

## Pipunculidae

Jocelyn Claude (1998 Checklist: Marc De Meyer & Milan Kozánek)

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**Diagnosis:** Among the Diptera Brachycera, the family Pipunculidae is characterised by its large compound eyes, occupying almost the entire globular head. Their small size (2-12 mm), uniform dark appearance and rather cryptic behaviour allow Pipunculidae to remain unnoticed.

**Biology:** Adults are non-flower visitors and can be found in a wide variety of habitats (wetlands, forests, meadows, lawns...). In the larval stage, Pipunculidae are almost exclusively endoparasitoids of Auchenorrhyncha, notably of the families Cixiidae, Cercopidae, Flatidae, Fulgoridae, Delphacidae and Membracidae (Freytag 1985, Ferrar 1987, Kapoor et al. 1987, Skevington & Marshall 1997). This highly specialised developmental strategy is unique to this family of Diptera. The overdevelopment of the eyes by the enlarged ommatidia occupying the whole face of the head, as well as the ovipositor of females, strongly sclerotised like a sting, are a direct consequence of their behaviour. Only representatives of the genus *Nephrocerus* Zetterstedt, 1838, an exception in the Pipunculidae, parasitise the Diptera Tipulidae (Koenig & Young 2007, Kehlmaier & Floren 2010).

**Nomenclature and classification:** According to Motamedinia et al. (2021). Currently, 1484 species of Pipunculidae are known worldwide (Skevington 2021), divided into four subfamilies and 25 genera (and 3 fossils in Motamedinia et al. 2021), but the fauna is still considered poorly known and an estimate of over 2000 species is given by Skevington & Yeates (2001).

**Number of species:** CH: 110 (1998 Checklist: 83),

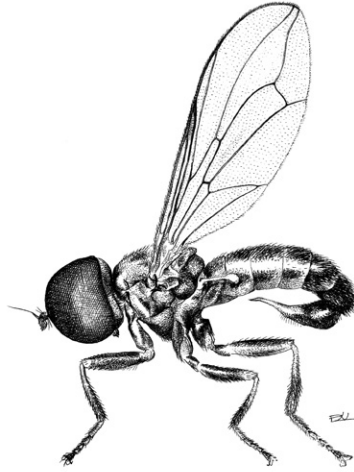
Europe: 215, World: 1484.

(Europe: Kehlmaier 2014, Kehlmaier et al. 2019, Kozánek et al. 2021, Withers & Claude 2021).

**Level of faunistic knowledge in Switzerland:** Medium.

**General references:** Ackland (1993), Albrecht (1990), De Meyer (1989, 1997), Dunk & Lauterer (1998), Földvári & De Meyer (2000), Grootaert & De Meyer (1986), Kehlmaier & Andrade (2016), Kehlmaier & Assmann (2008), Kehlmaier & De Meyer (2005), Kehlmaier (2005, 2006, 2008a, 2008b, 2010a, 2010b), Kuznetsov (1990, 1992), Withers & Claude (2021).

**References to the Swiss fauna:** De Meyer & Kozánek (1998), De Meyer et al. (2006), Dempewolf & Schiegg (1998), Földvári & De Meyer (2000), Merz et al. (2002, 2006), Kehlmaier (2005), Dirickx & Merz (2012), Claude et al. (2021), Claude et al. (in prep.).



*Pipunculus aggr. campestris*,  
female (CMPD3, p.142).

## Checklist

### Chalarinae

#### *Chalarus* Walker, 1834

- *basalis* Loew, 1873 L
- *brevicaudis* Jervis, 1992 L
- *decorus* Jervis, 1992 !
- *elegantulus* Jervis, 1992 !
- *fimbriatus* Coe, 1966 !
- *holosericeus* (Meigen, 1824) !  
= *perplexus* Jervis, 1992
- *indistinctus* Jervis, 1992 L
- *juliae* Jervis, 1992 !
- *leticiae* Kehlmaier, 2003 !
- *longicaudis* Jervis, 1992 !
- *proprius* Jervis, 1992 !
- *pughi* Coe, 1966 !
- *spurius* (Fallén, 1816) !

