

# A Check-list of Swedish Lestremiinae (Diptera: Cecidomyiidae)

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The check-list of Swedish Lestremiinae given here includes 91 species, presented in the light of a recently completed revision of the lestremiine species of the Holarctic Region. It results both from the study of the relevant lestremiine material by the author and from additional data from the literature. Information on the occurrence of each species in the Swedish provinces are given.

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## Introduction

The gall midges belonging to the subfamily Lestremiinae are small nematocerous flies (body length 1-4 mm in average) with mycophagous larvae living free in and on decaying organic matter (above all on dead wood), in soil or in fungi. Not only in Scandinavia and not only concerning their taxonomy the Lestremiinae is a poorly studied group. Traditionally it is considered to be one of three subfamilies of the Cecidomyiidae, but, today it is certain that Lestremiinae is not a monophyletic group. The present classification is based on imaginal characters.

The first records of Swedish lestremiines go back to Zetterstedt (1850, 1851, 1852), who knew 5 species considered valid at present (Jaschhof 1998b): *Lestremia leucophaea* (Meigen, 1818), *Catarete brevinervis* (Zetterstedt, 1851), *Campylomyza bicolor* Meigen, 1818, *Campylomyza flavipes* Meigen, 1818 and *Aprionus halteratus* (Zetterstedt, 1852). *Sciara coracina* Zetterstedt, 1851, listed by Skuhrová (1986) as an *Anarete* species, actually belongs to the Sciaridae [= *Scatopsiara vitripennis* (Meigen, 1818), Menzel personal communication]. For nearly 150 years the records by Zetterstedt remained the only information on the occurrence of lestremiines in Sweden, as listed also by Wahl-

gren (1922) and Skuhrová (1986). Additionally, the latter author mentioned a Swedish distribution for *Peromyia palustris* (Kieffer, 1895).

Recently two more comprehensive faunal lists were published for South and Central Sweden (Mamaev 1996) and for Swedish Lapland (Jaschhof 1996). Additionally, several new species of Lestremiinae were described from Swedish type-localities (Jaschhof 1996, 1997a, 1997 b, 1998a, Mamaev & Jaschhof 1997, Mamaev & Zaitzev 1997).

The following check-list summarizes our present knowledge about the distribution of the Lestremiinae in Sweden in the light of a recently completed revision of the lestremiine species of the Holarctic Region (Jaschhof 1998b).

## Material studied

Alcohol-preserved material from the collections of the Swedish Museum of Natural History Stockholm (NHRS) and from personal collections by the author (Jaschhof collection in the Zoological Institute and Museum of the University of Greifswald, ZIMG) was prepared as Canada balsam mounted specimens on microscopic slides. Other lestremiine material mentioned here

is stored in the Museum of Zoology of the University of Lund (Coll. Zetterstedt) and in the Mamaev collection.

### Results

With 91 recorded species Sweden belongs to the better known and highly diverse regions of Europe with respect to this taxon, and without any doubt one can expect many undiscovered species. For only 11 of 30 Swedish provinces distributional information exists at all, and more intensive surveys of the lestremiine fauna are limited to a very few locations within the country.

The arrangement of the species in the table follows the revision by Jaschhof (1998b), beginning with the most primitive tribes and entering in alphabetical order the genera and species within the higher categories. The number following the abbreviation for the province refers to the reference (see below). References *in italics* are distinguished to make clear that the author has not checked the relevant lestremiine material himself.

#### Lestremiini

- Anarete candidata* Haliday, 1833: Up(6)  
*Anaretella defecta* (Winnertz, 1870): Sm(5),  
 Sö(5), Up(5, 6), Dr(6), Pi(5), To(5)  
*Anaretella iola* Pritchard, 1951: Up(5), Pi(5),  
 To(1)  
*Lestremia cinerea* Macquart, 1826: Up(5, 6),  
 Pi(5), To(1)  
*Lestremia leucophaea* (Meigen, 1818): Ög(10),  
 Sö(5, 10), Up(6), Gä(5), Pi(5)

