

Set-aside Downy-back Beetle

Ophonus laticollis



The Set-aside Downy-back Beetle is a medium sized, 8-11 mm long, metallic blue-green ground beetle with amber-orange antennae and legs and a fine coating of hairs creating a 'downy back'. It is a seed-eating ground beetle that is usually found on arable field margins and calcareous grassland.

GB Status and rarity

Near Threatened (IUCN), GB - Nationally Scarce¹.

Distribution

Historically, the species had a wide but very scattered distribution in the southern half of England, with records as far apart as Cornwall and the Essex coast, with an eastern focus but reaching as far north as the East Midlands².

Since 1990, records have become increasingly focused in the east with a scattering of records from the Somerset and Swansea areas.

Strongholds can be found in Breckland, Surrey and Oxfordshire. Though the Set-aside Downy-back Beetle has undoubtedly declined over the past century, it is likely to have been under-recorded.

Reasons for decline

The decline in the Set-aside Downy-back Beetle is thought to be related to changing agricultural practices. There are fewer weedy arable margins that produce lots of seed which are the main food source for this ground beetle. The increase in the size of arable fields with less margin habitat and fewer hedgerows is also a

Lifecycle

Adults beetles can be found throughout the year, but are most commonly seen between April and October, peaking in May and June. Eggs are laid in spring and larvae develop through the summer, with new adults emerging from mid-July. Adults and larvae are thought to feed mainly on seeds.

Habitat

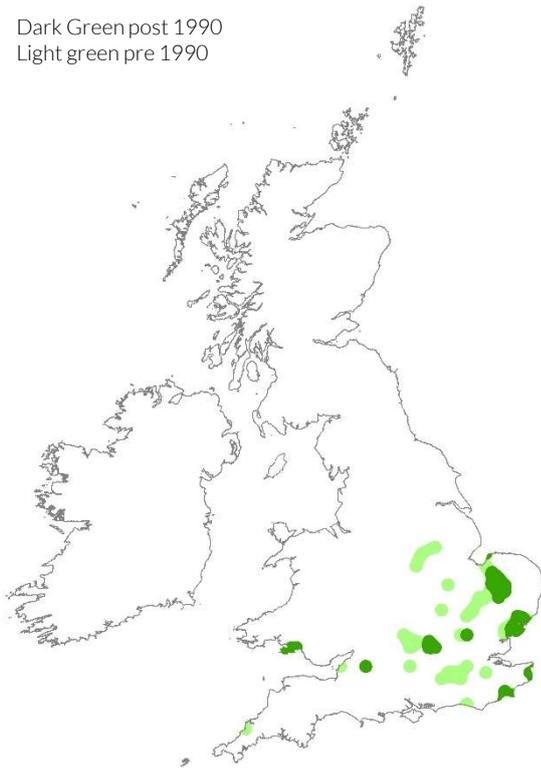
This scarce seed-eating beetle is more likely to be found in open sunny patches on disturbed arable field margins and calcareous grasslands with light, dry, friable soils with some underlying chalk or limestone. Undisturbed places such as grass margins or thick-bottomed hedges are used for shelter and hibernation.

Survey method

It is possible to record this beetle where there a range of annual plants in seed using a timed hand search, 'grubbing' along field margins and under scrub patches or hedges. Sweep netting can also be used.

factor. It has also suffered from over-grazing of calcareous grasslands, reducing food plants, or under-grazing with calcareous grasslands succeeding into scrub and coarse grasses.

Dark Green post 1990
Light green pre 1990



References

¹ Telfer, M.G. (2016) A review of the beetles of Great Britain: Ground Beetles (Carabidae): Species Status No.25. Natural England Commissioned Reports, Number 189.

² NBN Atlas (Undated) Set-aside Downy Back Beetle.
<https://species.nbnatlas.org/species/NHMSYSO020193665>. Last accessed 10/08/2020

³ Buglife (2013) Set-aside Downy-back Beetle Management Sheet.
https://cdn.buglife.org.uk/2019/08/Downy-back-beetle_0.pdf. Last accessed 02/12/2020

Habitat Management³

The most suitable management for this species are arable margins that are annually cultivated and uncropped left to develop into weedy margins. Rough grass margins and hedges provide shelter to overwinter and refuge from cultivation.

The most important requirements on arable sites are:

- Regular (more-or-less annual) soil disturbance, by ploughing, grazing or other process, to maintain suitable habitat conditions
- Leave unsprayed and unsown margins at least 6 metres wide to encourage abundant annual plants that produce the seeds required by the beetle.
- Uncultivated habitats at the edge of arable fields to provide overwintering sites and refuges from ploughing. Good sites for Set-aside downy-back are adjacent to ancient thick bottomed hedges or woodland.
- On calcareous grasslands sites, maintain some scrub and create ruderal areas through patchy disturbance and no more than light grazing in summer to allow ruderal plants to flower and set seed.
- Restrict the use of pesticides around habitat created for the beetle implement at least a 2 metre no-spray buffer.

Recommended management reflects the dependence of this beetle on regular, more-or-less annual, soil disturbance, by ploughing, cultivation, or other process, to maintain suitable habitat conditions. Conservation of this species is inextricably linked with arable farming. In this respect, it is very similar to the arable plant communities that are dependent upon cultivation. However, unlike the plants, Set-aside downy-backs has no seed bank and need the right conditions for breeding, shelter and food to be present year-in and year-out if this species is to survive and prosper.