

## Is biodiversity declining in the traditional haymeadows of Skye and Lochalsh, Scotland?

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**Introduction** Species-rich haymeadows have developed on crofts in the Isle of Skye and Lochalsh Districts of north-west Scotland as a result of a century or more of traditional land use. This has involved long rotations of late cutting for hay with aftermath grazing by cattle and short breaks for cropping. The traditional haymeadows are increasingly coming under threat from changes taking place in the countryside. A survey of the main haymeadows still remaining in Skye and Lochalsh was carried out during 2003 to assess the current botanical composition, management and conservation value, and to compare with earlier surveys.

**Materials and methods** Grassland sites (31 in Skye; 18 in Lochalsh) were recorded, including several surveyed earlier (Orange, 1987; Hutcheon, 1997). The presence and estimated abundance of plant species were recorded as Dafor values for communities and Domin scores in 2m x 2m quadrats. Croft owners or managers provided data on present, past and intended future managements. Based on floristic composition, uniformity, stability and area of the constituent communities, each site was assigned a subjective conservation value.

**Results** Conservation values of 5/13 sites on Skye, recorded in the Orange (1987) survey, have deteriorated radically due to neglect, invasion by *Juncus effusus* and heavy grazing by sheep. The other 8/13 sites showed a sharp reduction in the occurrence of orchid species and of globeflower (*Trollius europaeus* L.). As compared with the survey by Hutcheon (1997), deterioration of conservation values was similar on sites in Lochalsh. Table 1 shows the frequencies of current managements observed during the 2003 survey.

**Table 1** Haymeadow management observed

Management	No of sites (%)
Not cut or grazed	18
Cut only	8
Cut and grazed	34
Grazed only	40
Of which % grazed	
By cattle	47
By sheep	28
By cattle and sheep	25

**Discussion and conclusions** The widespread traditional croft management that led to the development of haymeadows has only a tenuous presence on a few scattered crofts in Skye and Lochalsh. Older crofters still make hay but big bale silage is the norm now, mainly because it allows for flexible management to cope with the prevailing weather. Other threats to the maintenance of biodiversity are replacement of cattle grazing by intensive sheep, invasion of rushes and changes in social structure leading to decrofting. Croft managers may require incentives to encourage them to continue to use traditional management systems.

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### References

- Hutcheon, K. (1997). Vegetation survey of Drumbuie, Kyle of Lochalsh. National Trust for Scotland.  
Orange, A. (1987). A survey of haymeadows and associated grasslands in Skye, Ardnamuchan, Sunart and Lochaber. Nature Conservancy Council, Edinburgh.