

# Checklist of the family Ceratopogonidae (Diptera) of Finland

Larry Huldén<sup>1</sup>, Lena Huldén<sup>2</sup>

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

**2** University of Helsinki, Department of Agricultural Sciences, P.O. Box 27, FI-00014 University of Helsinki, Finland

Corresponding author: *Larry Huldén* ([larry.hulden@helsinki.fi](mailto:larry.hulden@helsinki.fi))

---

Academic editor: *J. Kahanpää* | Received 17 April 2014 | Accepted 22 August 2014 | Published 19 September 2014

<http://zoobank.org/755BED11-1D1B-404F-AEAA-92F2DCB04BE3>

---

**Citation:** Huldén L, Huldén L (2014) Checklist of the family Ceratopogonidae (Diptera) of Finland. In: Kahanpää J, Salmela J (Eds) Checklist of the Diptera of Finland. ZooKeys 441: 53–61. doi: 10.3897/zookeys.441.7742

---

## Abstract

A checklist of the family Ceratopogonidae (Diptera) recorded from Finland is provided.

## Keywords

Checklist, Finland, Diptera, Ceratopogonidae

## Introduction

The biting midges (Ceratopogonidae) have only occasionally been studied by Finnish entomologists. Most notable are the studies by Lundström (1910, 1916), Munsterhjelm (1920), Storå (1939) and Hämäläinen (1988). The last mentioned reference is not published in print but included because the determinations have been checked by Peter Havelka. Other species reports were given by Frey (1918), Forsius (1924), Krogerus (1960), Meinander (1977) and Huldén et al. (2010). A considerable part of the species information has been contributed by foreign specialists, Edwards (1924), Clastrier (1961, 1991), Delecolle et al. (1983), Borkent and Bissett (1990), Szadziewski (2001), Ashe et al. (2007), Dominiak et al. (2007), Dominiak and Szadziewski (2010) and Dominiak (2012).

A World Catalogue of Ceratopogonidae is maintained by Art Borkent (2014), updated Jan. 20, 2014.

**Number of species:**

World: 6180 extant species + 274 fossil species (Borkent 2014)

Europe: 567 species (Fauna Europaea, Szadziewski, Borkent and Dominiak 2014)

Finland: 97 species

Faunistic knowledge level in Finland: medium

**Checklist**

suborder Nematocera Dumeril, 1805

infraorder Culicomorpha Hennig, 1948

superfamily Chironomoidea Newman, 1834

**CERATOPOGONIDAE** Newman, 1834

**FORCIPOMYIINAE** Lenz, 1934

**ATRICHOPOGON** Kieffer, 1906

**sg. *Atrichopogon*** Kieffer, 1906

*Atrichopogon brunripes* (Meigen, 1804)

*Atrichopogon fuscus* (Meigen, 1804)

= *fossicola* (Kieffer, 1922)

*Atrichopogon longicalcar* Remm, 1961

*Atrichopogon minutus* (Meigen, 1830)

*Atrichopogon pavidus* (Winnertz, 1852)

**sg. *Melochelea*** Wirth, 1956

*Atrichopogon lucorum* (Meigen, 1818)

*Atrichopogon meloesugans* Kieffer, 1922

= *winnertzi* auct. nec Goetghebuer, 1922

*Atrichopogon oedemerarum* Storå, 1939

**sg. *Psilokempia*** Enderlein, 1936

*Atrichopogon appendiculatus* (Goetghebuer, 1920)

*Atrichopogon forcipatus* (Winnertz, 1852)

*Atrichopogon maculatus* (Lundström, 1910)

= *minutus* var. *maculatus* Lundström, 1910

*Atrichopogon rostratus* (Winnertz, 1852)

**FORCIPOMYIA** Meigen, 1818

**sg. *Caloforcipomyia*** Saunders, 1957

*Forcipomyia glauca* Macfie, 1934

**sg. *Forcipomyia*** Meigen, 1818

*Forcipomyia bipunctata* (Linnaeus, 1767)

*Forcipomyia ciliata* (Winnertz, 1852)

