

***Coniopteryx (Metaconiopteryx) esbenpeterseni* Tjeder, 1930 new to Belgium (Neuroptera: Coniopterygidae)**

Koen LOCK

eCOAST Marine Research, Esplanadestraat 1, B-8400 Oostende (e-mail: Koen_Lock@hotmail.com)

Abstract

During an inventory of the nature reserve Bos t'Ename, already 19 species of Neuroptera have been observed. One of these is the wax fly *Coniopteryx (Metaconiopteryx) esbenpeterseni* Tjeder, 1930, which is reported here as a new species for the Belgian fauna. Several specimens were found by sweeping sun-exposed branches of pedunculate oak trees.

Keywords: Bos t'Ename, Coniopterygidae, wax flies.

Samenvatting

Tijdens een inventarisatie van het natuurreservaat Bos t'Ename werden al 19 soorten Neuroptera waargenomen. Eén hiervan is de dwerggaasvlieg *Coniopteryx (Metaconiopteryx) esbenpeterseni* Tjeder, 1930, die hier wordt gemeld als een nieuwe soort voor de Belgische fauna. Verschillende exemplaren werden gevonden tijdens het slepen van zonbeschenen takken van zomereiken.

Résumé

Lors d'un inventaire dans la réserve naturelle Bos t'Ename, 19 espèces de Neuroptera ont été trouvées, dont *Coniopteryx (Metaconiopteryx) esbenpeterseni* Tjeder, 1930 rapporté comme espèce nouvelle pour la faune belge. Quelques exemplaires ont été trouvés par fauchage de branches de chênes pédonculés bien exposées au soleil.

Introduction

Among the Neuroptera, the Coniopterytidae or wax flies are undoubtedly the most neglected family. This is caused by their small size and the need to investigate the male genitalia for identification; females cannot even be identified based on present knowledge. Wax flies can be collected by sweeping and beating the vegetation, especially sun-exposed branches of oak trees. They also come to light traps, however, they are hard to observe against a white background due to their whitish color. Specimens can best be preserved in ethanol and specimens should be kept as vouchers. Recently, *Coniopteryx (Coniopteryx) borealis* Tjeder, 1930, *Coniopteryx (Coniopteryx) pygmaea* Enderlein, 1906 and *Semidalis pseudouncinata* Meinander, 1963 (Coniopterygidae) could be added to the Belgian fauna, but several additional species were still expected (LOCK & SAN MARTIN, 2013).

Material and methods

In the framework of an inventory of the nature reserve Bos t' Ename, coordinated by the conservators Guido Tack and Pieter Blondé, among others Neuroptera have been studied, mainly by sweeping the vegetation.



Fig. 1. Habitus of *Coniopteryx (Metaconiopteryx) esbenpeterseni* Tjeder, 1930 (Coniopterygidae) (photograph by Koen Lock).

Table 1. Neuroptera observed in the nature reserve Bos t'Ename.

Family Chrysopidae

1. *Chrysopa perla* (Linnaeus, 1758)
2. *Chrysoperla carnea* (Stephens, 1836) *sensu lato*
3. *Chrysotropia ciliata* (Wesmael, 1841)
4. *Cunctochrysa albolineata* (Killington, 1935)
5. *Hypochrysa elegans* (Burgmeister, 1839)
6. *Nineta flava* (Scopoli, 1763)
7. *Pseudomallada flavifrons* (Brauer, 1850)
8. *Pseudomallada prasinus* (Burmeister, 1839)

Family Coniopterygidae

9. *Coniopteryx (Coniopteryx) tineiformis* Curtis, 1834
10. *Coniopteryx (Metaconiopteryx) esbenpeterseni* Tjeder, 1930
11. *Conwentzia psociformis* (Curtis 1834)

