

# Grasslands

SCOTTISH  
NATURAL  
HERITAGE



SCOTLAND'S LIVING LANDSCAPES



# GRASSLANDS

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1. Crofter feeding hay to Highland cattle, Skerray;
2. Dark green frillitary;
3. Devil's-bit scabious;
4. Base rich grassland, Glen tender.

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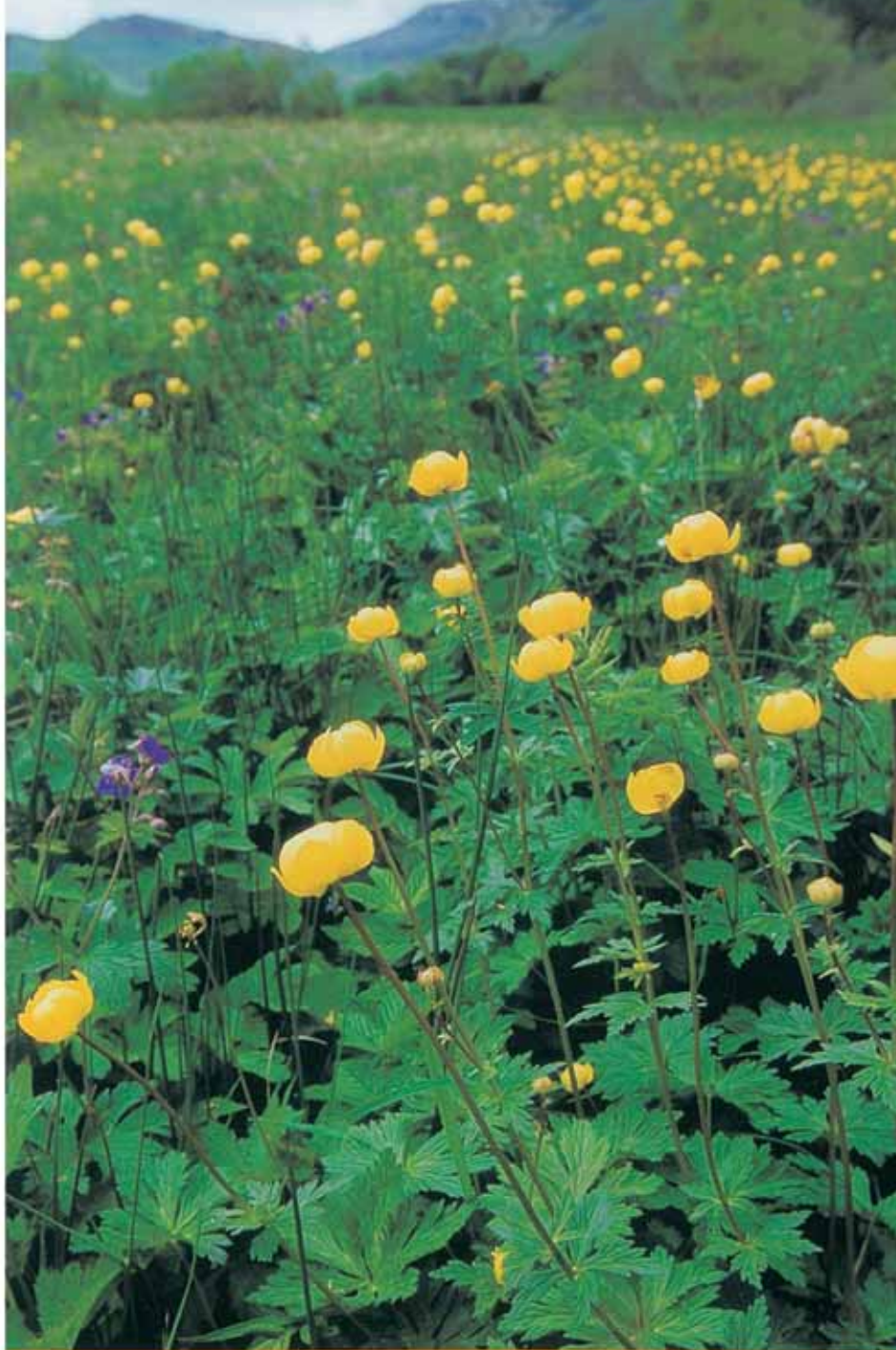
**SCOTLAND'S LIVING LANDSCAPES**

by

Stephen Ward & Jane MacKintosh

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Globe flowers, Perthshire



Meloncholy thistle, Perthshire

# Foreword

From open hillsides through grazed fields, hayfields and road verges down to playing fields and garden lawns, grasslands are everywhere. We take them for granted. Yet grasslands, more than any other habitat, depend upon man for their survival. It is our management, our continual harvesting of each year's growth and removal of the seedlings of trees and shrubs by grazing or mowing, which keep Scotland's grasslands from turning to scrub and woodland.

