

Checklist of the superfamilies Conopoidea, Diopsoidea and Nerioidea of Finland (Insecta, Diptera)

Jere Kahanpää¹, Jens-Hermann Stuke²

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

2 Roter Weg 22, 26789 Leer, Germany

Corresponding author: Jere Kahanpää (jere.kahanpaa@helsinki.fi)

Academic editor: J. Salmela | Received 28 February 2014 | Accepted 28 April 2014 | Published 19 September 2014

<http://zoobank.org/6CE8F3E1-4DA1-4E7C-93B2-ACA484FFA7A1>

Citation: Kahanpää J, Stuke J-H (2014) Checklist of the superfamilies Conopoidea, Diopsoidea and Nerioidea of Finland (Insecta, Diptera). In: Kahanpää J, Salmela J (Eds) Checklist of the Diptera of Finland. ZooKeys 441: 251–257. doi: 10.3897/zookeys.441.7227

Abstract

A checklist of the Diptera superfamilies Conopoidea (Conopidae), Nerioidea (Micropezidae, Pseudopomyzidae) and Diopsoidea (Megamerinidae, Psilidae, Strongylophthalmyiidae, Tanypezidae) from Finland is presented. *Myopa vicaria* Walker, 1849 is formally recorded for the first time from the country.

Keywords

Checklist, Finland, Diptera, biodiversity, faunistics

Introduction

Four fly families form the superfamily Nerioidea. Two of them, Micropezidae and Pseudopomyzidae, occur in Finland. Neriids are mostly tropical and cypselomatids (*sensu stricto*) have only been found in the Australasian and Oriental regions. The pseudopomyzids were included in Cypselosomatidae Hendel, 1931 in the previous checklist (Hackman 1980) and are still often included in Cypselosomatidae *sensu lato*. The

Table 1. Number of species by family.

Family	Number of species in			Level of knowledge
	World (Pape et al. 2011)	Europe	Finland	
Conopidae	~796	83	19	good
Nerioidea:				
Micropezidae	573	22	6	average
Pseudopomyzidae	18	1	1	good
Diopsoidea:				
Psilidae	320	47	29	average
Tanypezidae	27 (Lonsdale 2013)	1	1	good
Strongylophthalmyiidae	47 (Lonsdale 2013)	2	2	good
Megamerinidae	15	1	1	good

Finnish micropezid fauna is relatively well known. One or two species of *Cnodacophora* Czerny, 1930 and *Rainieria* Rondani, 1843 could be present but are so far undetected.

Diopsoidea consists of seven to ten families (depending on the source), none particularly species-rich. Only four are found in Finland: Psilidae, Tanypezidae, Strongylophthalmyiidae and Megamerinidae. Tanypezidae and Strongylophthalmyiidae are here treated as separate families following Lonsdale (2013). Megamerinidae has been assigned to several superfamilies, most often Diopsoidea following McAlpine (1989), but also Nerioidea, Sciomyzoidea, and recently Opomyzoidea (Wiegmann et al. 2011). These families have raised no particular interest among Finnish dipterists. The genus *Chamaepsila* Hendel, 1917 in particular needs more attention. It is likely that a few Finnish species remain unrecognised in this genus.

The systematic position of the Conopidae is unclear. It has traditionally been considered basal within Schizophora. Wiegmann et al. (2011) listed Conopidae within Sciomyzoidea while others (see Skevington et al. 2010) place the family near Tephritoidea. Within the family the recent classification of Gibson and Skevington (2013) is followed. The Finnish conopid fauna is now relatively well-understood and few additional species are expected to occur in the country.

The Finnish species of these families were last listed by Hackman (1980).

Checklist part 1: Conopoidea

suborder Brachycera Macquart, 1834
 clade Eremoneura Lameere, 1906
 clade Cyclorrhapha Brauer, 1863
 infraorder Schizophora Becher, 1882
 ? clade Archischiza Enderlein, 1936
 superfamily Conopoidea Latreille, 1802

CONOPIDAE Latreille, 1802

CONOPINAE Latreille, 1802

CONOPS Linnaeus, 1758**sg. Conops** Linnaeus, 1758*Conops quadrifasciatus* De Geer, 1776*Conops strigatus* Wiedemann, 1824*Conops vesicularis* Linnaeus, 1761**PHYSOCEPHALA** Schiner, 1861*Physocephala nigra* (De Geer, 1776)

ZODIONINAE Rondani, 1856

ZODION Latreille, 1796*Zodion cinereum* (Fabricius, 1794)= *notatum* Meigen, 1804

SICINAE Zimina, 1960

SICUS Scopoli, 1763*Sicus ferrugineus* (Linnaeus, 1761)