#### *Verrallia* Mik, 1899 N1

- *aucta* (Fallén, 1817) !  
= *helvetica* Kuznetsov, 1992
- *beatricis* (Coe, 1966) !
- *fasciata* (Roser, 1840) !  
= *setosa* (Verrall, 1901)
- *pilosa* (Zetterstedt, 1838) !
- *villosa* (von Roser, 1840) !

**Nephrocerinae***Nephrocerus* Zetterstedt, 1838

- *flavicornis* Zetterstedt, 1844 !
- *lapponicus* Zetterstedt, 1838 !
- *scutellatus* (Macquart, 1834) !

**Pipunculinae***Beckerias* Aczél, 1939

- *pannonicus* (Aczél, 1939) !

*Cephalops* Fallén, 1810

- *aeneus* Fallén, 1810 !
- *obtusinervis* (Zetterstedt, 1844) !
- *perspicuus* (de Meijere, 1907) !
- *signatus* (Becker, 1900) ? N2
- *varipes* (Meigen, 1824) !
  - = *Pipunculus varipes* Meigen, 1824
  - = *semifumosus* (Kowarz, 1887)
- *varius* (Cresson, 1911) !
- *vittipes* (Zetterstedt, 1844) !

*Cephalosphaera* Enderlein, 1936

- *furcata* (Egger, 1860) !

*Claraeola* Aczél, 1940

- *clavata* (Becker, 1897) L
- *halterata* (Meigen, 1838) L
- *melanostola* (Becker, 1897) L

*Clistoabdominalis* Skevington, 2001

- *dilatatus* (De Meyer, 1997) L
- *electus* (Hardy, 1947) L
- *fuscus* (Zetterstedt, 1844) !
- *tumidus* (De Meyer, 1997) L

*Dasydorylas* Skevington, 2001

- *holosericeus* (Becker, 1897) L
- *roseri* (Becker, 1897) L

*Dorylomorpha* Aczél, 1939*(Dorylomorpha* s.str.)

- *confusa* (Verrall, 1901) !
- *extricata* (Collin, 1937) !
- *imparata* (Collin, 1937) !
- *rufipes* (Meigen, 1824) !

*(Dorylomyia* Albrecht, 1990)

- *beckeri* (Aczél, 1939) !
- *xanthocera* (Kowarz, 1887) !

*(Dorylomyza* Albrecht, 1990)

- *albitarsis* (Zetterstedt, 1844) L
- *anderssoni* Albrecht, 1979 !
- *haemorrhoidalis* (Zetterstedt, 1838) !

- *hungarica* (Aczél, 1939) !
- *lautereri* Albrecht, 1990 !
- *platystylis* Albrecht, 1979 !
- *stelviana* Kehlmaier, 2008 !

*(Pipunculina* Albrecht, 1990)

- *borealis* (Wahlgren, 1910) !
- *maculata* (Walker, 1834) !

