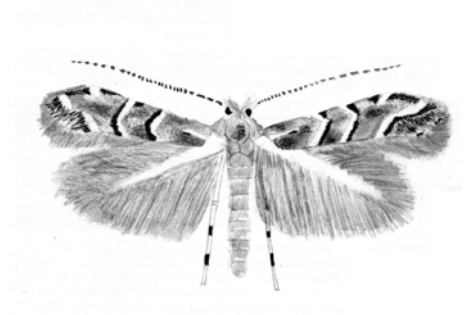


Volatile compounds potentially important for host plant selection in *Cameraria ohridella*



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Cameraria ohridella (Lepidoptera, Gracillariidae, Lithocolletinae) massively colonizes broadly cultivated white blooming common horse chestnut trees, *Aesculus hippocastanum* (Hippocastanaceae). The red horse chestnut, *Aesculus x carnea* (a hybrid of the common horse chestnut and the North American *Aesculus pavia*), is usually far less infested. Oviposition on trees of other families was not reported except for rare records on the sycamore and Norway maple, *A. platanoides* and *A. pseudoplatanus* (Aceraceae).

In general, the host plant selection by a phytophagous female is a complex process involving multimodal sensory analysis, where chemical signals are the most important. Recent findings imply that both the attractants from a suitable host and repellents from non-hosts might be involved. To identify semiochemicals possibly engaged in guiding *C. ohridella* females to a host from a distance, we collected volatiles emanating from *A. hippocastanum*, *A. x carnea*, *A. platanoides*, *A. pseudoplatanus* and English oak, *Quercus robur* (Fagaceae). The volatiles were analysed by GC-MS and GC-EAD. Concurrently, the antennal sensitivity of *C. ohridella* to a series of synthetic standards was investigated by EAG to determine the general olfactory capability of the species.

The EAG experiments showed a similar discriminatory capacity in both sexes. The GC and GC-MS experiments revealed both similarities and differences in fragrance composition among investigated plant species. The GC-EAD data showed EAD active compounds in both preferred and rejected plant species. Behavioural experiments are needed to ascertain behavioural roles of identified compounds.