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The types of Lygistorrhinidae and Mycetophilidae (Diptera: Bibionomorpha) in the KwaZulu-Natal Museum, Pietermaritzburg, South Africa

Sarah Siqueira Oliveira1* and Burgert S. Muller2

1Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto – Universidade de São Paulo, Av. Bandeirantes 3900, 14040-901, Ribeirão Preto, SP, Brazil; oliveira.sarahcv@gmail.com
2KwaZulu-Natal Museum, P. Bag 9070, Pietermaritzburg, 3200 South Africa, and Department of Zoology & Entomology, University of the Free State, P.O. Box 339, Bloemfontein, 9300 South Africa; bmuller@nmsa.org.za
*Corresponding author

ABSTRACT

An annotated list of the type specimens of Lygistorrhinidae and Mycetophilidae (Diptera: Bibionomorpha) at the KwaZulu-Natal Museum, Pietermaritzburg, South Africa is provided. Information on 54 type specimens, three lygistorrhinids and 51 mycetophilids, with details of labels and actual preservation of the specimens is furnished. Locality data are georeferenced and habitus images of type specimens are provided.

KEY WORDS: Fungus gnats, Lygistorrhinidae, Mycetophilidae, nomenclature, taxonomy, types.

INTRODUCTION

The Lygistorrhinidae (long-beaked fungus gnats) constitute a small family of Mycetophiliformia (sensu Amorim & Rindal 2007), which is widely distributed in tropical and subtropical regions. It now contains eight extant genera and about 32 or 33 species (Vockeroth 2009; Pape et al. 2011). The placement of some genera from Cretaceous amber in Lygistorrhinidae is still debatable (Blagoderov & Grimaldi 2004; Hippa et al. 2005), but the monophyly of the family including only the Recent species has not been questioned (Matile 1997; Grimaldi & Blagoderov 2001; Hippa & Vilkamaa 2005).

The fungus gnat family Mycetophilidae s.s. is one of the largest and most diversified families of Bibionomorpha, which fossil record extends back to the Jurassic (Evenhuis 1994; Amorim & Silva 2002). The family now contains approximately 180 extant genera and almost 4500 species world-wide (Pape et al. 2011). Although the monophyly of the Mycetophilidae is a consensus (Søli 1997; Rindal et al. 2009), a robust phylogeny of this family is still to be provided.

The present paper provides a list of type specimens of Lygistorrhinidae and Mycetophilidae housed in the collection of the KwaZulu-Natal Museum (NMSA, Pietermaritzburg, South Africa), following a recommendation of the International Code of Zoological Nomenclature (ICZN 1999: 72F.4).

MATERIAL AND METHODS

The list given below is arranged in the alphabetical order of genus and species. Label data are given in double quotation marks, with placement hierarchy (from top to bottom) of the label on the pin or slide being noted in round brackets. In case of handwriting on labels, the handwritten text is reproduced in italics; printed text on labels is 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 localities,
are given in square brackets. All specimen localities were georeferenced following the point-radius method (Wieczorek et al. 2004; Chapman & Wieczorek 2006), using the MaNIS Georeferencing Calculator April 2011 version (Regents of the University of California 2011).

TYPE LIST

Family Lygistorrhinidae Edwards, 1925

Lygistorrhina sanctaecatharinae Thompson, 1975

Fig. 1

Lygistorrhina sanctaecatharinae: Thompson 1975: 442, figs 1–3 (head, thorax, head, antenna), figs 7–14 (♂ & ♀ terminalia). Type locality: United States, Georgia, Liberty County.


Identification: (3) printed on white paper: “NMSA-Dip. 11277”; exemplar glued on a paper triangle; missing parts: none. (3) printed on white paper: “NMSA-Dip. 11308”; exemplar glued on a paper triangle; missing parts: none. (3) printed on white paper: “NMSA-Dip. 11266”; exemplar glued on a paper triangle; missing parts: none.

Distribution: United States (West Virginia, Virginia, North Carolina, Georgia).