- Forcipomyia costata* (Zetterstedt, 1838)  
 = *picea* (Winnertz, 1852)  
*Forcipomyia kaltenbachi* (Winnertz, 1852)  
*Forcipomyia myrmecophila* (Egger, 1863)  
*Forcipomyia nigra* (Winnertz, 1852)  
**sg. *Microhelea*** Kieffer, 1917  
*Forcipomyia fuliginosa* (Meigen, 1818)  
 = *brevimana* (Lundström, 1910)  
**sg. *Thyridomyia*** Saunders, 1925  
*Forcipomyia monilicornis* (Coquillett, 1905)  
 = *hirta* (Lundström, 1910)  
**sg. *Trichobelea*** Goetghebuer, 1920  
*Forcipomyia eques* (Johanssen, 1908)  
 DASYHELEINAE Lenz, 1934  
**DASYHELEA** Kieffer, 1911  
**sg. *Dasyhelea*** Kieffer, 1911  
*Dasyhelea bensoni* Edwards, 1933  
 = *vernalis* Remm, 1979  
*Dasyhelea bilineata* Goetghebuer, 1920  
 = *saxicola* (Edwards, 1929)  
 = *obscura* auct. nec (Winnertz, 1852)  
 = *versicolor* auct. nec (Winnertz, 1852)  
*Dasyhelea pallidiventris* (Goetghebuer, 1931)  
**sg. *Dicryptoscena*** Enderlein, 1936  
*Dasyhelea modesta* (Winnertz, 1852)  
 = *aestiva* (Winnertz, 1852)  
 = *longipalpis* Kieffer, 1913  
*Dasyhelea notata* Goetghebuer, 1920  
**sg. *Pseudoculicoides*** Malloch, 1915  
*Dasyhelea corinneae* Gosseries, 1991  
 = *scutellata* (Meigen, 1830), preocc.  
*Dasyhelea flavoscutellata* (Zetterstedt, 1850)  
 = *egens* (Winnertz, 1852)  
**sg. *Sebessia*** Remm, 1979  
*Dasyhelea holosericea* (Meigen, 1804)  
 CERATOPOGONINAE Newman 1834  
 tribe Culicoidini Kieffer, 1911  
***Culicoides*** Latreille, 1809  
*Culicoides achrayi* Kettle & Lawson, 1955  
*Culicoides albicans* (Winnertz, 1852)  
 = *vexans* auct. nec (Staeger, 1839)  
*Culicoides chiopterus* (Meigen, 1830)  
*Culicoides circumscriptus* Kieffer, 1918

- Culicoides dewulfi* Goetghebuer, 1936  
*Culicoides fascipennis* (Staeger 1839)  
*Culicoides festivipennis* Kieffer, 1914  
 = *odiblis* Austen, 1921  
*Culicoides grisescens* Edwards, 1939  
*Culicoides impunctatus* Goetghebuer, 1920  
*Culicoides kibunensis* Tokunaga 1937  
 = *cubitalis* Edwards in Edwards et al. 1939  
*Culicoides nubeculosus* (Meigen, 1830)  
*Culicoides obsoletus* (Meigen, 1818)  
 = *varius* (Winnertz, 1852)  
*Culicoides pallidicornis* (Kieffer 1919)  
*Culicoides pictipennis* (Staeger, 1839)  
*Culicoides pseudoheliophilus* Callot & Kremer, 1961  
*Culicoides pulicaris* (Linnaeus, 1758)  
*Culicoides punctatus* (Meigen, 1804)  
*Culicoides riethi* Kieffer, 1914  
*Culicoides riouxi* Callot & Kremer, 1961  
*Culicoides salinarius* Kieffer, 1914  
*Culicoides scoticus* Downes & Kettle, 1952  
*Culicoides segnis* Campbell & Pelham-Clinton 1960  
*Culicoides sphagnumensis* Williams, 1955  
 = *carjalaensis* Glukhova, 1957  
*Culicoides stigma* (Meigen, 1818)  
*Culicoides subfasciipennis* Kieffer, 1919  
 tribe Ceratopogonini Newman, 1834  
**ALLUAUDOMYIA** Kieffer, 1913  
*Alluaudomyia needhami* Thomsen, 1935  
 = *pentaspila* Remm & Glukhova, 1971  
*Alluaudomyia quadripunctata* (Goetghebuer, 1934)  
**BRACHYPOGON** Kieffer, 1899  
**sg. Isohelea** Kieffer, 1917  
*Brachypogon aquilonalis* (Clastrier, 1961)  
*Brachypogon hyperboreus* (Clastrier 1961)  
*Brachypogon incompletus* (Kieffer, 1925)  
 = *lapiae* Clastrier, 1961  
*Brachypogon nitidulus* (Edwards, 1921)  
 = *finniae* Clastrier, 1961  
*Brachypogon sociabilis* (Goetghebuer, 1920)  
**CERATOPOGON** Meigen, 1800  
*Ceratopogon lacteipennis* Zetterstedt, 1838  
*Ceratopogon niveipennis* Meigen, 1818  
 = *candidatus* Winnertz, 1852

