

Family CERATOPOGONIDAE

The Ceratopogonidae, members of which are commonly called punkies, no-see-ums, or biting midges, are a cosmopolitan family of flies with over 4,000 fossil and extant species. Adults of extant forms feed on a variety of food sources including nec tar and vertebrate and invertebrate blood. Some species are predaceous, others are known as vectors of arboviruses and various parasitic diseases. Larval habitats are diverse and include moss, rotting wood, decaying plant matter, animal excrement, ponds, lakes (some in benthos), streams and rivers, wet soil, the water of leaf axils, and partially submerged substrates where they feed on detritus, fungi, algae, or small organisms.

Over 170 species of fossil Ceratopogonidae have been described in 31 genera. Many undescribed species exist in collections. Zherichin & Sukacheva (1973) recorded 305 undetermined specimens of Ceratopogonidae from the Cretaceous amber deposits of Siberia. Only a minor fraction of these have been described (Remm, 1976). Langenheim *et al.* (1960) recorded an undetermined specimen from the Cretaceous Alaskan amber. Other Cretaceous amber fossils of Ceratopogonidae have been described by Szadziewski & Schlüter (1992), Grogan & Szadziewski (1988), and Boesel (1937). What may be the oldest records of this family are as yet undescribed specimens from the Lower Cretaceous amber of Lebanon (Schlee & Dietrich, 1970) and Austria (Schlee, 1984).

Metz (1987) discussed the possibility that trace fossils from the Eocene Green River shales mentioned by Moussa (1970) were ceratopogonid larval trails. Additional records of the family in the Tertiary are by Poinar (1992), who recorded undetermined material from the Oligocene/Miocene amber of Chiapas, Mexico and Soom (1984) who recorded material of this family from the Palaeocene amber of Switzerland.

Crosskey (1988) removed two species of *Simulium* from Simuliidae and transferred them to “?Ceratopogonidae”. They are listed here under questionably placed species at the end of the family chapter.

Ref.: Szadziewski (1988, world checklist of amber taxa; 1993, Saxonian amber taxa).

Genus ALLUAUDOMYIA Kieffer

***ALLUAUDOMYIA** Kieffer, 1913b: 12. Type species: *Alluaudomyia imparunguis* Kieffer, 1913, by original designation.

succinea Szadziewski, 1988: 112. PA: Baltic Region (Eocene/Oligocene) [A].

Genus ATRICHOPOGON Kieffer

- ***ATRICHOPOGON** Kieffer, 1906: 53 (as *Ceratopogon* subgenus). Type species: *Ceratopogon exilis* Coquillett, 1902 [= *Ceratopogon levis* Coquillett, 1901], by subsequent designation of Coquillett (1910: 512).
- brunnescens** Statz, 1944c: 141. PA: Germany (Oligocene) [C].
- eocenicus** Szadziewski, 1988: 223. PA: Baltic Region (Eocene/Oligocene) [A]. Unidentified sp.—PA: Japan (Pleistocene) [K] (Saigusa, 1974: 425).
- Unidentified sp.—PA: Germany (Miocene) [A] (Schumann & Wendt, 1989: 41).

Genus ATRICULICOIDES Remm

- ATRICULICOIDES** Remm, 1976: 345 (108). Type species: *Atriculicoides macrophthalmus* Remm, 1976, by original designation.
- cenomanensis** Szadziewski & Schlüter, 1992: 74. PA: France (Upper Cretaceous) [A].
- incompletus** Szadziewski & Schlüter, 1992: 76. PA: France (Upper Cretaceous) [A].
- macrophthalmus** Remm, 1976: 346 (108). PA: Russia (Siberia) (Upper Cretaceous) [A].
- squamiciliatus** Remm, 1976: 346 (110). PA: Russia (Siberia) (Upper Cretaceous) [A].

Genus AUSTROCONOPS Wirth & Lee

- ***AUSTROCONOPS** Wirth & Lee, 1959: 337. Type species: *Austroconops mc-millani* Wirth & Lee, 1959, by original designation.
- borkenti** Szadziewski & Schlüter, 1992: 78. PA: France (Upper Cretaceous) [A].
- ?Unidentified sp.—AU: Australia (Upper Cretaceous) [C] (Szadziewski, 1990a: 231).

