The effect of larval and early adult experience on behavioural plasticity of the aphid parasitoid Aphidius ervi (Hymenoptera, Braconidae, Aphidiinae)

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The relevance of the integration of preimaginal and eclosion experiences on the subsequent habitat preferences and mate finding by the adult has been rarely tested in holometabolous insects. In this work, the effect of larval and early adult experiences on the behavioural responses of adult males of the aphid parasitoid, Aphidius ervi, towards volatiles from the host-plant complex (HPC) and from conspecific females were evaluated. Two experience factors were considered: host diet (normal diet=ND; artificial diet=AD), and eclosion, i.e. extraction or non-extraction of the parasitoid larva from the parasitised aphid (extracted=EX; non-extracted=NE). Thus, four treatments were set up: ND/NE, ND/EX, AD/NE and AD/EX. Glass Y-tube olfactometers were used to investigate the responses of adult A. ervi males to the odour sources used. Males from the ND/NE treatment showed a shorter latency to the first choice of olfactometer arms, displayed a marked preference towards the HPC olfactometer arm,