This booklet tells the story of how ancient man first created the grasslands from forest clearings. It explains how different farming practices lead to different types of grassland and how the soil determines the plants and animals which can grow and feed there. It contrasts the uniformity of intensively managed silage fields with the diversity of traditionally

managed pasture and meadow. And it describes the grasslands themselves - from the internationally renowned machair of the west coast to the rare species-rich meadows of Perthshire.

Only remnants of wildlife-rich grassland now survive in Scotland. The fate of these flower-rich swards with their butterflies, bees and birds lies in the hands of crofters and farmers. We must look after what is left. This booklet aims to raise awareness of the importance of such grassland and I commend it to you.



Donnie MacLennan

President of the Scottish Crofters Union



Grassland on Unst, Shetland



# Introduction

Lying between Scotland's world-famous heather moorlands, coastal firths and sea lochs, our grasslands are easily overlooked. The word 'grasslands' - in Gaelic 'glasach', meaning lea or fallow land, green field - evokes a variety of images. To some, grasslands are extensive stretches of unenclosed turf speckled with wildflowers. To others they may be secluded fields penetrated by ancient tracks, pastures enclosed by makeshift stone walls or featureless tracts of modern agricultural land.

Grasslands cover the land upon which most farms and crofts lie, and from which most of Scotland's food is produced. The greater part of Scotland's network of roads and railways criss-cross the grasslands, providing a backdrop familiar to every traveller. Most of Scotland's grasslands were created by man and are maintained by farming. They are an important part of our natural heritage providing a vital habitat for a wide range of animals and plants including many different invertebrates, breeding and over-wintering birds, mammals and flowering plants.



# Creating grasslands

The ancient tribes did not have the option of claiming the grassland - it simply did not exist on any scale in prehistoric Scotland. It was only by felling, burning and grazing the woodland and scrub they found around them that the early farmers **created** most of the grassland, clearing by clearing, field by field over the millenia. They wrought it from the forest and, in recent centuries, extended it by draining wetlands.

Matthew Paris's map of thirteenth-century Scotland shows the far north and west of the country as 'fit for cattle and shepherds'. A century later John Fordoun found the upland districts and Highlands to be 'full of pasturage grass for cattle and comely with verdure in the glens along the water courses.'  
Haldane (1952).



Sheep in birchwood, Angus



Crofter sowing

Grasses thrive on being regularly grazed or mown, and are quick to produce new shoots. Grazing by cattle and sheep encouraged the growth of grasses, where the forest had been cleared, and prevented the slower-growing saplings from re-establishing. Gradually the vast forests that once covered Scotland were cleared for pasture until, by the 17th century, as little as 4% of the original woodland cover remained. Scotland was described at that time as little more than a grazing field for England.

In the absence of human intervention, 'natural' grassland has always been extremely scarce in Scotland, being more or less confined to exposed coasts and mountains. The native species that comprise today's grasslands were once restricted to these exposed areas and to forest clearings.

From the 14th until the middle of the 18th century, cattle were seized in raids and counter raids across the border between Scotland and England. In due course the droving trade emerged. Surplus cattle were gathered by drovers and drifted south through the summer

months and into the autumn, feeding as they went. The routes from the north funnelled the streams of cattle into a major tryst at Falkirk. Some 30,000 head were sold there in 1777 and this figure rose to 150,000 a year by 1850. The cattle were shod so that they could withstand long journeys with some travelling on as far as Smithfield market in London.

'They formed great cavalcades that blocked the way for other travellers for hours at a time; and they were as noisy as they were spectacular, with the chief drovers riding alongside the beasts, the cattle dogs barking and the men shouting out one of the oldest and most universal of human cries, transcribed by Sir Walter Scott as hoo-hoo. This sound is still used wherever men drive cattle, and the drovers used it to warn farmers that they were coming, as well as to urge on their own loitering beasts. It was important that such a warning be given, and in good time, for if the farmers did not want their cattle to join the drove they had to make sure they were safely enclosed.'

Toulson (1980).



Map showing the main drove routes in Scotland  
(adapted from Haldane, 1952)

In the wake of the Highland clearances, huge numbers of sheep pushed back still further the boundaries of remaining woodlands. Some of the grassland that grew in its place has, through crofting practices, been maintained to this day.



