

On the type specimen of *Ascalaphus obscurus* Westwood, 1847, a lost and rediscovered owlfly species (Neuroptera: Myrmeleontidae: Ascalaphinae)

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ÁBRAHÁM, L.: *On the type specimen of Ascalaphus obscurus* Westwood, 1847, a lost and rediscovered owlfly species (Neuroptera: Myrmeleontidae: Ascalaphinae).

Abstract: After the description of *Ascalaphus (Haploglenius) obscurus* Westwood, 1847, the type specimen was lost. Thus, the genus and subfamily classification of the species became uncertain. Later taxonomists (HAGEN 1866, McLACHLAN 1873, VAN DER WEELE 1909) could not clarify the correct combination of the genus (*Haploglenius*, *Idricerus*). TAUBER et al. (2019) found the syntype of the species, this solved a number of nomenclatural and taxonomic problems. *Ascalaphus (Haploglenius) obscurus* Westwood, 1847 is moved to *Protidricerus obscurus* (Westwood, 1847) (**comb. n.**) and the lectotype is designated. *Protidricerus philippinensis* Esben-Petersen, 1927 (**syn. n.**) is a junior synonym of *Protidricerus obscurus* (Westwood, 1847). Instead of *Ascalaphus (Haploglenius) obscurus* Westwood, 1847, *Stylascalaphus fabiani* Mészáros & Ábrahám, 2005 is designated to type species (present designation) of *Stylascalaphus* Sziráki, 1998. *Mansellacsa longicornis* Hölzel, 2004 (**syn. n.**) is a junior synonym of *Stylascalaphus krueperi* (van der Weele, 1909).

Keywords: new synonym, new combination, type designation

Introduction

Frederick William Hope (1797-1862), a famous entomologist of the 19th century, donated his insect collections to the University of Oxford in 1849, which later gave rise to the well-known the Hope Entomological Collections (Oxford). He appointed his younger friend, John Obadiah Westwood (1805-1893) as the first curator of the collection. In 1857, Westwood's collection was transferred to the University of Oxford as well.

In the 19th century, more and more exotic insect species were brought to the United Kingdom from India and Southeast Asia (East India), from the ever-growing British colonial empire. Both of them described many new exotic insect species and they founded the Entomological Society of London (The Royal Entomological Society) in 1833.

Thus, as the curator of the collection, Professor Westwood had the opportunity to study insects from different parts of the world and describe new species. In one of his very elaborately illustrated works (WESTWOOD 1848), he described 6 new species of Ascalaphidae from the Oriental area and provided colour illustrations of 3 species. In this publication, he described the species *Ascalaphus (Haploglenius) obscurus* Westwood,

1847. According to his description, this species is an average-sized owlfly with transparent wings, of which he did not provide an illustration like the other coloured species. Not long after, the type specimen of the species was not found in the large collection.

TRAUBER et al. (2019) published the Neuropterida type material preserved in the Hope Entomological Collection (Oxford). After more than 150 years, the type specimen of *Ascalaphus (Haploglenius) obscurus* Westwood, 1847 was found again. The inventory number of the syntype is NEUR0073. This made it possible to redetermine the exact taxonomic status of the species.

Material and methods

5 high-resolution photos of the syntype specimen of the previously lost species from the Hope Entomological Collections (Oxford) were requested (head in frontal view, habitus with scale, fore leg, abdomen in lateral view, and label). Then, the species to other species in the same genus was compared. Finally, the genus and species and related information were followed in the literature. When citing distribution data, only the first record from a given area is cited.

Abbreviations:

Comb – new combination, COdescr – cited original description, Dist – distribution, Misid – Misidentification, Mon – Monograph, Nom – Nomenclature, Odescr – original description, Redescr – redescription, Tax – Taxonomy, Typ – Type.

Results and discussion

Protidricerus obscurus (Westwood, 1847) **comb. n.**

Ascalaphus (Haploglenius) obscurus Westwood, 1847:69 - (Odescr); Walker 1853:447 (COdescr); Tauber et al. 2019:28 (Typ); Abrahám 2017:120 (Nom).

Ascalaphus obscurus Westwood, 1847 - Hagen 1866:385 (List), Hassan & Liu 2021:433 (List).

Haploglenius obscurus (Westwood, 1847) - Hagen 1866:406 (Comb).