Genus BEZZIA Kieffer

- ***BEZZIA** Kieffer, 1899: 69. Type species: *Ceratopogon ornatus* Meigen, 1830, by original designation.
- eocenica** Szadziewski, 1988: 187. PA: Baltic Region (Eocene/Oligocene) [A].
- longipennis** Statz, 1944c: 151. PA: Germany (Oligocene) [C].

Genus BRACHYPOGON Kieffer

***BRACHYPOGON** Kieffer, 1899: 69. Type species: *Ceratopogon vitiosus* Win-
nertz, 1852, by original designation.

Subgenus BRACHYPOGON Kieffer

balticus Szadziewski, 1988: 93. PA: Baltic Region (Eocene/Oligocene) [A].

eocenicus Szadziewski, 1988: 91. PA: Baltic Region (Eocene/Oligocene) [A].

frigidus Remm, 1976: 115 (350) (*Ceratopogon*). PA: Russia (Siberia) (Upper
Cretaceous) [A].

gedanicus Szadziewski, 1988: 95. PA: Baltic Region (Eocene/Oligocene) [A].

miocaenicus Szadziewski, 1993: 610. PA: Germany (Miocene) [A].

Subgenus ISOHELEA Kieffer

***ISOHELEA** Kieffer, 1917b: 295 (as genus). Type species: *Ceratopogon lacteipennis* Win-
nertz, 1852 [preoccupied, = *Ceratopogon sociabilis* Goetghebuer, 1920], by ori-
ginal designation.

henningseni Szadziewski, 1988: 89. PA: Baltic Region (Eocene/Oligocene) [A].

polonicus Szadziewski, 1988: 88. PA: Baltic Region (Eocene/Oligocene) [A].

prominulus Meunier, 1904c: 228 [1904d: 239] (*Ceratopogon*). PA: Baltic Re-
gion (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].

Unplaced to Subgenus of BRACHYPOGON Kieffer

?Unidentified sp.—PA: Sicily (Miocene) [A] (Szadziewski, 1988: 12).

Genus CERATOCULICOIDES Wirth & Ratanaworabhan

***CERATOCULICOIDES** Wirth & Ratanaworabhan, 1971: 170. Type species:
Helea longipennis Wirth, 1952, by original designation.

danicus Szadziewski, 1988: 102. PA: Baltic Region (Eocene/Oligocene) [A].

Genus CERATOPALPOMYIA Szadziewski

CERATOPALPOMYIA Szadziewski, 1988: 171. Type species: *Ceratopalpo-
myia eocenica* Szadziewski, 1988, by original designation.

eocenica Szadziewski, 1988: 173. PA: Baltic Region (Eocene/Oligocene) [A].

