus. 1 ♂ 1 ♀, N. Guinea Biró 96/ Erima Astrolabe B.; no determination labels.

***stimulata* Sogana Melichar, 1914a: 115.**

Original data: Mentawai (ein ♂ in meiner Sammlung).

MMBC: 1 ♂, Mentawai Si Oban IV–VIII Modigliani 94/ *stimulatus* M det. Melichar./ Typus/ Holo-typus. An additional 1 ♀, Sumatra [handwritten]/ coll. Breddin.

***stupida* Tambinia Melichar, 1914a: 86.**

Original data: Neu-Guinea, Moroka 1300 m (in meiner Sammlung).

MMBC: 1 ♂, N. Guinea S. E., Moroka, 1300 m Loria VII–XI 93/ *Tambinia stupida* Mel. det. Melichar./ Typus/ Syn-typus.

***subacta* Oechalina Melichar, 1914a: 30.**

Original data: Neu Guinea (1 ♀ in meiner Sammlung).

MMBC: 1 ♀, N. Guinea mer., L. Loria/ *Oechalia subacta* M. det. Melichar./ Typus/ Holo-typus.

***subfasciata* Mulucha Melichar, 1914a: 34.**

Original data: Fernando Poo, Fernand-Vaz (1 ♂ in meiner Sammlung).

MMBC: 1 ♂, Congo Francese Fernand-Vaz IX–X 1902. L.Fea/ *Mulucha subfasciata* M det Melichar./ Typus/ Holo-typus.

***suturalis* Leptovanua Melichar, 1914a: 19**

Original data: Salomo-Archipel, Shortlands-Ins. (1 ♂ and 1 ♀ im Nat. Museum in Budapest).

MMBC: 1 ♂, Salomo Archip. Shortlands Ins. C. Ribbe/ *suturalis* Mel. det. Melichar./ Typus/ Syn-typus.

HNHM: 1 ♀, Salomo-Archipel, Shortlands-Ins. C.Ribbe/ *suturalis* M det. Melichar./ Typus.

temulenta Amapala Melichar, 1914a: 75.

Original data: Nicaragua, San Marcos (1 ♀ in meiner Sammlung).

MMBC: 1 ♀, San Marcos Nicaragua Coll. Baker/ *temulenta* M. det. Melichar./ Typus/ Holo-typus.

tepida Pseudoparicana Melichar, 1914a: 113.

Original data: Neu-Guinea, Dilo (zwei ♀ ein ♂ in meiner Sammlung).

MMBC: 2 ♀ 1 ♂ (3 pins) N. Guinea Dilo Loria VI.VII.90/ *tepida* M det. Melichar./ Typus/ Syn-typus.

viridescens Haliartus Melichar, 1914a: 48

Original data: Fernando Poo, Basile, 400–600 m (drei Exemplare in meiner Sammlung).

MMBC: 1 ♀, Is. Fernando Poo Bahia de S Carlos XII.1901 200–400 m L. Fea/ *viridescens* det. Melichar./ Typus/ Syn-typus. 2 ♀ (2 pins), Is. Fernando Poo Basile 400–600 m s. m. VIII–IX 1901 L.Fea/ *viridescens* det. Melichar./ Typus/ Syn-typus.

viridis Stilborus Melichar, 1903: 50.

Original data: Peradeniya 3 Februar 1902 2 Exemplare ♂ und ♀ von Dr. Uzel gesammelt).

MMBC: 1 ♀, Ceylon Peradeniya 3. II 1902. leg. Dr. Uzel Dr. Melichar/ *viridis* det. Melichar/ Syn-typus. 1 ♂, Ceylon Peradeniya 28. II 1902. leg. Dr. Uzel Dr. Melichar/ Typus.

Species described by other authors contained in Melichar's personal collection

acris Daradax Walker, 1857: 146.

MMBC: 1 ♀, Borneo/ *Daradax/ acris* Walk det. Melichar/ Co-Typus [correct?].