Family Hemerobiidae

12. *Drepanopteryx phalaenoides* (Linnaeus, 1758)
13. *Hemerobius (Hemerobius) humulinus* Linnaeus, 1758
14. *Hemerobius (Hemerobius) micans* Olivier, 1792
15. *Micromus angulatus* (Stephens, 1836)
16. *Micromus variegatus* (Fabricius, 1793)
17. *Wesmaelius (Kimminsia) nervosus* (Fabricius, 1793)

Family Osmylidae

18. *Osmylus fulvicephalus* (Scopoli, 1763)

Family Sisyridae

19. *Sisyra nigra* (Retzius, 1783)
-

The Belgian Coniopterygidae can all be identified with the books of ASPÖCK *et al.* (1980a,b), which contain all the species occurring in Europe. Also the much cheaper identification key of PLANT (1997) contains all the species that have been reported in Belgium so far, however, some expected species are not included such as *Coniopteryx (Metaconiopteryx) tjederi* Kimmins, 1934 and *Coniopteryx (Holoconiopteryx) haematica* McLachlan, 1868.

Results

On 15.V.2014, 20.V.2014 and 25.V.2015, males of *Coniopteryx (Metaconiopteryx) esbenpeterseni* Tjeder, 1930 (Fig. 1) were observed in the nature reserve Bos t'Ename (Grootbos Noord) near the city

of Oudenaarde (province Oost-Vlaanderen). All specimens were found by sweeping sun-exposed branches of oak trees (*Quercus robur*). The species was only observed in May, while later in the year, only other wax fly species were found. In total, already 19 species of Neuroptera have been observed in the nature reserve Bos t'Ename (Table 1).

Discussion

Coniopteryx (Metaconiopteryx) esbenpeterseni Tjeder, 1930 was expected to occur in Belgium due to its presence in the Netherlands and the German federal states bordering Belgium (LOCK & SAN MARTIN, 2013). Although the species has only been discovered now, this doesn't necessarily mean it is a rare species in Belgium. The species turned out to be widespread and common in England, where the species was overlooked until 1987, but it has been regularly captured with light traps afterwards (PLANT, 1997).

In the Netherlands, several additional wax flies have been reported that have not yet been found in Belgium: *Coniopteryx (Metaconiopteryx) tjederi* Kimmins, 1934, *Helicoconis (Helicoconis) lutea* (Wellengren, 1871) and *Parasemidalis fuscipennis* (Reuter, 1894) (Hogenes, personal communication). In the German federal states bordering Belgium, Rheinland-Pfalz and Nordrhein-Westfalen, *Coniopteryx (Holoconiopteryx) haematica* McLachlan, 1868, *Coniopteryx (Metaconiopteryx) lentiae* H. Aspöck & U. Aspöck, 1964 and *Parasemidalis fuscipennis* (Reuter, 1894) were reported (SAURE, 2001). Further research will therefore probably result in extra species for the Belgian fauna.

Acknowledgements

I would like to thank Willem Hogenes (Naturalis) for information about the Coniopterygidae occurring in the Netherlands. Guido Tack and Pieter Blondé are acknowledged for their support during the inventory of Bos t'Ename.

References

- ASPÖCK H., ASPÖCK U., HÖLZEL H., 1980a. - *Die Neuropteren Europas*. Goecke & Evers, Krefeld, Volume I, 495 pp.
- ASPÖCK H., ASPÖCK U., HÖLZEL H., 1980b. - *Die Neuropteren Europas*. Goecke & Evers, Krefeld, Volume II, 355 pp.
- LOCK K. & SAN MARTIN G., 2013. - Checklist of the Belgian Neuroptera. *Bulletin S.R.B.E./K.B.V.E.*, 149: 233-239.
- PLANT C.W., 1997. - A key to the adults of British lacewings and their allies. *Field Studies*, 9: 179-269.
- SAURE C., 2001. - Verzeichnis der Netzflügler (Neuroptera) Deutschlands. *Entomofauna Germanica*, 6: 282-291.