#### Catochini

- Catarete brevinervis* (Zetterstedt, 1851):  
 Ås(10)  
*Catocha latipes* Haliday, 1833: Dr(6), Pi(5),  
 To(1)

#### Acoenoniini

- Acoenonia europaea* Mamaev, 1964: Sm(6),  
 Up(6)

#### Campylomyzini

- Campylomyza alpina* Siebke, 1863: Sm(5),  
 Sö(5), Up(5), Dr(6), Gä(5), Pi(5)

- Campylomyza armata* Mamaev, 1963: Dr(5),  
 Up(5)  
*Campylomyza bicolor* Meigen, 1818: Up(5),  
 Jä(9)  
*Campylomyza coronoidea* Jaschhof, 1998:  
 Dr(4), Up(5)  
*Campylomyza dilatata* Felt, 1907: To(1)  
*Campylomyza flavipes* Meigen, 1818: Sk(9),  
 Sm(6), Sö(5, 9), Up(5, 6), Pi(5), To(1)  
*Campylomyza fusca* Winnertz, 1870: Gä(5)  
*Campylomyza ormerodi* (Kieffer, 1913):  
 Sm(5), Sö(5), Up(5), Gä(5), Pi(5)  
*Campylomyza serrata* Jaschhof, 1998: Up(5),  
 Pi(5)  
*Campylomyza tridentata* Jaschhof, 1998:  
 Up(5), Dr(4)  
*Corinthomyia brevicornis* (Felt, 1907): Sm(6)  
*Excrescentia mutuata* Mamaev & Berest, 1991:  
 Sm(6), Sö(5), Pi(5)  
*Neurolyga fenestralis* Rondani, 1840: Up(5)  
*Neurolyga ovata* Jaschhof, 1996: Pi(1), To(1)

#### Bryomyiini

- Bryomyia bergrothi* Kieffer, 1895: Up(5, 6),  
 Dr(6), Pi(5)  
*Bryomyia gibbosa* (Felt, 1907): Up(5), Dr(6),  
 To(1)  
*Bryomyia incisa* Mamaev, 1963: Sk(6)  
*Bryomyia producta* (Felt, 1908): Sk(6), Sm(6),  
 Up(5, 6), Dr(6), Pi(5), To(1)  
*Heterogenella cambrica* (Edwards, 1938):  
 Pi(5)  
*Heterogenella hybrida* Mamaev, 1963: Dr(6),  
 To(1)  
*Heterogenella linearis* Yukawa, 1971: Nb(5)  
*Skuhraviana triangulifera* Mamaev, 1963:  
 Up(5), Pi(5)

#### Micromyini

- Micromyia lucorum* Rondani, 1840: Up(5)  
*Monardia (Monardia) kollari* (Winnertz,  
 1870): Pi(5)  
*Monardia (Monardia) obsoleta* Edwards, 1938:  
 Sm(5), Pi(5)  
*Monardia (Monardia) stirpium* Kieffer, 1895:  
 Dr(6)  
*Monardia (Xylopriona) atra* (Meigen, 1804):  
 Sm(5), Up(5), Gä(5), Pi(5)

*Monardia (Xylopriona) toxicodendri* (Felt, 1907): Sm(5)

*Polyardis adela* Pritchard, 1947: Sö(5), Up(5)

*Polyardis bispinosa* (Mamaev, 1963): Sm(5)

*Polyardis monothecca* (Edwards, 1938): Up(6), Dr(6), Gä(5), Nb(5)

*Polyardis silvalis* (Rondani, 1840): Sö(5), Up(5)

#### Aprionini

*Aprionus abiskoensis* Jaschhof, 1996: To(1)

*Aprionus accipitris* Jaschhof, 1997: Sö(2)

*Aprionus angeloides* Jaschhof, 1997: Pi(2)

*Aprionus betulae* Jaschhof, 1996: Sm(5), Ög(5), Up(5), Pi(5), To(1)

*Aprionus bidentatus* (Kieffer, 1894): Sö(5)

*Aprionus bifidus* Mamaev, 1963: Up(6), Dr(6), Nb(5), To(1)

