



Butterfly Conservation



factsheet

Adonis Blue

Polyommatus bellargus

Conservation status

Priority Species in UK Biodiversity Action Plan.

The Wildlife and Countryside Act (1981) specifies that a licence is needed for trading in this species.

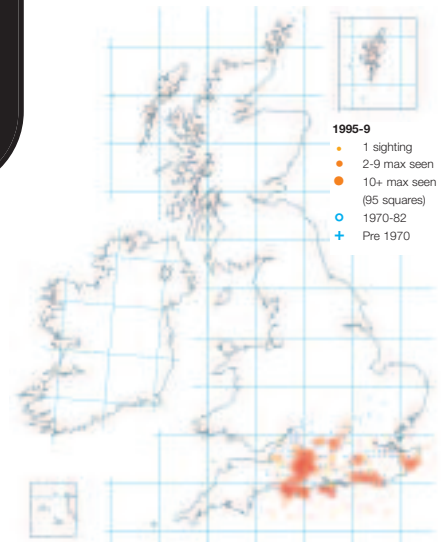
This beautiful butterfly is one of the most characteristic species of southern chalk downland, where it flies low over short-grazed turf. The males have brilliant sky-blue wings, while the females are brown and far less conspicuous. Both sexes can be distinguished from other species by the distinctive black lines that enter or cross the white fringes to the wings. Despite its restricted distribution, the butterfly can be seen in many hundreds on good sites. It has undergone a major decline through its entire range, but has recently re-expanded in some regions, notably Dorset and Wiltshire.

Life cycle

There are two broods per year, with adults flying from mid-May to mid-June, and early August to mid-September. The eggs are laid singly on very small foodplants growing in short turf. These conditions provide a very warm microclimate for larval development and are favoured by ants, which tend both larvae and pupae. The green larvae are well camouflaged and are nearly always attended by ants, which are attracted by secretions from special 'honey' glands and pores. Any ant species appears suitable, but the most common are the red ant *Myrmica sabuleti* and the small black ant *Lasius alienus*. The ants protect the larvae from predators and parasitoids, and even bury the larvae (in groups of up to eight) in loose earth cells at night. The Adonis Blue overwinters in the larval stage and pupates in the upper soil surface, often within ant nests where pupae continue to be attended by ants until the adults emerge.

Colony structure

The Adonis Blue is strongly colonial and quite small barriers of scrub or hedgerow can be enough to separate colonies. However, some individuals are capable of dispersing and the species has re-colonised sites over distances of 10-15 km. There is also evidence that populations on smaller and more isolated sites are more prone to extinction, and that their persistence may depend on being part of a larger metapopulation, covering a network of sites. Nevertheless, habitat quality is a crucial factor in determining colony occurrence and persistence.



Foodplants

The sole larval foodplant is Horseshoe Vetch *Hippocrepis comosa*.

Habitat

Dry, chalk or limestone grassland with abundant foodplants growing in short turf 1-4 cm tall, except in sheltered quarries where slightly taller vegetation may be used. The autumn generation selects shorter turf than the spring generation which can lay eggs on vegetation up to 8 cm tall. Most colonies occur on warm, south-facing slopes where favoured breeding areas include sheltered hollows, especially old chalk pits and quarries.

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

Habitat management for the Adonis Blue

The overall aim is to maintain substantial areas of unimproved grassland turf in the height range of 1-4cm for most of the year, but allowing plants to flower in abundance. The need for short-grazed areas is most critical in the late summer for use by the second generation of adults. Earlier in the year slightly longer vegetation (up to 8cm) may be tolerated.

Grazing

Suitable conditions can be maintained by moderate-heavy grazing sites either by cattle, ponies, sheep or rabbits. However, it is possible to over-graze Adonis Blue sites, particularly in years when the growing season is poor, such as in years of drought. Also, the first generation larvae may need somewhat taller vegetation during June and July, and adults of both generations require nectar sources that might be grazed off by heavy grazing, especially by sheep and rabbits.

The largest colonies occur under continuous grazing or winter and early spring grazing, which ensure a short sward when the females are flying in May and June.

Colonies can coexist on sites with a wide range of butterfly species that require taller or variable swards as long as there are patches (0.5-1 ha) of suitably short vegetation. This can be done through rotational grazing of compartments or by maintaining small patches of suitable turf among taller growth by continuous, extensive grazing.

Winter grazing alone is usually enough to maintain a small to medium colony in most years if rabbits are also present, but some summer grazing is desirable. The difference between cattle and sheep grazing has not been thoroughly investigated but both are known to sustain good populations.

below Horseshoe Vetch

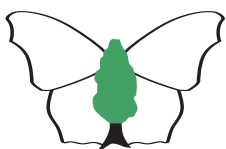


Scrub control

The presence of scattered patches of scrub may be beneficial to the Adonis Blue as it provides shelter and slightly warmer conditions for breeding on adjacent downland. However, some sites have too much scrub and a proportion may need to be removed to enlarge the areas of open grassland.

In such cases, a proportion of the scrub should be removed leaving some, strategically placed, small patches for shelter. Stumps should be treated with herbicide to prevent regrowth where necessary and all cut material removed.

below Ideal habitat, showing short-grazed vegetation with abundant Horseshoe Vetch



**Butterfly
Conservation**

Saving butterflies, moths and their habitats

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