

Spiders (Araneae) in low alpine areas at Finse, Southern Norway

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Pitfall trapping in 47 south exposed sites during the snow free season resulted in 47327 specimens and 55 species of spiders from 5 families, Linyphiidae and Lycosidae dominating. Field characteristics (estimated microclimatic temperature, soil humidity, soil organic content and plant sociological classification) have been tabulated, the sites being ranked based on their soil humidity, nutrient content and temperature; and the spider species based on their humidity preferences. Direct gradient analyses and reciprocal averaging (RA) ordinations of sites and species correspond fairly well. These results also correspond well with our present knowledge of the ecological preferences of species and their zoogeographical distribution in northern Europe (including the North Atlantic Islands. In the climatically most favourable sites, i.e. at «Nordnuten» (a steep eutrophic warm area with dry and humid meadows) lowland spiders, including a handful of so-called «widespread spider species» (species present in more than 2/3 of the 47 sites), all Nordic lowland species, were dominating; and more or less taking a central position in the species' ordination diagram, while at the climatic extreme ends of axis 1 (the dry/cold and the wet/cold parts) most typical high mountain species are situated. This is most clearly observed for the cold mires, in which a few high mountain «hygric» species almost completely seem to outnumber the «Nordnuten» lowland species, in the coldest mires even so for the «widespread» species. Similarly, in both species and site ordination diagrams, where axis 2 indicates a poor/cold - rich/warm gradient, the trend was a domination of lowland species/«warm» eutrophic sites in the upper half of the diagram. A Trellis diagram based on Soerensen indices of similarity shows that the «coldest» mires (especially the largest ones), as well as the two river sides, had few species in common with most other sites, the humid and dry meadows. Higher similarity indices were found within and between the dry and humid meadows. In some «Nordnuten» sites, having relatively dense growths of high perennials and *Salix* sp., some lowland forest spider species (very scarce/absent elsewhere in the area) reached relatively high densities. Seasonal variations of most species (phenology and numbers of specimens) are shown and briefly discussed.

Key words: Spiders, Araneae, southern Norway, alpine areas.

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