'Cattle drovers near Edinburgh'  
by Walter Geikie



Farmland near Stirling

# Sustainable farming: getting the right balance

Field scabious in a hay meadow, Perthshire



Grassland can be maintained as grassland as long as it is grazed or mown. Take away the sheep and cattle and most grassland will gradually revert to scrub and eventually to woodland. As the early farmers cleared more and more of the forest, grassland plant and animal populations boomed to become the major component of farmed land. However, by far the greater part of these farmed grasslands - with their native grasses and herbs - have themselves succumbed to the relentless march of agriculture.

Traditional grassland is damaged by a single application of mineral fertiliser or slurry and destroyed by successive applications. The grasses grow rapidly, ousting the wild flowers and with them the insects and birds once dependent on the

annual cycle of grazing and mowing. Alternatively, much old grassland has disappeared under the plough to be replaced by arable crops or designer grassland, known as 'ley', made up of grasses specially bred for high productivity.

Traditional grassland supports fewer livestock but requires less fertiliser, other than that recycled from dung. This is released slowly and, to this day, the routes of the old drove roads and the stances where the cattle were held overnight remain in many places appreciably greener than the surrounding hills.

Grasslands which are still managed traditionally as pasture or meadow are the richest in wildlife.

## Pasture

Pasture is grassland used for grazing, most commonly by sheep or cattle. In Scotland, pasture is the most widespread form of grassland management. But, if grassland is to be maintained in a healthy condition, a delicate balance must be achieved between undergrazing and overgrazing.

When a pasture is undergrazed, the first sign is often a build-up of plant remains known as 'litter'; in extreme cases shrubs and trees may take over. Provided that pockets of grassland are left, undergrazing can be reversed by cattle. Their trampling and grazing breaks up the accumulated litter and lets in the light and warmth needed by grassland plants and animals.

Where a pasture is overgrazed, the grass may be cropped as smooth as a bowling green with only the unpalatable plants left standing. With severe overgrazing, the soil is exposed.

A combination of wet weather and trampling under the hooves of livestock can turn pasture into a quagmire. This process can be reversed if the ground is rested, though there is the risk that thistles and ragwort may colonise the drying mud in place of grass.

Pasture with tussocks, tall herbs and the occasional tree or patch of scrub supports more creatures, such as spiders, insects, birds and mammals, than a sward of uniform height, as there are more places to feed and to shelter from predators and from the extremes of temperature and humidity.

Should grazing no longer be an option, cutting grassland can still provide a habitat for wildlife. In practice, since the cuttings must be removed to avoid smothering the growing shoots, this is only an option for limited areas.



Sheep and cattle grazing pasture near Lismore



Heavily grazed pasture with  
thistles and rushes

Cattle on herb rich pasture,  
Breadalbane



## Meadow

Meadows yield a crop of hay in summer to feed livestock over the winter. In spring the most productive pastures are 'shut' and, traditionally, the winter's accumulation of manure, which is bulky and heavy, is spread over the fields closest to the byre. Here grassland can grow undisturbed by livestock.

Hay-making, as a way of managing grassland for winter feed, may only have been practised in Scotland for about 200-300 years. It represented a major advance in farming; before this, livestock which could not be kept over winter were slaughtered. Creating a meadow required little more than excluding the livestock from a pasture and leaving it to grow.

Mowing creates grassland of uniform height, which means that meadows support a more limited range of wildlife than pastures. However in most years, especially when the mowing is done later in the year, wildflowers are able to set seed and young birds to fledge before the grass is cut.

'William Mackintosh of Borlum in 1729, advocating as a means of improving livestock the enclosing of farmland in Scotland by the planting of hedges, pointed out that such enclosing would not only make possible hay for winter food but would give some shelter for sheep in winter.'

Haldane (1952).

'Haymaking is the chief preoccupation and business of the crofting year and its greatest glory. It is a long, complex and hazardous process, beginning in these parts about the middle of July - give or take a week or two, depending on how good the season's growth is - and continuing usually into October or even November. Indeed I have known us to conclude our harvesting in December, more than once I have known that, and I have known it not to be concluded at all.'

Maclean (1984).



Haymaking is, however, at the mercy of the weather.

While hay is still fed to horses, sheep and suckler cattle, most dairy cattle are now fed silage. Mowing for hay has become uncommon in recent years in Scotland.