Idricerus obscurus (Westwood, 1847) - McLachlan 1873:241 (Comb); van der Weele 1909:68 (Mon); New 2003:118, 171 (List).

Stylonotus obscurus sensu Needham, 1909 nec (Westwood, 1847) - Needham 1909:198-199 (Redescr, Tax, Dist) – Misid; Navás 1912:97 (Cat); Oswald and Penny 1991:56 (Nom, Hom); Sziráki 1998:65 (Nom, Hom).

Stylascalaphus obscurus sensu Needham, 1909 nec (Westwood, 1847) - Sziráki 1998:65 (Nom); Mészáros & Ábrahám 2005:110 (Dist); Tauber et al. 2019 (Tax), – Misid.

Stephanolasca obscurus (Westwood, 1847) – Halder et al. 2018 (Comb, Chlist).

Protidricerus philippinensis Esben-Petersen 1927:550 – (Odescr), Sziráki 1998:69 (Chlist), New 2003:171 (Chlist), Ábrahám 2008:65 (Dist), 2016:57 (Dist), Wang et al. 2018:168 (Mon). **Syn. n.**

In the name of the species described by Westwood (*Ascalaphus (Haploglenius) obscurus*), the name *Haploglenius* Burmeister, 1839 refers to one of the important characteristic features of the species, that its eyes are undivided, which is used in the higher classification of owlfly taxa until recently (MACHADO et al. 2019).

The type specimen of the species was no longer found a few years later when WALKER (1853) compiled a list of the specimens of neuropterous insects in the collection of the

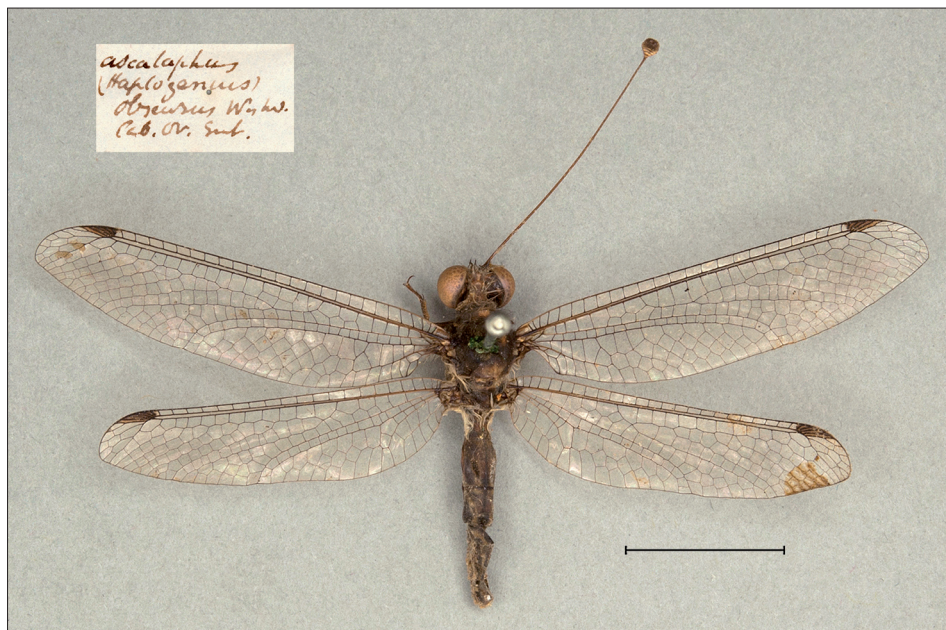


Fig. 1: Habitus and label of the syntype of *Ascalaphus (Haploglenius) obscurus* Westwood, 1847



Fig. 2: Head of *Ascalaphus (Haploglenius) obscurus* Westwood, 1847 in frontal view

British Museum, so he only quoted the original description of the species from WESTWOOD (1848).

HAGEN (1866) revised the described species of Neuroptera, and based on the undivided eye, he placed this species in a new combination as *Haploglenius obscurus* (Westwood, 1847).

Among the many new species in neuropteran research, the classification introduced by WALKER (1853) has become untenable, according to which, rejecting the previously described genera. He classified, for example, all owlflies into the genus *Ascalaphus*

Fabricius, 1775, and antlions into the genus *Myrmeleon* Linnaeus, 1767. McLACHLAN (1873) tried to resolve this problem when he revised the work of WALKER (1853) and restored genera and classified the species into new genera, making the recognition of additional new species much easier.

