

Allecula rhenana (Bach, 1856) (Coleoptera, Tenebrionidae) in Norway

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Olberg, S. & Wergeland Krog, O.M. 2016. *Allecula rhenana* (Bach, 1856) (Coleoptera, Tenebrionidae) in Norway. *Norwegian Journal of Entomology* 63, 184–187.

The darkling beetle *Allecula rhenana* (Bach, 1856) is reported for the first time from Norway. In July 2016, one female of *A. rhenana* was caught in a window trap mounted on an old hollow oak (*Quercus robur*) at Ø, Fredrikstad: Brevik. The beetle community connected with ancient oaks have been mapped with a considerable intensity for the last decade compared to earlier times, but still, new species to the Norwegian fauna are discovered.

Key words: Coleoptera, Tenebrionidae, *Allecula rhenana*, *Quercus robur*, Norway.

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Introduction

The darkling beetles (Tenebrionidae) are one of the most numerous beetle families worldwide, and are especially outspread in dry areas. 52 species are hereto known in Norway, of which several are connected to human settlements and stored dry products. Among the Alleculinae, of which *Allecula* belong, the 14 species known to Norway, are all found in the wild, and most of the species are saproxylic, have a narrow distributional range and are usually red-listed (Henriksen & Hilmo 2015).

The record

The darkling beetle *Allecula rhenana* (Bach, 1856) (Figure 1) is reported for the first time from Norway. In July 2016, a female specimen of *A. rhenana* was caught in a window trap (flight interception trap) mounted on an old hollow oak (*Quercus robur*) at Østfold, Fredrikstad: Brevik

(UTM 32VPL1773957449) (Figure 4). A few window traps where hung up by the second author on four locations with hollow oaks in Fredrikstad, hoping to get some information about the localities' importance for red-listed species. The main project was however to clear away young trees growing around old oaks, threatening to kill the trees. All together 12 oaks measuring between 200 and 480 cm in circumference are present on the locality at Brevik, and six of these oaks are visually hollow. The oaks are partly shaded by other trees, but are positioned close to a southeast-faced bare rock alongside a field, which gives a warm microclimate despite some shade (Figure 2). Two window traps where placed respectively on the stem and inside the hollow of the largest and presumptive oldest oak (Figure 3). The traps where active between 5 July and 31 August 2016, and the specimen of *A. rhenana* was caught between 5 and 17 July. Only a few beetle species and no red-listed species where caught in the two window traps at Brevik.



FIGURE 1. *Allecula rhenana* (Bach, 1856) caught in a window trap at Brevik in Fredrikstad. Photo: Stefan Olberg.



FIGURE 2. The old hollow oak (*Quercus robur*) at Brevik. Photo: Ola M. Wergeland Krog.



FIGURE 3. Window trap on the hollow oak (*Quercus robur*) at Brevik. Photo: Ola M. Wergeland Krog.