Baling hay on Islay



## Ley

Leys are grasslands created by sowing agricultural strains of grasses, particularly rye grass, often together with clover. Bred for its high yield, rye grass depends on mineral fertiliser or slurry being applied so that it can maintain its high productivity. In the absence of fertiliser a ley will begin to revert; this does not mean a return to a more wildlife-rich grassland but rather a gradual infiltration of the ley by less demanding native grasses and rushes.

Like haymaking, silage making is a means of harvesting summer grass to feed livestock during winter, but it is a very much more intensive process. Whereas hay-making is usually limited to a single crop each year, two or three crops of silage can be produced from the same fast-growing ley, with the first being cut as early as May. This intensified activity prevents wildlife from colonising the ley.



Modern mowing machines work inwards from the edge of the fields and corral birds and small mammals into a shrinking island in the centre, where many are killed by the final pass of the cutter. Wildlife-friendly mowing techniques reverse the mowing pattern. Cutting is started at the centre of the field and

works outwards, driving grassland birds and mammals towards the edges of the fields where they have a chance of escaping the cutter's blades. Many crofters and farmers have also agreed to delay their cutting in areas where birds like the corncrake are likely to breed.

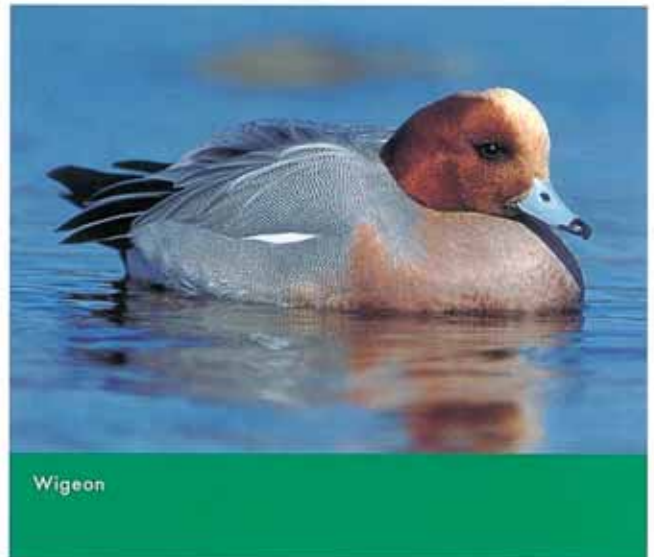
# Types of grassland

Not all grassland is the same. Some grasslands, such as those of the Solway merse, Hebridean machair or the Caithness cliffs are natural. These have evolved to withstand immersion by floods and tides, or exposure to winds and salt-laden storms.

## Natural grasslands

### Saltmarsh

Saltmarsh, immersed by the tides, comprises a more or less continuous turf of grasses and wildflowers. Grasses such as sea poa, in the most frequently inundated lower marsh, give way to others such as red fescue in the upper parts of the marsh. The upper reaches, immersed by only the highest Spring Tides, are used to graze cattle and sheep during summer. They may be tinged pink by drifts of thrift or, in late summer, purple by the Michaelmas daisy-like flowers of sea aster. Salt marshes are key winter resting and feeding places for migratory wildfowl; the Solway merse supports the entire Spitzbergen population of barnacle geese throughout the winter.





Saltmarsh, on Harris,  
Western Isles

Barnacle geese



## Machair



Ragged robin

Machair is a coastal grassland found in the north-west highlands and islands of Scotland. It occurs where rapidly shifting dunes of shell-sand are colonised first by marram grass, then by other species of plant like red fescue and sand sedge - the latter bringing order to chaos as its shoots rise from dead-straight rhizomes to make dotted lines across the sand.

Machair is renowned for its vivid displays of colourful wild flowers. Dune slacks, pale with silverweed, are mottled gold by its flowers and by those of marsh marigold and lesser spearwort. They are tinged with the delicate pink of lady's smock, the rose pink of ragged robin and later in the year, the deep red of marsh cinquefoil. The dry grassland starts with the whites of daisies and progresses to the yellows of buttercups, birdsfoot-trefoil and lady's bedstraw.

'... the most numerous breeding wader of the machair is the lapwing and they were beating and wailing over the ploughs and men, ... diving close to my head and flinging themselves away, making loud percussive thrumming noises with their wings.'  
Coxon, (1988).



Machair is often used for rough grazing, a practice which helps to maintain it. The machair around the Uists and Benbecula provides one of the most important breeding grounds for wading birds in the northern hemisphere.

