

The first record of the longhorn beetle *Chlorophorus herbstii* (Brahm, 1790) (Coleoptera, Cerambycidae) from Norway

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In this paper we present the first records of the longhorn beetle *Chlorophorus herbstii* (Brahm, 1790) from Hole, Buskerud in Norway. The species was found in a southwest faced stone scree with a mixed composition of tree species, dominated by lime. Several rare and red listed species of Coleoptera and Hymenoptera were found at the same site, indicating a high variety of insects dependent on trees in different stages of decomposition. Ecology and distribution of the species is briefly discussed.

Key words: Coleoptera, Cerambycidae, *Chlorophorus herbstii*, Norway.

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Introduction

The longhorn beetle *Chlorophorus herbstii* (Brahm, 1790) (Figure 1) has been recorded for the first time in Norway. The species is mostly confined to lime (*Tilia cordata*), but is occasionally found on oak (*Quercus* spp.) and other tree species favoured by a warm climate (Ehnström & Axelsson 2002). In the other Nordic countries the species is limited to the south-eastern parts of Sweden and three localities in southern parts of Finland (Ehnström & Holmer 2007). The species red list category in the two countries is VU and EN, respectively. Further, its distribution in Europe is confined to the middle and south-eastern parts, eastwards to the Caucasus and south-western Siberia, lacking on The British Isles and The Iberian peninsula (Ehnström & Holmer 2007).

Material

Two dead specimens were found in a dead lime in steep south-west faced scree in NORWAY **BØ**, Hole: Nes (32V Ø571905 N6652015) 13 May 2011. Further investigation in the same trunk later in the season revealed another two dead specimens on the 25 June 2011.

Discussion

Even though no living specimens were found, several exit holes from the species were observed on lime-trunks in the area, indicating a small population. According to Ehnström & Axelsson (2002), there are few species exploiting the same substrate as *C. herbstii*, and the exit-holes in the trunks resemble those described for *C. herbstii* (Ehnström & Axelsson 2002).

The larva of *C. herbstii* develops in dry vertical



FIGURE 1. One of the specimens of *Chlorophorus herbstii* (Brahm, 1790) found on the 13 May 2010 (Photo: Arnstein Staverløkk).

trunks and branches of its host-plants (Ehnström 1999), which have been dead for several years and free of bark (Ehnström & Axelsson 2002). Often the attacked wood is infested with mistletoe *Viscum album*, but this parasitic plant has not been found at the locality. It seems that trunks and branches lying on the ground is a suboptimal substrate for the species (Ehnström & Axelsson 2002), mostly because of the reduced sun-exposure and therefore increased moisture in the substrate. This probably increases the time for larval development (normally 2–3 years).

The four dead specimens found in the present study were found in a lime-trunk with bark, lying on scree rocks (Figure 2). Several exit holes were observed on the same trunk and nearby ones, indicating a small population. The bark of the trunk was loose, and it seemed like the adult beetles had trouble penetrating through, because of the airspace between the bark and the wood. They eventually died in their attempts to gnaw through the loose bark. Window traps placed just above the trunks did not collect any specimen. This may be due to a cold and wet summer, or that the population is extremely small. Window traps are not optimal for recording longhorn beetles, and the trapping period started in late June. The species normally pupate in late June, and emerges

in June–July (Ehnström 1999, Ehnström & Axelsson 2002). The two last specimens found in 2011 had obviously hatched just a few days before the 25 June, which indicates that the species is out quite early in the season despite poor weather conditions during the summer 2011.

Further search for the species in the area will hopefully reveal living specimens. Both the primary (dry vertical trunks of lime and dead branches of trees) and suboptimal substrates should be investigated. Also flowers of *Filipendula ulmaria* and *Anthriscus sylvestris* should be searched, since the species is known to visit them to forage (Ehnström & Holmer 2007).

The locality is very interesting with respect to wood-living insects because of the large amount of dead wood (especially *Tilia cordata*) scattered in sun exposed stone screens. A picture of the most sunexposed parts of the locality is shown in Figure 3. A survey in October 2011 (Ødegaard & Solevåg 2011) registered a mixed composition of saproxylic species, and several red listed species of both Coleoptera and Hymenoptera were found. One specimen of the longhorn beetle *Rusticoclytus pantherinus* (Savenius, 1825) were hatched from a branch of *Salix caprea* in the area. This is the second record of this species in the area, and the third record from Norway in



FIGURE 2. The lime trunks where *Chlorophorus herbstii* (Brahm, 1790) were found. Note the window trap to the right (Photo: F. Ødegaard).



FIGURE 3. The more open parts of the stone scree. The beetles were found high up to the left. The area is highly influenced by falling stones from the cliffs above (Photo: F. Ødegaard).

modern time (Laugsand et al. 2008). A specimen of *Ischnomera sanguinolenta* (Fabricius, 1787) was also found on flowering *Sorbus aucuparia*. These records indicate that there may be several more rare species of insects on the locality.

Chlorophorus herbstii has probably been present in Norway since the postglacial warm period, about 6000–8000 years ago, when *Tilia* were more abundant than today (Moen 1998). Its current distribution in Norway is probably restricted to habitats with a favourable microclimate and presence of lime and other suitable hosts. This implies that nature conservation should put strong focus on such habitats in order to preserve the presumable few localities where the species may be found. Another species in the genus, *C. varius* (Müller, 1766) is recorded from Sweden (Mehl & Pedersen, 1995). This species has more or less the same substrate requirements as *C. herbstii* (Ehnström 1999), and could potentially occur in the same habitats.

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