

Tabanidae

Theo Zeegers (1998 Checklist: Wolfgang Schacht)

Last update: Jul 2024

Diagnosis: Adults are medium sized to very large (6-26 mm), robust flies. Antenna generally short and apparently consisting of three segments, at closer look the third is annulated as well; antenna long in *Heptatoma*. Eye bare or hairy, often with striking colouration and/or a number of linear bands (1-3). Colouration of eye is made in most species by the lens and not by the ommatidia itself (exception: *Atylotus*). Scutellum without spines. Apex of each tarsus with three lappets. Wing with an elongated discal cell, the fourth branch of radial vein with a strong fork. Calypter large. Male with holoptic eyes (or nearly so: *Atylotus rufipes*). In many species, the ommatidia on the upper part of the eye are enlarged, sometimes strongly enlarged. In several species, the eye itself is enlarged, making the head broader than the thorax. Female with eyes separated by a linear or square frons, often decorated with dark (generally black) spots, the so called calli. Female easily recognised by their bloodsucking behaviour.

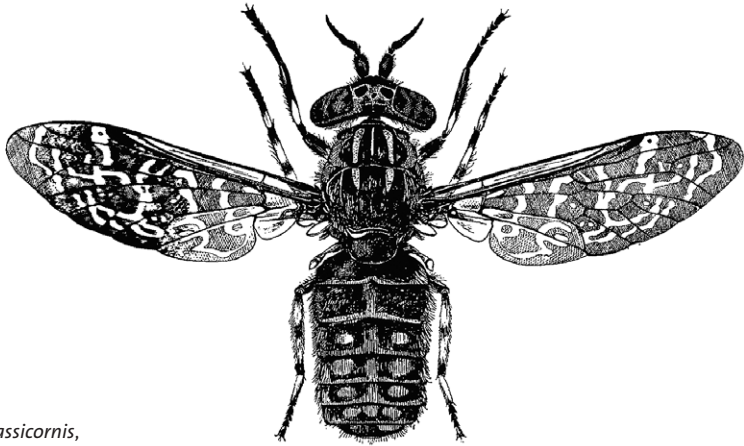
Biology: Tabanidae are generally univoltine, though *Heptatoma* might be bivoltine. Most Tabanidae are on the wing at high temperatures and often at high humidity. Female suck blood on mammals, primarily ungulates but others (including humans) are attacked as well. Some species (some *Atylotus*, *Chrysops rufipes*) do not suck blood. Males, and in some species also females, can be found on flowers, such as *Heraclium*. Males of several species exhibit persistent hovering, as in Syrphidae, but others are never seen hovering. Mating is in « opposite heads » orientation. Eggs are deposited on branches or leaves of trees and herbs above larval habitat in humps in one or a few layers. Most larvae live semi-aquatic, some are more aquatic (streams), some more terrestrial (moss in humid forests). Larvae are predators, though larvae of *Chrysops* are said to feed on decaying matter.

Nomenclature and classification: Nomenclature follows Fauna Europaea, though recent changes have been proposed for some species of *Hybomitra* (Kahanpää et al. 2014, Zeegers 2018, Zeegers & Schulten 2022).

Number of species: CH: 56 (1998 Checklist: 51), AT: 60, BE: 44, CZ: 54, DE: 58, ES: 95, FR: 83, GB: 29, LU: 13, IT: 83, NL: 37, PL: 46, PT: 53, FI: 38, SK: 48, Europe: ~220, World: ~4400.

Level of faunistic knowledge in Switzerland: Good, at species level, though obviously some species are definitely to be expected (*Hybomitra confiformis*, *Pangonius micans*). Contrary to many neighbouring countries, there is an apparent lack of modern data and records online.

General references: Chvála et al. (1972) [keys, descriptions, Europe], Zeegers & van Haaren (2000) [key, Northwest Europe], Zeegers & Schulten (2022) [photographic guide, Northwest Europe], Stubbs & Drake (2001) [keys, Great Britain], Portillo Rubio (2002) [keys, Iberia], Ježek (1977) [keys larvae], Smit et al. (2019) [distributional patterns, the



Haematopota crassicornis,
female (Oldroyd 1969, p.123).

Netherlands], Moucha (1976) [checklist, world], Schacht (1994) [checklist Bayern], Mally (1989) [checklist Austria], Chvála (2009) [checklist Czech republic & Slovakia], Kahanpää et al. (2014) [checklist Finland], Lunau & Knüttel (1995) [colouration of eyes].

References to the Swiss fauna: Aistleitner (2008), Bächli et al. (2014), Merz et al. (2002, 2006), Schacht (1998), Tóth & Rezbanyai-Reser (1999), Zeegers (2006).

