

LOWLAND MEADOWS

Nationally

Lowland meadows are taken to include most forms of unimproved neutral grassland across the enclosed lowland landscapes of the UK. This priority habitat is not restricted to grasslands cut for hay, but also takes into account unimproved neutral pastures where livestock grazing is the main land use. On many farms in different parts of the UK, use of particular fields for grazing pasture and hay cropping changes over time, but the characteristic plant community may persist with subtle changes in floristic composition. In non-agricultural settings, such grasslands are less frequent but additional examples may be found in recreational sites, church-yards, roadside verges and a variety of other localities.

Unimproved neutral grassland habitat has undergone a remarkable decline in the 20th century, almost entirely due to changing agricultural practice. It is estimated that by 1984 in lowland England and Wales, semi-natural grassland had declined by 97% over the previous 50 years to approximately 0.2 million ha. Losses continued during the 1980s and 1990s, and have been recorded at 2-10% per annum in some parts of England. Extensive agricultural modification of unimproved grasslands has also been recorded in Scotland between the 1940s and 1970s. Recent conservation survey findings in Britain and Northern Ireland reveal that the impact has been pervasive, with an estimated extent of less than 15,000ha of species-rich neutral grassland surviving today in the UK.



Hay Meadow © Karen Shelley-Jones

This habitat type concentrates on meadows and pastures associated with low-input nutrient regimes, and covers the major forms of neutral grassland which have a specialist group of scarce and declining plant species. Among flowering plants, these include fritillary (*Fritillaria meleagris*), Dyer's greenweed (*Genista tinctoria*), green-winged orchid (*Orchis morio*), greater butterfly orchid (*Platanthera chlorantha*), pepper saxifrage (*Silaum silaus*) and wood bitter vetch (*Vicia orobus*). Lowland meadows and pastures are important habitats for skylark and a number of other farmland birds, notably corncrake which has experienced a major range contraction across the UK.

**Extent in UK:
10,521 ha**

The overall outcome of habitat change in the lowland agricultural zone is that *Cynosurus* – *Centaurea* grassland, the mainstream community of unimproved hay meadows and pastures over much of Britain, is now highly localised, fragmented and in small stands. Recent estimates for cover in England and Wales indicate that there is between 5,000 and 10,000ha of this community in total.

In the Peak District



Hay making © PDNPA

Traditionally managed flower-rich hay meadows are a rich resource for wildlife, an intimate mix of grasses and herbs. They are a colourful refuge for some of our prettiest and increasingly uncommon plants. The dramatic seasonal changes in appearance of meadows reflects the cyclical nature of farming, to many they express the soul of the English countryside. Such meadows would, at one time, have been an integral part of each farm, providing essential winter-feed for stock. The resource of hay meadows is now fragmented, and flower-rich examples are becoming increasingly uncommon in the Peak District.

Nationally, it is recognised that flower-rich grasslands declined by 97% between the 1930's and the mid 1980s. The National Park Hay Meadows Project found a 50% loss and an additional 26% decline in hay meadows between the mid 1980's and mid 1990's. Follow up survey to the project highlighted a further 25% loss and/or decline in the quality of meadows in the National Park from 1995 to 1998. The rate of loss and decline has varied across the National Park with the greatest losses occurring in intensive dairy farming areas such as Peak Forest.



Yellow (hay) rattle © Karen Shelley-Jones

Ecologically the most interesting meadows are those which are long established, each field having developed a unique assemblage of plants over a considerable period of time. Across the Peak District there are a range of community types. The majority are neutral in character and typically support ox-eye daisy, hay rattle, meadow vetchling, common knapweed and meadow clover. A smaller number of meadows support damp meadow communities with great burnet, whilst others show affinity with acid and calcareous grasslands. Many of the species found in flower rich meadows are confined to traditionally managed grasslands, having exacting management and/or environmental requirements. In addition to their floristic interest, hay meadows are an important habitat for birds such as skylark, and it has been shown that hay meadows at the moorland fringe provide essential foraging habitat for twite.

Hay meadows make a significant contribution to the landscape of the Peak District, with their dramatic change in appearance throughout the seasons. They are a welcome contrast to the surrounding often agricultural, bright green silage fields. Culturally, hay meadows are significant; a product of human activity over many years. They are celebrated in folklore, customs and literature and are an outward sign of rural life that most of us have lost. The flower-rich swards are part

of our cultural heritage, they may be the oldest link with the past that a village has, perhaps even older than the church. The continuing loss of hay meadows can be a loss of an historical place as much as it is a wildlife habitat.

Within the White Peak there are known concentrations of hay meadows in several parishes, for example, Little Hucklow, Bonsall, Sheldon and Middleton-by-Wirksworth. Within the Dark Peak and South West Peak Natural Areas there are clusters of hay meadows around some of the hamlets and villages, including Edale, Sparrowpit, Brandside and Grindon.

**Extent in PD:
1,268 ha**

Current Factors Affecting the Habitat & Habitat Condition

Agricultural intensification has led to the extensive development of nutrient-demanding, productive perennial ryegrass (*Lolium perenne*) grasslands. These are managed for grazing and also silage production which has widely replaced traditional hay-making. Where fertiliser input is relaxed or in swards which have only been partially improved, *Lolium - Cynosurus* grassland is common; in many respects this is intermediate between improved and unimproved lowland neutral grasslands but has few uncommon species and is generally of low botanical value.

Recent Work

Hay meadow restoration projects, some funded through Higher Level Stewardship or other conservation grants, can help to increase the number of flower-rich meadows. Seed harvested from flower-rich meadows has been spread on less-diverse land in areas such as the North Lees estate, Wardlow Hay Cop and through the Vision for Wildlife Project in the White Peak.

An important consideration for the future is trying to link up species-rich meadows across the landscape, to move away from scattered individual fields, to a network of meadows providing greater benefit to a range of species.

Associated BAP Species in the Peak District

Skylark	<i>Alauda arvensis</i>
Twite	<i>Carduelis flavirostris</i>
Brown hare	<i>Lepus europaeus</i>

Locally Significant Species in the Peak District

Jacob's ladder (*Polemonium caeruleum*) on the neutral grasslands of the Dales

NVC Communities

The principal vegetation types (and their associated sub-communities) included in this habitat are:

MG4 - *Alopecurus pratensis* - *Sanguisorba officinalis* floodplain meadows

MG5 - *Cynosurus cristatus* - *Centaurea nigra* grasslands

MG8 - *Cynosurus cristatus* - *Caltha palustris* flood-pastures