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Heterarthrus aceris (Kaltenbach) new to Switzerland (Hymenoptera: Tenthredinidae)

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Leaf-mines of *Heterarthrus aceris* (KALTENBACH), a species new to the Swiss list, were found on *Acer campestre* and *A. pseudoplatanus* at a locality in the Solothurner Jura. Notes are given on its biology.

Many leaf-mines of *Heterarthrus aceris* (KALTENBACH) were found in *Acer campestre* at Teufengraben, Kanton Solothurn on 16. 7. 1980. Two mines were also found in *Acer pseudoplatanus*. *H. aceris* does not appear to have been previously recorded in Switzerland.

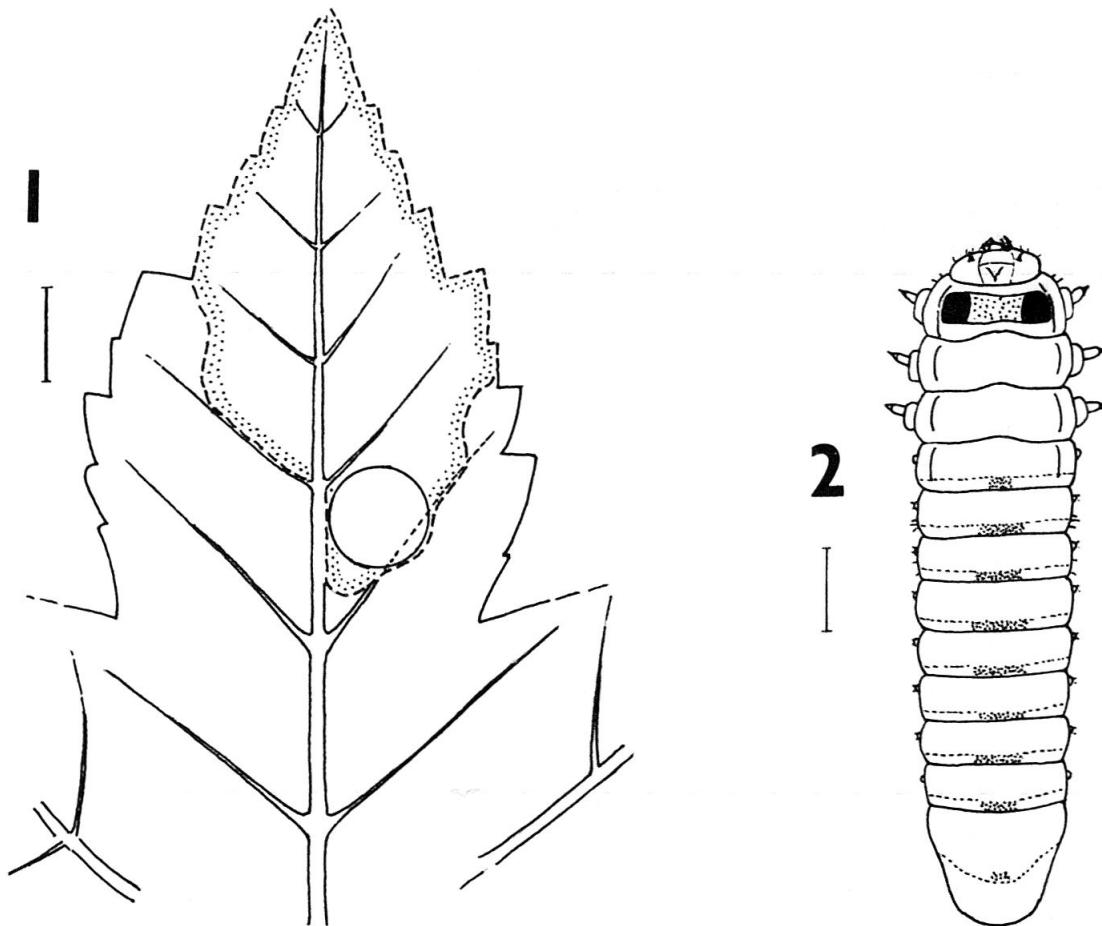


Fig. 1: Vacated mine of *Heterarthrus aceris* (KALT.) in leaf of *Acer pseudoplatanus*. Scale line = 1 cm.

Fig. 2: Last instar larva of *Heterarthrus aceris* viewed dorsally. Scale line = 1 mm.

This species is local in Central Europe, though larvae are often common and obvious where it does occur. Because of heavy parasitism and predation during the larval stages, adults are difficult to come by. Adult *Heterarthrus* of all species seem to be seldom found, simply because they are elusive (see MUCHE, 1977). *H. aceris* is almost entirely parthenogenetic. It flies in May and June.

The life history of this species is well known and described in many works: KALTENBACH even gives a note on its early stages with the original description. Female insect oviposits at the edge of the leaf near the apex of one of the lobes. At first the larva mines on both sides of the midrib and eats only the palisade cell layer of the leaf. As the larva moves towards the base of the lobe, it usually remains on one side of the midrib, resulting in the mine configuration depicted on Fig. 1. During this later stage it feeds on the entire leaf content. Frass is deposited at random throughout the mine. How the well-known «disc» is formed need not be dwelt on here, this being so often described in various previous works. The formation of a disc is not peculiar to this species however. *H. vagans* (FALLÉN) also makes one which remains in the leaf until the adult emerges in the following spring. *H. aceris* is unique in having a deciduous disc. Fig. 1 shows a vacated mine in *Acer pseudoplatanus*. Occupied mines can be found up to early August. Figure 2 illustrates a final instar larva in dorsal view.

It should be noted that ALTENHOFER (1980 a, b, c) considers several species of *Heterarthrus* feeding on *Acer* to be confused at present. Studies on the parasite complex of *Heterarthrus* spp., including *aceris*, have been made by ALTENHOFER (*l. c.*), ASKEW & SHAW (1974) and SHAW & ASKEW (1976). Where this species has appeared in northern areas outside the natural range of its host plants, parasitism is often less frequent and losses are chiefly due to bird predation and foraging Vespidae (*Vespula* spp.).

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