

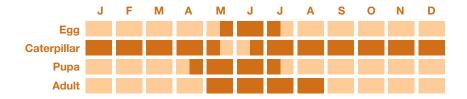
This fritillary is similar in size and habits to the Pearl-bordered Fritillary but is more widespread and occurs in damp, grassy habitats as well as woodland clearings and moorland. The adults fly close to the ground, stopping frequently to take nectar from flowers such as Bramble and thistles. It can be identified by the presence of several whitish pearl markings on the underside hind wings; the outermost of these whitish markings are bordered by black chevrons. The butterfly remains widespread and locally abundant in Scotland and Wales, but has undergone a severe decline in England.

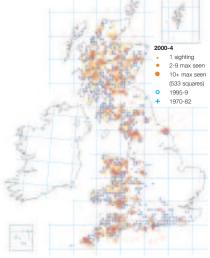
Life cycle

The butterfly is usually single brooded with adults flying from late May until mid July. In south-west England it can emerge as early as late April, whereas in Scotland it flies almost two months later. There is a partial second brood in parts of southern England and south Wales, with adults appearing in August. Eggs are laid singly, either on plants or dead vegetation near to violets and sometimes on the foodplant itself. Studies suggest a preference for laying in shorter than average vegetation. The larvae hibernate amongst the leaf litter and emerge to feed again during the spring. They rarely bask, and spend most of their time concealed amongst the vegetation, only coming out for short bouts of feeding. They pupate close to the ground, hidden deep within vegetation.

Colony structure

Colony structure and mobility appears to vary with landscape. Studies of damp grassland/flushes and Bracken suggest that adults are highly sedentary, remaining within the same small habitat patches. However a study in an extensive conifer forest in Wales showed much greater adult mobility with occasional movements between 1 and 3.5km. The species may also range widely in more extensive and open habitats such as those in Scotland and western and northern Britain.





Foodplants

The most widely used foodplants are Common Dog-violet *Viola riviniana* and Marsh Violet *V. palustris*. Other violet species may occasionally be used.

Habitat

Four main habitats are used:

- 1 Damp grassland, flushes and moorland (in northern and western Britain);
- Woodland glades and clearings (mainly in southern Britain);
- **3** Grassland with Bracken *Pteridium aquilinum* and/or patches of scrub;
- 4 Open wood-pasture and wood edges in Scotland, usually where there is some grazing by deer and/or sheep

Other habitats used include dune slacks and coastal cliffs.

Habitat management for the Small Pearl-bordered Fritillary

Damp grassland, flushes and moorland habitats

Aim to maintain damp or heathy vegetation where violets (often Marsh Violets) are abundant in medium height swards and suitable nectar sources are available. Waterlogged sites can be unsuitable especially under very acidic conditions.

Grazina

Extensive light cattle grazing is ideal, as some poaching encourages violet regeneration. Heavy grazing, especially by sheep, is detrimental. Where grazing is impractical autumn mowing and raking can be effective in maintaining suitable habitat.

Scrub Clearance

Scrub clearance can be undertaken as required, especially when acting as a barrier to colonisation. On open, exposed sites some planting of perimeter shelterbelts will increase habitat suitability. On afforested stream edges clearance of conifers and brash 5-10m back can create ideal habitat.

below Breeding habitat in damp grassland

Grassland with Bracken and/or scrub

Aim to maintain abundant violets in medium height swards, in association with Bracken or scrub edges.

Grazing

Bracken/grassland mosaics encourage an abundant supply of violets by suppressing grass growth. Aim to maintain a light Bracken cover. Extensive cattle or pony grazing is ideal, especially in winter and early spring, as the trampling helps break up the dense standing trash which suppresses violet and grass growth. Some sites may be maintained by sheep grazing, though they are not as effective at trampling Bracken.

Spraying/Cutting/Bruising

Spraying with Asulox in late summer or autumn before the Bracken begins to die back can be effective in areas where dense Bracken is already established. Small-scale autumn and winter raking and disturbance of dense Bracken litter can also be beneficial. Periodic (3-10 year rotation) Bracken cutting by swipe in late May or early June can be used on ungrazed or too lightly grazed sites. Bruising by machine or by hand in June may also reduce Bracken densities. Scrub clearance (or burning) on a 5-10 year rotation can be undertaken, but scrub should not be eliminated as it often provides shelter.

Woodland glades and clearings

Aim to ensure a supply of flower-rich, sunny, open clearings and rides, especially where soils are damp and the vegetation lush.

Traditional coppice management, where adjacent woodland plots are cut in succession, produces ideal conditions for the butterfly. Glade creation and ride widening can help to sustain populations.

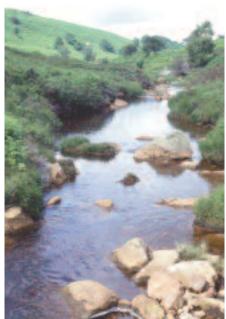
Wood-pasture/woodland edges

Aim to ensure that foodplants are not lost through closure of woodland canopies or through scrub development. Trees and scrub should be removed when necessary.

If foodplants are threatened by development of tall, dense ground vegetation this should be controlled, initially by heavy grazing then maintained by a regime of lighter grazing.

below Damp moorland habitat







Saving butterflies, moths and their habitats

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