

## Platypezidae

Peter J. Chandler (1998 Checklist: Peter J. Chandler)

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**Diagnosis:** Minute to medium sized (1.5-6 mm), slender to stout flies. Either entirely dark coloured in both sexes (*Microsania*, *Bolopus*, *Paraplatypeza atra* (Meigen, 1804)), or with male and female differing in colour, the male usually all black with the female lighter grey dusted (*Seri*, *Platypezina*) or often more brightly coloured than the male; one or both sexes with yellow, orange, grey or silvery markings, or entirely orange yellow in both sexes (*Agathomyia wankowiczii* (Schnabl, 1884)). Eyes holoptic in the male, dichoptic in female; antenna with third segment bearing a long, terminal arista with two basal aristomeres. Thorax with well-developed dorsocentral bristles; acrostichals uniserial or absent (Platypezinae); pleura except for propleuron bare. Wings clear or more or less darkened, a pterostigma present (*Microsania*, *Platypezina*) or only the costal margin between veins Sc and R<sub>1</sub> darkened; vein M<sub>1+2</sub> forked (except in *Callomyia* and *Agathomyia*), with fork beyond crossvein dm-m, which is present except in *Microsania* where crossvein r-m is also lacking; cell cua ending in an acute angle, often elongate, vein beyond cell cua (CuA+CuP) reaching the wing margin; a conspicuous anal lobe present in both sexes. Legs relatively short, stout; first tarsomere of hind leg in *Microsania* and Callomyiinae long and cylindrical, sometimes swollen in the male, slender in the female, the subsequent tarsomeres cylindrical; in Platypezinae hind tarsus laterally compressed, especially in the female, with the third tarsomere the longest (except in *Protoclythia*). Female hind tarsi of Callomyiinae and Platypezinae with membranous soles.

**Biology:** The larval development of *Microsaniinae* is unknown. Probably all larvae of other subfamilies are mycophagous, developing in fungi. Most have saproxylic fungus hosts, except for *Lindneromyia* species, which develop in field mushrooms *Agaricus* spp. In Callomyiinae, *Callomyia* larvae develop on the surface of encrusting fungi, while *Agathomyia* develop internally in polypores. Some genera of Platypezinae (*Bolopus*, *Polyporivora*, *Seri*) also develop in polypores, while the larvae of other genera feed between the gills of agarics. Most species are monophagous or oligophagous. The adults are mainly found in woodland, running about on leaves of trees and shrubs where they feed on honeydew and other organic matter on the leaf surface. The males form epigamic aerial swarms; those of *Microsania* are known as « smoke flies » since they swarm in the smoke of forest fires (and other fires as well).

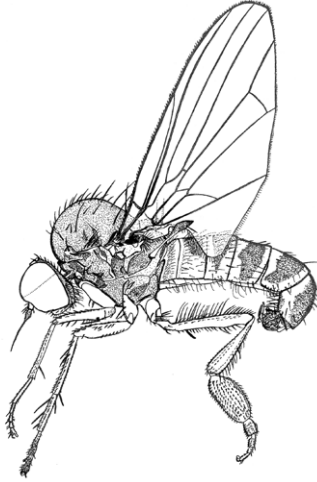
**Nomenclature and classification:** According to Chandler (2001).

**Number of species:** CH: 32 (1998 Checklist: 28),

AT: 16, BE: 20, CZ: 32, DE: 32, FR: 26, GB: 35, HU: 26, IT: 18, NL: 36, SK: 31, Europe: 52,

World: ~250.

**Level of faunistic knowledge in Switzerland:** Good. A few other widely distributed species are expected to occur and the total Swiss fauna might be around 40 species.



*Agathomyia falleni*,  
male (CMPD3, p.28).

**General references:** Chandler (2001) [keys to European species], Chandler & Shatalkin (1998) [general account and keys to genera of adults and larvae], Reemer & de Jong (2016) [keys to Dutch and other western European species], Rotheray et al. (2004) [descriptions of larvae and puparia], Ståhls et al. (2014) [revision of *Agathomyia elegantula* group].