Nowhere else in the British Isles do oystercatchers, ringed plovers, lapwing, dunlin, snipe and redshank breed in close proximity in such high densities.



Marsh marigolds, on Lewis, Shetland

Machair flowers on Lewis, Western Isles



## Cliff-top grasslands

Cliff-top grasslands, carpeted in close-cropped red fescue, are favoured by choughs, a species of bird once widespread in Scotland but now virtually restricted to Islay and Colonsay. The specialised lifestyle of choughs restricts them to short grasslands where they feed upon small creatures in the soil and dung.

Much to the detriment of maintaining or expanding the chough population, some of the modern pesticides which are given to cattle to kill parasites in their guts pass through the animal and are still poisonous to insect larvae in the dung. To avoid depriving grassland birds of food, cattle in a herd should be dosed at different times, or by a single dose rather than by continuous release bolus.



Chough





Thrift covered sea cliff top, Forvie National Nature Reserve, Aberdeenshire

# Man-made grasslands

The chief factor determining the character of grasslands is the soil. The soil reflects the material from which it has formed. So important is the influence of the soil in determining which plants can grow that it is this characteristic that is used to describe the grassland. When grassland is called 'neutral', 'base-rich' or 'acidic', these terms are really describing the soil upon which the grassland has formed.

As well as the type of soil, its water content is a limiting factor. Farmers prefer grasslands on freely draining soils, but must often make do with marginal land that is periodically flooded or even permanently water-logged.

## Neutral grasslands

Neutral grasslands grow on soil which is well drained, well balanced in nutrients and fertile, hence it is hospitable to a wide range of plants and creatures which, in turn, enhance the quality of the soil by their actions. Earthworms eat dead leaves, making them easier for soil bacteria to break down; they also mix the soil, bringing in air and improving drainage in the process.

Charles Darwin calculated that, in one year, worm casts deposited on pasture may amount to 16 tonne an acre, equivalent to a layer of soil 5mm deep being deposited each year and enough over time - as he observed - to bury stones in old pasture.



Hedgehog

'Moles do not dig constantly or specifically in search of food. Instead, the tunnel system, which is the permanent habitation of the mole, acts as a food trap, constantly collecting invertebrate prey such as earthworms and insect larvae. As they move through the soil, invertebrates fall into the mole run and often do not escape before being detected by the patrolling resident.'  
Stone, (1986).

Hedgehogs and moles, foraging underground and rarely seen, feed on the earthworms, insects, slugs and snails and help to keep their populations in balance.

Because the quality of the soil and the drainage are so good, most of the neutral grasslands in Scotland have been converted to arable crops, or reseeded and dosed with mineral fertiliser to create grass leys. In some areas, these leys are favoured by brown hares and by wildfowl, particularly geese; however, the practice of frequent cutting for silage poses a risk to young birds and animals and makes leys unsuitable as breeding grounds for wild animals.

Hardheads, also known as knapweed or horse knot, has been used to foretell the future of love. A girl would put the head with tight-closed florets inside her blouse. If an hour later the florets had blossomed, she would be lucky in love.  
Grigson, (1958).

The few remaining traditional neutral grassland sites can often be identified by their profusion of grasses and wildflowers such as crested dog's-tail and hardheads, the latter named after their tight blackish buds which later blossom into feathery purple flower heads. Closer to the ground in these areas grow bright yellow birdsfoot-trefoil and dandelion-like cat's ear which, instead of a smooth flower stalk, has one with cat's ear-like scales. The flowers of lady's bedstraw are tiny and bespeckle the sward with dusty yellow. Traditionally this grassland was grazed over the winter, then lightly manured and 'shut' to allow the grasses to grow. The grass was cut for hay in late July or early August. It is still cut for hay on crofting lands in Lochaber and survives as pasture in small patches elsewhere in Scotland.



Neutral grassland in Perthshire



Eyebright



Common rockrose



Primroses



Wood cranesbill

In Perthshire valleys, remnants of a rare flower-rich type of meadow can occasionally still be found. These are characterised by sweet vernal grass, which gives new-mown hay its heady aroma, and by abundant wood cranesbill with its open magenta flowers. Lower growing herbs include lady's mantle, sorrel and ribwort plantain with their nodding white stamens which, like grasses, release their pollen into the wind. The small herb eyebright also grows here - so named because its white flowers mottled with purple and yellow are reminiscent of a bruised eye and were once prescribed by herbalists as a treatment for eye disorders - as does the rare baldmoney, which can resemble a green hedgehog when left standing proud in pasture.