McLACHLAN (1873) also proposed an owlfly classification and separated two groups based on eye characters (Holophthalmi division, with undivided eyes and Schizophthalmi division with divided eyes). His study contained the species as *Haploglenius obscurus*. He also did not find the type specimen of the species, but based on the description of the species, he classified it in the Holophthalmi division. McLACHLAN (1873) even assumed that it could not belong to the genus *Haploglenius* Burmeister, 1839 known only from America, and therefore moved it to the genus *Idricerus* McLachlan, 1873, of which only one species, *Idricerus decrepitus* (Walker, 1853) was known at that time.

The first large monograph of Ascalaphidae on Earth is compiled by van der WEELE (1909). The missing type specimen of *Ascalaphus obscurus* was still not found at that time. So van der WEELE (1909) could not establish a genus either, as the original description of the species was too general. Thus, he left the species in the genus *Idricerus* McLachlan, 1873. He considered it an unidentifiable species for now.

During the study of the collection of the Indian Museum in Kolkata (Calcutta), NEEDHAM (1909) studied one male and four female specimens from the Himalayas and described a new genus, *Stylonotus* Needham, 1909 on the characteristics of the male. He designated the type species as *Ascalaphus obscurus* Westwood, 1847. The new genus was ranked into the divided-eyed subfamily, Ascalaphinae (=Schizophthalminae). OSWALD and PENNY (1991) stated that *Stylonotus* Needham, 1909 was a homonym (*Stylonotus* Olfers, 1907 – Collembola). Later, SZIRÁKI (1998) replaced the genus name with *Stylascalphus*, and listed it as *Stylascalphus obscurus* (Westwood, 1847) in an annotated checklist.

After finding the type specimen of *Ascalaphus* (*Haploglenius*) *obscurus* Westwood, 1847 (TAUBER et al. 2019), we already know that NEEDHAM (1909) misidentified the species and moving to the subfamily Ascalaphinae was wrong. There are no available specimens (1 male 4 females) examined by NEEDHAM (1909) any more in the Indian Museum, (Kolkata).

NAVÁS (1912) compiled a catalogue of Ascalaphidae, in which he adopted the information published by NEEDHAM (1909). He got a note from Banks (N.B.=Nathan Banks) that he also confirmed that the eyes of the specimens were divided. Banks could only examine the specimen identified by Needham in India, but could not study the type specimen described by WESMAEL (1848), as it was no longer available.

NEW (2003) compiled a faunal catalogue from Malesia (SE Asia), which partially overlaps with the type locality (East India) of *Ascalaphus* (*Haploglenius*) *obscurus* Westwood, 1847. He did not mention the nomenclature and taxonomic modification made by NEEDHAM (1909) about the well-circumscribed area (Malesia), since it is outside the area he examined.

TAUBER et al. (2019) found one syntype specimen of *Ascalaphus* (*Haploglenius*) *obscurus* Westwood, 1847 in the Hope Entomological Collection, Oxford University Museum of Natural History, but erroneously identified to Ascalaphinae as *Stylascalaphus obscurus* (Westwood, 1847).

Ascalaphus (*Haploglenius*) *obscurus* Westwood, 1847 is correctly combined to the genus *Protidricerus* van der Weele, 1909, and *Protidricerus philippinensis* Esben-Petersen, 1927 (**syn. n.**) is a junior synonym of *Protidricerus obscurus* (Westwood, 1847).

The male syntype of *Ascalaphus* (*Haploglenius*) *obscurus* Westwood, 1847, ivory number: NEUR0073, in OUMNH is designated as lectotype (present designation).

After the identification of the species, the type locality can be further narrowed down based on the currently known distribution of *Protidricerus phillipensis* (McLachlan, 1891). WESTWOOD (1848) mentioned "East Indies" as the type locality. The known collecting places of *Protidricerus phillipensis* are the Philippines (ESBEN-PETERSEN 1927), Taiwan (SZIRÁKI 1998), and China (WANG et al. 2018). There are hitherto unpublished distribution data from Laos, Malaysia (Kalamantan), and Thailand in the collection of Rippl-Rónai Museum, Kaposvár. These areas partly overlap with the territory of the East Indian British colonies.