Genus CERATOPOGON Meigen

- ***CERATOPOGON** Meigen, 1803: 261. Type species: *Tipula barbicornis* Meigen, 1803 (as “*barbicornis* Fabr.”) [misidentification, = *Ceratopogon communis* Meigen, 1804], by monotypy.
- ***CERAPOGON** Rafinesque, 1815: 130 (unnecessary new replacement name for *Ceratopogon* Meigen). Type species: *Tipula barbicornis* Meigen, 1803 [misidentification, = *Ceratopogon communis* Meigen, 1804], automatic.
- APEDELIA** Loew, 1850: 30 (as *Ceratopogon* subgenus). *Nomen nudum*.
- EUPEDELIA** Loew, 1850: 30 (as *Ceratopogon* subgenus). *Nomen nudum*.
- aquilonius** Boesel, 1937: 449. NE: Canada (Upper Cretaceous) [A].
- bitterfeldi** Szadziewski, 1993: 613. PA: Germany (Miocene) [A].
- ceranowiczi** Szadziewski, 1988: 77. PA: Baltic Region (Eocene/Oligocene) [A].
- crypticus** Szadziewski, 1988: 70. PA: Baltic Region (Eocene/Oligocene) [A].
- eminens** Meunier, 1904c: 229 [1904d: 240]. PA: Baltic Region (Eocene/Oligocene) [A].
- eucerus** Keilbach, 1982: 348. *Nomen nudum*.
- forcipiformis** Meunier, 1904c: 235 [1904d: 246]. PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].
- defectus** Meunier, 1904c: 229 [1904d: 240]. PA: Baltic Region (Eocene/Oligocene) [A].
- gedanicus** Szadziewski, 1988: 74. PA: Baltic Region (Eocene/Oligocene) [A].
- grogani** Szadziewski, 1988: 64. PA: Baltic Region (Eocene/Oligocene) [A].
- heini** Keilbach, 1982: 348. *Nomen nudum*.
- hennigi** Szadziewski, 1988: 60. PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].
- kotejai** Szadziewski, 1993: 616. PA: Germany (Miocene) [A].
- longicornis** Keilbach, 1982: 348. *Nomen nudum*.
- macronyx** Remm, 1976: 113 (350). PA: Russia (Siberia) (Upper Cretaceous) [A].
- margaritae** Szadziewski, 1988: 80. PA: Baltic Region (Eocene/Oligocene) [A].
- minimus** Keilbach, 1982: 348. *Nomen nudum*.
- miocaenicus** Szadziewski, 1993: 617. PA: Germany (Miocene) [A].
- pectinatus** Keilbach, 1982: 348. *Nomen nudum*.
- pilosus** Keilbach, 1982: 348. *Nomen nudum*.
- piotrowskii** Szadziewski, 1988: 75. PA: Baltic Region (Eocene/Oligocene) [A].
- remmicola** Szadziewski, 1988: 71. PA: Baltic Region (Eocene/Oligocene) [A].
- ritzkowskii** Szadziewski, 1988: 78. PA: Baltic Region (Eocene/Oligocene) [A].
- subeminens** Szadziewski, 1993: 617. PA: Germany (Miocene) [A].
- succinicola** Szadziewski, 1993: 621. PA: Germany (Miocene) [A].
- terminalis** Keilbach, 1982: 349. *Nomen nudum*.
- tertiaricus** Szadziewski, 1988: 62. PA: Baltic Region (Eocene/Oligocene) [A].
- ungulatus** Keilbach, 1982: 349. *Nomen nudum*.
- ungulinus** Keilbach, 1982: 349. *Nomen nudum*.
- Unidentified sp.—PA: Sicily (Miocene) [A] (Guérin-Méneville, 1838a: 170).

Genus **CULICOIDES** Latreille

- ***CULICOIDES** Latreille, 1809: 251. Type species: *Culicoides punctata* Latreille, 1809 [preoccupied, =*Ceratopogon punctatus* Meigen, 1804], by monotypy.
- ***PADROSIA** Rafinesque, 1815: 130 (unnecessary replacement name for *Culicoides* Meigen). Type species: *Ceratopogon punctatus* Meigen, 1804, automatic.

Subgenus **OECTACTA** Poey

- ***OECTACTA** Poey, 1853: 238 (as genus). Type species: *Oeacta furens* Poey, 1853, by monotypy.
- balticus** Szadziewski, 1988: 41. PA: Baltic Region (Eocene/Oligocene) [A].
- dasyheleiformis** Szadziewski, 1988: 36. PA: Baltic Region (Eocene/Oligocene) [A].
- speciosus** Meunier, 1904c: 229 [1904d: 240] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].
- succineus** Remm, 1976: 113 (349). PA: Russia (Siberia) (Upper Cretaceous) [A].
- succivarius** Szadziewski, 1988: 40. PA: Baltic Region (Eocene/Oligocene) [A].