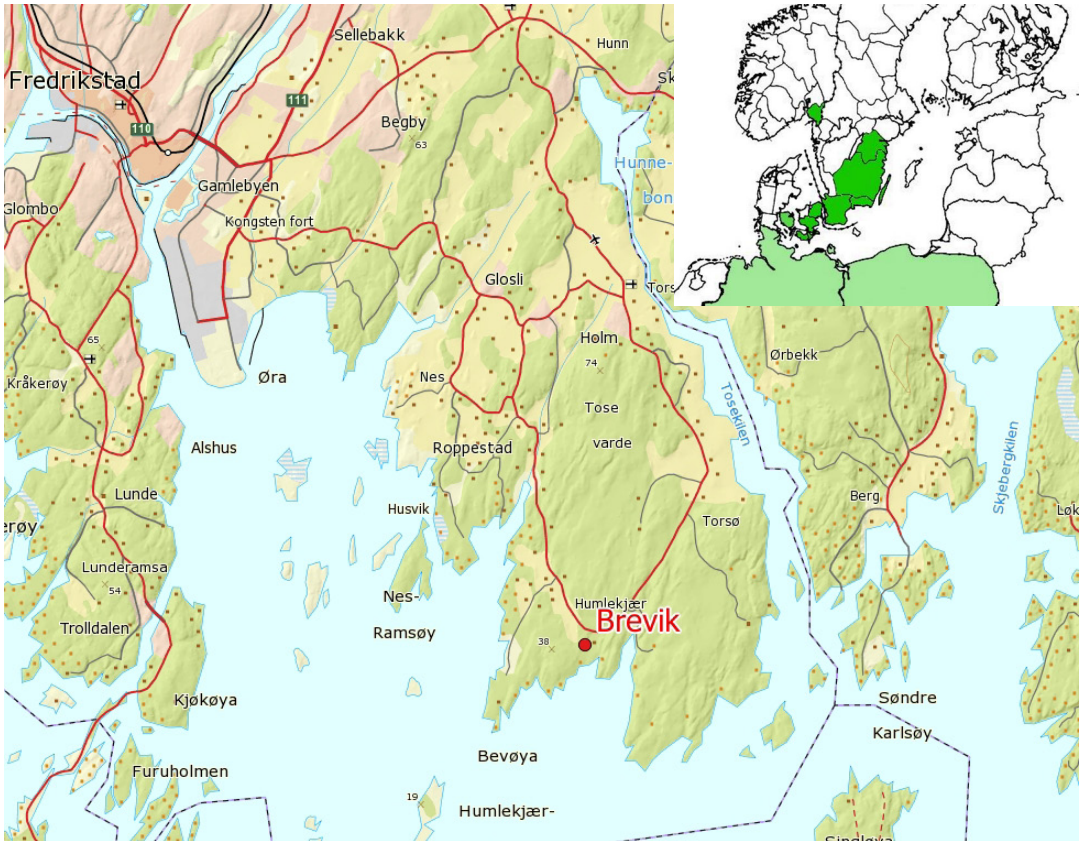


FIGURE 4. Map showing the distribution of *Allecula rhenana* (Bach, 1856) in Norway (red dot) and in parts of Northern Europe (inset top right). Maps generated from Norgesglasset and BeetleBase.

Ecology and distribution

Allecula rhenana is a black beetle with long, brown appendages, measuring 7–10 mm. *A. rhenana* is connected to fungi-infected wood, preferably inside hollow broadleaved trees. The larvae use a couple of years to develop to maturity, and the imagines are active in warm July-nights. From the western part of the Palaearctic region eight species of *Allecula* are known (Novak *et al.* 2012), and two of these are found in northern Europe. *A. rhenana* strongly resembles *A. morio* (Fabricius, 1787), which also occurs in Sweden and Denmark, but not in Norway. *A. rhenana* is a European species, found from Italy and France in the south, through some Central European countries, north to Sweden and east to Poland (Museum für Naturkunde 2016). *A. rhenana* is a scarce and local species in south-eastern Sweden

and is here regarded as vulnerable (VU). It is not found in Finland and is only known from south-eastern parts of Denmark. Since there is such a big gap between the locality in Norway and the Swedish and Danish populations, it was not expected that this species would turn up in Norway. On the other hand, the closely related *A. morio* are found west to Bohuslän and Värmland in Sweden, close to the Norwegian border, and where therefore more likely to be detected in Norway. The beetle composition in Østfold has not been as thoroughly investigated as on the western side of the Oslofjord region (e.g. Ødegaard *et al.* 2009, Sverdrup-Thygeson *et al.* 2011, Olberg *et al.* 2013, Olberg & Gammelmo 2014, 2015, Olberg 2016a, b). It should not come as a surprise if further new species, connected to ancient oaks and other broadleaved trees, turn up in this region in the future.

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Received: 21 November 2016

Accepted: 24 November 2016