

PRIORITY HABITAT FACTSHEET



*Chalk grassland. (Natural England/Des Sussex),
Rare Spring Sedge (Nick Gibbons), Cinnabar Moth (Paul Kitchener)*

Lowland Calcareous Grasslands

Lowland calcareous grasslands develop on shallow, lime-rich soils. Usually found on escarpments, dry valley slopes or ancient earthworks, Suffolk's Breckland grasslands are a special, rather atypical, form that are found on flatter ground.

Managed as part of pastoral or mixed farming where some are cut for hay. Rabbit-grazing is an important factor in maintaining the short turf.

IMPORTANCE FOR WILDLIFE

Calcareous grassland can be the most species-rich of the UK's grassland types with a very high floral diversity, particularly where grazing is not too heavy. Typical flowers include Marjoram, Salad Burnet, Fairy Flax and Greater Knapweed as well as orchid species, such as the attractive Bee Orchid. If the grassland is not over-grazed it will be frequented by numerous insects such as burnet moths, grasshoppers and butterflies during the spring and summer.



IMPORTANT ASSOCIATED SPECIES

Bees and Wasps

Red-shanked Carder-bee *Bombus ruderarius*

Beetles

Brush-thighed Seed-eater *Harpalus froelichii*

Set-aside Downy-Back *Ophonus laticolis*

Moths

The Forester *Adscita statice*

Narrow-bordered Bee Hawk-moth *Hemaris tityus*

Large Nutmeg *Apamea anceps***

Deep-brown Dart *Aporophyla lutulenta***

Dark Brocade *Blepharita adusta***

Broom-tip *Chesias rufata***

Latticed Heath *Chiasmia clathrata***

White-line Dart *Euxoa tritici***

Small Emerald *Hemistola chrysoprasaria***

Rosy Rustic *Hydraecia micacea***

Dot Moth *Melanchra persicariae***

Broom Moth *Melanchra pisi***

Rosy Minor *Mesoligia literosa***

Shoulder-striped Wainscot *Mythimna comma***

Dark Spinach *Pelurga comitata***

Mullein Wave *Scopula marginepunctata***

Shaded Broad-bar *Scotopteryx chenopodiata***

Buff Ermine *Spilosoma luteum***

Hedge Rustic *Tholera cespitis***

Feathered Gothic *Tholera decimalis***

Blood-vein *Timandra comae***

Cinnabar *Tyria jacobaeae***

Oak Hook-tip *Watsonalla binaria* (oak trees)**

Dark-barred Twin-Spot Carpet

*Xanthorhoe ferrugata***

Lichens

Starry Breck-lichen *Buellia asterella* (Brecks)

Plants

Rare Spring-sedge *Carex ericetorum*

Basil Thyme *Clinopodium acinos*

Frog Orchid *Dactylorhiza viridis*

Spanish Catchfly *Silene otites*

Man Orchid *Aceras anthroporum*

Fine-leaved Sandwort *Minuartia hybrida*

Purple Milk Vetch *Astragalus danicus*

*Suffolk Priority species

**Priority - Research Only. Common and widespread, but rapidly declining.



Images: Top – Small Emerald (Charles Cuthbert). Bottom, left to right – Forester, Man Orchid (both Stuart Read), Purple Milk Vetch (Martin Sanford).

FACTORS AFFECTING HABITAT IN SUFFOLK

- Fragmentation increases the risk of species extinctions in the small remnant areas
- Agricultural intensification including use of fertilisers, herbicides and other pesticides, re-seeding or ploughing for arable crops
- Under-grazing resulting in dominance of coarse grasses and invasion by scrub and woodland, leading to habitat loss
- Over-grazing causing localised sward damage due to trampling and long-term nutrient enrichment
- Recreational pressure bringing changes associated with trampling and soil compaction
- Non-native plants can cause problems by smothering calcareous grassland communities



HABITAT MANAGEMENT ADVICE

- Maintain a mosaic of sub-habitats, including areas of short turf, bare ground, long grass and a limited amount of scrub. Over-wintering invertebrates will require the protection of tussocky vegetation. Sward height is of crucial importance to many species of chalkland butterfly, which require very specific conditions. Knowledge of the species present is important for an appropriate management plan.
- Many species do not thrive in grassland which is too closely cropped by grazing. Plants should be allowed to flower in order to provide pollen and nectar for adult insects.
- An open and varied sward is best achieved through livestock and rabbit grazing, the latter creates disturbed areas that are preferred by many species. However, overgrazed areas support fewer invertebrates, and under grazed areas become encroached by plants shading out specialist chalk or limestone flora. Use a three year managed rotation so that plants can flower, develop seeds and produce seedlings. Cutting should be done after July to retain seeds of grasses and herbs and some cuttings should be left on site.
- Avoid the application of artificial fertilisers, which will reduce the plant species diversity of a site and encourage denser foliage to over-shade the ground.
- Some ground beetles appear to require disturbed patches on calcareous grassland sites. These beetles are amongst the hardest to find in the modern countryside, suggesting serious declines. Where they do persist, it is more likely to be at the margins of adjacent arable fields than on the calcareous grassland itself. Mechanical disturbance using tracked vehicles in wet weather is a very effective management technique for these species. Harrowing, or perhaps ploughing, could be used to create a gradual transition between closed turf and adjacent arable land.

Spanish Catchfly (Stuart Read).



VISION FOR SUFFOLK

1. Improve knowledge of extent and quality of lowland calcareous grasslands.
2. Maintain the existing extent of lowland calcareous grasslands to ensure no net loss.
3. Re-create lowland calcareous grasslands as opportunities arise.
4. Encourage the restoration and improvement of degraded lowland calcareous grasslands.



WHERE TO FIND FURTHER INFORMATION

Buglife – advice on managing BAP habitats

- <https://www.buglife.org.uk/resources/habitat-management/lowland-calcareous-grassland>

Buglife – Notable invertebrates associated with lowland calcareous grassland (pdf)

- <https://cdn.buglife.org.uk/2019/07/15-Notable-invertebrates-associated-with-lowland-calcareous-grassland.pdf>

Grazing Animals Project – conservation grazing resources • <https://www.rbst.org.uk/Pages/Category/gap-resources>

JNCC Habitat Description (pdf)

- <https://data.jncc.gov.uk/data/c212f9ed-9df8-408a-83cf-668ef9802b2f/UKBAP-BAPHabitats-25-LowlandCalcGrass.pdf>

MAGIC website – interactive mapping information including designations • <https://magic.defra.gov.uk/>

Making Space for Nature, a Review of England's Wildlife Sites and Ecological Network 16 Sep 2010.

- Chaired by Professor Sir John Lawton CBE FRS. Defra website (pdf) • <https://webarchive.nationalarchives.gov.uk/ukgwa/20130402151656/http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf>

Natural Environment White Paper June 2011 – *The Natural Choice: securing the value of nature* (pdf)

- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/228842/8082.pdf

Natural England – Lowland Grassland Management (Chapter 5 Grazing)

- <http://publications.naturalengland.org.uk/file/114020>

Suffolk Wildlife Trust Habitats Explorer

- <https://www.suffolkwildlifetrust.org/habitats/grassland/lowland-calcareous-grassland>

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