

Tayside's Farmland Priority Species

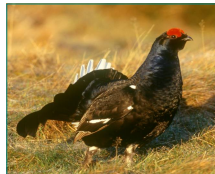
This leaflet aims to highlight some of the most significant species associated with Tayside's farmland. We hope to help focus attention on the conservation of these species, raise awareness of their status and highlight ways to help them.



The vast majority of Tayside stretching from the mountains, hills and glens, through the fertile valleys and straths to the carselands of the coastal plains and estuaries - can be classed as agricultural land.



This farmed land is made up of a wide range of habitat types and is home to a huge diversity of species. Some of these species are unique to Tayside and others are rare in the context of their distribution within the UK.



TAYSIDE BIODIVERSITY PARTNERSHIP

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With thanks to:
Farming and Wildlife Advisory Group
Scottish Agricultural College
Royal Society for the Protection of Birds
Scottish Crop Research Institute

Bumblebee Conservation Trust
Butterfly Conservation
Scottish Natural Heritage
SEERAD
Perth Museum and Art Gallery



NORTHERN BROWN ARGUS BUTTERFLY

Tayside is a stronghold for the rare Northern Brown Argus Butterfly.

This small butterfly has a silvery appearance, and flies low to the ground over sheltered flowery grasslands. It is distinguished mainly by a white spot on its forewing. It is chocolate-brown on the upper surface, with a band of orange half-moons at the edge of the wings.

Habitat, Management & Distribution

This butterfly occurs in unimproved grasslands where Common Rock-rose grows in lightly-grazed swards. Most sites are sheltered and have thin, base-rich soils with patches of bare ground. A mosaic of short and tall patches seems to be preferable.

The Northern Brown Argus requires some form of light grazing on most of its sites in order to maintain open swards. The butterfly has become extinct on many sites following neglect and scrub invasion. At others it has suffered from overgrazing. Light winter grazing and limited summer grazing seems to be best suited to maintaining an ideal habitat.

The Northern Brown Argus is widely distributed throughout Tayside. There are colonies in the sheltered Angus Glens and also in some areas of the Sidlaw hills. In Perthshire, the butterfly can be found around Killiecrankie, Blair Atholl, the northern slopes of Schiehallion towards Kinloch Rannoch, on the hillsides overlooking Loch Tay and Loch Tummel and in Glen Lyon.



MASON BEE (*Osmia inermis*)

The Blair Atholl area of Highland Perthshire is one of only two known sites for this species in the UK.

This small, rather non-descript bee is one of a small group of boreo-alpine species of bee found in the UK. Its flight period

Habitat, Management & Distribution

This Mason Bee is found on exposed base-rich grasslands or short heath/grassland mosaics. These areas are botanically diverse and contain good numbers of common birds-foot trefoil - the Mason Bee's pollen-forage plant.

Autumn/winter grazing provides the best habitat management, as this encourages growth and flowering of birds-foot trefoil. Summer grazing removes the flowering heads and therefore the Mason Bee's food source.

It is essential that the habitat includes thin, loose stones on the surface of the vegetation or suitable cracks in rocks, as the Mason Bee builds its nest under stones or in narrow crevices in rock. All nesting sites need to be in full exposure to the sun.



LAPWING

Lapwings are a familiar and charismatic farmland bird, easily recognised by their green and white plumage, crest and distinctive call.

Although Lapwings in Scotland have fared better than in other parts of the UK, their population has been showing a decline in recent years. Between 1994 and 2005, the Lapwing population in Scotland has declined by 48%. (British Trust for Ornithology).

Habitat, Management & Distribution

Lapwings nest on the ground early in spring. They choose areas of bare earth or short vegetation such as spring-tilled arable land or short grassland, including moorland margins and in-bye. Nesting success can be increased if nests can be identified and protected from field operations. Lapwings avoid nesting and feeding in areas close to tall tree and shrub cover as these areas can provide vantage points for predators such as crows, which can take chicks. The planting of trees, shrubs or hedges within 30 metres of areas where Lapwings feed and nest should be avoided. Chicks feed on soil and ground invertebrates and require access to wet areas with suitably short vegetation. It is beneficial if damp areas or small shallow pools with muddy margins can be left or managed to provide feeding areas for chicks.