*Aprionus bispinosus* Edwards, 1938: Sm(5, 6), Sö(5), Gä(5), Pi(5)

*Aprionus brachypterus* Edwards, 1938: Sm(5), Gä(5), Pi(5)

*Aprionus carinatus* Jaschhof, 1996: Up(5), Gä(5), Pi(5), To(1)

*Aprionus confusus* Mamaev, 1969: To(1)

*Aprionus cornutus* Berest, 1986: Dr(5)

*Aprionus dentifer* Mamaev, 1965: Dr(6)

*Aprionus ensiferus* Jaschhof, 1996: To(1)

*Aprionus flavidus* (Winnertz, 1870): Sk(6), Sö(5), Dr(6), Gä(5), Nb(5), Pi(5)

*Aprionus halteratus* (Zetterstedt, 1852): Ög(11), Sö(5), Up(5), Pi(5)

*Aprionus inquisitor* Mamaev, 1963: Up(6), Dr(6), Pi(5)

*Aprionus insignis* Mamaev, 1963: Up(5), Gä(5)

*Aprionus lapponicus* Jaschhof & Mamaev, 1997: Dr(1, 7), Pi(5), To(1, 7)

*Aprionus miki* Kieffer, 1895: Sm(5), Gä(5), Pi(5)

*Aprionus paludosus* Jaschhof & Mamaev, 1997: Up(1, 7), Dr(1, 7)

*Aprionus piceae* Jaschhof, 1997: Pi(5)

*Aprionus similis* Mamaev, 1963: Up(5)

*Aprionus spiniger* (Kieffer, 1894): Up(6), Dr(6), Gä(5), Pi(5)

*Aprionus subacutus* Jaschhof, 1997: Dr(5)

*Aprionus svecicus* Jaschhof, 1996: To(1)

*Aprionus tiliamcorticis* Mamaev, 1963: Gä(5), Pi(5)

#### Peromyiini

*Peromyia angellifera* Jaschhof, 1997: Sö(5)

*Peromyia bicolor* (Edwards, 1938): Sm(5), Gä(5), To(1)

*Peromyia bidentata* Berest, 1988: Sö(5)

*Peromyia caricis* (Kieffer, 1901): Ög(5), Sö(5), Gä(5), Nb(5), Pi(5), To(1)

*Peromyia diadema* Mamaev, 1963: Sö(5), Up(6)

*Peromyia discreta* Jaschhof, 1997: Gä(3), Pi(3)

*Peromyia edwardsi* Berest, 1994: Sm(5), Sö(5)

*Peromyia fungicola* (Kieffer, 1898): Sm(5), Up(5), Pi(5), To(1)

*Peromyia longicostalis* Mamaev & Zaitzev, 1997: Up(8)

*Peromyia mitrata* Jaschhof, 1997: Sö(3)

*Peromyia modesta* (Felt, 1907): Up(5)

*Peromyia monilis* Mamaev, 1965: Sö(5), To(1)

*Peromyia muscorum* (Kieffer, 1895): Sö(5), Up(5), Pi(5)

*Peromyia nemorum* (Edwards, 1938): To(1)

*Peromyia palustris* (Kieffer, 1895): Sö(5)

*Peromyia perpusilla* (Winnertz, 1870): Sm(5), Sö(5), Up(5), Dr(6)

*Peromyia photophila* (Felt, 1907): Sö(5), To(1)

*Peromyia ramosa* (Edwards, 1938): Up(5)

*Peromyia subanatina* Mamaev & Zaitzev, 1997: Up(8), Dr(8)

*Peromyia subborealis* Jaschhof, 1997: Sö(5)

*Peromyia syltefjordensis* Jaschhof, 1996: To(1)

*Peromyia tschirnhausi* Jaschhof, 1996: To(1)

*Peromyia tundrae* Jaschhof, 1996: To(1)

*Peromyia upupoides* Jaschhof, 1997: Sm(5), Up(5)

*Peromyia viklundi* Jaschhof, 1997: Pi(3)