*Eudorylas* Aczél, 1940

- *angustimembranus* Kozánek & Kwon, 1991 L  
= *kozanecki* De Meyer, 1993
- *arcanus* Coe, 1966 !
- *bermeri* Kehlmaier, 2005 L
- *coei* Kehlmaier, 2005 L
- *coloratus* (Becker, 1897) L
- *elephas* (Becker, 1898) !
- *furvulus* Collin, 1956 !
- *fuscipes* (Zetterstedt, 1844) !
- *gemellus* Kehlmaier, 2005 L
- *horridus* (Becker, 1898) !
- *inferus* Collin, 1956 !
- *jenkinsoni* Coe, 1966 !
- *kowarzi* (Becker, 1897) L
- *longifrons* Coe, 1966 !
- *montium* (Becker, 1898) !
- *nemoralis* Kozánek, 1993 L
- *obliquus* Coe, 1966 !
- *obscurus* Coe, 1966 !
- *pannonicus* (Becker, 1897) L
- *restrictus* Coe, 1966 !
- *ruralis* (Meigen, 1824) !
- *slovacus* Kozánek, 1993 !
- *subfascipes* Collin, 1956 !
- *subterminalis* Collin, 1956 !
- *terminalis* (Thomson, 1870) !
- *unicolor* (Zetterstedt, 1844) !
- *vonderdunki* Dempewolf, 1998 L
- *zermattensis* (Becker, 1898) !
- *zonatus* (Zetterstedt, 1849) !
- *zonellus* Collin, 1956 !

*Microcephalops* De Meyer, 1989

- *opacus* (Fallén, 1816) !  
= *vestitus* (Becker, 1900)

*Pipunculus* Latreille, 1802

- *calceatus* von Roser, 1840 !
- *campestris* Latreille, 1802 !  
= *spinipes* Meigen, 1830

- = *thomsoni* Becker, 1898
- *elegans* Egger, 1860 ! [1]
- *fonsecai* Coe, 1966 ?
- *lenis* Kuznetsov, 1991 !
- *oldenbergi* Collin, 1956 !
- *omissinervis* Becker, 1889 L
- *tenuirostris* Kozánek, 1981 !
- *zugmayeriae* Kowarz, 1887 !
- Semicephalops* De Meyer, 1994
  - *carinatus* (Verrall, 1901) !
  - *straminipes* (Becker, 1900) !
  - *subultimus* Collin, 1956 !
  - *ultimus* (Becker, 1900) !
- Tomosvaryella* Aczél, 1939
  - *cilifemorata* (Becker, 1907) !
  - *cilitarsis* (Strobl, 1910) !
  - *coquilletti* (Kertész, 1907) !
  - *estebani* Withers & Claude, 2021 ! [2]
  - *freidbergi* De Meyer, 1995 L
  - *geniculata* (Meigen, 1824) !
  - *kuthyi* Aczél, 1944 !
  - *minima* (Becker, 1898) !
  - *minuscula* (Collin, 1956) L
    - = *magyarica* Földvari & De Meyer, 1999
  - *mutata* (Becker, 1898) ! [3]
  - *palliditarsis* (Collin, 1931) !
  - *sylvatica* (Meigen, 1824) !

### Excluded species

- Eudorylas bartaki* (Kozánek, 1993) N3  
*Eudorylas fascipes* (Zetterstedt, 1844) N4

### Notes

- N1 The genus *Jassidophaga* is now considered a synonym of genus *Verrallia* (Motamedinia et al. 2021).  
 N2 De Meyer & Kozánek (1998) report the presence of *Cephalops signatus* (Becker, 1900) with a question mark in the 1998 Checklist; this species has yet to be confirmed in Switzerland.  
 N3 *Eudorylas bartaki* Kozánek, 1993 was withdrawn from the Swiss list, the two specimens identified by De Meyer et al. (1996) actually being *E. vonderdunki* Dempewolf, 1998 (Kehlmaier 2005, Merz et al. 2006).  
 N4 *Eudorylas fascipes* (Zetterstedt 1844) was withdrawn from the Swiss list, the specimen identified by De Meyer & Kozánek (1998) actually being *E. coloratus* (Becker, 1897) (Kehlmaier 2005, Merz et al. 2006).

### Species records

- [1] 1M, GE, Moulin de la Grave, 26.v.2005, Malaise Trap, leg. H. Boillat (MHNG)  
 [2] 1M, VS, 620 m, Leuk-Plantten, 30.5.2002, leg. B. Merz (MHNG)  
 [3] 1M, VS, 1900-2200 m, Visperterminen Gibidumsee, 28.viii.2001, leg. B. Merz & Landry (MHNG)

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