Lady's mantle was prescribed by herbalists to stem bleeding. It was also valued by alchemists in their attempts to turn base-metal to gold, hence its Latin name - *Alchemilla*.

Mabey, (1996).

Field workers to slake their thirst used sorrel - also known as sourock. It was also used as a garnish for fish and meat and to take rust marks out of linen.

Mabey, (1996) & Grigson, (1958).

Highlanders used baldmoney or spignel to give food a spicy flavour and also chewed the roots as a stimulant and to relieve flatulence.

Grigson, (1958).

On road verges and railway embankments, where neutral grassland is ungrazed and rarely cut, oat grass predominates with tall herbs such as cow parsley and meadow cranesbill.

Flora Britannica says of cow parsley, also known as Queen Anne's lace, that 'For nearly all of May, almost every country road is edged with its froth of white blooms.'

Mabey, (1996).



Lady's mantle and geranium, Perthshire

## Base-rich grasslands

'Base-rich' soil is formed from rocks like limestone, serpentine and old red sandstone. Like them it is rich in calcium and other 'bases' and supports plants which are 'lime-loving'. This type of soil is uncommon in Scotland, and the base-rich grasslands it supports are of limited extent.

The most common type of base-rich grassland, usually found on south-facing slopes, is characterised by bent and fescue grasses and wild thyme. Thyme is easily spotted by its tiny purple flowers and the smell of its crushed leaves underfoot. Also visible in base-rich grassland are quaking grass with its nodding heads, fairy flax, rockrose with its big bright yellow flowers, cat's-foot with its white silky-haired leaves and the upright spikes of field gentian and orchids - some conspicuous such as common spotted orchid while others, such as frog orchid, are seen only at close range.

In the north and west of Scotland, another type of base-rich grassy heath can be found. This is distinguished by mountain avens which has tiny oak-like leaves and large white eight-petalled flowers in June or July, and by carnation grass (actually a sedge, not a grass) named because of its blue-green leaves. These two species are often found growing together with sea plantain, which also features in high-level grasslands and on salt marshes.

Butterflies fluttering on their seemingly carefree way appear to have little to do with grassland. They alight casually on wildflowers and refuel, using their long tubular tongue as a drinking-straw to suck up nectar. But when looking for a suitable plant on which to lay their eggs, they are very fussy. Their eggs hatch to release caterpillars which, although voracious vegetarians, will eat only specific plants. Northern brown argus

caterpillars, for instance, feed upon rockrose, dark-green fritillaries upon common violet and common blues upon birdsfoot-trefoil.

Grazing animals often prefer the plants found on base-rich grasslands to other types of vegetation which may be growing nearby. In some areas this has caused severe problems with over-grazing. On Skye, base-rich grasslands have been so intensively grazed by sheep as to lead to erosion and scree formation, even at low altitudes.

Wild thyme contains thymol, a reasonably powerful antiseptic; flowering sprigs were used to scent linen. Thyme-tea was popular as an everyday drink and, in the Western Isles, thyme was put under the pillow or drunk as an infusion to prevent nightmares or otherwise give a restful sleep.

Mabey, (1996).



Fairy flax, also known as purging flax, was used as a laxative.

Grigson, (1958).



Quaking grass



Common blue butterfly  
on birdsfoot-trefoil



Meadow brown butterfly  
on marjoram



Short-eared owl



## Acidic grasslands

Acidic rock types and the soils produced from these and from glacial drift are extensive throughout Scotland. Only a limited range of lime-avoiding plants can thrive on these acidic soils.

Acidic grasslands may be characterised by heath bedstraw with bent and fescue grasses, often mixed with tormentil, common violet and mountain pansy. Such grassland is common and is widely used as pasture for sheep so that, despite the relatively poor nutrition they provide, by their sheer extent they make an important contribution to Scottish agriculture.

The beautiful, but diminutive, mountain pansy was used by James Grieve, a gardener and plant breeder of Edinburgh, as one of the forebears of the garden pansy.

Mabey, (1996).

Tormentil was used to treat calves and children with stomach-ache. In Shetland it is known as eart-barth (earth bark) and was used, in the absence of tannin from oak bark, as a source of red dye for fishing nets.

Grigson, (1958).

Blaeberry and heather may remain in grassland originating from moor, and heath bedstraw grassland readily reverts to moorland if grazing pressure is removed. Conversely, a consequence of intensive grazing is that plants avoided by sheep, such as mat grass, tufted hair-grass and bracken (which stores its resources in underground rhizomes) are able to spread.