HNHM: 1 ♀, Borneo Benguey/ *Daradax acris* Walk det. Melichar.

albosignata Barunoides Distant, 1906: 284.

MMBC: 1 ♂, 1 ♀, E. Jacobson. Samarang. Java Nov. 1910/ *albosignata* Dist. det. Melichar. 2 ♂, Mt. Makiling Luzon Baker (one of them type of var. *fusca* Melichar). 1 ♂, Sibolangit IX. 1920 D. V. L.

biermanni Trichoduchus Dammerman, 1910: 29.

MMBC: 1 ♂, E. Jacobson Samarang Java Juli 1909. 1 ♂ 1 ♀ (one pin), E. Jacobson Samarang Java Juni 1910. 1 ♂, Mt. Makiling Luzon Baker.

***breviceps Stacota Walker, 1858:* 68.**

MMBC: 2 ♀ (1 pin) 2 ♂ 1 ♀ (3 pins) 2 nymphs (1 pin), Ceylon Peradeniya 1902 Dr. Uzel/ *Stacota breviceps* W det. Melichar.

***centralis Haliartus Gerstaecker, 1895:* 16.**

MMBC: 1 ♂ 1 ♀, Is. Fernando Poo Basile 400–600 m s. m. VIII–IX.1901 L. Fea. 1 ♂, Fernando Poo. 1 ♂, Fernando Páo Isabel. 1 ♀, Kamerun Conradt IX/ coll. Kraatz. All labelled *centralis* Gerst. det. Melichar./ Typus [but cannot be types!].

***curvifera Pseudoparicana Distant, 1907:* 288.**

MMBC: 1 ♂ 1 ex., Fiuma Purari Loria I - 94/ *curvifera* D. det. Melichar. 1 ♀, Nuova Guinea Ramoi Ging L.M.D'Albertis [with no determination label and not certainly conspecific].

***debilis Tambinia Stål, 1859:* 314.**

MMBC: 1 ♀, Ceylon/ Ossa/ *dimidiata* [Motschulsky] det. Melichar. [synonym of *T. debilis*]. 1 ♂, Ind. Or. Trichopoly/ *debilis* Stål det. Melichar. 1 ♂, Ceylon Peradeniya 21.I. 1902, leg. Dr. Uzel/ *Tambinia debilis* Stål/ *debilis* St. det. Melichar/ Typ. [but cannot be type].

HNHM: 1 ♀, Inde Mer. Trichinopoly Jos. Dubreuil/ *Tambinia debilis* Stål det. Melichar. 1 ♂ 1 ♀ (same card), same data but not Melichar determination label.

***dilatipennis Paricana Walker, 1857:* 159.**

MMBC: 1 ♂, Perak Malacca/ *Paricana dilatipennis* W det. Melichar. 1 ♀, Perak/ *Paricana dilatipennis* W det. Melichar. 1 ♀, Sumatra Deli ex coll. Fruhstorfer [no determination label].

Comments. Melichar distinguished a var. *frontalis* with a dark face. The male from Perak has a dark brown face but the label does not mention a variety name.

NMW: 1 ♀, Sumatra Deli ex coll. Fruhstorfer/ *Paricana dilatipennis* Wk det. Melichar [pale brown face]. 1 ♀, with same data and dark brown face but no determination label.

***fenestrata Trypetimorpha Costa, 1862:* 60.**

MMBC: series of 20 ex. from various localities

***fowleriana Colgorma Kirkaldy, 1907:* 249.**

[correct name is now *Arenasella fowleriana* Kirkaldy: new name given for *Rudia bicincta* Fowler nec *bicinctus* Spinola].

MMBC: 1 ♂, [Mexico] Teapa, Tabasco H. H. S. / *bicincta* det. Fowler. 1 ♀, Süd America Itaituba [not certainly conspecific with the specimen determined by Fowler].

Comments. Fowler misdetermined Stål's *bicincta*.

