



Genus: *Brachyopa*



Brachyopa testacea male habitus

(© Sander Bot)

Genus: *Brachyopa* Meigen, 1822

Family: Syrphidae

Subfamily: Eristalinae

Tribe: Brachyopini

Number of species of this genus found in Europe: 20

Description

Head

They have a rather broad body with a relatively small head and they have a yellow face without a pointed snout. The eye is bare. The male is holoptic, the female is dichoptic. Both the male and the female do not have a facial tubercle. The face can be short to clearly pronounced. The basoflagellomere is round to oval and it often has a clearly visible sensory pit. The arista is positioned subbasally and it is bare to long plumose.

Thorax

The postpronotum is pilose and it can be reddish brown to completely grey. The scutum is red-brown to largely black, variably grey pollinose, sometimes with clear pale or dusted longitudinal stripes and/or bare shiny spots that can be black. The scutum does not have strong bristles. The scutellum is usually the same colour as the scutum and the anterior part of the scutellum can be grey dusted. The scutellum hind rim can have strong black bristles or only normal hairs. The katepisternum can be haired or bare in the upper part. The posterior part of the posterior anepisternum can have a number of strong black bristles.

Wings

The vein R_{4+5} is straight. The crossvein r-m is situated before the middle of the discal cell dm. The vein M_1 is oblique to vein R_{4+5} . The posterior lower corner of cell dm can have an auxiliary vein (M_4). The wing is usually clear, but can be slightly infuscated at the tip or along veins, or can have several maculae.

Legs

The leg is of normal shape and the hind leg femur has no black bristles, only normal short hairs.

Abdomen

The abdomen is conical and is at its widest point at the posterior part of tergite 2. The abdomen varies from pale yellow to a more brownish yellow or black, sometimes with darker markings on the lateral margins, on the central median part and/or on the posterior parts of the tergites.

General comments on identification to species level

Differential diagnosis

The genus *Brachyopa* does not look like any other genus within the Syrphidae with the exception of *Hammerschmidtia* and to some lesser extent *Rhingia*. In the field they look more like members of the Diptera families Dryomyzidae, Scatophagidae, Muscidae or Anthomyiidae. However, *Brachyopa* differs from all members of these families in that its wing has a vena spuria. *Brachyopa* can be separated from the genus *Rhingia* on the basis that the latter has a greatly protruding face with a pointed snout. *Brachyopa* can have a protruding face but to a lesser extent than in *Rhingia* and the snout is not pointed. The differences between *Brachyopa* and the closely related genus *Hammerschmidtia* are as follows. In *Brachyopa* the vein M_1 ends obliquely in vein R_{4+5} and vein $R_{4+5}+M_1$ is shorter than the length of the crossvein r-m. The abdomen is more conical and is at its widest point at the posterior part of tergite 2 with the abdomen gradually and clearly narrowing towards the posterior tip of the abdomen. The hind tibia has only normal short pile. The male and female both lack a facial tubercle.

In *Hammerschmidtia* the vein M_1 is perpendicular to vein R_{4+5} and vein $R_{4+5}+M_1$ is longer than the length of crossvein r-m. The abdomen is straight and almost parallel-

sided. The hind leg tibia have short stout black setae posteromedially.

Hammerschmidtia males have a tuberculate face.



Brachyopa bicolor male
habitus



*Hammerschmidtia
ferruginea* male habitus



Brachyopa testacea male
head lateral



*Hammerschmidtia
ferruginea* male head
lateral

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Geographical distribution and global diversity

