Notes on the feeding of chalcid flies

By Karl-Johan Hedqvist

The feeding of chalcid flies has not been studied closely until the 20th century due to the main attention being paid to studies of parasites on economically important insects. References are here made only to: Caffrey (1921), Cotton (1923), Crossman (1925), Doten (1911), Flanders (1935), Griswold (1925, 1926), Hartley (1922), Imms (1916), Lundie (1924), Quayle (1910), and Rockwood (1917).

The authors mentioned have observed how the female flies are searching for their host animals in various ways and how the flies have punctured the host animals subsequently to devour eagerly the seeping body fluid. Several authors have also shown that this protein food is needed for an acceleration of the egg layering. Moreover, laboratory experiments proved that carbohydrates are necessary after egg layering has started to supplement the body fluid of the host animals. The female flies therefore visit places where such food can be obtained, e.g. plants attacked by aphids and flowers. It is long known that flies visit such localities where they can find sugary excretions from aphids. However, no systematic collection seems to have been conducted on places of this kind despite interesting findings of flies can certainly be made. The author has collected rare chalcid flies on such localities on several occasions.

In the literature, however, there is hardly anything mentioned about chalcid flies visiting flowers. In the autumn of 1962 the author had an opportunity to observe chalcids in flowers of *Angelica silvestris*. A collection was arranged and the material obtained is presented in the following list.

Lamprotatus splendens Westw. 2 ♀♀
Stichtomischus obscurus Walk 20 ♀♀
Stenomalina micans (Oliv.) 4 ♀♀ 1 ♂
Halticoptera brevicornis Thoms. 2 ♂♂
Habrocytus beryllinus (Dalm.) 1 ♀
Rhicnocoelia pr. *constans* (Walk) 1 ♀
Differs from *constans* by lacking a hair row that demarks the basal cell from speculum. Propodeum with more distinct sculpture.
Mesopolobus amaenus Walk. 1 ♀
Elachertus olivaceus (Thoms.) 1 ♀
Aprostocetus sp. 1 ♀ 1 ♂

This list could certainly be extended considerably if flowers were investigated more systematically. Umbelliferae in particular seem to be attractive to flies.

The chalcides mentioned here were studied by means of magnifiers and it appeared that the flies were feeding on pollen. Pollen is known to contain proteins and it is probable that these species satisfy their craving for protein in this way.

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