Heath bedstraw and tormentil



In acidic grasslands, small heath and meadow-brown butterflies lay their eggs upon fine-leaved fescues. Short-tailed field voles, feeding on grass stems and roots, in turn fall prey to short-eared owls. Rabbits are common, particularly where the soil is easily excavated, and they too make easy meals for buzzards, foxes and stoats.

On thin-soiled rocky knolls, a mixture of bent and fescue grassland is found with sheep's sorrel and a variety of other small plants. Some of these, like maiden pink and shepherd's cress, are rare in Scotland. Because the soil layer on these rocky outcrops is thin, it dries out quickly and most of the plants found here are annuals which survive the driest months as seed. A few, such as biting stonecrop, have succulent leaves that store water for the dry season. On moist peaty soils,

another form of heath bedstraw grassland can be found, characterised by an abundance of highly unpalatable mat grass, which is easily identified in winter by the pale yellow, almost white clumps. This type of grassland provides poor grazing.

## Periodically flooded grasslands

In the Western Isles, well-drained grasslands are scarce. Grasslands that are flooded from time to time are indicated by the yellow blobs of marsh marigold and the pinks and reds of ragged robin and marsh cinquefoil. These areas are often managed by farmers or crofters as meadows to produce 'bog hay'.

In low-lying coastal areas, plants such as yellow flags, tufted hair-grass and soft rush thrive on agricultural land that is wet, poorly managed or abandoned. Cattle tend to avoid these plants, so they are able to spread and form clumps. These clumps provide vital cover for the nests of wild birds like snipe and corncrake. Until recently, corncrakes seemed destined for extinction in Scotland - they were confined to a few shrinking populations, mainly based in the Hebrides. Now, thanks to the introduction of wildlife-friendly mowing techniques, delayed cutting and leaving patches of tall vegetation for 'early cover', corncrake numbers have begun to rise again.

Where water comes to the surface of the ground in 'flushes', water-loving plants like butterwort, sedges and mosses can be found, or, in late summer, grass of Parnassus with its delicate green veins on white petals.



Grass of Parnassus



Bog hay on Shetland

## Rush-pasture

Completely waterlogged land (really a kind of marsh) may sometimes be managed as a type of grassland, called rush-pasture.

In rush-pasture, sharp-flowered rushes are often found with soft rushes and herbs like the purple flowered marsh thistle and, in western Scotland, whorled caraway, a fine-leaved plant with flowers similar to cow parsley. Cattle and sheep prefer to graze on the softer grasses, leaving the rush tussocks standing tall and untouched.

The pith of soft rush was used to make rushlights - vegetable tapers of peeled rush soaked in fat - which burned to give a good clear light.  
Mabey, (1996).

In some rush-pastures, purple moor-grass provides food and shelter for the caterpillars of the Scotch argus and chequered skipper and, in Argyll, of the rare marsh fritillary butterfly. Purple moor-grass is Britain's only deciduous grass. Its leaves die completely in the winter to a pale-yellow litter and are prey to winter winds that bowl them along - hence its alternative name of 'flying bent' - until fences in its path become clogged and are blown down; a particular problem for farmers in winter.

The chequered skipper is found where purple moor-grass grows. The caterpillar binds the edges of the grass-blade into a tube that protects it from predators and the worst of the weather. When selecting suitable plants upon which to lay their eggs, the adults choose locations where purple moor grass stays green into October or even November and avoid those where it dies back as early as September, but how they differentiate such locations is a mystery.  
Ravenscroft, (1995).



Rush-pasture, Perthshire

Some rush-pastures, with little human interference or management, have a profusion of colourful wildflowers throughout the summer: creamy meadowsweet, the purple northern marsh orchid and yellow balls of globe flowers in early summer and the drooping magenta heads of the melancholy thistle later in the year. Many of these flowers were once widespread in Scottish meadows, on land which may have been wrought from mires by drainage. With more intensive agricultural methods, they are but rarely seen in meadows now.

Meadowsweet, known variously as lady-of-the-meadow, meadow queen and queen-of-the-meadow, was used to flavour mead, for scouring milk churns, as a black dye, to treat malaria and to cover floors where, when crushed, it gave off a fresh carbolic smell.

Grigson, (1958).

Melancholy thistle, so called because the flower head droops at first, was used to 'expel melancholy out of the body, and makes a man as merry as a cricket'.

Grigson, (1958).



Meadowsweet (above and below)



# Retaining native grassland

Grasslands rich in wildlife, once to be found on every farm, now survive only where traditional farming and crofting is practised.