***Protidricerus* van der Weele, 1908**

Protidricerus van der Weele, 1908:61- (Odescr),

Type species: *Protidricerus exilis* (McLachlan, 1894)

***Protidricerus elwesii* (McLachlan, 1891)**

Idricerus elwesii McLachlan, 1891:512.

Protidricerus elwesii (McLachlan, 1891) – van der Weele 1908:63 (Mon), Navás 1912:64 (Mon), Ghosh & Sen 1977:319 (Chlist), Ghosh 1988:168 (Dist), Sziráki 1998:69 (Chlist), Ghosh 2000:99 (Redescr), New 2003:171 (Chlist), Ábrahám 2008:64 (Dist), Zhang et al. 2015:381 (Dist), Wang et al. 2018:165 (Mon), Yang et al. 2018:75 (Chlist), Hassan et al. 2019:516 (Chlist), Hassan & Liu 2021:433 (Redescr, Dist).

Protidricerus palliventralis C.-k. Yang, 1999:141 – (Odescr), Zhang et al. 2015:381 (Syn), Wang et al. 2018 (Syn).

Distribution: China (SZIRÁKI 1998), India (McLachlan 1891), Myanmar (ZHANG et al. 2015), Pakistan (ÁBRAHÁM 2008), further unpublished data found in coll. SCMK: Vietnam, Laos, Thailand.

***Protidricerus exilis* (McLachlan, 1894)**

Idricerus exilis McLachlan, 1894:424 – (Odescr).

Protidricerus exilis (McLachlan, 1894) – van der Weele 1909:62 (Mon), Navás 1912:64 (Mon), Sziráki 1998:69 (Chlist), Whittington 2002:378 (Dist), Zhang et al. 2015: 383 (Redescr, Dist), Wang et al. 2018:166 (Mon), Yang et al. 2018:75 (Chlist).

Distribution: China (McLACHLAN 1894).

***Protidricerus irene* van der Weele, 1909**

Protidricerus irene van der Weele, 1909:315 – (Odescr, Mon), Navás 1912:64 (Cat), Sziráki 1998:69 (Chlist), Ábrahám 2016:57 (Dist).

Distribution: Malaysia (van der WEELE 1909), the Philippines (ÁBRAHÁM 2016).

***Protidricerus steropterus* X.-l. Wang & C.-k. Yang, 2002**

Protidricerus steropterus X.-l. Wang & C.-k. Yang, 2002:562 – (Odescr), Zhang et al. 2015:385 (Redescr, Dist), Wang et al. 2018:169 (Mon), Yang et al. 2018:75 (Chlist).

Distribution: China (WANG & YANG 2002).

***Protidricerus japonicus* (McLachlan, 1891)**

Idricerus japonicus McLachlan 1891:513 – Odescr, Matsumura 1908: 40 (List).

Protidricerus japonicus (McLachlan, 1891) – van der Weele 1908:63 (Mon), Navás 1912 (Mon), Navás 1924:220 (Dist), Kuwayama 1960:32 (Dist), Kuwayama 1962:391 (Dist), Sziráki 1998:69 (Chlist), Zhang et al. 2015:385 (Dist), Ábrahám 2016:57 (Dist), Wang et al. 2018:167 (Mon), Yang et al. 2018:75 (Chlist),

Distribution: Japan (McLACHLAN 1891), Thailand (ÁBRAHÁM 2016), China (ZHANG et al. 2015).

***Stylascalaphus* Sziráki, 1998**

Stylonotus Needham, 1909:198 – (Odescr), Oswald & Penny 1991:56 (Hom); Sziráki 1998:65 (Nom, Hom).
Mansellacsa Hölzel, 2004:220 – (Odescr), **Syn. n.**

Type species: *Stylascalaphus fabiani* Mészáros & Ábrahám, 2005 - present designation.

The genus *Stylascalaphus* Sziráki, 1998 is a replacement name, therefore ÁBRAHÁM (2017) redescribed the genus, and also listed *Ascalaphus* (*Haploglenius*) *obscurus* Westwood, 1847 (sensu *Needham* 1909) as the type species. Since it has been proven that NEEDHAM (1909) misidentified the species *Stylonotus obscurus* (Westwood, 1847), so *Stylascalaphus fabiani* Mészáros & Ábrahám, 2005, the second described species in the genus is designated to the type species (present designation, Article 70.3. of ICZN) of *Stylascalaphus* Sziráki, 1998.

