

Endogenous and exogenous factors affecting host chemical footprint exploitation by a hymenopterous egg parasitoid

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Eligible for student prize

During the host location process, parasitoids encounter and explore a great variety of volatile and contact semiochemicals from the host-plant complex. The egg parasitoid *Trissolcus basalis* lands on a plant and can taste chemical footprints left by walking adult hosts, *Nezara viridula*. These cues represent a set of indirect host-related contact kairomones that induce arrestment and motivate searching behaviour, as they drive wasps to an area where there is a high probability of finding hosts but are not able to “promise” the presence of the suitable host stage. Patch time allocation is strongly modified by experience gained during foraging on host traces. When footprint exploitation is not followed by successful oviposition, wasps gradually lose their motivated searching behaviour and move back to a more general host searching behaviour. In this work we investigated the effects of endogenous and exogenous factors that can affect the host location behaviour of *T. basalis*. Trials were recorded and analysed with the aid of a video tracking and motion analysis system. The potential significance of these results in the host location behavior of *T. basalis* is discussed.

