

Distribution of Trichoptera in Øvre Heimdalen, Jotunheimen Mountains, Norway

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The distribution of lotic trichopterans was studied in different vegetational zones, ranging from 1090 m a.s.l. to 1550 m a.s.l. in the Øvre Heimdalen area in the Jotunheimen Mountains of southern Norway. Five species were recorded in the mid-alpine zone, eleven species in the low alpine zone, and twenty-four species in the subalpine zone. In the mid-alpine zone the community was dominated by *Apatania* species and *Apatania zonella* was the only species found at 1550 m a.s.l. The dominant feeding modes were scrapers in the mid-alpine zone, and both shredders in the low alpine and subalpine zones. Temperature and food were important factors influencing species distribution.

Many common running water species such as *Potamophylax cingulatus*, *Halesus digitatus* and *Rhyacophila nubila* had their altitudinal distribution limit in the low alpine zone. Filter feeding polycentropodids were found in lake outlets in the subalpine and low alpine zones. In the outlet of the small lake Blåtjern, in the mid-alpine zone, no filter feeding species were found. Many species we recorded in the subalpine zone had low abundance, indicating that these species lived at their altitudinal limit in this area.

The first axis of DCA (Detrended Correspondence Analysis) clearly showed a gradient of species in the Øvre Heimdalen area. The analyses indicated the species changes to be most distinct at the transition from the low alpine to the mid-alpine.

Keywords: Trichoptera, distribution, vegetation, alpine zones.

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