**SCHIZOHELEA** Kieffer, 1917*Schizohoelea leucopeza* (Meigen, 1804)= *copiosa* Winnertz, 1852= *xanthopeza* (Clastrier, 1963)**SERROMYIA** Meigen, 1818*Serromyia atra* (Meigen, 1818)*Serromyia femorata* (Meigen, 1804)*Serromyia subinermis* Kieffer, 1919

tribe Heteromyiini Wirth, 1962

**CLINOHELEA** Kieffer, 1917*Clinohoelea unimaculata* (Macquart, 1826)= *variegata* (Winnertz, 1852)

tribe Sphaeromiini Newman 1834

**MALLOCHOHELEA** Wirth, 1962*Mallochohoelea inermis* (Kieffer, 1909)*Mallochohoelea munda* (Loew, 1864)= *dentata* (Kieffer, 1909)*Mallochohoelea nitida* (Macquart, 1826)*Mallochohoelea setigera* (Loew, 1864)*Mallochohoelea vernalis* Remm, 1965**PROBEZZIA** Kieffer, 1906= *Dicrobezzia* Kieffer, 1919*Probezzia concinna* (Meigen, 1818)= *venusta* v. *concinna* (Meigen, 1818)*Probezzia seminigra* (Panzer, 1798)= *venusta* (Meigen, 1818)= *borealis* (Clastrier, 1962)**SPHAEROMIAS** Curtis, 1829*Sphaeromyias fasciatus* (Meigen, 1804)*Sphaeromyias pictus* (Meigen, 1818)= *candidatus* (Loew, 1856) preocc.

tribe Palpomyiini Enderlein, 1936

**BEZZIA** Kieffer, 1899*Bezzia annulipes* (Meigen, 1830)*Bezzia bicolor* (Meigen, 1804)*Bezzia circumdata* (Staeger, 1839)= *solstitialis* (Winnertz, 1852)*Bezzia coracina* (Zetterstedt, 1850)= *albipes* (Winnertz, 1852)*Bezzia fascispinosa* Clastrier, 1962*Bezzia flavicornis* (Staeger, 1839)= *flavipalpis* (Winnertz, 1852)*Bezzia fuscifemoris* Remm, 1971

- Bezzia leucogaster* (Zetterstedt, 1850)  
 = *xanthocephala* Goetghebuer, 1911  
*Bezzia nigrifula* (Zetterstedt, 1838)  
*Bezzia nobilis* (Winnertz, 1852)  
 = *leucogaster* var. *punctata* Lundström, 1910  
*Bezzia winnertziana* Kieffer, 1919  
 = *gracilis* (Winnertz, 1852) nec Haliday, 1833  
**PALPOMYIA** Meigen, 1818  
*Palpomyia armipes* (Meigen, 1838)  
 = *rufipecta* (Winnertz, 1852)  
*Palpomyia distincta* (Haliday, 1833)  
*Palpomyia flavipes* (Meigen, 1804)  
 = *hortulana* Meigen, 1818  
*Palpomyia flavitarsis* (Meigen, 1838)  
*Palpomyia lineata* (Meigen, 1804)  
 = *stagnalis* Clastrier, 1962  
*Palpomyia lundstroemi* Remm, 1981  
 = *bispinosa* Lundström, 1916, preocc.  
*Palpomyia serripes* (Meigen, 1818)  
 = *transfuga* (Staeger, 1839)  
*Palpomyia tibialis* (Meigen, 1818)

## Notes

***Atrichopogon meloesugans* Kieffer, 1922.** This species was restored from synonymy with *A. winnertzi* Goetghebuer, 1922 by Szadziewski et al. (2007).