Management for Lapwings can benefit other farmland waders such as: Redshank, Curlew, Snipe and Oystercatcher.



BROWN HARE

The Brown Hare was once very common on many lowland farms in Tayside. It is estimated that the UK population has dropped by over 75% since the 1940s.

Although we do not have an accurate population figure, many farmers in lowland Tayside have reported a decline in Brown Hare numbers on their farms in recent decades.

Habitat, Management & Distribution

Brown Hares require a mix of arable and grass fields to provide cover and feeding opportunities throughout the year. Specialisation, resulting in less mixed farming, has made it difficult for hares. A lack of grazing on arable farms in the winter and larger fields and block cropping meaning they have to travel further to feed. On grass farms there tends to be a lack of cover and therefore a higher predation of leverets, plus mortality due to leverets killed by grass-cutting machinery.

Farmers can benefit hares by including grass set-aside in the crop rotation; retaining winter stubbles; including tussocky grass field margins around arable fields; establishing game crops or wild bird cover; planting hedges and small woodlands with grassy margins to provide shelter; cutting hay and silage fields in a wildlife-friendly pattern and retaining uncut grass margins as refuges. Some recovery in Brown Hare numbers has been reported on farms where the above measures have been implemented.



PEARL BORDERED FRITILLARY

This beautiful butterfly has several bright silver 'pearls' along the edges of the undersides of its hindwings. It is more scarce than the very similar Small Pearl-bordered Fritillary. The Pearl-bordered Fritillary is a Priority Species in the UK BAP.

An advice note is available from scotland@butterfly-conservation.org or at www.butterfly-conservation.org

Habitat, Management & Distribution

Caterpillars need a warm microclimate in the early spring. The best sites are sheltered and sunny with plenty of common dog-violets, the caterpillar foodplant. Moderate bracken cover provides a warm surface for caterpillars to bask.

It occurs primarily in bracken/grassland/scrub mosaics, along woodland edges, and in open woodland. Powerline wayleaves can provide valuable habitat in dense woodland.

The main threat to Pearl-bordered Fritillary sites is a reduction in grazing. On grasslands this allows bracken to become too dense. In woodlands, it allows trees to colonise the glades, making them too shady. Another threat is bracken eradication on grassland sites. Without bracken, grassland sites are too cool for the springtime caterpillars. Light grazing prevents the over-dominance of bracken. In woodlands, the butterfly needs either a network of clearings in woodland, or rotational felling.

The Pearl-bordered Fritillary is widespread in Highland Perthshire, with small, scattered colonies in the St.Fillans-Comrie area, but it appears to be absent from Angus.



WATER VOLE

Water Voles are often mistaken for the more common Brown Rat. Similar in size but with a rounder face and a blunt nose. It has short furry ears, a shorter tail and long, glossy, dark-brown fur. The male is approximately 30cm long including the tail, females are slightly smaller. In the past century the number of water voles has declined by 90%.

Water Voles survive on average about 5 months in the wild and usually no more than 18 months. They feed mainly on grasses and waterside plants, but also eat twigs, buds, bulbs, roots and fallen fruit.

Habitat, Management & Distribution

Water Voles inhabit rivers, canals, streams, ponds, lakes and marshes, but are sometimes found away from water, in woodland, meadows, crops and gardens. Management requires maintenance of stable riverside banks and good bankside vegetation. Control of mink (their main predator) and improvement of water quality are also important.

In Tayside, Water Voles are thought to be under-recorded. Past records show widespread distribution from lowland Perthshire and Angus to populations in upland areas such as Ben Lawers and Glen Lyon. More recent survey work suggests they may now be locally extinct in lowland areas.



BAT SPECIES

Tayside is home to several different kinds of bat, all of which are protected under UK and European legislation. They include the Pipistrelle (2 species), Daubenton's Bat, Natterer's Bat and the Brown Long-eared Bat. Of all the species, the Brown Long-eared Bat is probably the least common in Tayside. As the name suggests, the ears are the distinguishing feature, which are nearly the same length as its body. When resting, they curl their ears back like rams' horns, or tuck them away under their wings.

Habitat, Management & Distribution

Farms are particularly important for Long-eared Bats, as they tend to prefer larger and older buildings for their maternity roosts. Derelict farm buildings and old trees are important too, as they can provide suitable locations for winter roosts. Farm woodlands provide ideal habitat for foraging and feeding, where the bats prey on moths and other insects by picking them directly off the leaves and twigs.

