



Burnfoot SSSI, River South Tyne © NBP Photographer John Williamson

Working with Wildlife

Calaminarian Grassland Habitat Action Plan

Plan Co-ordinator	Rivers & Wetlands Group
Plan Author	Elaine Jaggs
Plan Lead	Northumberland Wildlife Trust
Latest version	January 2008

Description

Calaminarian grassland is found on alluvial shingle deposits that were contaminated by waste from historic mining for lead, silver, zinc, barium and fluorspar. Intense mining activity and large volumes of waste from the ore dressing process were released into the rivers and deposited downstream as fines trapped amongst the river cobbles. Contamination levels vary with the location and age of deposit, depending on which minerals were being mined at that time, or whether older contaminated deposits were being reworked by the river.

In recent years the rivers have cut deeper into their beds leaving these shingle bars above river level and only rarely subject to flooding. They soon develop short, open grassland dominated by species and ecotypes that are tolerant of toxic metals, low nutrient levels, drought and grazing.

The grassland community is structurally varied and may be species rich. It is typically grazed short by rabbits, and sometimes also by sheep. The most contaminated sites are sparsely vegetated with only the most metal tolerant vascular plants present, but lichens and bryophytes are abundant and may be highly diverse with as many as 30 lichen species per square metre. Less contaminated sites have a greater diversity of vascular plants, up to 22 per square metre, but fewer lichens and bryophytes.

Conservation Status

EC Habitats Directive, schedule II
UK Biodiversity Action Plan Habitat

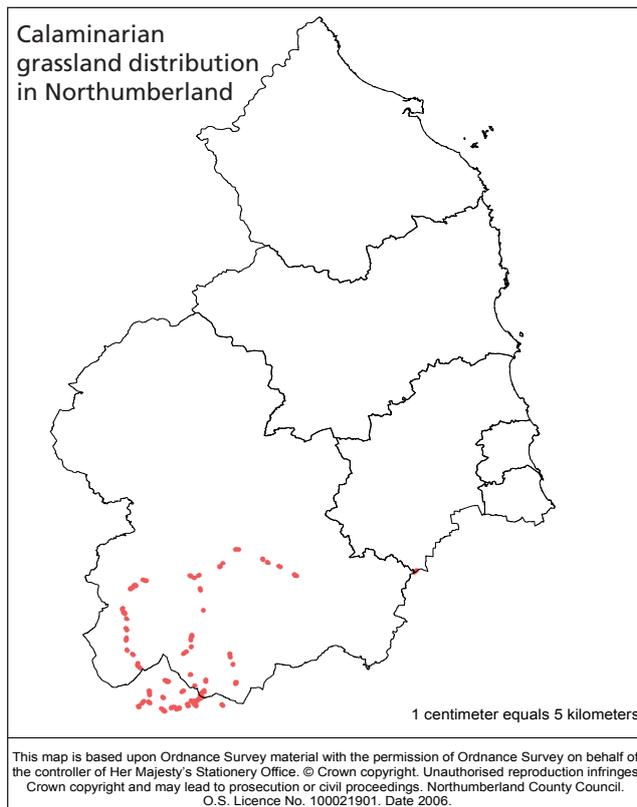
Current Extent in Northumberland

Calaminarian grassland is a widespread but uncommon habitat in Britain, generally associated with mine spoil or natural mineral outcrops in the Pennines, Cumbria, Wales and Scotland. The national extent is small but not precisely known, and the ranges and populations of metallophyte species have declined dramatically over the last 50 years as mine sites have been reworked for minerals or taken into agricultural use.

Calaminarian grassland occurs in the North Pennines on alluvial deposits of the rivers South Tyne and Allen and their tributaries, and also on places along the main River Tyne. So far 33 sites have been identified on these river systems, of which 27 (approximately 40 ha) are in Northumberland. Many of these are of geomorphological, as well as biological interest. The areas of calaminarian grassland are generally small and diminishing rapidly, with no more than 12ha in Northumberland now in favourable condition. A number of Calaminarian grassland sites are designated as SSSI's including Ninebanks River Shingles and Lambley River Shingles.

There are a few other heavy metal sites of importance in Northumberland at Carrshield and Coalcleugh in Allendale. These have important lichen and metallophyte populations and are in need of protection from disturbance and restoration. Important populations of rare helleborines are found at the lead and barium contaminated spoil at Stonecroft Mine.

Calaminarian Grassland Habitat Action Plan



Current Factors Causing Loss or Decline

- Insufficient grazing leading to mature gorse scrub
- Manuring by cattle leading to coarse grass development
- Extraction of gravel from shingle bars
- Disturbance by building of river defences
- Recreational pressure
- Tree planting
- Fly tipping
- Overbank flooding
- Invasive species such as Himalayan Balsam

Associated Action Plans

Rivers and Streams

Further Information

This calaminarian grassland action plan links to the calaminarian grassland UK BAP action plan.

National Vegetation Classification -
OV37 *Festuca ovina* – *Minuartia verna* grassland

European context - *Violetalia calaminariae*

Targets

Maintain the current extent of calaminarian grassland in Northumberland by 2010

Improve the condition of calaminarian grassland to favourable on sites in Northumberland currently assessed as being in an unfavourable condition by 2015

Code	Priority Actions	Date
CG A01	Identify all remaining calaminarian grassland sites in Northumberland	2008
CG A02	Use the data from recent calaminarian grassland surveys to quantify the action plan targets	2008
CG A03	Agree a methodology for condition monitoring of calaminarian grassland	2009
CG A04	Secure and maintain appropriate management for all calaminarian grassland sites	2010
CG A05	Ensure relevant sites are designated as SSSI and included in the South Tyne & Allen River Gravels candidate SAC	2010
CG A06	Identify and undertake gorse and scrub removal on appropriate sites	2010
CG A07	Research techniques for re-creation of calaminarian grassland communities	2015
CG A08	Carry out condition monitoring of calaminarian grassland in Northumberland	ongoing