



# UK Biodiversity Action Plan Priority Habitat Descriptions

## Upland Flushes, Fens and Swamps

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# Upland Flushes, Fens and Swamps

## Correspondence with existing habitats

- UK BAP broad habitat: Fen, marsh and swamp *pp*
- Phase 1: E2 Flush/spring *pp*; E3 Fen *pp*; F1 Swamp *pp*; B5 Marsh/marshy grassland *pp*
- NVC: (mostly *pp*) M4–M12, M21, M23a, M25c, M27–M29, M31–M35, M37, M38, S9–S11, S19, S27
- Annex I: Alpine pioneer formations of the *Caricion bicoloris-atrofuscae*; Transition mires and quaking bogs *pp*; Petrifying springs with tufa formation (*Cratoneurion*) *pp*; Alkaline fens *pp*.
- Birks and Ratcliffe types: C4 *pp*, H2, H3b-j, H4, I1, I2, I4
- JNCC upland CSM feature types: Alkaline fen (upland); Alpine flush; Short-sedge acidic fen (upland); Soakway and sump (upland); Spring-head, rill and flush (upland); Transition mire, ladder fen and quaking bog (upland); Mire grassland and rush pasture (upland)

## Description

Upland flushes, fens and swamps are defined as peat or mineral-based terrestrial wetlands in upland situations, which receive water and nutrients from surface and/or groundwater sources as well as rainfall. The soil, which may be peaty or mineral, is waterlogged with the water table close to or above the surface for most of the year. Includes both soligenous mires (springs, flushes, valley fens) and topogenous mires (basin, open-water transition and flood-plain fens), as well as certain *Molinia* grasslands and rush pastures, but excludes ombrotrophic bogs and associated bog pools and seepages (blanket bog priority habitat). Also excluded are species-poor *Molinia* swards (M25 except M25c) and species-poor or 'weedy' *Juncus effusus* swards (M23b and MG10). Swamps are included except for those forming a fringe less than 5m wide adjacent to standing waters, which are included in the relevant standing water priority habitat type; and those reedbeds (S4) which qualify as the reedbed priority habitat.

This priority habitat is restricted to upland areas (i.e. above the limit of agricultural enclosure, so complementing but not overlapping the fens priority habitat). This 'upland/lowland' boundary definition is intended to match that for grassland and heathland priority habitats. For consistency with the Broad habitat definitions, upland flushes, fens and swamps includes montane/alpine springs and flushes, but not snowbeds (U11–14) which are part of the mountain heaths and willow scrub proposed priority habitat. Usually this habitat is grazed by deer and/or sheep, sometimes cattle, in conjunction with surrounding grassland/heath. Some types (e.g. springs), may be ungrazed. Generally this habitat is too wet to be burned.

This is a varied habitat category but is typically dominated by sedges and their allies, rushes, grasses (e.g. *Molinia*, *Phragmites*), and occasionally wetland herbs (e.g. *Filipendula ulmaria*), and/or a carpet of bryophytes (e.g. *Sphagnum* spp., *Cratoneuron* spp.). Vegetation generally short (<1m, often <30cm) but sometimes taller (e.g. swamps).

The habitat overall supports a rich flora of vascular plants with many rare species, for example scorched alpine-sedge (*Carex atrofusca*), bristle sedge (*C. microglochin*), sheathed sedge (*C. vaginata*), mountain scurvygrass (*Cochlearia micacea*), alpine rush (*Juncus alpinoarticulatus*), two-flowered rush (*J. biglumis*), chestnut rush (*J. castaneus*), three-flowered rush (*J. triglumis*), false sedge (*Kobresia simpliciuscula*), Iceland-purslane (*Koenigia islandica*), Yellow Marsh Saxifrage (*Saxifraga hirculus*) and Scottish asphodel (*Tofieldia pusilla*). Also exceptionally important for bryophytes with notable species including *Sphagnum lindbergii*, *S. riparium*, *Hamatocaulis vernicosus*, *Bryoerythrophyllum caledonicum* and *Campylopus setifolius*.

The habitat may also be important as nesting habitat for waders, such as curlew, snipe and redshank. It also supports a varied invertebrate fauna, notably taxa such as Diptera (e.g. *Clinocera nivalis* and *Pseudomyopina moriens*), Coleoptera (e.g. *Gabrius scoticus* and *Elaphrus lapponicus*), spiders (e.g. *Maro lepidus*) and Mollusca (e.g. *Vertigo* spp), which in turn provide an important food source for upland breeding birds at critical times of year.

The habitat is widespread but local throughout the uplands of Scotland, Wales, England and Northern Ireland. Extent is difficult to assess because the habitat has not been comprehensively surveyed in many areas and tends to occur in small, sometimes numerous stands.