

# Information Note: Land Management for Marsh Fritillary Butterfly

## Action Points

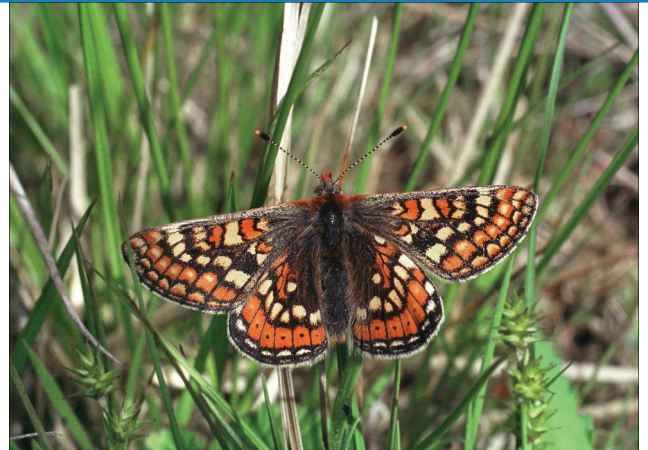
This brightly patterned butterfly has declined steeply and is now restricted to damp meadows in the west of Scotland. It is associated with long term cattle grazing and requires:-

- A sunny sheltered area containing abundant patches of Devils-bit Scabious, it's foodplant.
- An uneven patchwork of short and tall vegetation 5-25cm (2-10in) tall. This is ideally created by cattle grazing

## Habitat requirements

Marsh Fritillary generally require;

- The butterfly uses several different types of habitat, including heathland, moorland, wetlands and damp meadows, these areas must contain the caterpillar foodplant which is Devils-bit Scabious. A factor common to all habitats is that they are in full sun, the higher temperature aids larval development.
- Adult Marsh Fritillary are usually on the wing for only a short time in June. They are avid nectar feeders and will feed from a variety of flowers, favourites including buttercups and thistles.
- Adults lay eggs which hatch around the end of July. On emerging from their eggs ,the caterpillars spin a silk web by binding together leaves of the foodplant, in which they live and feed. In later instars, the webs can be quite conspicuous on the foodplant. Larvae will also bask on the outside of the tent absorbing the sun's rays, where their increased temperature aids digestion



## Status of Marsh Fritillary in the UK:

In Scotland the Marsh fritillary butterfly's distribution is limited to the Argyll islands and the neighbouring strip of the Argyll mainland; these colonies represent some of the most important in Europe. Its severe decline has led to it being designated a UKBAP Priority species, being included on the Scottish Biodiversity List, it is also included on Annex II of the EC Habitats Directive and is protected under the Wildlife and Countryside Act 1981. It is also one of NatureScot's Species Action Framework species.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Egg												
Caterpillar												
Chrysalis												
Adult												

Marsh Fritillary Life cycle

## Management Requirements to Benefit Marsh Fritillary Butterfly

- In general the overall aim is to create/maintain patches of abundant Devil's-bit Scabious, ideally in an uneven patchwork of short and tall vegetation 5-25cm (2-10in) tall. A good supply of nectar sources, preferably in sunny and sheltered locations, is ideal for the adult butterflies.
- At most sites light grazing by cattle and/or ponies at 0.2-0.3 LU/ha/year has produced suitable habitat. This can be achieved through all year grazing but grazing should not exceed 0.2 LU/ha during June to September.
- Traditional breeds of cattle are preferred as they can better cope with the rougher vegetation being less selective grazers.
- Sheep are often unsuitable at maintaining sites in suitable condition, particularly if used without cattle/ponies or grazed at high densities in late summer and early autumn, as they can selectively feed on Devil's-bit Scabious. Over time this can reduce or even eliminate Devil's-bit Scabious from the sward.
- Artificial fertilizer, manure or slurry should not be applied to the site, neither should pesticides.
- Mowing is usually unsuitable for maintaining Marsh Fritillary habitat and is often only used where sites have deteriorated and tussock forming rushes or purple moorgrass have become too dominant. In the absence of grazing, mowing can prevent sites becoming too rank, or tussocky.
- Some scrub and trees within Marsh Fritillary habitat can be tolerated especially around the perimeter as this provides shelter. However, the formation of new scrub within the centre of suitable habitat is far less beneficial as it can dry and shade out suitable habitat. Once scrub over 1m high occupies more than 10-15% of suitable habitat it should be controlled.



### Marsh Fritillary Facts

The wings of this beautiful butterfly are more brightly patterned than those of other fritillaries, with more heavily marked races being found in Scotland and Ireland.

The larvae spin conspicuous webs that can easily be recorded in late summer within tussocky vegetation.

### Key messages:

Marsh Fritillary butterflies require a sunny area with abundant patches of their food plant, Devils-bit Scabious. An uneven patchwork of short and tall which is easiest to create using cattle grazing.