The genus *Brachyopa* Meigen, 1822 is found in the Holarctic and Oriental realms with 44 species (Stackelberg 1952; Chu 1994; Van Steenis 2015; Skevington et al. 2019). In Europe, 20 species of *Brachyopa* are known to occur (Speight 2020). Except for one species known from the Oriental realm, the occurrence of *Brachyopa* is concentrated in the Nearctic sub realm and in the Mediterranean and Circumboreal region, as well as in the Caucasian and Manchurian provinces within the Palearctic sub realm. All these biogeographical areas are characterized by the occurrence of coniferous and deciduous, broadleaved forest (Udvardy 1975; Reemer et al. 2009; Van Steenis 2015; Skevington et al. 2019). Central Europe, that partly lays in the Circumboreal and partly in the Mediterranean region, harbours the highest number of endemic species. In particular, the Mediterranean forests have a high number of endemics making these forests highly important for conservation of the genus *Brachyopa* in Europe. (Kaplan & Thompson 1981; Kassebeer 2000a, 2000c, 2001, 2002; Doczkal & Dziöck 2004; Van

Steenis & Van Steenis 2014; Pérez-Bañón et al. 2016, Van de Meutter, pers. comm. 2024).

Presence in Europe

Albania, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation - European Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom.

Biology

The species of the genus *Brachyopa* are highly dependent on a very specific larval habitat, namely senescent, damaged or diseased trees with sap runs or recently fallen tree trunks and stumps with a buildup of decaying sap. Adults, and especially the males, are regularly found patrolling damaged live or dead trees with sap runs or accumulations of sap, as well as also on trees, tree trunks or tree logs with no visible sap runs or any other visible damage.

The adults are often found near the larval habitat usually within or near the shelter of forest and feed on various flowering herbs, shrubs and trees. Flower visiting is observed regularly in most *Brachyopa* species at plants with abundant, "open" and generally white-coloured flowers, such as species within the families Apiaceae and Rosaceae.

The flight period is from March until July (Torp 1994; Bartsch et al. 2009; Reemer et al. 2009; Bot & Van de Meutter 2019). It is not unusual to find several species of *Brachyopa* simultaneously on the same flower or around trees with supposed sap runs (e.g., Wakkie et al. 2011; Van Steenis & Van Steenis 2014; Mutin et al. 2016).

Larvae occur in a diverse array of microhabitats associated with tree sap runs in or within dead or living trees. Some of the species are generalists and can be found in broadleaved as well as coniferous trees, while other species seem to have a more restricted tree preference (Lundbeck 1916; Hartley 1961; McLean & Stubbs 1990; Rotheray 1991, 1996; Sivova et al. 1999; Krivosheina 2005; Dussaix 2013; Ricarte et al. 2013).



Type species: *Musca conica* Panzer, 1798

Common names:

FI - mahlaset;

NB - sevjeblomsterfluer;

SV - savblomflugor

List of species found in Europe:

1. *Brachyopa atlantea* Kassebeer, 2000
2. *Brachyopa bicolor* (Fallén, 1817)
3. *Brachyopa bimaculosa* Doczkal & Dziock, 2004
4. *Brachyopa cinerea* Wahlberg, 1844
5. *Brachyopa dorsata* Zetterstedt, 1837
6. *Brachyopa grunewaldensis* Kassebeer, 2000

7. *Brachyopa insensilis* Collin, 1939
8. *Brachyopa maculipennis* Thompson, 1980
9. *Brachyopa minima* Vujić & Pérez-Bañón in Pérez-Bañón et al, 2016
10. *Brachyopa obscura* Thompson & Torp, 1982
11. *Brachyopa panzeri* Goffe, 1945
12. *Brachyopa pilosa* Collin, 1939
13. *Brachyopa plena* Collin, 1939
14. *Brachyopa quadrimaculosa* Thompson, 1981
15. *Brachyopa scutellaris* Robineau-Desvoidy, 1843
16. *Brachyopa silviae* Doczkal & Dziock, 2004
17. *Brachyopa testacea* (Fallén, 1817)
18. *Brachyopa vernalis* van Steenis & van Steenis, 2014
19. *Brachyopa vittata* Zetterstedt, 1843
20. *Brachyopa zhelochovtsevi* Mutin, 1998

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Attributions

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