

Tipulidae

Christophe Dufour (1998 Checklist: Christophe Dufour)

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Diagnosis: Medium to large-sized, slender-bodied flies (body length exceptionally up to 60 mm, wing length up to 40 mm). Adults are distinguished by the following combination of characters: elongate maxillary palps, the last segment usually being longer than the combined length of the preceding segments. Usually 13 antennal segments. Rostrum well developed and often with nasus. Compound eyes large, separated and bare. Ocelli absent. Thorax with a transverse V-shaped mesonotal suture. Wings elongate with 2 anal veins reaching wing margin. Vein Sc usually ending in R (not in C). No short cross vein proximal to tip of Sc. Cell m-1 (discal cell) usually present. Females sometimes with reduced wings. Legs very long and slender. Tibiae without or with 1 or 2 apical spurs. Abdomen long and slender. Male terminalia (hypopygium) with a variety of characteristic features. Female terminalia (ovipositor) including 2 pairs of elongate valves (cerci and hypovalvae)(Oosterbroek et al. 2007).

Biology: Some species have aquatic larvae but usually the larvae live in semi-aquatic or terrestrial environments, such as along streams, lakes, ponds, or marshes, in moist to wet cushions of mosses or liverworts, wood or sodden logs in various stages of decay, leaf litter, mud, sandy or gravelly riversides, dry soils of pasturelands, lawns, steppes and even semi-deserts (after Oosterbroek et al. 2007). The spectacular members of the subfamily Ctenophorinae are mimics of ichneumons and wasps. The long and vicious-looking ovipositor of some species appear as going to sting when picked up. But these species which represent a significant conservation element of the saproxylic fauna are of course harmless (Stubbs 2021). Because of their abundance and their size, Tipulidae are of great ecological importance as food for numerous vertebrates, insects and spider species. In the Swiss Alps, White-winged Snowfinches, *Montifringilla nivalis nivalis* (Linnaeus), feed their nestlings during breeding season predominantly with larvae from Tipulidae which are especially nutritious (Heiniger 1991). The highest known altitude for a crane fly in the Swiss Alps is 3100 m (Dufour 1992).

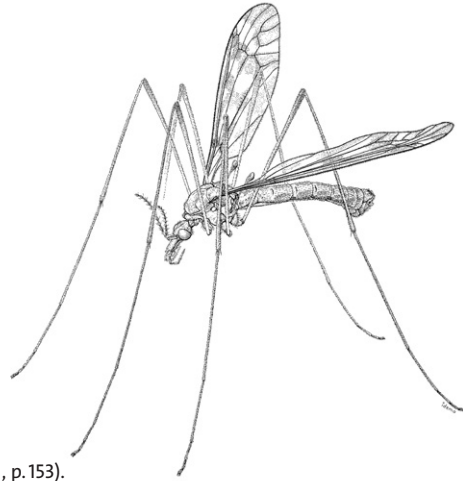
Nomenclature and classification: According to Oosterbroek (2023).

Number of species: CH: 155 (1998 Checklist: 151),
AT: 145, BE: 98, CZ: 128, DE: 142, FR: 185, GB: 87, HU: 81, IT: 182, NL: 89, Europe: 521,
World: 4483 (Kolcsar et al. 2023, Oosterbroek 2023).

Level of faunistic knowledge in Switzerland: Good. Another ten species can be expected.

General references: Oosterbroek (2023).

References to the Swiss fauna: Bächli et al. 2014, Dufour (1986, 1991, 1992, 1994, 1998), Dufour & Brunhes (1984), Dufour et al. (2020), Huguenin (1888), Merz et al. (2002), Tillier et al. (2020), Weibel & Kessler (2021).



Tipula trivittata,
male, not present in Switzerland (MND1, p.153).

Checklist

Ctenophorinae

Ctenophora Meigen, 1804

(*Cnemoncosis* Enderlein, 1921)

- *elegans* Meigen & Wiedemann, 1818 ! N1 [1]
- *festiva* Meigen, 1804 !
- *ornata* Meigen & Wiedemann, 1818 !

(*Ctenophora* s.str.)

- *flaveolata* (Fabricius, 1794) !
- *guttata* Meigen & Wiedemann, 1818 !
- *pectinicornis* (Linnaeus, 1758) !

Dictenidia Brullé, 1833

- *bimaculata* (Linnaeus, 1760) !

Tanyptera Latreille, 1804

(*Tanyptera* s.str.)

- *atrata* (Linnaeus, 1758) !
- *nigricornis* (Meigen, 1818) !

Dolichopezinae

Dolichopeza Curtis, 1825

(*Dolichopeza* s.str.)

- *albipes* (Ström, 1768) !
- *bifida* Oosterbroek & Lantsov, 2011 !
- *nitida* Mik, 1874 ! N2 [2]

(*Oropeza* Needham, 1908)

- *modesta* (Savchenko, 1980) !