Checklist

Atylotus Osten-Sacken, 1876

- *fulvus* (Meigen, 1804) !
= *agrestis* auct. nec Wiedemann, 1838
- *loewianus* (Villeneuve, 1920) !
- *plebeius* (Fallén, 1817) !
- *rusticus* (Linnaeus, 1767) L
- *sublunaticornis* (Zetterstedt, 1842) !

Chrysops Meigen, 1803

- *caecutiens* (Linnaeus, 1758) !
= *meridionalis* Strobl, 1906
- *divaricatus* Loew, 1858 !
- *melicharii* Mik, 1898 L
- *relictus* Meigen, 1820 !
- *rufipes* Meigen, 1820 !
- *sepulcralis* (Fabricius, 1794) !
- *viduatus* (Fabricius, 1794) !

= *pictus* Meigen, 1820

Dasyrhamphis Enderlein, 1922

- *ater* (Rossi, 1790) !

Haematopota Meigen, 1803

- *crassicornis* Wahlberg, 1848 !

- *grandis* Meigen, 1820 !

- *italica* Meigen, 1804 !

= *nigricornis* Gobert, 1880

- *ocelligera* Kröber, 1922 !

- *pandazisi* (Kröber, 1936) !

- *pluvialis* (Linnaeus, 1758) !

- *scutellata* (Olsufjev, Moucha & Chvála, 1964) !

- *subcylindrica* Pandellé, 1883 !

Heptatoma Meigen, 1803

- *pellucens* (Fabricius, 1776) !

Hybomitra Enderlein, 1922

- *aterrima* (Meigen, 1820) ! N1

= *auripila* var. *aterrima* (Meigen, 1820)

= *heydenianus* (Jaennicke, 1866)

= *jacobi* (Bouvier, 1945)

= *lugubris* (Zetterstedt, 1838)

- *auripila* (Meigen, 1820) ! N1

= *aterrima* var. *auripila* (Meigen, 1820)

- *bimaculata* (Macquart, 1826) !

= *bisignata* (Jaennicke, 1866)

= *tropica* auct. nec Linnaeus, 1758

- *caucasica* (Enderlein, 1925) !

= *aterrima* auct. nec Meigen, 1820

= *olsufjevina* Philip, 1961

- *distinguenda* (Verrall, 1909) !

- *kaurii* Chvála & Lyneborg, 1970 L

= *borealis* auct. nec Fabricius, 1781

- *lundbecki* Lyneborg, 1959 !

= *fulvicornis* auct. nec Meigen, 1820

- *lurida* (Fallén, 1817) !

- *micans* (Meigen, 1804) !

- *montana* (Meigen, 1820) !

- *muehlfeldi* (Brauer, 1880) !

- *nigricornis* (Zetterstedt, 1842) !

= *engadinensis* (Jaennicke, 1866)

- *solstitialis* (Meigen, 1820) ! N2

= *ciureai* (Séguy, 1937)

Philipomyia Olsufjev, 1964

- *aprica* (Meigen, 1820) !

= *infuscata* (Loew, 1858)

- *graeca* (Fabricius, 1794) !

Silvius Meigen, 1820

- *alpinus* (Scopoli, 1763) !
- = *vituli* (Fabricius, 1805)

Tabanus Linnaeus, 1758

- *autumnalis* Linnaeus, 1760 !
- = *brunnescens* Szilády, 1914
- *bovinus* Linnaeus, 1758 !
- *bromius* Linnaeus, 1758 !
- = *glaucus* Meigen, 1820
- *cordiger* Meigen, 1820 !
- *glaucoptis* Meigen, 1820 !
- *hirsutus* (Villers, 1789) L N3
- = *Glaucoptis hirsutus* (Villers, 1789)
- = *haematopotoides* Jaenicke, 1866
- *maculicornis* Zetterstedt, 1842 !
- *miki* Brauer, 1880 !
- *paradoxus* Jaenicke, 1866 !
- *quatuornotatus* Meigen, 1820 !
- *rectus* Loew, 1858 !
- *rupium* (Brauer, 1880) !
- = *lasios* (Surcouf, 1924)
- *spodopterus* Meigen, 1820 !
- *sudeticus* Zeller, 1842 !
- *tergestinus* Egger, 1859 !
- *unifasciatus* Loew, 1858 !

Theriopectes Zeller, 1842

- *gigas* (Herbst, 1787) !
- *tunicatus* (Szilády, 1927) !

Notes

- N1 Based on DNA analysis (CO1), I consider both *Hybomitra aterrima* and *H. auripila* to be valid species (Zeegers & Schulten 2022).
- N2 Based on a review of the type, *Hybomitra solstitialis* has proven to be a senior synonym of *H. ciureai* (Zeegers 2018).
- N3 Pending a proper phylogenetical analysis based on DNA, I follow Mally (1987) by not accepting *Glaucoptis* as valid genus, but a synonym of genus *Tabanus*.

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