MYOPINAE Macquart, 1834

MYOPA Fabricius, 1775*Myopa buccata* (Linnaeus, 1758)*Myopa fasciata* Meigen, 1804*Myopa hirsuta* Stuke & Clements, 2008= *strandii* auct. nec Duda, 1940*Myopa occulta* Wiedemann, 1824= *nigrifrons* von Bonsdorff, 1866*Myopa tessellatipennis* Motschulsky, 1859= *polystigma* auct. nec Rondani, 1857*Myopa testacea* (Linnaeus, 1767)*Myopa vicaria* Walker, 1849= *villosa* Ringdahl, 1945= *strandii* Duda, 1940**MYOPOTTA** Zimina, 1969*Myopotta pallipes* (Wiedemann, 1824)**THECOPHORA** Rondani, 1845= **Occemyia** Robineau-Desvoidy, 1853*Thecophora cinerascens* (Meigen, 1804)= *pusilla* (Meigen, 1824)= *atra* misid.*Thecophora distincta* (Wiedemann, 1824)= *melanopa* misid.*Thecophora fulvipes* (Robineau-Desvoidy, 1830)= *sundewalli* (Zetterstedt, 1844)*Thecophora jakutica* Zimina, 1974= *atra* misid.

DALMANNIINAE Hendel, 1916

DALMANNIA Robineau-Desvoidy, 1830

Dalmannia dorsalis (Fabricius, 1794)

= *punctata* misid.

Checklist part 2: Nerioida and Diopsoidea

suborder Brachycera Macquart, 1834

clade Eremoneura Lameere, 1906

clade Cyclorrhapha Brauer, 1863

infraorder Schizophora Becher, 1882

clade Muscaria Enderlein, 1936

parvorder Acalyptratae Macquart, 1835

superfamily Nerioida Westwood, 1840

MICROPEZIDAE Blanchard, 1840

CALOBATINAE Bigot, 1853

CALOBATA Meigen, 1803

Calobata petronella (Linnaeus, 1761)

NERIA Robineau-Desvoidy, 1830

Neria cibaria (Linnaeus, 1761)

Neria commutata (Czerny, 1930)

= *nigricornis* auct. nec Zetterstedt, 1838

Neria ephippium (Fabricius, 1794)

Neria nigricornis (Zetterstedt, 1838)

= *helleni* (Frey, 1918)

= *nitidicollis* (Frey, 1947)

MICROPEZINAE Blanchard, 1840

MICROPEZA Meigen, 1803

Micropeza corrigiolata (Linnaeus, 1767)

PSEUDOPOMYZIDAE McAlpine, 1966

PSEUDOPOMYZA Strobl, 1893

Pseudopomyza atrimana (Meigen, 1830)

superfamily Diopsoidea Billberg, 1820

MEGAMERINIDAE Hendel, 1913

MEGAMERINA Rondani, 1861

= *Lissa* Meigen, 1826 preocc.

Megamerina dolium (Fabricius, 1805)

= *loxocerina* (Fallén, 1820)

PSILIDAE Macquart, 1835

CHYLIZINAE Rondani, 1856

CHYLIZA Fallén, 1820**sg. Chyliza** Fallén, 1820*Chyliza annulipes* Macquart, 1835= *fuscipennis* auct. nec Robineau-Desvoidy, 1830*Chyliza leptogaster* (Panzer, 1798)= *scutellata* (Fabricius, 1798)*Chyliza nova* Collin, 1944*Chyliza vittata* Meigen, 1826

PSILINAE Macquart, 1835

tribe Loxocerini Macquart, 1835

IMANTIMYIA Frey, 1925*Imantimyia albisetia* (Schrank, 1803)= *ichneumonea* (Linnaeus, 1758) nom. dubium (see Notes)*Imantimyia fulviventris* (Meigen, 1826)*Imantimyia nigrifrons* (Macquart, 1835)*Imantimyia sylvatica* (Meigen, 1826)**LOXOCERA** Meigen, 1803**sg. LOXOCERA** Meigen, 1803*Loxocera aristata* (Panzer, 1801)= *ichneumonea* (Linnaeus, 1758) nom. dubium (see Notes)

tribe Psilini Macquart, 1835

CHAMAEPSILA Hendel, 1917= **Tetrapsila** Frey, 1925*Chamaepsila atra* (Meigen, 1826)*Chamaepsila bicolor* (Meigen, 1826)= *nigromaculata* (Strobl, 1909)*Chamaepsila buccata* (Fallén, 1826)= *gracilis* (Meigen, 1826)*Chamaepsila humeralis* (Zetterstedt, 1847)*Chamaepsila limbatella* (Zetterstedt, 1847)*Chamaepsila morio* (Zetterstedt, 1835)*Chamaepsila nigra* (Fallén, 1820)*Chamaepsila nigricornis* (Meigen, 1826)*Chamaepsila nigrosetosa* Frey, 1925*Chamaepsila obscuritarsis* (Loew, 1856)*Chamaepsila pallida* (Fallén, 1820)*Chamaepsila pectoralis* (Meigen, 1826)*Chamaepsila rosae* (Fabricius, 1794)*Chamaepsila rufa* (Meigen, 1826)*Chamaepsila unilineata* (Zetterstedt, 1847)**PSILA** Meigen, 1803

sg. FREYOPSILA Shatalkin, 1986

Psila sibirica (Frey, 1925)

sg. PSILA Meigen, 1803

Psila fimetaria (Linnaeus, 1761)

