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Restoration of upland vegetation communities by conservation grazing: the effect of changing from sheep to ponies

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Introduction

Traprain Law is a steep-sided hill in East Lothian. Most of the hill is grassland and designated as a Site of Special Scientific Interest for botanical and geological interest. In 2003, a fire damaged much of the vegetation on the site. To facilitate regrowth, 125 sheep were reintroduced in 2008 to reduce coarse vegetation. However, this did not have the desired effect as sheep are selective grazers, with a preference for forbs over tall grasses. Thus, much of the Law became undergrazed and tall grasses began to dominate. In 2012, sheep were removed and thirteen Exmoor ponies introduced.



Traprain Law from the north © Kim Traynor (CC BY-SA 3.0)

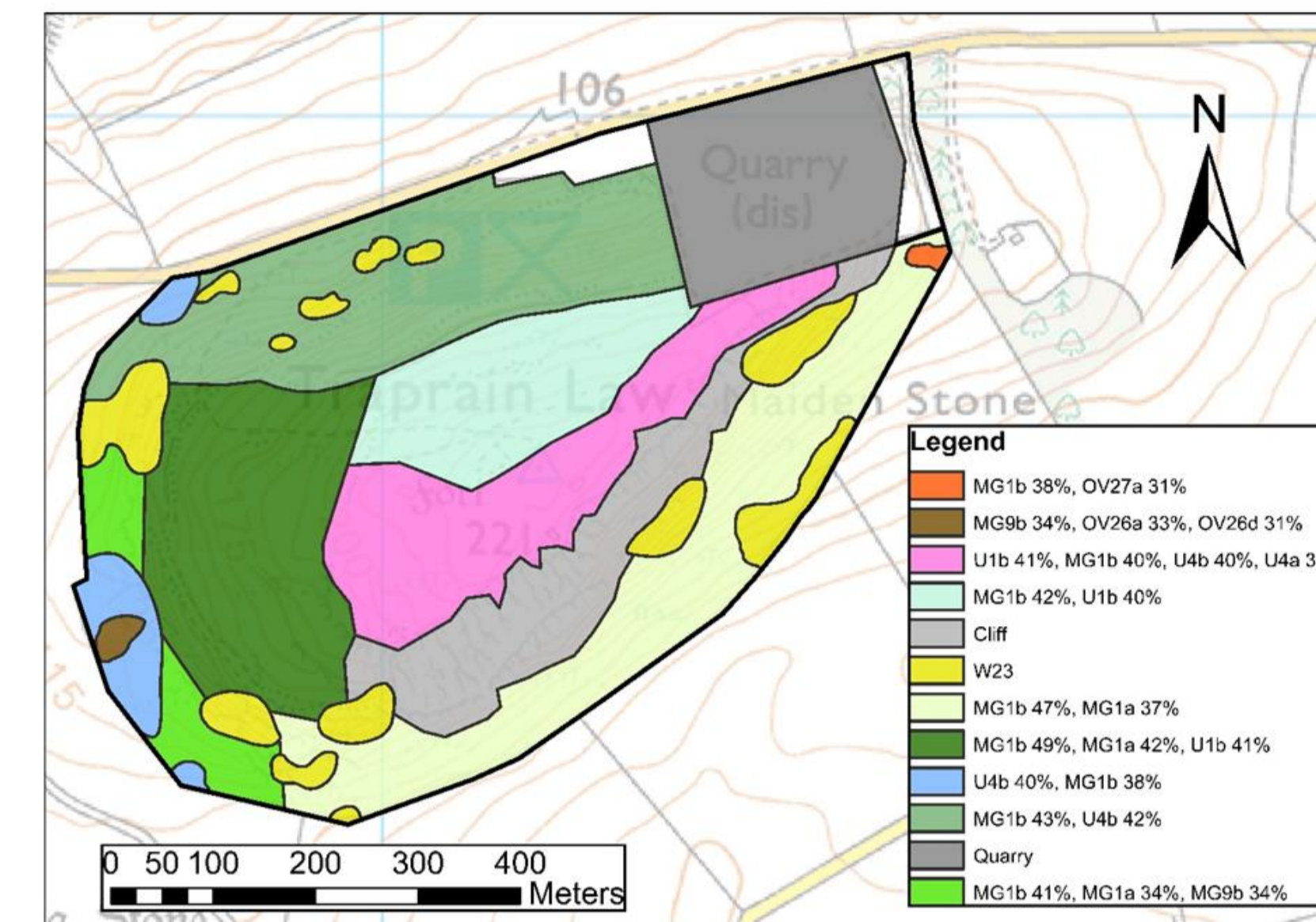
Methods

Surveys from 2012 to 2017 detailing vegetation community type, vegetation height, litter layer and forbs cover were undertaken during annual surveys of established fixed quadrats conducted by volunteers using a 1 x 1 m quadrat. In summer 2017, a National Vegetation Classification (NVC) survey using 2 x 2m quadrats was conducted on the site following the boundaries of a previous survey map from 2004 (Averis, 2005).

Results

Comparing the NVC surveys of 2004 to 2017, there has been a change from the tall rank grasses of MG1a, *Arrhenatherum elatius* (*Festuca rubra* sub-community) and MG1b (*Urtica dioica*) grassland to very short U4b *Holcus lanatus* - *Trifolium repens* and MG9 *Holcus lanatus* - *Deschampsia cespitosa* on the lower western slopes, and a shift to a more varied MG1a, MG1b and U1b *Festuca ovina* - *Agrostis capillaris* - *Rumex acetosella* grasslands.

However, on northern and southern slopes, the U4a *Festuca ovina* - *Agrostis capillaris* - *Galium saxatile* grassland has degraded in value to MG1b and U1b rank communities.



Since the initial survey previously small patches of W23 *Ulex europaeus*-*Rubus fruticosus* scrub community have significantly increased in expanse across the whole of the site.



Comparing fixed-point photography from 2012 to 2017 displays a retreat in the rank MG1 grassland.



Conclusions

- Results reveal that some areas of the site have changed substantially, while others have remained relatively constant.
- Portions of the summit changed from tall grassland communities to short communities. Meanwhile, the northern and southern slopes were evidently much less grazed, resulting in a transition to rank grassland.
- Ponies are selective grazers (Köhler, Hiller and Tischew, 2016), and have thus exhibited a preference for only part of the site, leading to neglected areas becoming less species diverse
- Overall, botanical interest has increased, suggesting Exmoor ponies have a role to play in conservation grazing., but with limitations

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Further information on this work is available from:

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