Tipulinae

Nephrotoma Meigen, 1803

- *aculeata* (Loew, 1871) !
- *analis* (Schummel, 1833) !
- *appendiculata appendiculata* (Pierre, 1919) !
- *appendiculata pertenua* Oosterbroek, 1978 !
- *austriaca* (Mannheims & Theowald, 1959) !
- *cornicina* (Linnaeus, 1758) !
- *crocata* (Linnaeus, 1758) !
- *croceiventris lindneri* (Mannheims, 1951) !
- *dorsalis* (Fabricius, 1781) !
- *euchroma* (Mik, 1874) !
- *flavescens* (Linnaeus, 1758) !
- *flavipalpis* (Meigen, 1830) !
- *guestfalica* (Westhoff, 1879) !
- *helvetica* (Mannheims & Theowald, 1959) !
- *lamellata* (Riedel, 1910) !
- *lunulicornis* (Schummel, 1833) !
- *pratensis* (Linnaeus, 1758) !
- *quadrifaria* (Meigen, 1804) !
- *quadristriata* (Schummel, 1833) !
- *scalaris* (Meigen, 1818) !
- *scurra* (Meigen, 1818) !
- *submaculosa* Edwards, 1928 !
- *tenuipes* (Riedel, 1910) !

Nigrotipula Hutson & Vane-Wright, 1969

- *nigra* (Linnaeus, 1758) !

Prionocera Loew, 1844

- *pubescens* Loew, 1844 !
- *turcica* (Fabricius, 1787) !

Tipula Linnaeus, 1758

(*Acutipula* Alexander, 1924)

- *bosnica* Strobl, 1898 !
- *fulvipennis* De Geer, 1776 !
- *luna* Westhoff, 1879 !
- *maxima* Poda, 1761 !
- *vittata* Meigen, 1804 !

(*Beringotipula* Savchenko, 1961)

- *unca* Wiedemann, 1817 !

(*Dendrotipula* Savchenko, 1964)

- *flavolineata* Meigen, 1804 !

(*Emodotipula* Alexander, 1965)

- *gomina* Dufour, 2003 ! N3 [3]
- *obscuriventris* Strobl, 1900 !
- *saginata* Bergroth, 1891 !

(*Lindnerina* Mannheims, 1965)

- *bistilata* Lundström, 1907 !
- (*Lunatipula* Edwards, 1931)
 - *adusta* Savshenko, 1954 !
 - *affinis* Schummel, 1833 !
 - *alpina* Loew, 1873 !
 - *bezzii* Mannheims & Theowald, 1959 !
 - *bullata* Loew, 1873 !
 - *circumdata* Siebke, 1863 !
 - *falcata* Riedel, 1913 !
 - *fascingulata* Mannheims, 1966 !
 - *fascipennis* Meigen, 1818 !
 - *handschini* Mannheims, 1967 !
 - *helvola* Loew, 1873 !
 - *heros* Egger, 1863 !
 - *laetabilis* Zetterstedt, 1838 !
 - *limitata* Schummel, 1833 !
 - *livida* van der Wulp, 1859 !
 - *longidens* Strobl, 1909 !
 - *lunata* Linnaeus, 1758 !
 - *magnicauda* Strobl, 1895 !
 - *pelio stigma* Schummel, 1833 !
 - *pilicauda* Pierre, 1922 !
 - *selene* Meigen, 1830 !
 - *truncata* Loew, 1873 !
 - *vernalis* Meigen, 1804 !
 - *verrucosa* Pierre, 1919 !
 - *xyrophora* Theischinger, 1977 !
- (*Mediotipula* Pierre, 1924)
 - *mikiana* Bergroth, 1888 !
 - *sarajevensis* Strobl, 1898 !
 - *siebkei* Zetterstedt, 1852 !
 - *stigmatella* Schummel, 1833 !
- (*Odonatisca* Savchenko, 1956)
 - *nodicornis* Meigen, 1818 !
- (*Platytipula* Matsumura, 1916)
 - *luteipennis agilis* Dufour & Brunhes, 1984 !
 - *luteipennis luteipennis* Meigen, 1830 !
 - *melanoceros* Schummel, 1833 !
- (*Pterelachisus* Rondani, 1842)
 - *apicispina* Alexander, 1933 !
 - *austriaca* (Pokorny, 1887) !
 - *bertei* (Rondani, 1842) !
 - *bilobata* Pokorny, 1887 !
 - *cinereocincta* Lundström, 1907 !
 - *glacialis* (Pokorny, 1887) !
 - *irregularis* (Pokorny, 1887) !