NMW: 1 ♂ 1 ♀, [Mexico] Teapa Tabasco H.H.S./ *bicincta* det. Fowler [placed as *Achilorma bicincta* Spinola].

***fuscopicta* Numicia Stål, 1866:** 190.

MMBC: 1 ♂ 1 ♀, Guinea Portugese Rio Cassine IV. 1900 L. Fea/ *Numicia fuscopicta* det. Melichar. [Species not listed in MELICHAR 1914a].

***gardinieri* Antabhoga Distant, 1912:** 185.

Original data: Laccadive-Insel; Minikoi (Gardiner, Brit. Mus.; Distant's Co-type in meiner Sammlung).

MMBC: 1 ♂, Minikoi (Gardiner)/ *Antabhoga gardinieri* Dist [handwritten] on separate label/ Typus/ Syntypus. 2 further ♂: Kamerun Conradt; N. Camerun Albrechtshoehe/ coll. Breddin/ ng et sp.

***granulata* Taxilana Stål, 1870:** 750 [*Kallitaxila*].

MMBC: 1 ♀, Iligan Mindanao Baker [no det label]. 1 ♀, Dapitan Mindanao Baker [no det label]. 1 ♂ 2 ♀ (3 pins), Luzon, Manila 10.1913. leg G. Boettcher.

Comments. Melichar states that he has specimens from Philippines Los Banos Baker but they do not seem to be present.

***hopponis* Sogana Matsumura, 1914:** 268.

MMBC: 1 ♂ 1 ♀ (2 pins), Formosa Sauter/ Kosempo 908./ *Sogana hopponis* Mats det. Melichar.

HNHM: 1 ♀, Formosa Sauter/ Teraso 1909 ii/ *Sogana hopponis* Mats det. Melichar.

***kurandae* Peltodictya Kirkaldy, 1906:** 415.

MMBC: 1 ♀, Cairns Q. K. Austr. 8. 1904/ Co-type of *Peltodictya kurandae* [labelled as co-type but probably not being part of type series?].

***lineatus* Ossoides Bierman, 1910:** 27.

MMBC: 1 ♀, Formosa/ 'Typus'. MELICHAR (1914a) states that he had a specimen in his collection from 'Java, Semarang'.

***luridus* Tropiduchus Walker, 1857:** 88.

MMBC: 1 ♀, Borneo Sarawak 1863–66 coll. S. Doria.

melichari Eodryas Distant, 1906: 53.

MMBC: 3 ♂ 2 ♀ 1 nymph, Ost India Bombay Dr Uzel/ *Epora subtilis* Walk./ *Anepora melichari* Dist det. Melichar/Typus/ Syntypus.

Comments. Type series is based on DISTANT's (1906) naming of the species considered to be *Epora subtilis* Walker by MELICHAR (1903).

melichari Trobolophya Baker, 1919: 302 [=Neomatissus].

MMBC: 1 ♂ 2 ♀, Mt. Makiling Luzon Baker/ Typus/ *Melichari* Bak det. Melichar./ Syntypus.

nigrifinis Peggioga Walker, 1868: 102.

MMBC: 1 ♀, Neu Guinea = Compagnie/ *Peggioga nigrifinis* Wk. det. Melichar. 1 ♂ 1 ♀, Sula Mangoli Oct.–Novbr. Doherty ex coll. H, Fruhstorfer/ *Peggioga nigrifinis* Wk. det. Melichar.

HNHM: 2 ♀, Neu-Pommern Kinigunang C. Ribbe/ *nigrifinis* Wk det. Melichar.

onukii Mesepora Matsumura, 1914: 262.

HNHM: 1 ♀, Japonia Matsumura/ Kuishi/ *Epora onukii* *Anepora onukii* M det. Melichar.

orbiculata Rotunosa Fowler, 1887: 41.

MMBC: 1 ♀, San Marcos Nicaragua coll. Baker/ 1487/ *Rotunosa orbiculata* det. Melichar. 1 ♂, Honduras/ coll. Breddin.

philippinensis Trobolophya Baker, 1919: 304 [=Neomatissus].