Unplaced to Subgenus of **CULICOIDES** Latreille

- abbreviatipennis** Statz, 1944c: 142. PA: Germany (Oligocene) [C].
- abdominalis** Statz, 1944c: 145. PA: Germany (Oligocene) [C]. [Preoccupied by *abdominalis* Santos Abreu, 1918; no new replacement name proposed here.]
- atratus** Statz, 1944c: 147. PA: Germany (Oligocene) [C].
- austerus** Statz, 1944c: 144. PA: Germany (Oligocene) [C].
- bicolor** Statz, 1944c: 146. PA: Germany (Oligocene) [C].
- carri** Pierce, 1966: 91. NE: USA (Miocene) [P].
- casei** Grogan & Szadziewski, 1988: 809. NE: USA (Upper Cretaceous) [A].
- ceranowiczi** Szadziewski, 1988: 45. PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].
- elongatulus** Statz, 1944c: 143. PA: Germany (Oligocene) [C].
- eoselficus** Szadziewski, 1988: 43. PA: Baltic Region (Eocene/Oligocene) [A].
- filipalpis** Remm, 1976: 111 (347). PA: Russia (Siberia) (Upper Cretaceous) [A].
- fossilis** Pierce, 1966: 91. NE: USA (Miocene) [P].
- gedanensis** Szadziewski, 1988: 46. PA: Baltic Region (Eocene/Oligocene) [A].
- gracilior** Statz, 1944c: 143. PA: Germany (Oligocene) [C].
- jucundus** Statz, 1944c: 147. PA: Germany (Oligocene) [C].
- jucundus* Statz, 1941: fig. 8. *Nomen nudum*.
- kaluginae** Remm, 1976: 110 (347). PA: Russia (Siberia) (Upper Cretaceous) [A].
- laurae** Pierce, 1966: 91. NE: USA (Miocene) [P].
- liliputanus** Statz, 1944c: 142. PA: Germany (Oligocene) [C].
- megacanthus** Palmer, 1957: 272. NE: USA (Miocene) [P].
- miocenicus** Pierce, 1966: 93. NE: USA (Miocene) [P].
- obesus** Statz, 1944c: 145. PA: Germany (Oligocene) [C].

- obscuratus** Statz, 1944c: 144. PA: Germany (Oligocene) [C].
prussicus Szadziewski, 1988: 48. PA: Baltic Region (Eocene/Oligocene) [A].
sphenostylus Remm, 1976: 112 (347). PA: Russia (Siberia) (Upper Cretaceous) [A].
subgedanicus Szadziewski, 1993: 608. PA: Germany (Miocene) [A].
tenuiipennis Statz, 1944c: 147. PA: Germany (Oligocene) [C].
 Unidentified sp.—NE: Canada (Upper Cretaceous) [A] (Downes, 1978: 58).

Genus DASYHELEA Kieffer

- ***DASYHELEA** Kieffer, 1911b: 5. Type species: *Dasyhelea halophila* Kieffer, 1911, by monotypy.
antiqua Palmer, 1957: 266 (as *australis* Wirth subspecies). NE: USA (Miocene) [P].
browneae Pierce, 1966: 87. NE: USA (Miocene) [P].
dara Pierce, 1966: 88. NE: USA (Miocene) [P].
eodicryptoscenica Szadziewski, 1988: 228. PA: Baltic Region (Eocene/Oligocene) [A].
gedanica Szadziewski, 1988: 226. PA: Baltic Region (Eocene/Oligocene) [A].
judithae Pierce, 1966: 88. NE: USA (Miocene) [P].
kanakoffi Pierce, 1966: 89. NE: USA (Miocene) [P].
miocaenica Szadziewski, 1993: 651. PA: Germany (Miocene) [A].
stanislavi Szadziewski, 1988: 230. PA: Baltic Region (Eocene/Oligocene) [A].
stenoceras Palmer, 1957: 271. NE: USA (Miocene) [P].

Genus EOHELEA Petrunkevitch

- EOHELEA** Petrunkevitch, 1956: 675 [1957: 208]. Type species: *Eohelea stridulans* Petrunkevitch, 1956, by monotypy.
fossicola Szadziewski, 1993: 624. PA: Germany (Miocene) [A].
gedanica Szadziewski, 1988: 165. PA: Baltic Region (Eocene/Oligocene) [A].
grogani Szadziewski, 1988: 164. PA: Baltic Region (Eocene/Oligocene) [A].
miocaenica Szadziewski, 1993: 625. PA: Germany (Miocene) [A].
petrunkevitchi Szadziewski, 1984: 39 [1985: 127]. PA: Baltic Region (Eocene/Oligocene) [A].
sakhalinica Szadziewski, 1990b: 78. PA: Russia (Sakhalin I) (Paleocene/Eocene) [A].
sinuosa Meunier, 1904c: 234 [1904d: 245] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].
stridulans Petrunkevitch, 1956: 675 [1957: 209]. PA: Baltic Region (Eocene/Oligocene) [A].