Dinempheria enigmata Väisänen, 1994

Fig. 2

Dinempheria enigmata: Väisänen 1994: 14, figs 1–3 (head, thorax, wing); figs 4–9 (♂ terminalia). Type locality: South Africa, Mpumalanga.


Preservation: Exemplar glued on paper triangle, terminalia retained in glycerine, left wing damaged on distal half, abdomen and one leg glued on paper triangle; missing parts: right wing, left leg I, and legs III.


Preservation: Pinned exemplar; missing parts: right legs I and II tarsi, right leg III.

Distribution: South Africa (Mpumalanga).

Dziedzickia peckorum Matile, 1992

Fig. 3


Paratype (NMSA type no. 1952): ♂ (1) printed on blue paper: “REP AFR. SUD, NATAL | 75 KM WSW ESTCOURT | CATHEDRAL PEAKS [Cathedral Peak]”; (2) printed on blue paper: “FOR STA. [Forest

Preservation: Pinned exemplar; missing parts: right leg III, right II tarsi, four terminal segments.


Preservation: Pinned exemplar; missing parts: legs II.

Distribution: South Africa (KwaZulu-Natal).
Dziedzickia stickenburgorum Matile, 1992

Fig. 4


Preservation: Pinned exemplar, terminalia retained in glycerine; missing parts: none.

Distribution: South Africa (KwaZulu-Natal).

Leia arsona Hutson, 1978

Fig. 5


Preservation: Pinned exemplar; missing parts: right leg III.


Preservation: Pinned exemplar, abdomen glued on the micropin; missing parts: right leg III.


Preservation: Pinned exemplar; missing parts: none.


Manota natalensis Jaschhof & Mostovski, 2006

Fig. 6


Preservation: On one slide, with terminalia and right wing separate on the slide; missing parts: three right terminal flagellar segments.

Identification: (4) printed on white paper: “NMSA-Dip. 66402”; on one slide, with terminalia, left leg II and left wing separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66403”; on one slide, with head, antenna, all right legs, right wing and terminalia separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66404”; on one slide, with terminalia separate on the slide, distal edge of both wings damaged; missing parts: none.

Preservation: On one slide, with left leg I, left antenna, left wing and terminalia separate on the slide; missing parts: none.


Identification: (4) printed on white paper: “NMSA-Dip. 66406”; on one slide, with abdomen and both wings separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66407”; on one slide, with head, antennae, both wings and terminalia separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66408”; on one slide, with terminalia separate on the slide; missing parts: none.

Paratype (NMSA type no. 1953): ♂ (1) printed on white paper: “det. M. JASCHHOF | Manota natalensis | JASCH. & MOST., male”; (2) printed on yellow paper circle: “Para- | type”; (3) printed on white paper: “RSA [South Africa]: KwaZulu-Natal: | Central Drakensberg, Cathedral | Peak Nat. Res. [Nature Reserve], Rainbow Gorge | (28.57.6'S 29.13.6'E [28°57.6'S 29°13.6'E], uncertainty 0.246 km]; 1500m; | old-growth indigenous forest; | 3-5 Dec. 2005 [3–5.xii.2005]; Malaise trap; | M. MOSTOVSKI, M. & C. JASCHHOF”.

(4) printed on white paper: “NMSA-Dip. 66409”.

Preservation: On one slide, with terminalia separate on the slide; missing parts: none.

Distribution: South Africa (KwaZulu-Natal).

Manota whiteleyi Jaschhof & Mostovski, 2006

Fig. 7

Manota whiteleyi: Jaschhof & Mostovski 2006: 240, figs 4, 5 (♂ terminalia), Type locality: South Africa, KwaZulu-Natal, Ramsgate.

