

## Pallopteridae

Andrey L. Ozerov (1998 Checklist: Bernhard Merz)

Last update: Jul 2024

**Diagnosis:** Small to medium-sized (2.5-7.0 mm) varying in colour from yellow to black acalyptrate flies, almost all with dark markings on the wings. Head with one pair of reclinate orbital setae, postocellar setae parallel or slightly divergent; vibrissae absent. Costal vein with subcostal break, subcostal vein is complete. Females with very much elongated and sword-shaped ovipositor, varying from narrow to very broad. The complete characteristic of the family is given by Merz (1998).

**Biology:** Adults live in or close to shady environments and may be found in forests, often on fallen tree trunks. The known larvae are very similar to those of Lonchaeidae. They are cylindrical for most of their length, gradually tapering forwards and bluntly rounded posteriorly, rather smooth, with only a few ventral creeping spines. Cephalopharyngeal skeleton with paired simple or ventrally serrated mandibles, large pharyngeal sclerites; dental sclerite present. Anterior spiracles fan-shaped. Posterior spiracles set on separate short tubercles. The posterior spiracles of some species, for example *Paloptera saltuum* have a spine-like extension of the peritreme. Larvae of some species live in flower heads of Asteraceae or in stems of Umbelliferae, Graminae and Juncaceae and are considered to be phytophagous. Others have been found under the bark of fallen coniferous and deciduous trees infested with longicorn (Cerambycidae) or bark beetles (Curculionidae). Morge (1956) saw *Paloptera usta* and *P. ustulata* larvae attacking and feeding on beetle and fly larvae respectively. From his observations these pallopterid larvae undoubtedly seem predaceous. However many pallopterid larvae follow other insects and some authors think that the larvae may utilize their tunnels or feed on fungal mycelia growing there (Niblett 1946, Morge 1956). The final conclusion in the question of predation of pallopterid larvae was made by Rotheray (2014), who conducted a series of feeding tests and found that necrophagy can occur in larvae in species living in galleries of other insects, and predation and cannibalism are accidental.

**Nomenclature and classification:** According to Merz (1998a), Ozerov (2009).

**Number of species:** CH:15 (1998 Checklist: 15),  
BE: 13, CZ: 15, DE: 11, IT: 13, NL: 11, UK: 7, Europe: 23, World: 60.

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

**General references:** Niblett (1946), Morge (1967) [key], Merz (1998a, 2007), Ozerov (2009) [key].

**References to the Swiss fauna:** Merz (1997, 1998b, 1998c).



*Toxoneura venusta*,  
female (CMPD3, p.201).

## Checklist

### Eurygnathomyiinae

*Eurygnathomyia* Czerny, 1904

- *bicolor* (Zetterstedt, 1837) !

### Pallopterinae

*Palloptera* Fallén, 1820

- *flava* Oldenberg, 1910 !
- *marginata* (Meigen, 1826) !
- *umbellatarum* (Fabricius, 1775) !
- *ustulata* Fallén, 1820 !

*Toxoneura* Macquart, 1835 N1

- *ambusta* (Meigen, 1826) !
- *ephippium* (Zetterstedt, 1860) !  
= *kloiberi* (Morge, 1967)
- *laetabilis* (Loew, 1873) !
- *modesta* (Meigen, 1830) !
- *muliebris* (Harris, 1780) !
- *quinquemaculata* (Macquart, 1835) !
- *saltuum* (Linnaeus, 1758) !
- *trimacula* (Meigen, 1826) !
- *usta* (Meigen, 1826) !
- *venusta* (Loew, 1858) !

## Notes

N1 *Temnosira*, used by Merz in the 1998 Checklist, is a synonym of *Toxoneura* Macquart, 1835 (Ozerov 2009).

## References

- Merz B. 1997. Zur Faunistik der Pallopteridae der Schweiz (Diptera). Mitteilungen der Schweizerischen Entomologischen Gesellschaft 70: 225-230.
- Merz B. 1998a. 3.14. Family Pallopteridae. In: Papp L. & Darvas B. (eds). Contributions to a Manual of Palearctic Diptera (with special reference to flies of economic importance). Vol. 3: 201-210. Science Herald, Budapest, 880 pp.
- Merz B. 1998b. 71. Pallopteridae. In: Merz B., Bächli G., Haenni J.-P. & Gonthier Y. (eds). Diptera - Checklist. Fauna Helvetica 1: 264-265. CSCF / SEG, Neuchâtel, 369 pp.
- Merz B. 1998c. Nachträge zur Faunistik der Pallopteridae (Diptera) der Schweiz. Mitteilungen der Entomologischen Gesellschaft Basel 47(1997): 156-158.
- Merz B. 2007. Fauna Europaea: Pallopteridae. In: Pape T. (ed). Fauna Europaea: Diptera, Brachycera. Fauna Europaea version 1.3. <http://www.faunaeur.org> (Accessed 30 June 2009).
- Morge G. 1956. Über Morphologie und Lebensweise der bisher unbekanntenen Larven von *Palloptera usta* Meigen, *Palloptera ustulata* Fallén und *Stegana coleoprata* Scopoli (Diptera). Beiträge zur Entomologie 6: 124-137.
- Morge G. 1967. Die Lonchaeidae und Pallopteridae Össterreichs und der angrenzenden Gebiete. Eine Revision auf der Grundlage der Linzer Sammlungen und anderer österreichischer Kollektionen. 2. Teil: Die Pallopteridae. Naturkundliche Jahrbücher der Stadt Linz 13: 141-212.
- Niblett M. 1946. Diptera bred from flower-heads of Compositae. The Entomologist's Record and Journal of Variation 58: 121-123.
- Ozerov A.L. 2009. Review of the family Pallopteridae (Diptera) of the fauna of Russia. Russian Entomological Journal 18(2): 129-146. [In Russian].
- Rotheray G.E. 2014. Development sites, feeding modes and early stages of seven European *Palloptera* species (Diptera, Pallopteridae). Zootaxa 3900(1): 50-76.