The momentum that created the first grasslands, the drive to get more from the land, has continued to shape Scotland unabated. Traditionally managed grasslands are still being converted to arable or reseeded as leys; with their rapid decline they are losing their ability to support a diversity and abundance of wild plants and animals. The last refuges for traditionally managed grasslands are on crofts and small farms. If we are to keep grasslands as havens for wildlife then traditional farming practices in these areas must be supported and encouraged.

Funding is available to farmers through agri-environment programmes run by the Scottish Executive Rural Affairs Department. Scottish Natural Heritage also offers advice on ways of managing land to encourage wildlife.

We have barely begun to understand how to restore wildlife interest to grasslands that have been destroyed by intensive management under a modern agricultural regime. If we are to maintain the breadth and variety of our living landscapes, preserving the remaining unspoiled natural and semi-natural grasslands left in Scotland is essential.



Drying hay on a croft

# How you can help

## As a crofter or farmer

Fields which are richest in wildflowers are the most likely to support a range of other wildlife. You don't have to be a wildlife expert to make sound decisions on farming these areas.

For example, fields with a high summer water-table are often favoured by wading birds such as lapwing and snipe as breeding grounds. By not grazing and mowing these fields between April and July you can give the birds the best chance of rearing their chicks. Allowing wild plants to flower and set seed from time to time helps to maintain the interest of grassland that is rich in wild flowers. Scottish Natural Heritage will be pleased to advise you on how to manage grassland to maximise its wildlife interest; our contact details can be found on the opposite page.

## As a passer-by

The importance of maintaining grassland areas that are rich in wildflowers, butterflies and wild birds has often been overlooked.

If you know of such an area nearby and you know the farmer or crofter who manages the land, you may wish to mention what you have seen and the pleasure it has given you. For advice on the significance of the area, contact your local SNH Area Officer or one of the voluntary conservation organisations whose contact details can be found opposite.



Frog orchid



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## Addresses

Scottish Natural Heritage will be pleased to discuss the conservation of grasslands with you at its Head Office or one of its Area Offices, details of which can be obtained from:

Scottish Natural Heritage  
2 Anderson Place  
EDINBURGH  
EH6 5NP  
Tel:0131-447-4784  
[www.snh.org.uk](http://www.snh.org.uk)

Other organisations with an interest in the natural heritage  
and the conservation of grasslands:

Scottish Executive Rural Affairs  
Department  
Pentland House  
47 Robb's Loan  
EDINBURGH  
EH14 1TW  
Tel:0131-556-8400  
[www.scotland.gsi.gov.uk](http://www.scotland.gsi.gov.uk)

Farming and Wildlife Advisory Group  
Rural Centre  
West Mains  
Ingliston  
NEWBRIDGE  
Midlothian  
EH28 8NZ  
Tel:0131-472-4080  
[www.fwag.org.uk](http://www.fwag.org.uk)

Scottish Crofters' Union  
Old Mill  
BROADFORD  
Isle of Skye  
IV49 9AQ  
Tel:01471-822529  
[www.sco.co.uk](http://www.sco.co.uk)

Royal Society for the Protection of Birds  
Dunedin House  
25 Ravelston Terrace  
EDINBURGH  
EH4 3TP  
Tel:0131-311-650  
[www.rspb.org.uk](http://www.rspb.org.uk)

Plantlife  
Strome House  
North Strome  
STRATHCARRON  
Ross-shire  
IV54 8YJ  
Tel:01520-722660  
[www.plantlife.org.uk](http://www.plantlife.org.uk)

Butterfly Conservation  
PO Box 12477  
EDINBURGH  
EH12 2YE  
Tel:0131-557-3385  
[www.butterfly-conservation.org.uk](http://www.butterfly-conservation.org.uk)

The Scottish Wildlife Trust promotes the conservation of natural habitats,  
including grasslands, throughout Scotland:

Scottish Wildlife Trust  
Cramond House  
Kirk Cramond  
Cramond Glebe Road  
EDINBURGH  
EH4 6NS  
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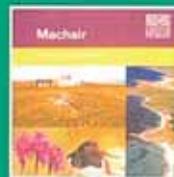


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## About the authors:

**Stephen Ward** has worked in nature conservation for more than 30 years, during which time he has taken a particular interest in the flower-rich grasslands associated with traditional farming.

**Jane MacKintosh** has studied British vegetation, particularly woods and grasslands, for 24 years and is now an advisor on species-rich grasslands.



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