

## Flower visitation of fungus gnats from the genera *Antlemom*, *Asindulum* and *Macrorrhyncha* (Diptera: Keroplatidae): published data and a new record

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**Abstract.** The literature data about flower visitation of species from the fungus gnats genera *Antlemom*, *Asindulum* and *Macrorrhyncha* are summarized and a new record for *Macrorrhyncha flava* on *Heracleum verticillatum* is given.

**Key words:** *Macrorrhyncha flava*, *Heracleum verticillatum*, pollinators.

**Introduction.** Tribe Orfeliini (Diptera: Keroplatidae) includes 52 genera (see Evenhuis 2006), only 4 of which have elongate mouth parts: *Antlemom* Loew, 1871, *Asindulum* Latreille, 1805, *Macrorrhyncha* Winnertz, 1846 and *Cloephoromyia* Matile, 1970. First tree of them are known as flower visitors and probably pollinators.

The adults of the Orfeliini genera are most common in forest habitats and generally do not inhabit dry areas. The larvae of the genera *Neoditomyia*, *Proceroplatus*, *Platyceridion*, *Orfelia*, *Platyura*, *Truplaya*, and *Xenoplatyura* are predaceous (Evenhuis 2006). Larvae of some *Macrorrhyncha* spin webs on various substrates and could be either carnivorous or feed on fungal spores (Falk & Chandler 2005).

The adults of the genera *Antlemom*, *Asindulum* and *Macrorrhyncha* were found mainly on the flowers of Apiaceae as follows:

Fungus gnats	Visited plants	References
<i>Antlemom</i>	Umbelliferae (Apiaceae)	Hutson <i>et al.</i> (1980)
<i>Antlemom haliday</i> (Loew, 1871)	Apiaceae	Chandler <i>et al.</i> (2005)
<i>Antlemom servulum</i> (Walker, 1837)	<i>Chrysanthemum leucanthemum</i> L. (Asteraceae)	Chandler (1977)
<i>Antlemom servulum</i> (Walker, 1837)	<i>Anthriscus</i> sp. (Apiaceae)	Chandler (1977)
<i>Asindulum nigrum</i> Latreille, 1805	<i>Saxifraga hirculus</i> L. (Saxifragaceae)	Olesen & Warncke (1989a, 1989b)
<i>Asindulum nigrum</i> Latreille, 1805	<i>Heracleim</i> sp. (Apiaceae)	Chandler (1991), Falk & Chandler (2005)
<i>Asindulum nigrum</i> Latreille, 1805	<i>Angelica</i> sp. (Apiaceae)	Chandler (1991), Falk & Chandler (2005)
<i>Asindulum nigrum</i> Latreille, 1805	<i>Oenanthe fistulosa</i> L. (Apiaceae)	Chandler (1991), Falk & Chandler (2005)
<i>Macrorrhyncha</i>	umbelifer flowers (Apiaceae)	Hutson <i>et al.</i> (1980)

**New data*****Macrorrhyncha flava*** Winnertz, 1864

Material examined: Bulgaria, Plovdiv Region, south of Hrabrino Village, UTM: 35TLG05, 700 m a.s.l., 6.07.2009, on *Heracleum verticillatum* Panč. flowers (Fig. 1) near *Quercus* forest, about 20 specimens in feeding and in copula (Fig. 2). The genitalia of 3 males (leg. D. Bechev) were studied under microscope.

The plant was determined using Delipavlov *et al.* (2003). Determination of the fungus gnat species is on the base of the male terminalia.



**Fig. 1.** *Heracleum verticillatum*, general view.



**Fig. 2.** Specimens of *Macrorrhyncha flava* (marked with arrow) on the flowers.

**Discussion.**

The species of the mentioned genera have mouthparts with different length, in *Macrorrhyncha* for example, from little longer from eye height to about two times longer than head (see the key in Chandler *et al.* 2005). Adults of most *Macrorrhyncha* feed at flowers especially of umbels, for which their elongate proboscis is adapted. "It is not known whether *M. rostrata*, which has a shorter proboscis than *M. flava*, has this habit too" (Falk & Chandler 2005).

The currently reported new record of *Macrorrhyncha flava*, a widely distributed species in Europe, on *Heracleum verticillatum*, a Balkan endemic plant species (Dimitrov 2001), is indicator that *M. flava* is not monofagous. Probably the species of the genera *Antlemon*, *Asindulum* and *Macrorrhyncha* are oligophagous, adapted to the flowers of certain plant species.

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