***Stylascalaphus fabiani* Mészáros & Ábrahám, 2005**

Stylascalaphus fabiani Mészáros & Ábrahám, 2005:103 – Odescr, Dobosz & Ábrahám 2007 (Dist), Hassan et al. 2019 (Chlist), Hassan & Liu 2021 (List, Dist).

Distribution: Pakistan (MÉSZÁROS & ÁBRAHÁM 2005), Turkey, Iran (DOBOSZ & ÁBRAHÁM 2007).

***Stylascalaphus krueperi* (van der Weele, 1909)**

Helicomitus krueperi van der Weele 1909:180 – (Odescr), Navás 1912:90 (List, Dist).

Helicomitus hyalinus Navás 1921:11 – (Odescr).

Ascalaphus hyalinus (Navás 1921) – Aspöck & Hölzel 1996:78 (List, Dist), Ábrahám 2017 (Syn).

Ascalaphus krueperi (van der Weele, 1909) Aspöck & Hölzel 1996:78 (Comb, List, Dist), Sziráki 1998:59 (Chlist), El Hamouly & Fadl 2011:96 (Dist), El-Hawagry et al. 2016:1220 (Dist).

Stylascalaphus krueperi (van der Weele, 1909) – Ábrahám 2017 (Comb), Monnerat & Ábrahám 2020:142 (Dist), Letardi et al. 2020:139 (Dist).

Mansellacsa longicornis Hölzel, 2004:220 – (Odescr), **Syn. n.**

Remarks: Reviewing genera similar to the genus *Stylascalaphus*, I found that *Mansellacsa longicornis* Hölzel, 2004 (**syn. n.**) is a junior synonym of *Stylascalaphus krueperi* (van der Weele, 1909).

Distribution: Africa: Algeria (NAVÁS 1921), Egypt (ASPÖCK et al. 2001), Morocco (ÁBRAHÁM 2017), Asia: Jordan (MONNERAT & ÁBRAHÁM 2020), Saudi Arabia (EL-HAWAGRY et al. 2016), Syria (van der WEELE 1909).

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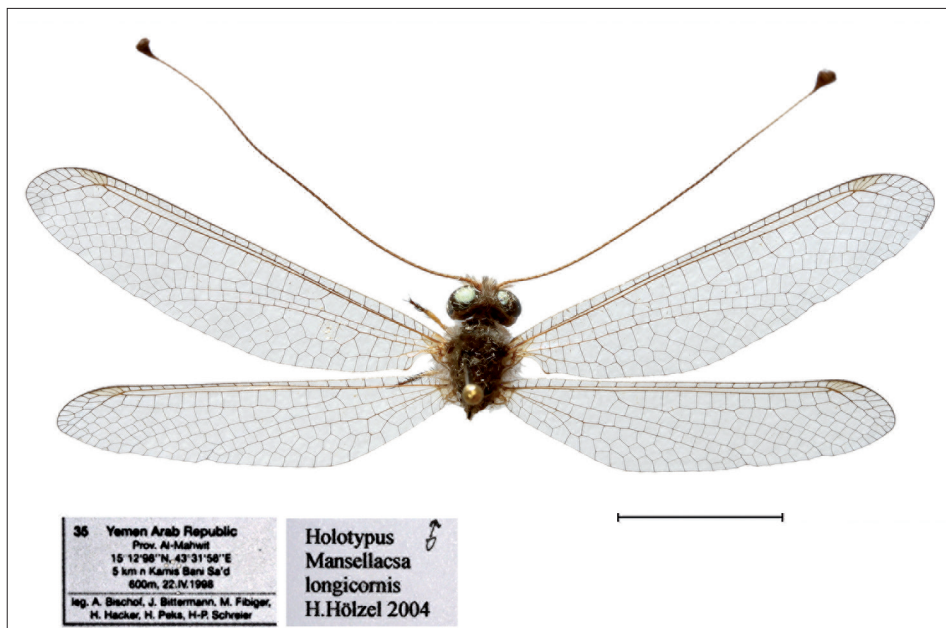


Fig. 1: Habitus and labels of the holotype of *Mansellacsa longicornis* Hölzel, 2004

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