

Some ecological facts about two Dutch *Melanips* species (Hymenoptera, Cynipidae)

by

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During investigations on the ecological relationships between phytophagous and entomophagous insects of apple-trees we bred three specimens of *Melanips opacus* (Hart.) from puparia of syrphid flies, collected as larvae preying on apple aphids. One female was reared on *Epistrophe balteata* (de Geer), collected on 21 June 1962 at Wageningen, preying on the rosy apple-aphid, *Dysaphis plantaginea* (Pass.), and two male parasites were reared on larval predators, collected on 26 May 1964 at Gronsveld (Prov. of Limburg). One of these males was reared on *S. vitripennis* Meig., the other either on *S. ribesii* (L.) or on *S. torvus* (Ost.-Sack.), whose puparia cannot be distinguished reliably. As *S. ribesii* was far more often reared from apple aphids than *S. torvus*, *S. ribesii* is most likely the host. Usually the puparia of Syrphidae preying on apple aphids can be readily distinguished by the structure of the respiratory tube at the end of the abdomen (EVENHUIS, 1966). The above syrphid larvae formed their puparia within a few days of collection; the adult parasites emerged in the spring of the next year.

SNELLEN VAN VOLLENHOVEN (1869) records that *Amblynotus* (= *Melanips*) *opacus* was collected as adults at Utrecht in April and May. I have seen his specimens, one male and two females, which are in the collection of the Laboratory of Entomology of the Agricultural University at Wageningen. I cannot detect any specific difference between these specimens and mine.

The species does not seem to be rare in Europe but till now the host was unknown. I think we may conclude that *Melanips opacus* is a parasite of several aphidophagous syrphid species, and has one generation a year, the adults appearing in spring.

This parasite belongs to the subfamily Figitinae, which, in the sense of DE DALLA TORRE & KIEFFER (1910), was till now only known to be parasitic on Diptera Cyclorapha Schizophora Acalyptrata and Calyptrata. So this is the first record of a host range of the Figitinae outside the Diptera Cyclorapha Schizophora.

I have mentioned another *Melanips* species before (EVENHUIS, 1965), which has possibly not yet been described. This species was reared on puparia of *Leucopis* spp. (Diptera, Chamaemyiidae), preying as larvae on apple aphids. We have one male and one female, the host larvae of which were collected on 13 July 1960 at Kloetinge (Prov. of Zeeland) preying on the green apple-aphid, *Aphis pomi* de Geer, and one male, reared on *Leucopis* sp., collected on 15 July 1960 near Tiel (Prov. of Gelderland), preying on the rosy apple-aphid. Just like *M. opacus*, these larvae soon formed their puparia but the adult parasites emerged later in the same season. This suggests that this species, unlike *M. opacus*, has more than one generation a year.

There are some more records of *Melanips* spp. bred from *Leucopis* spp. DE

GAULLE (1908, in SÉGUY, 1934, p. 361) mentions *Amblynotus* (= *Melanips*) *longitarsis* Reinh. reared on *Leucopis griseola* (Fallén) in France and WILSON (1938) reared the same parasite on *Leucopis obscura* (Hal.) preying on Chermesidae of coniferous trees in England. The Dutch *Melanips* specimens reared on *Leucopis* are certainly not *M. longitarsis*, especially because the parapsidal furrows are complete and distinct and the antennae are not thickened towards the apex. Also some other characteristics do not correspond with the description given by KIEFFER (1902).

I myself reared an unknown *Melanips* species on *Leucopis* sp., preying on apple aphids in Nova Scotia, Canada (EVENHUIS, 1961).

Till now the known hosts of *Melanips* are aphidophagous Diptera Cyclorapha, either Syrphidae as hosts for *M. opacus* or *Leucopis* spp. as hosts for the other species.

References

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Vermeldenswaardige vangsten van Lepidoptera en Diptera. Op 24 april 1968 ving ik onder Oirschot een gynandromorf van *Anthocaris cardamines* L., links ♀, rechts ♂. Het was een belevens deze vlinder, die met zijn ene oranje vleugeltip natuurlijk onmiddellijk opviel, te kunnen bemachtigen.

Enkele minder gewone zweefvliegen, die ik in 1966 en 1967 ving, zijn de volgende:

- Leucozona lucorum* L. Oirschot, 20.V.1967.
Pipiza austriaca Mg. Oirschot, 24.VIII.1967.
Pipiza lugubris Fabr. Nederwetten, 30.VI.1967.
Syrphus triangulifer Zett. Nuenen, 4.VII.1967.
Cheilosia intonsa Loew. Bergen op Zoom, 1.IX.1967.
Cheilosia lenis Beck. Vaals, 5.V.1967.
Parapenium flavitarsis Mg. Oirschot, 1.VII.1967.
Xylota tarda Mg. Best, 20.VI.1967. Ter plaatse niet zeldzaam.
Eristalis jugorum Egg. Brunssum, 10.IX.1966. Het tweede exemplaar voor Nederland.
Parbelophilus frutetorum Fabr. Schaesberg, 26.VI.1966. Gevangen door de heer L. H. CLAASSENS te Heerlen.

De heer V. S. VAN DER GOOT was zo vriendelijk in twijfelgevallen de determinatie te verrichten of te controleren.

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