

6280 *Nordic alvar and precambrian calcareous flatrocks

Management of Natura 2000 habitats. Summary



Nordic alvar on the island of Öland, SE Sweden, with the endemic Öland rockrose (*Helianthemum oelandicum*). Photo: Markus Forslund.

Alvar and calcareous flatrocks are characterised by openness (reinforced by grazing), flatness, limestone bedrock, exposure to winds causing dryness in summer and the impact of frost and freezing in winter. A main characteristic is a very thin soil layer (0-30 cm). The soil is primarily a product of weathering, with scattered deposits of siliceous soils from old beach ridges.

The vegetation cover is often incomplete with bare patches. Plant and invertebrate communities are mostly rich in species, and many of them have developed various adaptations to tackle the harsh conditions linked to dry summers, frosty winters and windy conditions. The flora includes several plants whose main distribution lies elsewhere, plus some endemic species and subspecies.

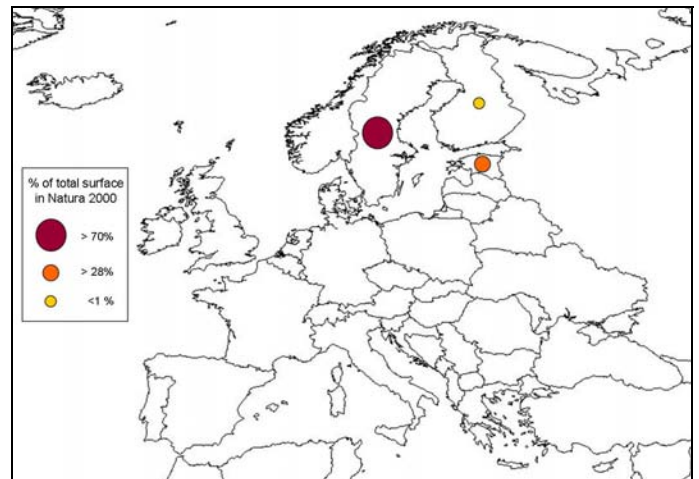
World-wide, calcareous flatrocks have a very limited distribution, restricted to the Baltic Region of Europe and Great Lakes Region in North America, with almost 90% of the area in Europe. Within the European Union, the habitat is only found in Sweden (primarily on the islands of Öland and Gotland) and Estonia, with minor areas in south-west Finland.

Calcareous flatrocks mostly occur in a mosaic with related habitats, such as semi-natural dry grasslands (6210), rupicolous calcareous or basophilic grasslands (*6110) and limestone pavements (*8240), and a holistic management approach is advisable.

Zero or low grazing intensities will inevitably result in scrub encroachment and loss of species (where deep soil is present), with a drastic decline when the scrub cover reaches around 70%.

Although there are patches of "natural" alvar areas where thin soil and drainage via fissures in the bedrock make the establishment of any other kind of habitats impossible, grazing is a basic prerequisite for the long-term maintenance of nature conservation values over large areas. Regular clearing may be a necessary complementary measure in order to assure the basic requirements. When reopening an overgrown site for grazing, restoration in order to remove scrub vegetation and to overcome problems of internal fertilising is usually a necessary first step. For sites where the protection of threatened and rare species is a key objective, management usually has to consider species-specific requirements.

Clearing should preferably be initiated before the critical level of around 70% scrub canopy cover is reached, and in most cases it is more effective, from both a conservation and a cost perspective, to prioritise less overgrown areas. Evaluations of various techniques have shown that motor-manual clearing is the most effective alternative from a conservation point of view, although time-consuming in the short term.



Percentage distribution of the total surface of Nordic alvar and precambrian calcareous flatrocks in Natura 2000.

The complete text of the document is available at: http://ec.europa.eu/environment/nature/natura2000/management/best_practice_en.htm

Management of Natura 2000 habitats is a project launched by the European Commission in January 2007 aimed at defining best practices for management of habitat types included in Annex I of the Habitat Directive (92/43/EEC) that need active recurring management. Twenty six habitat types that are representative of different bio-geographical regions have been considered.