Genus FORCIPOMYIA Meigen

- ***FORCIPOMYIA** Meigen, 1818: 73, 75. Type species: *Tipula bipunctata* Linnaeus, 1767, automatic (by designation of type species for *Labidomyia*). [Generic name originally proposed in synonymy with *Ceratopogon*, but available under I.C.Z.N. Code Article 11(d).]
- ***LABIDOMYIA** Stephens, 1829a: 52 [1829b: 239] (unnecessary new replacement name for *Forcipomyia* Meigen). Type species: *Tipula bipunctata* Linnaeus, 1767, by subsequent designation of Westwood (1840: 126).

Subgenus EUPROJOANNISIA Brèthes

- ***EUPROJOANNISIA** Brèthes, 1914: 155 (as genus). Type species: *Euprojoannisia platensis* Brèthes, 1914, by original designation.
- berendti** Szadziewski, 1988: 209. PA: Baltic Region (Eocene/Oligocene) [A].
- henningseni** Szadziewski, 1988: 211. PA: Baltic Region (Eocene/Oligocene) [A].
- miocaenica** Szadziewski, 1993: 647. PA: Germany (Miocene) [A].
- piriformis** Meunier, 1904c: 228 [1904d: 239] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].
- tuberculosa** Szadziewski, 1993: 648. PA: Germany (Miocene) [A].

Subgenus FORCIPOMYIA Meigen

- eocostata** Szadziewski, 1988: 202. PA: Baltic Region (Eocene/Oligocene) [A].
- gedanicola** Szadziewski, 1988: 200. PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].
- lyneborgi** Szadziewski, 1988: 196. PA: Baltic Region (Eocene/Oligocene) [A].
- pseudomicrohelea** Szadziewski, 1988: 205. PA: Baltic Region (Eocene/Oligocene) [A].
- subgedanicola** Szadziewski, 1993: 645. PA: Germany (Miocene) [A].
- turbinata** Meunier, 1904c: 227 [1904d: 238] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].
- uncula** Meunier, 1904c: 227 [1904d: 238] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].
- unculiformis** Szadziewski, 1993: 646. PA: Germany (Miocene) [A].
- Unidentified sp.—PA: Russia (Sakhalin I) (Paleocene/Eocene) [A] (Szadziewski, 1990: 79).

Subgenus LASIOHELEA Kieffer

- ***LASIOHELEA** Kieffer, 1921: 115 (as genus). Type species: *Atrichopogon pilosipennis* Kieffer, 1919 [= *Ceratopogon velox* Winnertz, 1852], by original designation.
- succinea** Szadziewski, 1988: 194. PA: Baltic Region (Eocene/Oligocene) [A].
- Unidentified sp.—PA: Russia (Sakhalin I) (Paleocene/Eocene) [A] (Szadziewski, 1990: 79).

Subgenus **PHYTOHELEA** Remm

***PHYTOHELEA** Remm, 1971: 189. Type species: *Ceratopogon bromelicola* Lutz, 1914, by original designation.

eophytoheleana Szadziewski, 1988: 215. PA: Baltic Region (Eocene/Oligocene) [A].

Subgenus **TRICHOHELEA** Goetghebuer

***TRICHOHELEA** Goetghebuer, 1920: 39 (as genus). Type species: *Trichohelea tonnoiri* Goetghebuer, 1920 [= *Apelma auronitens* Kieffer, 1919], by original designation.

bifidicola Szadziewski, 1993: 649. PA: Germany (Miocene) [A].

otrichoheleana Szadziewski, 1988: 213. PA: Baltic Region (Eocene/Oligocene) [A].

succinicola Szadziewski, 1993: 650. PA: Germany (Miocene) [A].

Unplaced to Subgenus of **FORCIPOMYIA** Meigen

eobreviflagellata Szadziewski, 1988: 220. PA: Baltic Region (Eocene/Oligocene) [A].

krzeminskii Szadziewski, 1988: 217. PA: Baltic Region (Eocene/Oligocene) [A].

kulickae Szadziewski, 1988: 219. PA: Baltic Region (Eocene/Oligocene) [A].

Unidentified sp.—NE: Canada (Upper Cretaceous) [A] (Downes & Wirth, 1981: 396).

Unidentified sp.—PA: Russia (Sakhalin I) (Paleocene/Eocene) [A] (Szadziewski, 1990: 78).