The Long-eared Bat has declined owing to changing land use, especially the removal of trees and woodland. Creating new areas of broadleaf woodland and retaining hollow trees would help to conserve their numbers. Other good management includes hedge planting, installing bat boxes and avoiding damage or disturbance to known roost sites in buildings. All species of bat have declined in recent years, and the management listed above would help in their conservation as well.



BLACK GROUSE

Black Grouse remain a widespread though elusive species in upland Tayside. They are best seen on calm spring mornings at communal display arenas called leks. Here, the showy males gather to court females and their bubbling calls are audible over long distances - these leks provide one of Tayside's most enthralling wildlife spectacles.

Habitat, Management & Distribution

Black Grouse inhabit mixed landscapes where upland farmland, woodland and moorland meet. This habitat mosaic supports all their requirements throughout the year in just a few hundred hectares. Heather is a staple food and also provides cover for nesting and shelter. Rough pasture and white hill support a range of food plants and leks are often found here. Upland flushes, mires and bogs support important plants like Cotton Grass and provide a rich source of invertebrates for young broods. Open woodland and scrub are key habitats with trees like Birch, Rowan and Larch providing important seasonal foods.

Black Grouse prefer light grazing regimes in grass and heather habitats, giving good cover, more food plants and high invertebrate densities. Wetlands should also be lightly grazed and blocking drains could create additional damp areas. Open woodlands and patches of scrub should be retained or created as part of the



CORN BUNTING

The Corn Bunting, once a widespread farmland bird species, has suffered local extinctions throughout many parts of Scotland. The remaining Tayside population is found on farmland between Montrose and Arbroath, and consists of approximately 50 singing males (*RSPB, unpublished data*).

The Corn Bunting is similar in colour to the Skylark but is larger with a thick, stout beak. The song, a short burst of notes like jangling keys, is repeated continually from a favourite song post, such as a fence or overhead wire.

Habitat, Management & Distribution

The Corn Bunting is a seed eating bird characteristic of open lowland habitats, such as arable farmland and is one of the few species dependant on cropped land.

The Corn Bunting requires open fields, a supply of seeds throughout the year and insects or soft grain throughout the summer to feed their young. Nesting and foraging habitats include cereals, set-aside, improved and unimproved grassland. They nest on the ground from late May and continue through until early September. This can put them at risk from field operations. Late cutting of silage, grass margins and set-aside can consequently benefit these birds. Good local sources of seed are vital for Corn Buntings during the winter months. Winter feeding habitats include wild bird cover, seed rich cereal stubbles, livestock feed areas and grain spills.

Other species that will benefit from management for Corn Bunting include Skylark and Grey Partridge.



SCARLET PIMPERNEL

Scarlet Pimpernel, called “poor man’s weather glass” because its flowers only open in sunshine, is a square stemmed annual of the primrose family. Its sprawling hairless stems grow 5-30cm tall and its self-pollinated reddish-orange flowers (occasionally white, pink or blue) are 60mm across and appear from June-August.

Its leaves are oval to heart shaped with black dots underneath.

Habitat, Management & Distribution

Scarlet Pimpernel is widely distributed in Great Britain, but is rarer in the north. It is an annual of roadsides, dunes and arable ground. Most seeds germinate in March-May or August-September, some over-wintering. Seeds remain dormant for over 10 years. Management practices such as conservation headlands help Scarlet Pimpernel survive where it is still present. Naturally regenerated set-aside provides good habitat for this plant.

In Tayside Scarlet Pimpernel is recorded on the coast on cliffs and dunes and along the Tay Estuary, with fewer sites inland.

The Scottish Crop Research Institute are collating sightings of arable plants including Scarlet Pimpernel. For more information go to www.scri.ac.uk/livingfield

LESSER BUTTERFLY ORCHID



This is an attractive plant, with creamy, white flowers tinged with green. The best time to look for the flowering plants is in June and July.

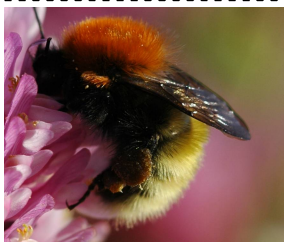
The Lesser Butterfly Orchid is very similar to the Greater Butterfly Orchid. One way to tell them apart is the spur at the back of the flower. The Lesser has a horizontal spur and the Greater has a down-turned spur.

