

# Is spring burning a viable management tool for species-rich grasslands?



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**Background:** In Sweden, the area of semi-natural grasslands has declined and grassland vegetation is threatened due to lack of management and land use change. Appropriate management is required to maintain the high species richness of semi-natural grasslands.

**Aim:** To examine if spring burning is as good as mowing and grazing in the management of semi-natural grasslands.

**Method:** Data collected from 11 sites in Southern Sweden in 1973, 1980 and 1986 was collated. The sites comprise a long-term field experiment established in the 1970s. The occurrence of grassland plants indicating good management, excess nitrogen and lack of management were used to evaluate the effects of burning, mowing and grazing.

**Statistical analysis:** calculated odds ratio used in meta-analysis



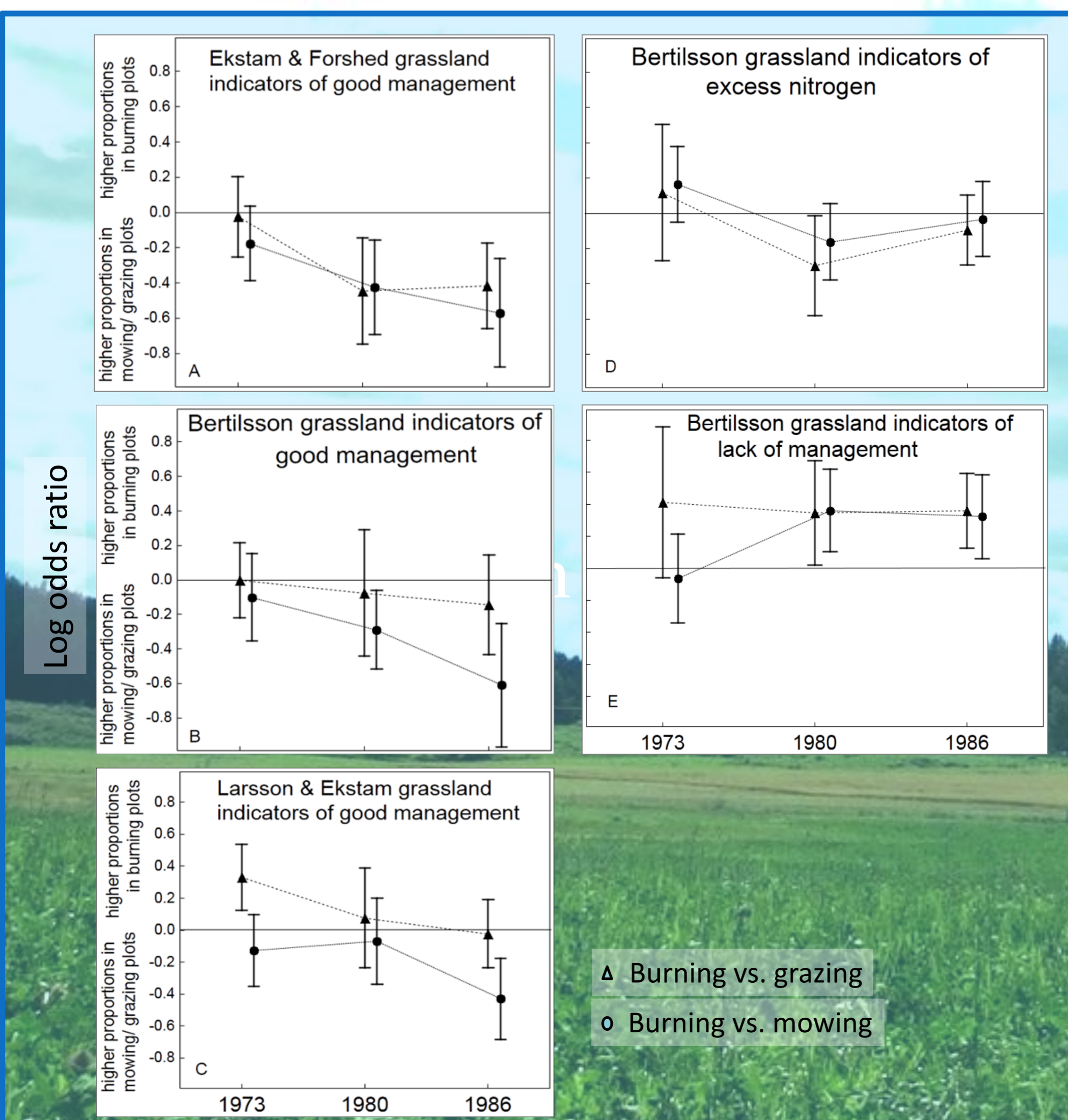
## Results:

- Indicator of good management were less abundant in burnt plots compared to mowed and grazed plots.
- Proportions of excess nitrogen indicators did not differ between grazed and mowed plots.
- Lack of management indicators more common in burnt plots.

## Conclusions:

- Spring burning is not suitable for maintaining diversity of grassland dependent species.
- Spring burning is not a viable long-term management tool for species-rich grasslands.

But it might still be a useful alternative for a single year, e.g. when conventional management has failed in the previous year.



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