Genus **FOSSIHELEA** Szadziewski

FOSSIHELEA Szadziewski, 1988: 104. Type species: *Ceratopogon gracilitarsis* Meunier, 1904, by original designation.

gracilitarsis Meunier, 1904c: 235 [1904d: 246] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

miocaenica Szadziewski, 1993: 627. PA: Germany (Miocene) [A].

Genus **GEDANOHELEA** Szadziewski

GEDANOHELEA Szadziewski, 1988: 166. Type species: *Gedanohelea loewi* Szadziewski, 1988, by original designation.

loewi Szadziewski, 1988: 168. PA: Baltic Region (Eocene/Oligocene) [A].

succinea Szadziewski, 1988: 169. PA: Baltic Region (Eocene/Oligocene) [A].

wirthi Szadziewski, 1988: 170. PA: Baltic Region (Eocene/Oligocene) [A].

Genus HETEROMYIA Say

***HETEROMYIA** Say, 1825: pl. 35. Type species: *Heteromyia fasciata* Say, 1825, by monotypy.

Unidentified sp.—NT: Dominican Republic (Oligocene/Miocene) [A] (Schlee, 1980: 50).

Genus LEPTOCONOPS Skuse

***LEPTOCONOPS** Skuse, 1889: 288. Type species: *Leptoconops stygius* Skuse, 1889, by monotypy.

boreus Kalugina, 1991: 78 (1992: 76). PA: Russia (Siberia) (Upper Cretaceous) [A].

succineus Szadziewski, 1988: 233. PA: Baltic Region (Eocene/Oligocene) [A]. Unidentified sp.—PA: Russia (Sakhalin I) (Paleocene/Eocene) [A] (Szadziewski, 1990: 79).

Unidentified sp.—NE: Canada (Upper Cretaceous) [A] (Downes & Wirth, 1981: 396).

Unidentified sp.—PA: France (Upper Cretaceous) [A] (Szadziewski & Schlüter, 1992: 78).

Genus LEPTOHELEA Wirth & Blanton

***LEPTOHELEA** Wirth & Blanton, 1970: 12. Type species: *Leptohelea micronyx* Wirth & Blanton, 1970, by original designation.

taimyrica Remm, 1976: 115 (351) (*Baeohelea*). PA: Russia (Siberia) (Upper Cretaceous) [A].

Genus MANTOHELEA Szadziewski

MANTOHELEA Szadziewski, 1988: 144. Type species: *Ceratopogon lacus* Meunier, 1904, by original designation.

gedanica Szadziewski, 1988: 146. PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].

laca Meunier, 1904c: 232 [1904d: 243] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

Genus MEUNIEROHELEA Szadziewski

- ***MEUNIEROHELEA** Szadziewski, 1988: 148. Type species: *Meunierohelea nielseni* Szadziewski, 1988, by original designation.
- ***CHIMAEROHELEA** Debenham, 1988: 801. Type species: *Chimaerohelea caligula* Debenham, 1988, by original designation. **New synonymy**.
- gedanicola** Szadziewski, 1988: 153. PA: Baltic Region (Eocene/Oligocene) [A].
- miocaenica** Szadziewski, 1993: 622 (*Chimaerohelea*). PA: Germany (Miocene) [A]. **New combination**.
- nielseni** Szadziewski, 1988: 150. PA: Baltic Region (Eocene/Oligocene) [A].
- wirthi** Szadziewski, 1988: 157. PA: Baltic Region (Eocene/Oligocene) [A].

Genus MONOHELEA Kieffer

- ***MONOHELEA** Kieffer, 1917*b*: 294. Type species: *Monohelea hieroglyphica* Kieffer, 1917, by original designation.
- baltica** Szadziewski, 1988: 130. PA: Baltic Region (Eocene/Oligocene) [A].
- clunipes** Loew, 1850*b*: 30 (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].

Genus NANNOHELEA Grogan & Wirth

- ***NANNOHELEA** Grogan & Wirth, 1980: 374. Type species: *Ceratopogon bou-roni* Clastrier, 1961, by original designation.
- eocenica** Szadziewski, 1988: 101. PA: Baltic Region (Eocene/Oligocene) [A].
- grogani** Szadziewski, 1988: 99. PA: Baltic Region (Eocene/Oligocene) [A].

