

A catalogue of the types of Bolitophilidae and Ditomyiidae (Diptera, Bibionomorpha) in the collection of the Muséum national d'Histoire naturelle, Paris

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KEY WORDS

Bolitophilidae,
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nomenclature,
scientific collections.

ABSTRACT

An annotated list is provided of the type specimens of seven species of Bolitophilidae Winnertz, 1863 and Ditomyiidae Keilin, 1919 (Diptera, Bibionomorpha) at the Muséum national d'Histoire naturelle (Paris).

RÉSUMÉ

Un catalogue des types de Bolitophilidae et Ditomyiidae (Diptera, Bibionomorpha) dans la collection du Muséum national d'Histoire naturelle, Paris.

MOTS CLÉS
Bolitophilidae,
Ditomyiidae,
taxonomie,
nomenclature,
collections scientifiques.

Une liste commentée des spécimens types de sept espèces de Bolitophilidae Winnertz, 1863 et Ditomyiidae Keilin, 1919 (Diptera, Bibionomorpha) présents au Muséum national d'Histoire naturelle (Paris) est fournie.

INTRODUCTION

Bolitophilidae Winnertz, 1863 and Ditomyiidae Keilin, 1919 are small families of Mycetophiliformia Hennig, 1954 (*sensu* Amorim & Rindal 2007). Bolitophilids are restricted to the Holarctic region, except for two described species from the Oriental region (Ševčík & Papp 2004). Only one extant genus is recognised, *Bolitophila* Meigen, 1818, with 64 described species (Bechev & Chandler 2011), currently divided into two subgenera, *Bolitophila* s.s. and *Cliopisa* Enderlein, 1936.

Fungus gnats of the family Ditomyiidae are represented by 15 extant genera and more than 100 described species, with a fossil record dating from the Eocene (55.8 ± 0.2 to 33.9 ± 0.1 Mya) of Australia (Evenhuis 1994). The Ditomyiidae, along with Bolitophilidae, Diadocidiidae Winnertz, 1864 and Keroplatidae Rondani, 1856, comprise the Keroplatoidea Rondani, 1856 (Hippa & Vilkamaa 2005), further recognised as a well-supported clade within Mycetophiliformia by Amorim & Rindal (2007).

Little is known about the biology of these families. Bolitophilid larvae are often found in sporophores of fleshy fungi (Rindal *et al.* 2008), and those of ditomyiids associated with bracket fungi (Basidiomycota Whittaker ex Moore, 1980, Polyporaceae Corda, 1839) or encrusting fungi growing on rotten wood (Munroe 1974), where they build their galleries.

The present paper provides a list of the type specimens of Bolitophilidae and Ditomyiidae in the collection of the Muséum national d'Histoire naturelle, Paris (MNHN), following a recommendation of the *International Code of Zoological Nomenclature* (ICZN 1999: 72F.4).

The combinations and spellings of names follow the Palaearctic catalogues for Bolitophilidae (Plassmann 1988; Bechev & Chandler 2011) and Ditomyiidae (Mamaev & Krivosheina 1988). We follow Ribeiro *et al.* (2007) and Yamaguchi & Lamas (2009) in standardising catalographic information. For each species section, the first line provides the name and authorship. The next lines provide the taxon's original name (including figure citations), type locality, as well as information regarding the specimen's preservation, including a list of the

missing structures. Label data are quoted in double quotation marks, with a straight slash to indicate separate lines. In case of handwriting on printed labels, the handwritten text is reproduced in italics; completely handwritten and printed labels are reproduced in regular font. For the sake of clarity, additions to some of the original information of labels, such as abbreviated collecting dates and incomplete locality and names of collectors, are included within square brackets.

LIST OF THE TYPES IN THE MNHN

Family BOLITOPHILIDAE Winnertz, 1863
Genus *Bolitophila* Meigen, 1818

Bolitophila nana (Macquart, 1826)

Macrocera nana Macquart, 1826: 54 (original description).

TYPE LOCALITY. — Northern France.

TYPE WITH LABELS. — (1) Handwritten on white paper: "160"; (2) handwritten on white paper: "France | Nord | Macquart"; (3) printed on red paper: "TYPE"; (4) handwritten on white paper: "Macrocera | nana".

PRESERVATION. — Pinned exemplar, very damaged, with a wing and an undetermined leg glued on the paper rectangle. Missing parts: abdomen and one wing.