***Dasyhelea modesta* (Winnertz, 1852).** Old records reported before 1988 of this species (as *D. aestiva* (Winnertz, 1852) or *D. longipalpis* (Winnertz, 1852)) are questionable according to Dominiak and Szadziewski (2010). Records by Hämäläinen (1988) are valid.

***Ceratopogon neglectus* Winnertz, 1852.** Reported by Lundström (1910) as *Culicoides neglectus* from Finland. Szadziewski (1984) transferred it to *Dasyhelea*. Remm (1988) considered it a doubtful Ceratopogonidae. Because the type specimen is lost and the original description is insufficient it is considered nomen dubium by Dominiak and Szadziewski (2010). The species is removed from the Finnish list.

***Culicoides vexans* (Staeger, 1839).** Reported from Finland by Lundström (1910) who listed *Culicoides albicans* as a probable synonym. *C. vexans* was omitted in Frey and Storå (1941) and Havelka (1978) but included in Hackman (1980) and Szadziewski et al. (1997) (citing Hackman). According to Delecolle et al. (1983) Lundström's *C. vexans* represents *C. albicans*. *C. albicans* is included in the Finnish list and *C. vexans* is removed from the Finnish fauna.

***Culicoides reconditus* (Campbell & Pelham-Clinton, 1960) and *C. riouxi* Callot & Kremer, 1961.** *C. riouxi* was treated as a synonym of *C. reconditus* in Borkent

and Wirth (1997) but restored from synonymy in Borkent (2012). Delecolle et al. (1983) reported *C. riouxi* as a valid species from Finland (N: Tvärminne). The record of *C. reconditus* by Hämäläinen (1988) from Finland (Ta: Riihimäki) was checked by Havelka but because he considered *C. riouxi* and *C. reconditus* synonyms the identity of Hämäläinen's record remains unclear (see Havelka and Aquilar 1999 and Huldén et al. 2008 in accordance with Borkent and Wirth 1997). As a consequence *C. reconditus* is not included in the Finnish list.

***Culicoides salinarius* Kieffer, 1914.** According to Delecolle et al. (1983) this species is indistinguishable from *C. manchuriensis* Tokunaga, 1941 which is reported from Russian Karelia by Glukhova (1957).

***Probezzia concinna* (Meigen, 1818).** The record listed by Krogerus (1960) from Kuusamo district (by mistake as '*coracina*') is tentatively interpreted to be in the same locality in Finland as *Probezzia seminigra*, Kuusamo: Isosuo (Storå 1937). *P. concinna* was listed as a variety of *P. seminigra* in Frey and Storå (1941). Storå obviously identified both taxa. The species is here interpreted as a Finnish species.

***Palpomyia flavipennis* Meigen, 1804.** Misspelled species name for *P. flavipes* (Frey and Storå 1941).

***Palpomyia aterrima* Goetghebuer, 1921.** The record listed by Krogerus (1960) from Kuusamo district is from the Russian part according to locality data in Storå (1939). Not recorded in Finland.

***Palpomyia spinipes* (Meigen) in Panzer, 1806.** The record listed by Krogerus (1960) from Kuusamo district is from the Russian part according to the bog type information. Not recorded in Finland.

## Acknowledgements

Art Borkent (Canada) and Patrycja Dominiak (Poland) for corrections and updated faunistic information on species.