Genus NEOCULICOIDES Pierce

- NEOCULICOIDES** Pierce, 1966: 93. Type species: *Neoculicoides jeanneae* Pierce, 1966, by original designation.
- jeanneae** Pierce, 1966: 94. NE: USA (Miocene) [P].

Genus NEUROHELEA Kieffer

- ***NEUROHELEA** Kieffer, 1925: 112. Type species: *Ceratopogon luteitarsis* Meigen, 1838, by monotypy.
- cothurnata** Meunier, 1904*c*: 231 [1904*d*: 242] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

flagellus Meunier, 1904c: 230 [1904d: 241] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

Genus PALPOMYIA Meigen

***PALPOMYIA** Meigen, 1818: 82. Type species: *Ceratopogon flavipes* Meigen, 1804 (as *flavipes* with *Palpomyia geniculata* Meigen in synonymy), by monotypy.

[Generic name originally published in synonymy with *Ceratopogon* but available under I.C.Z.N. Code Art. 11(d).]

MIOPALPOMYIA Pierce, 1966: 95. Type species: *Miopalpomyia shilo* Pierce, 1966, by original designation.

NEOPALPOMYIA Pierce, 1966: 95. Type species: *Neopalpomyia freyi* Pierce, 1966, by original designation.

PARAPALPOMYIA Pierce, 1966: 97. Type species: *Parapalpomyia ryshkoffi* Pierce, 1966, by original designation.

edwardsi Cockerell, 1921c: 469. PA: UK (England) (Eocene/Oligocene) [C].

erikae Szadziewski, 1993: 642. PA: Germany (Miocene) [A].

freyi Pierce, 1966: 95 (*Neopalpomyia*). NE: USA (Miocene) [P].

jantari Szadziewski, 1988: 182. PA: Baltic Region (Eocene/Oligocene) [A].

multispinosa Pierce, 1966: 97 (*Neopalpomyia*). NE: USA (Miocene) [P].

riedeli Szadziewski, 1988: 183. PA: Baltic Region (Eocene/Oligocene) [A].

ryshkoffi Pierce, 1966: 98 (*Parapalpomyia*). NE: USA (Miocene) [P].

shilo Pierce, 1966: 95 (*Miopalpomyia*). NE: USA (Miocene) [P].

succinea Szadziewski, 1988: 185. PA: Baltic Region (Eocene/Oligocene) [A].

unca Hong, 1981: 58. PA: China (Eocene) [A].

Genus PARACULICOIDES Pierce

PARACULICOIDES Pierce, 1966: 94. Type species: *Paraculicoides rouseae* Pierce, 1966, by original designation.

rouseae Pierce, 1966: 94. NE: USA (Miocene) [P].

Genus PHYSOHELEA Grogan & Wirth

***PHYSOHELEA** Grogan & Wirth, 1979: 53. Type species: *Neurohelea oedidactyla* Ingram & Macfie, 1931, by original designation.

obtusa Meunier, 1904c: 235 [1904d: 246] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

cothurnatulus Meunier, 1904c: 231 [1904d: 242] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

Genus PROTOCULICOIDES Boesel

PROTOCULICOIDES Boesel, 1937: 50. Type species: *Protoculicoides depressus* Boesel, 1937, by original designation.

depressus Boesel, 1937: 51. NE: Canada (Upper Cretaceous) [A].

Genus SERROMYIA Meigen

***SERROMYIA** Meigen, 1818: 83. Type species: *Ceratopogon femoratus* Meigen, 1804, by monotypy.

alpheia Heyden, 1870: 251 (*Ceratopogon*). PA: Germany (Oligocene) [C]; PA: Germany (Miocene) [A].

austera Statz, 1941: fig. 10. *Nomen nudum*.

austera Statz, 1944c: 150. PA: Germany (Oligocene) [C].

colorata Statz, 1944c: 150. PA: Germany (Oligocene) [C].

spinofemorata Statz, 1941: fig. 9. *Nomen nudum*.

spinofemorata Statz, 1944c: 151. PA: Germany (Oligocene) [C].

anomalicornis Loew, 1850b: 30 (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

polonica Szadziewski, 1988: 135. PA: Baltic Region (Eocene/Oligocene) [A].

ryszardi Borkent *in* Borkent & Bisset, 1990: 207. PA: Baltic Region (Eocene/Oligocene) [A].

sinuosa Borkent *in* Borkent & Bisset, 1990: 207. PA: Baltic Region (Eocene/Oligocene) [A].

spinigera Loew, 1850b: 30 (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].

elongatus Meunier, 1904c: 242 [1904d: 253] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].

succinea Szadziewski, 1988: 136. PA: Baltic Region (Eocene/Oligocene) [A].