- *irrorata* Macquart, 1826 !
- *luridorostris* Schummel, 1833 !
- *mayerduerii* Egger, 1863 !
- *neurotica* Mannheims, 1966 !
- *pabulina* Meigen, 1818 !
- *padana* Dufour, 1981 !
- *pseudocrassiventris* Theowald, 1980 !
- *pseudoirrorata* Goetghebuer, 1921 !
- *pseudopruinosa* Strobl, 1895 !
- *pseudovariipennis* Czizek, 1912 !
- *sauteri* Dufour, 1982 !
- *subglacialis* Mannheims & Theowald, 1959 !
- *submarmorata* Schummel, 1833 !
- *trifascingulata* Theowald, 1980 !
- *truncorum* Meigen, 1830 !
- *varipennis* Meigen, 1818 !
- *winthemi* Lackschewitz, 1932 !
- (*Savtshenkia* Alexander, 1965)
- *alpium* Bergroth, 1888 !
- *benesignata* Mannheims, 1954 !
- *breviantennata* Lackschewitz, 1933 !
- *cheethami* Edwards, 1924 !
- *confusa* van der Wulp, 1884 !
- *gimmerthali* Lackschewitz, 1925 !
- *goriziensis* Strobl, 1893 !
- *grisescens* Zetterstedt, 1851 !
- *interserta* Riedel, 1913 !
- *invenusta subinvenusta* Slipka, 1950 !
- *limbata* Zetterstedt, 1838 !
- *nielsenii* Mannheims & Theowald, 1959 !
- *obsoleta* Meigen, 1818 !
- *pagana* Meigen, 1818 !
- *pechlaneri* Mannheims & Theowald, 1959 !
- *rufina* Meigen, 1818 !
- *serrulifera* Alexander, 1942 !
- *signata* Staeger, 1840 !
- *subnodicornis* Zetterstedt, 1838 !
- *subsignata* Lackschewitz, 1933 !
- *subvafra* Lackschewitz, 1936 !
- *tulipa* Dufour, 1983 !
- (*Schummelia* Edwards, 1931)
- *variicornis* Schummel, 1833 !
- *zernyi* Mannheims, 1952 !
- *zonaria* Goetghebuer, 1921 !
- (*Tipula* s.str.)
- *italica* Lackschewitz, 1930 !

- *oleracea* Linnaeus, 1758 !
- *orientalis* Lackschewitz, 1930 !
- *paludosa* Meigen, 1830 !
- *subcunctans* Alexander, 1921 !

(*Vestiplex* Bezzi, 1924)

- *cisalpina* Riedel, 1913 !
- *croliana* Dufour, 1992 !
- *excisa* Schummel, 1833 !
- *hemiptera strobliana* Mannheims, 1966 !
- *hortorum* Linnaeus, 1758 !
- *montana* Curtis, 1834 !
- *nubeculosa* Meigen, 1804 !
- *pallidicosta* Pierre, 1924 !
- *scripta* Meigen, 1830 !

(*Yamatotipula* Matsumura, 1916)

- *caesia* Schummel, 1833 !
- *couckeii* Tonnoir, 1921 !
- *italia* Theowald, Dufour & Oosterbroek, 1982 ! N4
 - = *afriberia italia* Theowald, Dufour & Oosterbroek, 1982
 - = *montium italia* Theowald, Dufour & Oosterbroek, 1982
- *lateralis* Meigen, 1804 !
- *marginella* Theowald, 1980 !
- *montium* Egger, 1863 !
- *pierrei* Tonnoir, 1921 !
- *pruinosa* Wiedemann, 1817 !
- *submontium* Theowald, 1981 !

Notes

- N1 First evidence for Switzerland of *Ctenophora elegans* Meigen & Wiedemann, 1818 based on the photography by Daniel Kessler of one male in a partly overgrown garden with old fruit trees, including sour cherries (Weibel & Kessler 2021).
- N2 *Dolichozepe nitida* Mik, 1874 which turned out to be the same as *Dolichozepe graeca* Mannheims, 1954 is reported for the first time from Switzerland (Tessin); *Dolichozepe nitida* sensu authors, also present in Switzerland, represents a different species described as *Dolichozepe bifida* by Oosterbroek and Lantsov (2011). Unpublished data.
- N3 Several females of *Tipula* (*Emodotipula*) captured in Switzerland in 1982 and 1990 and illustrated as « unusual type » (Dufour 1991) have been identified as *Tipula* (*Emodotipula*) *gomina* (Tillier et al. 2020), a new species for Switzerland.
- N4 *Tipula* (*Yamatotipula*) *italia*, previously a subspecies *T. (Y.) afriberia italia* was elevated to species level by Hancock (2020).

Species records

- [1] 1M, SH, Schaffhausen, Munot, Emmersberg, 27.4.2007, 460 m., leg. Daniel Kessler
- [2] 1M, TI, Monte Ceneri, 26.6.1979, 540 m., leg. Willy Geiger (MHNN)
- [3] 1F, VS, Monthey, Les Giettes, 16.06.1982, 1250 m., leg. Christophe Dufour

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