

Checklist of Finnish Diptera published

by Jaakko Pohjoismäki¹, Antti Haarto², Kaj Winqvist³ and Jere Kahanpää⁴

¹ University of Eastern Finland, Department of Biology, P.O. Box 111, FI-80101 Joensuu, Finland; e-mail: jaakko.pohjoismaki@uef.fi

² Zoological Museum, Section of Biodiversity and Environmental Science, University of Turku, FI-20014 Turku, Finland

³ Mikonkatu 3C 52, 20100 Turku, Finland

⁴ Finnish Museum of Natural History, Zoology Unit, P.O. Box 17, FI-00014 University of Helsinki, Finland

The updated checklist of Finnish Diptera was published as a special issue of *Zookeys* in September 2014 (Kahanpää & Salmela 2014). The new checklist includes 6920 dipteran species from Finland of which 2932 belong to Nematocera or lower flies and 3989 to the suborder Brachycera. Together with the introductory chapter, the work is divided into 31 independently-authored chapters consisting of infraorders to single families. A total of 24 authors contributed to the work, the first of its kind since 1980 (Hackman 1980a, 1980b). The checklist is open access and easy to use as an online resource.



Figure 1. Male *Peleteria ruficornis* (Macquart) from Tampere, 2009. J. Pohjoismäki leg. Although not present in the Central European key (Tschorsnig & Herting 1994), the species is easy to tell apart from the other European *Peleteria* by the red tip of the otherwise blackish gray abdomen.

Additions to the Finnish Tachinidae

Tachinid enthusiasts might be delighted to see that the number of Tachinidae recorded from Finland has risen from 201 in 1980 to 319 in 2014 (Pohjoismäki & Kahanpää 2014). After the checklist was published, three additional tachinid species have been found in the country: *Lecanipa bicinta* (Meigen, 1824) and *Winthemia speciosa* (Egger, 1861), both from Lappeenranta, Koiveronmäki N67.71560 E5.93392, August 6, 2014, Iiro Kakko leg, and *Carcelia puberula* (Mesnil, 1941) from Espoo, Siikajärvi, N60.29 E24.52, May 25 to June 15, 2014, Jussi Koistinen leg. (**new records**). On the other hand the records of *Siphona variata* Andersen, 1982 proved to be misidentifications and this species must be deleted from the Finnish list. The current tachinid species count for Finland is a decent 321.

Comments on the tachinid fauna

A major part of the increase in species known from Finland is explained by the extensive collecting efforts in the 2000s, but some records might reflect real changes in the fauna, namely the northward expansion of species as a result of global climate change. A similar trend is seen in the Finnish lepidopteran species (see Kontiokari 2014 for a review). At the same time some conspicuous species that are common in old collections, such as *Dexia vacua* (Fallén, 1816) and *Dinera carinifrons* (Fallén, 1817) have declined sharply in numbers or have possibly gone extinct. Although the last records for these species are from the 1940s, they have been kept on the list as some regions of Finland remain poorly sampled.

Probably the most impressive Finnish newcomer is *Gonia divisa* Meigen, 1826, first recorded in 1979, next recorded in 2004 and now one of the most common spring tachinids in southern Finland up to the level of Joensuu (N69.4 E6.4). This likely reflects the real situation in the field and not only the changes in collecting intensity, as the other spring *Gonia*, *G. ornata* Meigen, 1826 and *G. picea* (Robineau-Desvoidy, 1830) are common in old collections. While *G. divisa* is widespread elsewhere in northern Europe, some of the other records in Pohjoismäki & Kahanpää (2014) are more surprising. For example, the following species have been regarded as having more southern European distributions (Tschorsnig & Herting 1994):

Exoristinae

Ceromasia rubrifrons (Macquart, 1834). First recorded in 2013 from Lieksa in North Carelia (63.2N 30.6E).

Tachininae

Peleteria ruficornis (Macquart, 1835) (Fig. 1). A species not included in the book on Central European Tachinidae (Tschorsnig & Herting 1994). First recorded in 1997 from Naantali, two more in 2009 (Tampere) and 2010 (Toijala). All locations are in south-west; i.e., the southern part of central Finland.

Dexiinae

Halidaya aurea Egger, 1856. First recorded in 2006 in Helsinki, three more records from the same region in 2011–14 and one record from Joensuu, North Carelia in 2013.

Phasiinae

Hemyda obscuripennis (Meigen, 1824). A single record, Espoo in the vicinity of Helsinki in 2012.

Hemyda vittata (Meigen, 1824). So far the only record is Pohja, in southwestern Finland, in 2006.

Towards a Red List of Finnish tachinids?

The brachyceran infraorders and families Xylophagoidea, Tabanoidea, Stratiomyoidea, Nemestrinoidea, Asiloidea, Dolichopodidae, Syrphidae, Neriodea, Diopsoidea, Conopoidea, Tephritoidea, Lauxanoidea, Scio-myzoidea and Clusiidae were evaluated in the 2010 Red List of Finnish species (Anonymous 2010). Together with a follow-up of the evaluated groups, it is intended that the evaluation will be extended to some other important families, such as Tachinidae, in the next Red List. Besides the problems with the paucity of recording, relatively little is known about the ecological requirements of tachinids. However, it could be possible to identify threatened tachinid species restricted to declining habitats, such as dry meadows (*Aphria* spp., *Demotocus*) or utilizing a threatened host as in the case of *Minthodes picta* (Zetterstedt, 1844) living on *Myrmecozela ochraceella* (Tengström, 1848) (Lepidoptera: Tineidae) (classified as NT). The evaluation will nevertheless be useful for the overall knowledge of the status and diversity of Finnish Tachinidae.

References

- Anonymous (2010) *The 2010 Red List of Finnish Species, December; Ministry of the Environment, Finnish Environment Institute SYKE*. Available online at: http://www.ymp.fi/en-US/Latest_news/Publications/Monographs/List_of_available_monographs_in_English%284482%29
- Hackman, W. (1980a) A check list of the Finnish Diptera. *Notulae entomologicae*, 60, 17–48.
- Hackman, W. (1980b) A check list of the Finnish Diptera. *Notulae entomologicae*, 60, 117–162.
- Kahanpää, J. & Salmela, J. (eds.) (2014) Checklist of the Diptera of Finland. *ZooKeys*, 441, 1–408. Online version available at: http://zookeys.pensoft.net/browse_journal_issue_documents.php?issue_id=603
- Kontiokari, S. (2014) Current status and expansion of species new to Finland in 1990–2009. *Baptria*, 39 (4), 92–115. [In Finnish with English summary.]
- Pohjoismäki, J. & Kahanpää, J. (2014) Checklist of the superfamilies Oestroidea and Hippoboscoidea of Finland (Insecta, Diptera). Pp. 383–408. *In*: Kahanpää, J. & Salmela, J. (eds.), Checklist of the Diptera of Finland. *ZooKeys*, 441, 1–408. Online version available at: <http://zookeys.pensoft.net/articles.php?id=4066>
- Tschorsnig, H.-P. & Herting, B. (1994) Die Raupenfliegen (Diptera: Tachinidae) Mitteleuropas: Bestimmungstabellen und Angaben zur Verbreitung und Ökologie der einzelnen Arten. *Stuttgarter Beiträge zur Naturkunde. Serie A (Biologie)*, 506, 1–170.