**References to the Swiss fauna:** Chandler (1998), Merz et al. (2002).

## Checklist

### Callomyiinae

*Agathomyia* Verrall, 1901

- *antennata* (Zetterstedt, 1819) !
- *boreella* (Zetterstedt, 1838) ! N1
- *cinerea* (Zetterstedt, 1852) !
- *collini* Verrall, 1901 !
- *falleni* (Zetterstedt, 1819) !
- *sexmaculata* (von Roser, 1840) !
- *unicolor* Oldenberg, 1928 !
- *vernalis* Shatalkin, 1981 !
- *viduella* (Zetterstedt, 1838) !
- *wankowiczii* (Schnabl, 1884) !

*Callomyia* Meigen, 1804

- *amoena* Meigen, 1824 ! N2
- *dives* (Zetterstedt, 1838) !

- *elegans* Meigen, 1804 !
- *speciosa* Meigen, 1824 !

### Microsaniinae

*Microsania* Zetterstedt, 1837

- *pectipennis* (Meigen, 1830) !
- *straeleni* Collart, 1954 !
- *vrydaghi* Collart, 1954 !

### Platypezinae

*Bolopus* Enderlein, 1932

- *furcatus* (Fallén, 1826) !

*Lindneromyia* Kessel, 1965

- *dorsalis* (Meigen, 1804) !
- *hungarica* Chandler, 2001 L

*Paraplatypeza* Kessel & Maggioncalda, 1968

- *atra* (Meigen, 1824) !
- *bicincta* (Szilády, 1941) !

*Platypeza* Meigen, 1803

- *aterrima* Walker, 1836 !
- *consobrina* Zetterstedt, 1844 !
- *fasciata* Meigen, 1804 !
- *hirticeps* Verrall, 1901 !

*Polyporivora* Kessel & Maggioncalda, 1968

- *boletina* (Fallén, 1815) !
- *ornata* (Meigen, 1838) !
- *picta* (Meigen, 1830) !

*Protoclythia* Kessel, 1949

- *modesta* (Zetterstedt, 1844) !
- *rufa* (Meigen, 1830) !

*Seri* Kessel & Kessel, 1966

- *obscuripennis* (Oldenberg, 1916) L

### Excluded species

*Agathomyia elegantula* (Fallén, 1815)

### Notes

- N1 The Swiss record of *Agathomyia elegantula* cited in the 1998 Checklist (Chandler 1998) was based on a specimen in MNHN; following the revision of this species group by Ståhls et al. (2014), this specimen has now been re-identified as *A. boreella* (Zetterstedt, 1838).
- N2 *Callomyia amoena*, as interpreted by Chandler (2001), comprises two widespread species, one of them yet to be described, and both of which are probably present in Switzerland (Ståhls & Chandler in preparation).

## References

- Chandler P.J. 2001. The Flat-footed Flies (Diptera: Opetiidae and Platypezidae) of Europe. *Fauna Entomologica Scandinavica* 36: 1-276.
- Chandler P.J. & Shatalkin A.I. 1998. 3.3. Family Platypezidae. In: Papp L. & Darvas B. (eds). Contributions to a Manual of Palaearctic Diptera (with special reference to flies of economic importance). Vol. 3, Higher Brachycera: 27-49. Science Herald, Budapest, 880 pp.
- Chandler P.J. 1998. 50. Platypezidae. In: Merz B., Bächli G., Haenni J.-P. & Gonseth Y. (eds). Diptera - Checklist. *Fauna Helvetica* 1: 209-210. CSCF / SEG, Neuchâtel, 369 pp.
- Merz B., Bächli G. & Haenni J.-P. 2002. Erster Nachtrag zur Checkliste der Diptera der Schweiz. *Mitteilungen der Entomologischen Gesellschaft Basel* 51(3-4)(2001): 110-140.
- Reemer M. & de Jong H. 2016. De Nederlandse breedvoetvliegen en basterdbreedvoetvliegen (Platypezidae & Opetiidae). *Entomologische tabellen* 10. Supplement bij Nederlandse Faunistische Mededelingen, 134 pp.
- Rotheray G.E., Chandler P.J. & Gilbert F. 2004. Final stage larvae and puparia of Platypezidae (Diptera). *Insect Systematics & Evolution* 35: 79-105.
- Ståhls G., Miettinen O. & Rättel E. 2014. mtDNA COI in efficient use: clarifying taxonomy, linking morphologically discordant sexes and identifying the immature stages of *Agathomyia* Verrall flat-footed flies (Diptera: Platypezidae). *Journal of Zoological Systematics and Evolutionary Research* 53(2015) (3): 219-238.