Holotype (NMSA type no. 1954): ♂ (1) printed on white paper: “det. M. JASCHHOF / MOST#7 | Manota whiteleyi | JASCH. & MOST., male”; (2) printed on red paper circle: “Hol- | type”; (3) printed on white paper: “RSA [South Africa]: KwaZulu-Natal: | Ramsgate Butterfly Sanctuary | (30.53.38 30.20.4E) [30°53.1'S 30°20.4'E, uncertainty 0.244 km]; | 45m; | indigenous forest patch near | stream; 3-26 Feb 2005 [3–26.ii.2005]; | Malaise trap; M. MOSTOVSKI”; (4) printed on white paper: “NMSA-Dip. 66410”.

Preservation: On one slide, with left legs, head and antennae separate on the slide; missing parts: none.

Paratypes (NMSA type no. 1954): 3♂ (1) printed on white paper: “det. M. JASCHHOF / MOST#7 | Manota whiteleyi | JASCH. & MOST., male”; (2) printed on yellow paper circle: “Para- | type”; (3) printed on white paper: “RSA [South Africa]: KwaZulu-Natal: | Ramsgate Butterfly Sanctuary | (30.53.38 30.20.4E) [30°53.1'S 30°20.4'E, uncertainty 0.244 km]; | 45m; | indigenous forest patch near | stream; 3-26 Feb 2005 [3–26.ii.2005]; | Malaise trap; M. MOSTOVSKI”.

Identification: (4) printed on white paper: “NMSA-Dip. 66412”; on one slide, with terminalia separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66413”; on one slide, with right wing and terminalia separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66414”; on one slide, with left legs, left wing and terminalia separate on the slide; missing parts: none.

Paratype: ♀ (1) printed on white paper: “det. M. JASCHHOF / MOST#7 | Manota whiteleyi | JASCH. & MOST., | female”; (2) printed on yellow paper circle: “Para- | type”; (3) printed on white paper: “RSA
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[South Africa]: KwaZulu-Natal: | Ramsgate Butterfly Sanctuary | (30°53.3'S 30°20.4'E, uncertainty 0.244 km); | 45m; | indigenous forest patch near stream; | 3-26 Feb 2005 [3–26.ii.2005]; | Malaise trap; M. MOSTOVSKI”; (4) printed on white paper: “NMSA-Dip. 66415”.

Preservation: On one slide, with right wing separate on slide; missing parts: right leg I.
Paratype (NMSA type no. 1954): ♂ (1) printed on white paper: “det. M. JASCHHOF / MOST#3 | Manota whiteleyi | JASCH. & MOST., male”; (2) printed on yellow paper circle: “Para- | type”; (3) printed on white paper: “RSA [South Africa]: KwaZulu-Natal: | Ramsgate Butterfly Sanctuary | (30°53.3'S 30°20.4'E, uncertainty 0.244 km); | 45m; | indigenous forest patch near stream; | 9 Jan-2 Feb 2005 [9.i–2. ii.2005]; | Malaise trap; M. MOSTOVSKI”; (4) printed on white paper: “NMSA-Dip. 66411”.

Preservation: On one slide, with left legs, left wing and terminalia separate on the slide; missing parts: none.
Distribution: South Africa (KwaZulu-Natal).

Mycomya edra Väisänen, 1994

Fig. 8


Preservation: Pinned exemplar, terminalia retained in glycerine; missing parts: right leg II tibia and tarsi.
Paratypes (NMSA type no. 2152): 2♂ (1) printed with handwriting on white paper: “SOUTH AFRICA: Natal | Cathedral Peak area [28°57'S 29°12'E, uncertainty 2.46 km] | 2829Cc 16–18.XII.1977 | JGH Londt”; (2) printed with handwriting on white paper: “Mycomya ♂ | edra n.sp. | det. R. Väisänen 1992”; (3) printed on yellow paper: “PARATYPE ♂”.

Identification: (4) printed on white paper: “NMSA-Dip. 11293”; pinned exemplar, terminalia retained in glycerine; missing parts: head, right leg II and legs III. (4) printed on white paper: “NMSA-Dip. 59083”; pinned exemplar, terminalia retained in glycerine; missing parts: right III tarsi and left III.