## References

- Ashe P, O'Connor JP, Chandler PJ (2007) *Dasyhelea* (*Dasyhelea*) *saxicola* (Edwards) (Diptera: Ceratopogonidae) new to Ireland and Wales from limestone rockpools with review of its ecology and distribution. *Entomologist's Monthly Magazine* 143: 113–126.
- Borkent A (2012) World species of Biting Midges (Diptera: Ceratopogonidae). <http://www.inhs.illinois.edu/files/8413/4219/9566/CeratopogonidaeCatalog.pdf> [Update February 18, 2012]
- Borkent A (2014) World species of Biting Midges (Diptera: Ceratopogonidae). [+ Number of taxa summarized] <http://www.inhs.illinois.edu/files/9913/9144/3328/CeratopogonidaeCatalog.pdf>, <http://www.inhs.illinois.edu/files/7613/9136/7587/WorldCatalogtaxa.pdf> [Update January 20, 2014]

- Borkent A, Bissett B (1990) A revision of the Holarctic species of *Serromyia* Meigen (Diptera: Ceratopogonidae). Systematic Entomology 15(2): 153–217. doi: 10.1111/j.1365-3113.1990.tb00311.x
- Borkent A, Wirth WW (1997) World species of biting midges (Diptera: Ceratopogonidae). Bulletin of the American Museum of Natural History 233: 1–257. <http://digitallibrary.amnh.org/dspace/handle/2246/1622>
- Clastrier J (1961) Notes sur les Ceratopogonides XV. – *Ceratopogon* et *Alluaudomyia* de la Region Palearctique. Archives de l'Institut Pasteur d'Algérie 39(4): 401–437.
- Clastrier J (1991) Description de *Forcipomyia* (*Dycea*) *madeira* n. sp. de l'Île de Madère, et présence en Finlande de *F. (Calofoforcipomyia) glauca* Macfie (Dipt. Ceratopogonidae). Bulletin de la Societe Entomologique de France 96(3): 261–266.
- Delecolle J-C, Brummer-Korvenkontio M, Kremer M (1983) *Culicoides* (Diptera, Ceratopogonidae) new to the Finnish fauna light trapped in the Tvärminne area (Hanko, Southern Finland). Notulae Entomologicae 63: 88–89.
- Dominiak P (2012) Biting midges of the genus *Dasyhelea* Kieffer (Diptera: Ceratopogonidae) in Poland. Polish Journal of Entomology 81: 211–304. <http://www.degruyter.com/view/j/pjen.2012.81.issue-3/v10200-012-0009-8/v10200-012-0009-8.xml>
- Dominiak P, Piotrowicz M, Szadziewski R (2007) New records of *Atrichopogon bargaensis* Remm and *A. longicalcar* Remm (Diptera: Ceratopogonidae) in Europe. Dipteron 23: 7–10. <http://www.kzbp.biol.ug.edu.pl/pages/pl/dzialalnosc-naukowa/publikacje.php>
- Dominiak P, Szadziewski R (2010) Distribution and new synonymy in European biting midges of the genus *Dasyhelea* Kieffer (Diptera: Ceratopogonidae). Zootaxa 2437: 1–37. Abstract on <http://www.mapress.com/zootaxa/2010/f/z02437p037f.pdf>
- Edwards FW (1924) *Forcipomyia eques* Joh. in Europe (Diptera, Chironomidae). Notulae Entomologicae 4: 97.
- Forsius R (1924) On Ceratopogoninae as ectoparasites of Neuroptera. Notulae Entomologicae 4: 98–99.
- Frey R (1918) En i Finland anträffad myrmekofil dipter, *Forcipomyia myrmecophilus* Egger. Meddelanden af Societas pro Fauna et Flora Fennica 44: 216–217.
- Frey R, Storå R (1941) Ceratopogonidae. In: Frey R (Ed) Enumeratio Insectorum Fenniae. VI. Diptera. Helsingin Hyönteisvaihtoyhdistys, Helsinki, Oy Tilgman Ab, 55–56.
- Glukhova VM (1957) Genus *Culicoides* Latr. (Diptera, Heleidae) in Karelia. Entomologicheskoe Obozrenie 36: 248–251. [in Russian]
- Hackman W (1980) Checklist of Finnish I. Diptera Nematocera and Brachycera. Notulae Entomologicae 60: 17–48.
- Havelka P (1978) Ceratopogonidae. In: Illies J (Ed) Limnofauna Europaea. 2. edition, G. Fischer, Stuttgart and Swets & Zeitlinger, Amsterdam, 441–458.
- Havelka P, Aquilar M (1999) Ceratopogonidae. In: Schumann H, Bährmann R, Stark A (Eds) Checkliste der Dipteren Deutschlands. Studia Dipterologica, Supplement 2: 33–38. [http://nlbif.eti.uva.nl/ccw/documents/Heiss,\\_1999.pdf](http://nlbif.eti.uva.nl/ccw/documents/Heiss,_1999.pdf)
- Hildén M, Silfverberg H, Talman R (2010) Accessions to the Zoological Museum of the Finnish Museum of Natural History, University of Helsinki in 2009. Memoranda Societatis pro Fauna et Flora Fennica 86: 86–89.