REMARKS

As pointed out by Bechev & Chandler (2011), *Bolitophila nana* is a *nomem dubium*, as the type of *Macrocera nana* is an unidentifiable *Bolitophila* species. According with these authors, the type is likely to be in Macquart's collection in the Muséum d'Histoire naturelle de la ville de Lille (MHNL), Lille, France, but this has not been confirmed. The authors visited the MNHN collection and the type is allocated in this collection.

Regarding to Bolitophilidae collection, the type of *Bolitophila* (*Bolitophila*) *cinerea* Meigen, 1818, should be allocated at MNHN. During the visit to the collection, the authors did not find the type so, as mentioned by Bechev & Chandler (2011), the type probably is lost. Moreover, there are specimens of *B. (Bolitophila) austriaca* (Mayer, 1950) and

B. (Cliopisa) bispinosa Mayer, 1951 in the collection, but both the holotypes are deposited in the Naturhistorisches Museum, Vienna (NMW) (Bechev & Chandler 2011). The specimens from MNHN have red labels printed with the term “allotype”, determined by Matile (specifically for *B. (Bolitophila) austriaca* see Matile 1976). As additional name-bearing type material can never be added after the original description and the term “allotype” just may be used to indicate a specimen of opposite sex to the holotype, no name-bearing function (ICZN 1999: 72A), these specimens were not considered here.

Family DITOMYIIDAE Keilin, 1919
Genus *Nervijuncta* Marshall, 1896

Nervijuncta concinna Matile, 1988

Nervijuncta concinna Matile, 1988: 139 (original description), 138, fig. 1 (male terminalia).

TYPE LOCALITY. — Mont Mou, New Caledonia.

HOLOTYPE MALE WITH LABELS. — (1) printed on pink paper: “Muséum PARIS | Nouvelle Calédonie”; (2) printed with handwritten inscriptions on pink paper: “Muséum Paris | St. 131a, Mt Mou | 166°19'46"E | 22°04'28"S”; (3) handwritten on pink paper: “350 m, Forêt | humide | 4-XI-1984 | Tillier, Bouchet”; (4) printed on red paper: “HOLOTYPE”; (5) printed with handwritten inscriptions on white paper: “*Nervijuncta concinna* n. sp. | ♂ holotype | L. Matile det. 1988”.

PRESERVATION. — pinned exemplar, terminalia retained in glycerin.

Nervijuncta evenhuisi Matile, 1988

Nervijuncta evenhuisi Matile, 1988: 140 (original description), 138, fig. 3 (male terminalia).

TYPE LOCALITY. — Mont Koghi, New Caledonia.

PARATYPE MALE WITH LABELS. — (1) printed on white paper: “NEW CALEDONIA: | Mt. Koghi, 500 m | 2.XII.1963”; (2) printed on white paper: “R. Straatman | Malaise trap | BISHOP [Bishop Museum]”; (3) printed on red paper: “PARATYPE”; (4) printed with handwritten inscriptions on white paper: “*Nervijuncta evenhuisi* n. sp. | ♂ paratype | L. Matile det. 1988”.

PRESERVATION. — Pinned exemplar.

Nervijuncta vicina Matile, 1988

Nervijuncta vicina Matile, 1988: 139 (original description), 138, fig. 2 (male gonostyle).

TYPE LOCALITY. — Mont Koghi, New Caledonia.

PARATYPE FEMALE WITH LABELS. — (1) printed on white paper: “NEW CALEDONIA: | Mt. Koghi, 500 m | 23-27.VIII.1967”; (2) printed on white paper: “M. Sedlacek | collector | BISHOP MUS. [Bishop Museum]”; (3) printed on red paper: “PARATYPE”; (4) printed with handwritten inscriptions on white paper: “*Nervijuncta vicina* n. sp. | ♀ paratype | L. Matile det. 1988”.

PRESERVATION. — Pinned exemplar.

Genus *Symmerus* Walker, 1848

Symmerus (Psylosymmerus) vockerothi
Munroe, 1974

Symmerus (Psylosymmerus) vockerothi Munroe, 1974: 29 (original description); 125, fig. 7 (male terminalia), 171, fig. 63f (wing), 176, fig. 69 (phylogeny).

TYPE LOCALITY. — King Mountain, Old Chelsea, Quebec, Canada.

PARATYPE MALE WITH LABELS. — (1) printed with handwritten inscriptions on white paper: “King Mtn., Old | Chelsea, Que. 1000”, 5.VIII.69 [1969] | Malaise trap | D. D. Munroe”; (2) printed with handwritten inscriptions on yellow paper: “PARATYPE | *Symmerus vockerothi* | Munroe”; (3) printed on red paper: “PARATYPE”.

PRESERVATION. — Pinned exemplar.

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