Identification: (4) printed on white paper: “NMSA-Dip. 59084”; pinned exemplar, terminalia retained in glycerine; missing parts: none. (4) printed on white paper: “NMSA-Dip. 59085”; pinned exemplar; missing parts: right I tarsi 3 to 5, left II tarsi 2 to 5 and left III tibia and tarsi. (4) printed on white paper: “NMSA-Dip. 59086”; pinned exemplar; missing parts: right flagellar segments. (4) printed on white paper: “NMSA-Dip. 59087”; pinned exemplar, terminalia retained in glycerine; missing parts: right legs I and II. (4) printed on white paper: “NMSA-Dip. 59088”; pinned exemplar, terminalia retained in glycerine; missing parts: left flagellar segments, left I and right II and left III tibia and tarsi. (4) printed on white paper: “NMSA-Dip. 59089”; pinned exemplar, terminalia retained in glycerine, abdomen glued to micropin foam; missing parts: apical right flagellar segments and all legs.
Distribution: South Africa (KwaZulu-Natal).
**Mycomya londti** Väisänen, 1994

*Fig. 9*


Preservation: Pinned exemplar, terminalia retained in glycerine; missing parts: legs I, all other legs have missing tarsi.


Preservation: Pinned exemplar; missing parts: antenna, right I tibia and tarsi, and right III tarsi.

Distribution: South Africa (KwaZulu-Natal).

**Mycomya natalensis** Väisänen, 1994

*Fig. 10*


Preservation: Pinned exemplar, terminalia retained in glycerine, left wing damaged distally; missing parts: right leg I and legs II, all remaining legs have missing tarsi 2–4.

Distribution: South Africa (KwaZulu-Natal).

**Mycomyiella irwini** Väisänen, 1994

*Fig. 11*


Preservation: Exemplar glued on paper triangle, terminalia retained in glycerine; missing parts: right legs.


Preservation: Pinned exemplar, terminalia retained in glycerine; missing parts: all legs.

Preservation: Pinned exemplar; missing parts: none.

Distribution: South Africa (KwaZulu-Natal).
Neoempheria transvaalensis Väisänen, 1994

Fig. 12


Preservation: Pinned exemplar, terminalia retained in glycerine; missing parts: right III, left III tarsi 2–5.


Preservation: Pinned exemplar, right III and abdomen glued on card; missing parts: right I and legs III.

Distribution: South Africa (Limpopo, Mpumalanga).

Paradoxa paradoxa Jaschhof, 2006

Fig. 13


Preservation: On one slide, with left legs, left wing and terminalia separate on the slide; missing parts: none.


Identification: (4) printed on white paper: “NMSA-Dip. 66417”; on one slide, with terminalia, left leg I, both legs II and wings separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66418”; on one slide, with head and terminalia separate on the slide; missing parts: left leg II. (4) printed on white paper: “NMSA-Dip. 66419”; on one slide, with left antenna, left wing and terminalia separate on the slide; missing parts: none.


Identification: (4) printed on white paper: “NMSA-Dip. 66420”; on one slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66421”; on one slide, with ter-
minalia separate on the slide; missing parts: right leg III. (4) printed on white paper: “NMSA-Dip. 66422”; on one slide, with left legs, left wing and terminalia separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66423”; on one slide, with right legs, right wing, head and terminalia separate on the slide; missing parts: none. (4) printed on white paper: “NMSA-Dip. 66424”; on one slide, with abdomen, head, terminalia and both wings separate on the slide; missing parts: distal part of right wing missing.

Distribution: South Africa (KwaZulu-Natal).

Sciophila atrigaster Matile, 1979

Fig. 14

Sciophila atrigaster: Matile 1979: 269, figs 31, 32 (♂ terminalia). Type locality: Comoro Islands.


Preservation: Pinned exemplar, terminalia retained in glycerine; missing parts: none.

Distribution: Comoro Islands, Madagascar.

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