- Huldén L, Huldén L, Lahtinen T (2008) Bluetongue-virusen vektorilajit Suomessa. Suomen Eläinlääkärilehti 114(3): 158–161.
- Hämäläinen J (1988) Aquatic taxocoenosis of biting midges (Ceratopogonidae) in Finland. Master's Thesis, University of Helsinki, Helsinki, Finland. [in Finnish]
- Krogerus R (1936) Egendomligt levnadssätt hos några dipterer. Notulae Entomologicae 16: 27.
- Krogerus R (1960) Ökologische Studien über nordische Moorarthropoden. Commentationes Biologicae 21 (3): 1–238.
- Lundström C (1910) Beiträge zur Kenntnis der Dipteren Finlands VI, Chironomidae. Acta Societatis pro Fauna et Flora Fennica 33(10): 1–46.
- Lundström C (1916) Beiträge zur Kenntnis der Dipteren Finlands X, Supplement 4. Bibionidae, Chironomidae, Tipulidae. Acta Societatis pro Fauna et Flora Fennica 44(2): 1–23. [Lundström died in 1914, manuscript compiled by Richard Frey in 1915]
- Meinander M (1977) På svamp levande svidknott (Ceratopogonidae) [Brief reports]. Notulae Entomologicae 57: 63.
- Munsterhjelm G (1920) Om chironomidernas äggläggning och ägrupper. Acta Societatis pro Fauna et Flora Fennica 47(2): 1–174.
- Remm H (1988) Family Ceratopogonidae. In: Soós A, Papp L (Eds) Catalogue of palaeartic Diptera 3: 11–110.
- Storå R (1937) Mitteilungen über die Nematoceren Finnlands. Acta Societatis pro Fauna et Flora Fennica 60: 256–266.
- Storå R (1939) Mitteilungen über die Nematoceren Finnlands II. Notulae Entomologicae 19: 16–30.
- Szadziewski R (1984) On the synonymy and morphology of some *Culicoides* species (Diptera, Ceratopogonidae). Polskie Pismo Entomologiczne 53: 559–566. [http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy\\_doktoranci/szadziewski\\_r.php](http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy_doktoranci/szadziewski_r.php)
- Szadziewski R (2001) European *Atrichopogon* of the subgenus *Psilokempia* (Diptera: Ceratopogonidae). Polish Journal of Entomology 70: 359–374. [http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy\\_doktoranci/szadziewski\\_r.php](http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy_doktoranci/szadziewski_r.php)
- Szadziewski R, Dominiak P, Tothova A (2007) European *Atrichopogon* biting midges of the genus *Meleohelea* (Diptera: Ceratopogonidae). Polish Journal of Entomology 76: 267–284. [http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy\\_doktoranci/szadziewski\\_r.php](http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy_doktoranci/szadziewski_r.php)
- Szadziewski R, Krzywinski J, Gilka W (1997) Diptera Ceratopogonidae, Biting Midges. In: Nilsson AN (Ed) Pp in Aquatic Insects of North Europe – A taxonomic Handbook. Volume 2. Apollo Books, Stenstrup, Denmark, 243–263. [http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy\\_doktoranci/szadziewski\\_r.php](http://www.kzbp.biol.ug.edu.pl/pages/pl/o-katedrze/pracownicy_doktoranci/szadziewski_r.php)