Genus STILOBEZZIA Kieffer

***STILOBEZZIA** Kieffer, 1911a: 118. *Stilobezzia festiva* Kieffer, 1911, by original designation.

Subgenus ACANTHOHELEA Kieffer

- ***ACANTHOHELEA** Kieffer, 1917a: 198 (as genus). Type species: *Acanthohelea pruinosa* Kieffer, 1917, by monotypy.
- PALEOTETRAGONEURA** Meunier, 1920b: 1221 (897). Type species: *Tetragoneura veterana* Meunier, 1920, by monotypy.
- falcata** Meunier, 1904c: 233 [1904d: 244] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A]; PA: Germany (Miocene) [A].
- spinosa** Meunier, 1904c: 234 [1904d: 245] (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].
- kutscheri** Szadziewski, 1993: 637. PA: Germany (Miocene) [A].
- saxonica** Szadziewski, 1993: 638. PA: Germany (Miocene) [A].
- succinea** Szadziewski, 1993: 639. PA: Germany (Miocene) [A].
- veterana** Meunier, 1920b: 897 (1221) (*Tetragoneura*). PA: Germany (Oligocene) [C].
- goetghebueri** Statz, 1944c: 148. PA: Germany (Oligocene) [C].
- Unidentified sp.—Unidentified sp.—PA: Russia (Sakhalin I) (Paleocene/Eocene) [A] (Szadziewski, 1990: 78).

Subgenus STILOBEZZIA Kieffer

- Unidentified sp.—PA: Baltic Region (Eocene/Oligocene) [A] (Szadziewski, 1988: 124).

Genus WIRTHOHELEA Szadziewski

- WIRTHOHELEA** Szadziewski, 1988: 158. Type species: *Wirthohelea trifida* Szadziewski, 1988, by original designation.
- trifida** Szadziewski, 1988: 159. PA: Baltic Region (Eocene/Oligocene) [A].

Unplaced Species of CERATOPOGONIDAE

- canadensis** Boesel, 1937: 47 (*Atrichopogon*). NE: Canada (Upper Cretaceous) [A].
- crassipalpis** Meunier, 1912c: 191 [1912d: 365] (*Ceratopogon*). AF: Madagascar (Holocene) [K].
- cretea** Boesel, 1937: 46 (*Lasiohelea*). NE: Canada (Upper Cretaceous) [A].
- escheri** Giebel, 1856: 252 (*Ceratopogon*). PA: Baltic Region (Eocene/Oligocene) [A].
- globosa** Boesel, 1937: 47 (*Lasiohelea*). NE: Canada (Upper Cretaceous) [A].
- hotchkissae** Pierce, 1966: 94 (*Johannsenomyia*). NE: USA (Miocene) [P].
- madagascariensis** Meunier, 1912c: 191 [1912d: 365] (*Ceratopogon*). AF: Madagascar (Holocene) [K].
- swinhoei** Cockerell, 1919b: 243 (*Johannsenomyia*). OR: Myanmar (Oligocene) [A].
- tenuipes** Meunier, 1912d: 366 (*Ceratopogon*). AF: Madagascar (Holocene) [K].

- tyrrelli** Boesel, 1937: 48 (*Dasyhelea*). NE: Canada (Upper Cretaceous) [A].
viscatus Meunier, 1912c: 191 [1912d: 364] (*Ceratopogon*). AF: Madagascar
(Holocene) [K].

Questionably Placed in CERATOPOGONIDAE

- pasitheim** Heyden, 1870: 238 (*Simulium*). PA: Germany (Oligocene) [C].
terribile Förster, 1891: 467 (*Simulium*). PA: Germany (Oligocene) [C].