

4c Upland hay meadows

These are also known as Northern Hay Meadows and are listed in the EC Habitats Directive. They comprise only the NVC community MG3 *Anthoxanthum odoratum* – *Geranium sylvaticum* grassland and rely on low levels of soil nutrients. There is typically a dense growth of grasses and dicotyledonous plants, up to 80 cm high with no clear dominance by any particular grass species. Other species found here include pignut *Conopodium majus*, great burnet *Sanguisorba officinalis* and lady's mantles *Alchemilla* species.

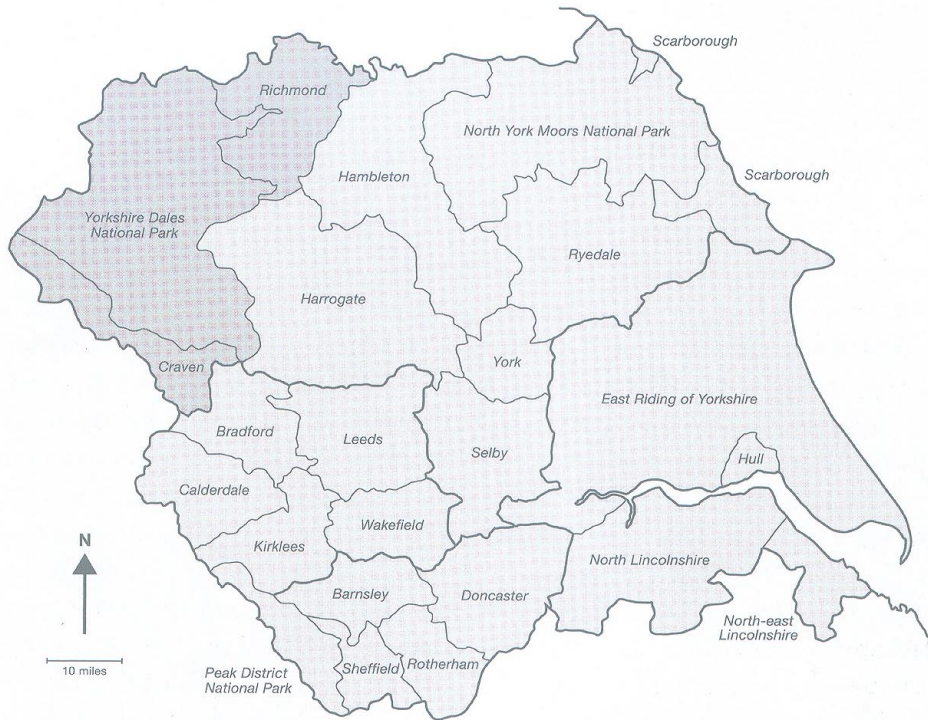
Status

The habitat is restricted to northern England apart from a few scattered localities in Scotland. The main concentrations lie in the northern Pennines, in Durham, Cumbria and North Yorkshire. The high areas of Swaledale, Wharfedale and Wensleydale are important. Sites are usually very small (less than 2 ha) and roadside verges can provide an important resource. There are discrepancies in estimates of the area of habitat remaining depending upon what is included as good habitat, but it is clear that the total is very small. A recent report gave a total of 610 ha (probably an over-estimate) of good quality habitat in England, 96 ha (16%) are in North Yorkshire¹. The remaining areas are also very susceptible to loss by agricultural improvement. The three MG3 subcommunities characterised by the presence of lop grass *Bromus hordaceus*, quaking grass *Briza media* and false oat grass *Arrhenatherum elatius* are all represented in north-east Yorkshire.

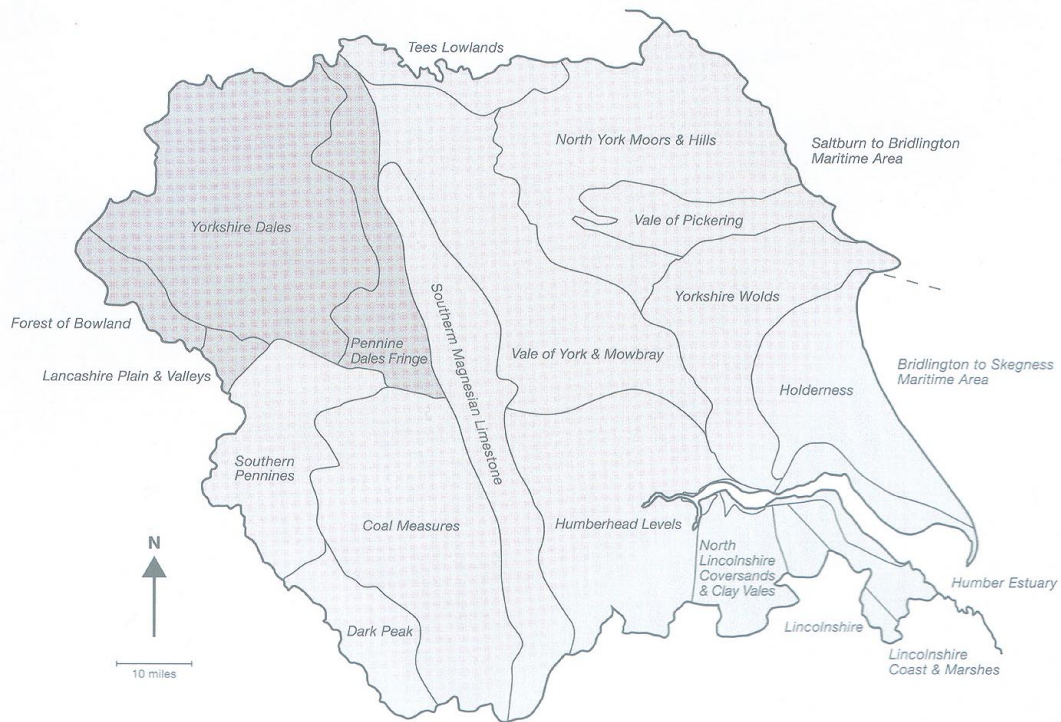
Threats

Agricultural improvement can lead to the loss of this habitat, simply by heavy applications of manure or fertiliser, or a change to silage production with frequent and earlier cutting. Traditional hay meadow management is important. The *Arrhenatherum* subcommunity is found in uncut areas such as field edges and roadsides where wider countryside policies and careful management by the Highways Agency can have significant beneficial effects. Neglect or the application of herbicides or pesticides may lead to changes in vegetation, as will management as pasture rather than hay meadow and overgrazing in the spring.

Map 8a: Presence of upland hay meadows shown by local planning authority boundaries



Map 8b: Presence of upland hay meadows shown by Natural Areas



Habitat present
 Habitat not known to be present