MMBC: 1 ♂ 2 ♀, Mt. Makiling Luzon, Baker/ *philippensis* det. Melichar/ Typus/ Syntypus. 1 ♀, Luzon M. Banahao [handwritten]/ *philippensis* det. Melichar/ Typus/ Syntypus. 1 ♂ 3 ♀, Los Banos P. I., Baker/ *philippensis* det. Melichar/ Typus.

pilosus Trichoduchus Horváth, 1907: 323.

MMBC: 2 ♂ (2 pins), Dalmatia Horváth/ Teodo 906. (Zupa)/ *Trypetimorpha pilosa* Horv. [handwritten]/ Typus/ Syntypus.

quasitrix Rhinodictya Kirkaldy, 1906: 417.

MMBC: 1 ♂, Cairns, Q. Austr. 8.1904/ Cotype of *Rhinodictya quasitrix* Kirk. [handwritten].

rufitarsis Leusaba Kirby, 1891: 134.

MMBC: 1 ♂, [no data], *marginalis* [nec Walker] det. Melichar./ *Leusaba*. 1 ♂ 1 ♀ (2 pins), Ceylon Peradeniya 29.III.902 Dr. Uzel/ *Leusaba marginalis* Wk det. Melichar./ *rufitarsis* Kirby det. Melichar.

Comments. Melichar had misidentified these specimens as *marginalis* Walker in MELICHAR (1903).

***similis Alcestis* Schmidt, 1911:** 266.

MMBC: 1 ♂ 1 ♀ (2 pins), Stieglmayr Rio Gr. do Sul/ *Alcestis similis* Sch det. Melichar. 1 ♂, Santa Cruz Rio Grande do Sul Fr. Stieglmayr leg. vend. 10. VII. 1895./ *similis* Sch det. Melichar [? same species].

***sobrinus Tropiduchus* Stål, 1854:** 248.

MMBC: 1 ♀, Kamerun Conradt/ Co Typus/ *Tropiduchus sobrinus* Stål [handwritten]. 1 ♀, Kamerun Conradt/ X/ [no other label].

HNHM: 1 ♀, Africa Kamerun/ *Tropiduchus sobrinus* Stål det. Melichar. 1 ♀, Sierra Leone/ *Tropiduchus sobrinus* Stål det. Melichar.

***subdivisa Neocatara* Walker, 1870:** 115.

MMBC: 1 ♀, Sula Mangoli Oct.–Novbr. Doherty ex coll. Fruhstorfer/ *Neocatara subdivisa* Wk det. Melichar.

***subtestacea Cattulia* Stål, 1870:** 749.

MMBC: 2 ♂ 2 ♀, Los Banos P. I., Baker/ *Cattulia subtestacea* Stål. 1 ♂, E. Jacobson Samarang. Java Nov. 1909/ *Cattulia javana* Bm det. Melichar./*Cattulia*.

***vitiensis Vannua* Kirkaldy, 1906:** 416.

MMBC: 1 ♀, Fiji Is. 3-1905/ coll. Koebele/ Cotype of *Vannua vitiensis* Kirk. [handwritten].

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Figs 1–4. Some types of Tropiduchidae species described by Leopold Melichar with corresponding labels (MMBC). 1 – Syntype of *Peggioga solitaria*, 2 – Holotype of *Habrotasa elongata*, 3 – Syntype of *Tambinia fasciculosa*, 4 – Holotype of *Paruzelia psyllomorpha*.

