



Butterfly Conservation

factsheet



Varied sward structure in Breck grassland

Lunar Yellow Underwing

Noctua orbona

Conservation status

Priority Species in UK Biodiversity Action Plan.

The English name of this attractive moth partly describes the yellow coloration of the hindwings, which are hidden beneath the forewings when the moth is at rest. The scientific name 'Noctua' refers to the nocturnal behaviour of the adults. The species was formerly more widely recorded in Britain. Now it is largely confined to the Brecks of Norfolk and Suffolk, the Sandlings in Suffolk and to parts of Wiltshire, with a few recent records from other sites.

Foodplants

The larvae are thought to feed on a variety of grasses and small herbaceous plants. These include Cock's-foot *Dactylis glomerata*, Common Couch *Elytrigia repens*, Reed Canary-grass *Phalaris arundinacea*, Meadow Buttercup *Ranunculus acris*, Creeping Cinquefoil *Potentilla reptans*, Cowslip *Primula veris* and Common Chickweed *Stellaria media*. In the Brecks a recent study has shown the young larvae to feed entirely on fine grasses, including Wavy Hair-grass *Deschampsia flexuosa*, Sheep's Fescue *Festuca ovina* and Brown Bent *Agrostis vinealis*, but older larvae will eat coarser grasses such as Cock's-foot.

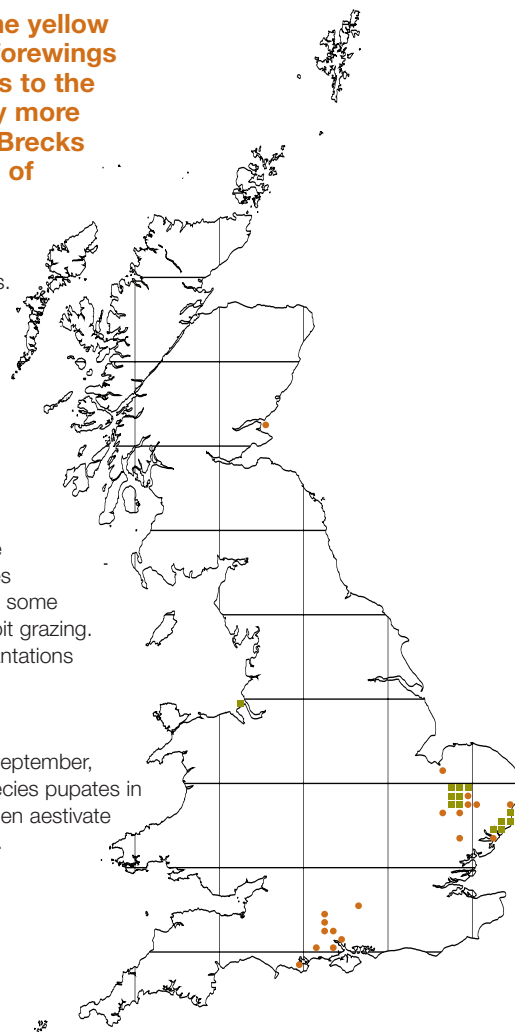
Habitat

The species is mainly associated with open sandy heath or calcareous sites. In the Brecks it is found on dry, well-drained light soils with both acid and calcareous sites being used. Tufty or tussocky grassland is required by the larval stages, though on some Suffolk Sandling sites the species is found on short turf 'lawns' maintained by rabbit grazing. Grass heathland rides in sunny young woodland and regrowth in young conifer plantations can also be suitable until the tree canopy closes.

Life cycle

The species is single-brooded and flies at night. The eggs are laid in August and September, with the larvae hatching in September. Larvae overwinter, feeding at night. The species pupates in May and June in a flimsy cocoon in the soil. The adults emerge in late June and then aestivate ('summer-hibernate') for a period before reappearing in late August and September.

■ Larval record 1999 to 2004
● Adult record 1999 to 2004



	J	F	M	A	M	J	J	A	S	O	N	D
Egg								■	■			
Larva	■	■	■	■					■	■	■	■
Pupa					■	■						
Adult						■	■	■	■			

Habitat management for the Lunar Yellow Underwing

On extant or recently occupied sites, the aim should be to maintain open spaces and prevent them from becoming overgrown, encroached by scrub or shaded by adjacent trees or plantations, while also avoiding overgrazing.

- ◆ On Breck grasslands, heavy sheep or cattle grazing, and low cutting are thought to be detrimental to this and other species of moth and should be avoided. Heavy grazing and cutting may prevent the formation of grass tussocks and remove the leaf tips of the foodplants, which are the primary larval food source.
- ◆ Ungrazed sites need some management to maintain open, tussocky conditions in the long term, either through scrub clearance or low intensity grazing. Sheep grazing is recognised to be the most economic and effective form of habitat management in at least parts of the moth's distribution, but it demands flexibility in removing the flock before overgrazing is apparent and its replacement before regrowth becomes tall.
- ◆ The role of rabbit grazing remains unclear, but heavy rabbit grazing is generally detrimental. However, on a few Suffolk Sandling sites the larva does occur on rabbit grazed 'lawns' with a short turf height.
- ◆ A range of moths and other invertebrates in the Breck also depend upon low flowering plants that succeed only amongst fine grass with bare soil, and these too will benefit from controlled sheep grazing.
- ◆ Woodland rides within plantation sites should be kept open and sunny by periodic clearance of rideside trees and scrub. They should have marginal strips of longer vegetation which should be cut on rotation and not all cut in any one year.



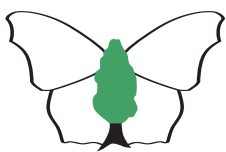
How to survey/monitor

The best method is to search for larvae amongst grasses after dark in late winter and early spring. The adult moth comes readily to light-traps and artificial baits such as sugar, and is also fond of heather flowers.

top Lunar Yellow Underwing larva

middle Rabbit grazed 'lawn' in the Suffolk Sandlings utilised by Lunar Yellow Underwing

bottom Typical chalk grassland habitat



Butterfly Conservation

Saving butterflies, moths and their habitats

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Registered Office: Manor Yard East Lulworth Wareham Dorset BH20 5QP.

Registered in England No. 2206468 - Registered Charity No. 254937

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