Habitat, Management & Distribution

The Lesser Butterfly Orchid grows in heathy pastures, grassland, open scrub, woodland edges and on moorland. It is tolerant of wet conditions and is usually found in moist grassland and heathland in Scotland. It grows in a variety of soil types too, ranging from acid to calcareous.

It has declined throughout the UK, and has suffered a 33% decline between 1964 and 2002. Drainage of fields, woodland disturbance, ploughing up of grassland and heathland, the spreading of fertilisers, spraying of herbicides, heavy grazing during the summer, and the cutting of road side verges in the flowering season, are activities that have brought about its decline.

For more information on the Lesser Butterfly Orchid and to help with the Lesser Butterfly Survey, go to www.snh.org.uk/orchid/



MOSS CARDER BUMBLEBEE (*Bombus muscorum*)

At least nine species of bumblebee can be found on farmland in Tayside. They are important pollinators of wildflowers and fruit and vegetable crops. They are good indicators of the health of the environment. If conditions are right for bumblebees then lots of other wildlife will benefit.

One of the most beautiful is the Moss Carder Bee that thrives on tall flower-rich grasslands. This bee can be difficult to identify as it is very similar to the Common Carder Bee found in many habitats, including gardens.

Habitat, Management & Distribution

It is a bee with a bright foxy red back and a silvery-yellow tail that emerges in late spring and nests on the surface of the ground at the base of grass tussocks. The bee uses moss to make the nest covering. In mainland Scotland it is mainly confined to bogs and heath but formerly was found in flower-rich upland farmland.

Bumblebees benefit from any corners, margins, tracks and hedgerows where perennial wildflowers establish. Any farming practice that encourages perennial flowers whether, preservation of field edges or cropping hay in the traditional way, will encourage bumblebees. This bee loves Red Clover as a source of pollen and nectar.

The species has rapidly declined in recent decades and is expected to become a UKBAP species. Its current distribution in Tayside is poorly known.



NIGHT-FLOWERING CATCHFLY

Night-flowering Catchfly grows to about 60cms tall. The whole plant is hairy, with sticky hairs (which often catch flies!) on the upper parts.

The flower of Night-flowering Catchfly has a very distinctive colour (white or pink inside and creamy-yellow on the backs). The flowers are tightly rolled by late morning, opening again in the early evening. They are pollinated by nocturnal flying insects.

Habitat, Management & Distribution

Night-flowering Catchfly is generally found in arable field margins, especially in root crops. The plant generally prefers calcareous loams and calcareous sandy loams.

Formerly widespread and frequent throughout the south and east of Britain, including Tayside, it has declined markedly since the 1950s. It is highly susceptible to many broad-spectrum herbicides. It may also have been affected by the decrease in area of spring-drilled cereals.

Night-flowering Catchfly is rare in Tayside but can be found in sandy cereal fields along the Angus coast.

The Scottish Crop Research Institute are collating sightings of arable plants including Night-flowering Catchfly. For more information go to www.scri.ac.uk/livingfield



TREE SPARROW

The Tree Sparrow is the smaller and scarcer cousin of the House Sparrow and is distinguished by the chestnut crown and black cheek spot. The UK population of Tree Sparrow declined by 94% between 1970 and 2001. Recent surveys indicate an encouraging upward trend for Tree Sparrows, with a 23% increase since 1994. (British Trust for Ornithology). The Tree Sparrow is widespread throughout Tayside although numbers remain low.

Habitat, Management & Distribution

Tree Sparrows feed mainly on seeds and seek areas where they have a rich supply of seed food throughout the year, such as rotational set-aside, winter stubbles, wild bird cover, weedy margins and areas of spilt grain. Chicks are fed on insects for the first two weeks of their life. Hedges, crops and waterside vegetation are important foraging areas for adults at this time.

Tree Sparrows traditionally nest in holes in old trees, hedges or farm buildings and it is vital to protect these nest sites. It is possible to encourage Tree Sparrows by providing nest boxes. As they nest in colonies, several boxes sited on a tree close together will be more attractive.

Other species that will benefit from management for Tree Sparrows include