Tropiduchidae (Hemiptera, Fulgoromorpha)

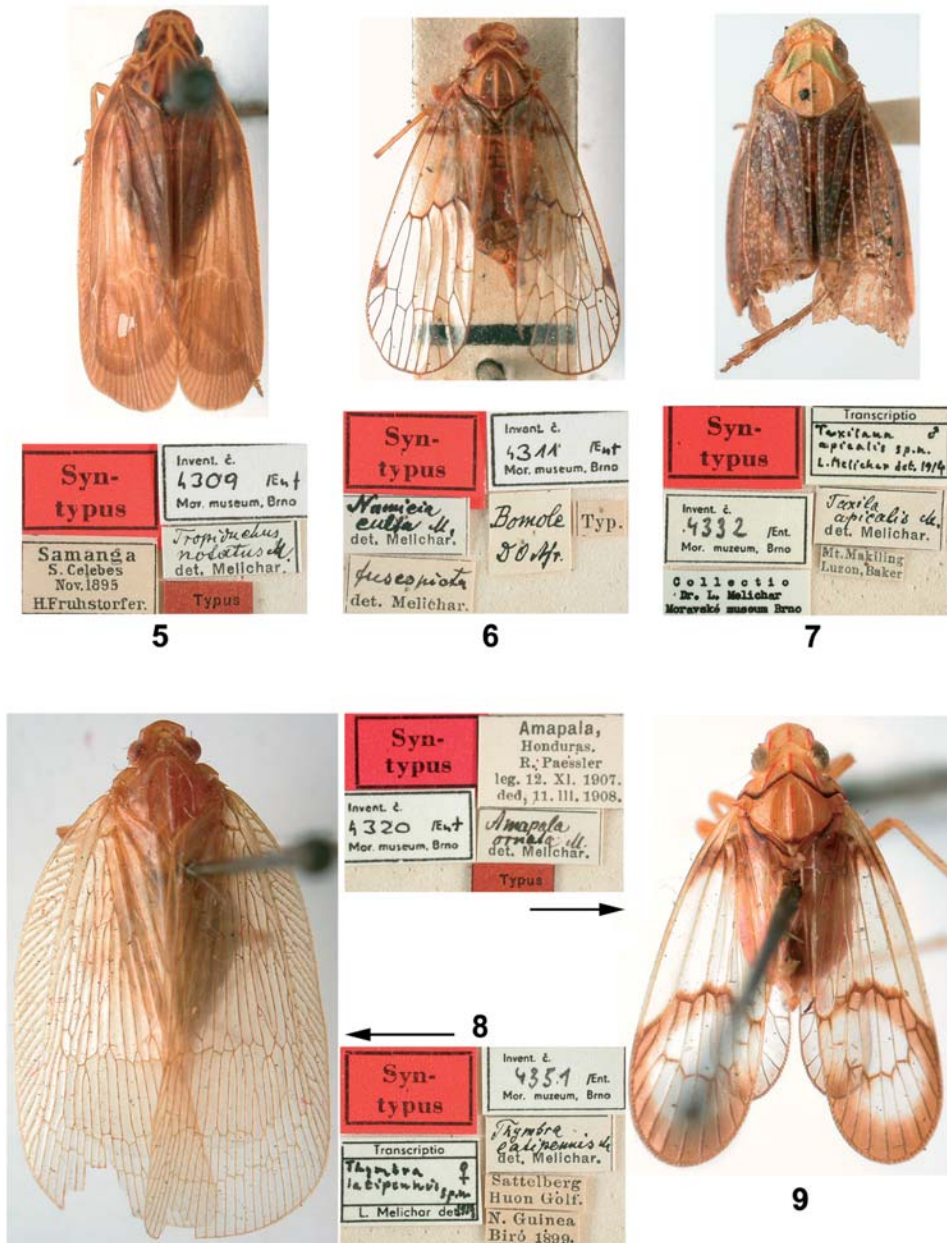


Fig. 5–9. Some types of Tropiduchidae species described by Leopold Melichar with corresponding labels (MMBC). 5 – Syntype of *Tropiduchus notatus*, 6 – Syntype of *Numicia culta*, 7 – Syntype of *Taxilana apicalis*, 8 – Syntype of *Thymbra latipennis*, 8 – Syntype of *Amapala ornata*