

Necklace Ground Beetle

Carabus monilis



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The Necklace Ground Beetle is a large sized, 22-26 mm long, copper-green coloured species associated with open landscapes. Both its scientific and common name derives from the sculptured pattern of short 'granules' along the length of the wing cases that resemble a beaded necklace. This is a largely predatory and scavenging beetle, the adults forage at ground level while the larvae live on or just under the soil surface.

Lifecycle

The Necklace Ground Beetle is believed to have an annual life cycle in Britain, but some adults may live for two years as they do in mainland Europe. It is a flightless species which disperses on foot. The adults can be found from April to September with a peak of activity mid-summer. The larvae live on the soil surface, in the litter layer or in the soil, where they prey on other invertebrates. As both adult and larva, it is a generalist predator and scavenger of invertebrates including insect larvae, earthworms and molluscs but will also eat fruit¹.

Habitat

Although it has been recorded from a range of open habitats, this beetle is frequently associated with cultivated land and field margins. Short, compact turf may be important to allow foraging adults to cover enough ground. A variety of crop types are likely to benefit this beetle providing that pesticide use is restricted, and winter tilling is avoided.

Pesticide restriction is not only important for the beetle itself but also to ensure a viable supply of prey items. The Necklace Ground Beetle has also been recorded from sandy heaths, willow carr, old woodland, thick scrub, secondary woodland, limestone dales, cultivated field margins, hay meadows, river shingle, parkland, quarries and aggregates pits. It is thought to prefer well-drained soils, although it is occasionally found on wetter ground.

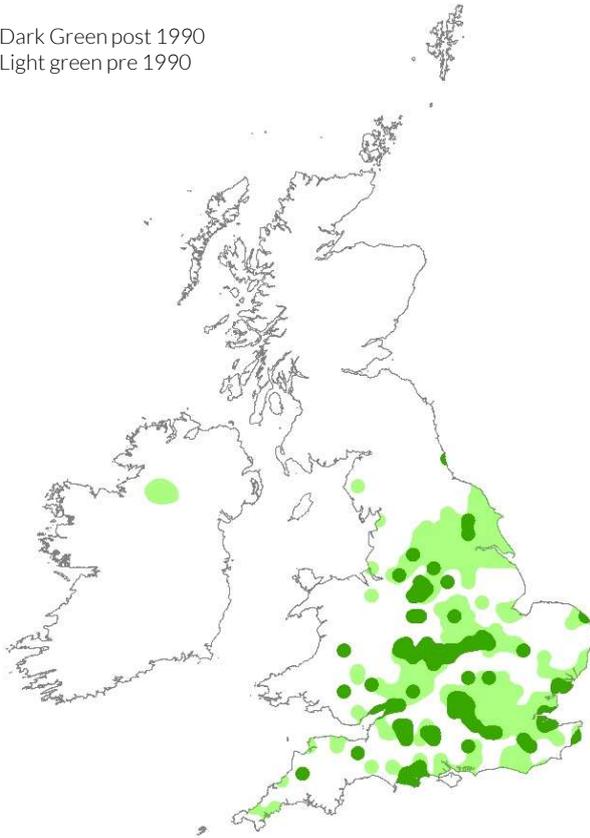
GB Status and rarity

Formerly widespread this is now a scarce species and has declined across its range. Nationally Scarce (Nb), Endangered B2ab ii, iv and Endangered (IUCN)².

Survey method

Adult Necklace Ground Beetles are mainly active between April to September and are nocturnal predators. Searching on paths with a torch after dark is an excellent way to find them.

Dark Green post 1990
Light green pre 1990



Habitat Management³

Create and manage field margins and headlands in a manner that will provide refuges and hibernation areas for the ground beetles and encourage populations of other invertebrates that they can prey on. A continuity of appropriately managed fields and field margins across the landscape may facilitate the spread of this species back across its former range.

Pursue more traditional farming practices, avoiding winter tilling and pesticide use.

Avoid soil disturbance that may damage the larvae.

Distribution

The Necklace Ground Beetle was once widespread and relatively common, particularly in southern and central England. However, it has become much less common since the 1990s across its range, despite a wide distribution, disappearing from many of its historic sites. Globally this species is limited to northern-central Europe which places greater international importance on the British population.

Reasons for decline

Agricultural intensification, particularly the widespread use of pesticides, the loss of hedgerows and other field border refuges, and shifts from spring to autumn cultivation, are the most likely causes of this beetle's decline. The resulting fragmentation and isolation of suitable habitat will have compounded this problem by restricting the recolonisation of lost habitat, particularly as this beetle does not fly and must disperse by walking.

References

¹ Walters and Telfer (2003) [Guides to British Beetles 1. Carabus, Calosoma and Cychrus Ground Beetles \(Coleoptera: Carabidae\)](#). Last accessed 01/12/2020

²Telfer, M.G. (2016) A review of the beetles of Great Britain: Ground Beetles (Carabidae): Species Status No.25. Natural England Commissioned Reports, Number 189.

³ Buglife (2010) <https://cdn.buglife.org.uk/2019/08/Necklace-ground-beetle-species-management-sheet.pdf>. Last accessed 01/12/2020.