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## References

- Jaschhof, M. 1996: Zur Gallmückenfauna Lapplands mit Beschreibung neuer Arten aus den Gattungen *Aprionus*, *Neurolyga* und *Peromyia* (Cecidomyiidae, Lestremiinae) (On the gall-midge fauna of Lapland with the description of new species of the genera *Aprionus*, *Neurolyga* and *Peromyia* (Cecidomyiidae, Lestremiinae)). – Stud. dipt. 3(2): 338-355. (1)
- Jaschhof, M. 1997a: Neue Gallmücken-Arten aus der Paläarktiskis (Diptera: Cecidomyiidae, Lestremiinae). 1. Beitrag: Gattung *Aprionus* (New species of gall-midges from the Palaearctic (Diptera: Cecidomyiidae, Lestremiinae). 1st contribution: genus *Aprionus*. – Reichenbachia 32(1): 113-124. (2)
- Jaschhof, M. 1997b: Neue paläarktische Gallmücken-Arten aus der Gattung *Peromyia* (Diptera: Cecidomyiidae, Lestremiinae) (New palaeartic gall-midge species of the genus *Peromyia* (Diptera: Cecidomyiidae, Lestremiinae)). – Dt. ent. Z. 44(1): 33-63 (3)
- Jaschhof, M. 1998a: Neue Gallmücken-Arten aus der Paläarktiskis (Diptera: Cecidomyiidae, Lestremiinae). 3. Beitrag: Gattungen *Campylomyza*, *Bryomyia*, *Heterogenella*, *Polyardis* und *Xylopriona* (New species of gall-midges from the Palaearctic (Diptera: Cecidomyiidae, Lestremiinae). 3rd contribution: genera *Campylomyza*, *Bryomyia*, *Heterogenella*, *Polyardis* and *Xylopriona*). – Stud. dipt. 4(2)(1997): 259-274. (4)
- Jaschhof, M. 1998b: Revision der Lestremiinae (Diptera: Cecidomyiidae) der Holarktiskis (Revision of the Lestremiinae (Diptera: Cecidomyiidae) of the Holarctic Region). – Stud. dipt. suppl. 4: 552 pp. (5)
- Mamaev, B. M. 1996: Records of gall midges of the subfamily Lestremiinae (Diptera: Cecidomyiidae) in Sweden. – Ent. Tidskr. 117: 61-62. (6)
- Mamaev, B. M. & Jaschhof, M. 1997: Neue paläarktische Arten aus der Gattung *Aprionus* Kieffer, 1894 (Diptera, Cecidomyiidae, Lestremiinae) (New palaeartic species of the genus *Aprionus* Kieffer, 1894 (Diptera, Cecidomyiidae, Lestremiinae)). – Beitr. Ent. 47(2): 451-463. (7)
- Mamaev, B. M. & Zaitzev, A. I. 1997: Four new aberrant species of gall midges of the genus *Peromyia* Kieffer (Diptera, Cecidomyiidae). – All-Russian Institute of Continuous Education in Forestry 7: 1-9. Pushkino. (8)
- Skuhrová, M. 1986: Family Cecidomyiidae. – In: Soós, Á. & Papp, L. (eds.): Catalogue of Palaearctic Diptera. Vol. 4: 72-297. Amsterdam (Elsevier).
- Wahlgren, E. 1922: Tvåvingar. Diptera. I. Orthorapha. Första gruppen. Myggor. Nemocera. – Svensk Insektfauna II: 201-273.
- Zetterstedt, J. W. 1850: Diptera Scandinaviae disposita et descripta 9: 3367-3710. Lund. (9)
- Zetterstedt, J. W. 1851: Diptera Scandinaviae disposita et descripta 10: 3711-4090. Lund. (10)
- Zetterstedt, J. W. 1852: Diptera Scandinaviae disposita et descripta 11: VII+4091-4545. Lund. (11)

## Sammanfattning

Hittills har 91 arter av Lestremiinae (Cecidomyiidae, gallmyggor) rapporterats från Sverige. Information om gruppen finns endast från 11 av Sveriges 30 landskap. En förteckning över de anmälda arterna med uppgifter om fyndens fördelning på landskap presenteras.