Psila merdaria Collin, 1944

PSILOSOMA Zetterstedt, 1860

Psilosoma audouini (Zetterstedt, 1835)

Psilosoma lefebvrei (Zetterstedt, 1835)

STRONGYLOPHTHALMYIIDAE Hendel, 1917

STRONGYLOPHTHALMYIA Heller, 1902

Strongylophthalmyia pictipes Frey, 1935

Strongylophthalmyia ustulata (Zetterstedt, 1847)

TANYPEZIDAE Rondani, 1856

TANYPEZA Fallén, 1820

Tanypeza longimana Fallén, 1820

Excluded species

Dalmannia punctata (Fabricius, 1794) not found within present borders.

Notes

Chamaepsila unilineata (Zetterstedt, 1847) and *C. nigrosetosa* Frey, 1925 were synonymized with *C. pallida* but they have recently been reinstated as valid species (Shatalkin and Merz 2010).

Loxocera ichneumonea (Linnaeus, 1758). This name has been used for *L. aristata* (Panzer) and *L. albisetata* (Schrank). Unfortunately no type material is known. Linné's original description is insufficient and may in fact belong to a hoverfly (see Buck and Marshall 2006).

Myopa vicaria Walker, 1849. One of the common *Myopa* species through Finland, but previously unreported due to difficulties in identification. Recorded from provinces *Ab, N, Ka, St, Ta, Sa, Kl, Om, Ok, Lkoc* and *Li*.

References

Buck M, Marshall SA (2006) Revision of New World *Loxocera* (Diptera: Psilidae), with phylogenetic redefinition of Holarctic subgenera and species groups. European Journal of Entomology 103: 193–219. doi: 10.14411/eje.2006.022

- Gibson JF, Skevington JH (2013) Phylogeny and taxonomic revision of all genera of Conopidae (Diptera) based on morphological data. *Zoological Journal of the Linnean Society* 167(1): 43–81 doi: 10.1111/j.1096-3642.2012.00873.x
- Hackman W (1980) A check list of the Finnish Diptera. *Notulae entomologicae* 60: 17–48, 117–162.
- Lonsdale O (2013) Review of the families Tanypezidae and Strongylophthalmyiidae, with a revision of *Neotanypeza* Hendel (Diptera: Schizophora). *Smithsonian Contributions to Zoology* 641: 1–60. <http://160.111.252.33/handle/10088/21132>, doi: 10.5479/si.19436696.641.1
- McAlpine JF (1989) Phylogeny and classification of the Muscomorpha. In: McAlpine JF, Wood DM (Eds) *Manual of Nearctic Diptera Volume 3. Agriculture Canada Monographs* 32. Research Branch, Agriculture Canada, Ottawa, 1397–1518.
- Pape T, Blagoderov V, Mostovski MB (2011) Order Diptera Linnaeus, 1758. In: Zhang Z-Q (Ed) *Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. Zootaxa* 3148: 222–229. <http://www.mapress.com/zootaxa/2011/f/zt03148p229.pdf>
- Shatalkin AI, Merz B (2010) The Psilidae (Diptera, Acalyptrata) of Switzerland, with description of two new species from Central Europe. *Revue Suisse de Zoologie* 117(4): 771–800. www.biodiversitylibrary.org/part/117602
- Skevington JH, Thompson FC, Camras S (2010) Conopidae (Thick-headed Flies). In: Brown BV, Borkent A, Cumming JM, Wood DM, Woodley NE, Zumbado MA (Eds) *Manual of Central American Diptera, Volume 2. NRC Research Press, Ottawa*, 847–855.
- Wiegmann BM, Trautwein MD, Winkler IS, Barr NB, Kim J-W, Lambkin C, Bertone MA, Cassel BK, Bayless KM, Heimberg AM, Wheeler BM, Peterson KJ, Pape T, Sinclair BJ, Skevington JH, Blagoderov V, Caravas J, Kutty SN, Schmidt-Ott U, Kampmeier GE, Thompson FC, Grimaldi DA, Beckenbach AT, Courtney GW, Friedrich M, Meier R, Yeates DK (2011) Episodic radiations in the fly tree of life. *Proceedings of the National Academy of Sciences of the United States of America* 108(14): 5690–5695. doi: 10.1073/pnas.1012675108