abstract

NATURE CONSERVATION WITH CATTLE AND SHEEP AT MOLSLABORATORIET:

During a period of approx. 20 years we have grazed different types of areas varying from low meadows to higher hills; in both the meadows and the hills the soil is very poor and dry. The areas have all been used for agriculture 40-80 years ago, but now abandoned. There have only been used very little fertilizer and when, then only animal dung in improving the soil quality; also no pesticides has been used. The vegetation on the abandoned areas are at the low meadows different kind of grasses, herbs and trees. At the hills we have larger heathland areas with Calluna, Deschampsia and few trees and larger areas which has developed into succession forests in different stages.

For the grazing we use Galloway cattle and Islandic sheeps; divided so that we have fencings grazed only by cattle and fencings grazed only by sheep. The cattle grazed fencings are situated both in the hills and at the low meadows.

One fencing, which has been grazed by cattle since 1974, is Buelund, situated on heathland in the high hills with a poor vegetation of Calluna, Deschampsia, Juniperus and few bushes. The grazing has been followed since 1975 and the vegetation is analysed in three transects cutting through the area so that the different types of vegetation is accounted for and with a control area outside the fencing.

The area consist of mainly three different types of vegetation: FA = South-orientated slopes with high insolation and a very high diversity of species. DA = North-orientated slopes with less sun and warmth, but still representing a fairly high diversity of species. CD = Old vegetation and probably also the kind of ending vegetation for this type of grazed areas.

Results:

FA/DA: The area had few Calluna bushes when the grazing began and they have been grazed very heavily, but still there have been a significant increase in plants compared to the control area where only few bushes are seen. Both areas also shows a very significant increase in species density in the grazed part compared to the nongrazed. (species density = average number of species/m2) (Calluna age is max. 30-32 years old)

CD: Area with old Calluna from an earlier grazing period, (now 40-50 years old), when the grazing began. Also here we saw an increase in both the Calluna coverage and in the species density on the grazed areas compared to the nongrazed.

Both the Calluna and other species are renewed vegetative and by new germination and it is expected that this condition can be kept permanent by grazing.

Flemming Ejlersen
Molslaboratoriet
Denmark