SPECIES HANDBOOK

Southern Oyster Mushroom Beetle (*Triplax lacordairii*)

Ecology, conservation, survey and management

Conservation Status

ENDANGERED

- **Facing a high risk of extinction in the wild**
- **Endangered in both the UK and across Europe**
- **Threatened by habitat loss and irresponsible foraging for mushrooms**

Southern Oyster Mushroom Beetles are found at only a handful of sites in southern England. The beetles are associated with oyster mushrooms (and probably other bracket fungi) on large, old, decaying trees.

The loss of ancient woodland over time is therefore thought to be a crucial factor in the decline of this species. Irresponsible mushroom foraging may also have contributed to its decline, as the beetles are dependent on mushrooms for their survival. However, to date, the extent and impact of mushroom foraging on the species has not been assessed.

It is important that we explore the potential impact of foraging on this species so that we can protect it at its last remaining sites.

Cover Illustration by Sarah Jane Humphrey, available as a card from The Species Recovery Trust shop.

Description

A small saproxylic beetle that is 2.7-4.5mm in length and elongate-oval in shape. It has dark brown/black wing casings and the abdomen underneath the elytra is black. The beetle has an amber pronotum and legs and clubbed antennae.

Lifecycle

Very little is known about the lifecycle of the Southern Oyster Mushroom Beetle. The beetle appears to be dependent on Pleurotus species (oyster mushrooms) as host fungi, which live on decaying trees. Little is known about the relationships between the host trees, the oyster mushrooms and the beetles, but the beetles are believed to feed on the mushrooms.

In the past, the beetle has been found between 9th May and 25th September, but we do not know if it might also be found at other times of the year. Oyster mushrooms may be found in any month of the year but the spring (April-June) is the peak fruiting season for Pleurotus cornucopiae and the early autumn is the peak fruiting season for Pleurotus ostreatus.

Habitat

The species is dependent on oyster mushrooms (and possibly other bracket fungi) and so it is restricted to sites where these species are present. It is thought that large old trees are required to produce suitable decaying wood for the host fungi and certainly to date, the species has only been found in sites with a long historical continuity of ancient trees. This suggests that the species is found only in ancient woodland. Within the UK, the New Forest appears to be the stronghold for the species.

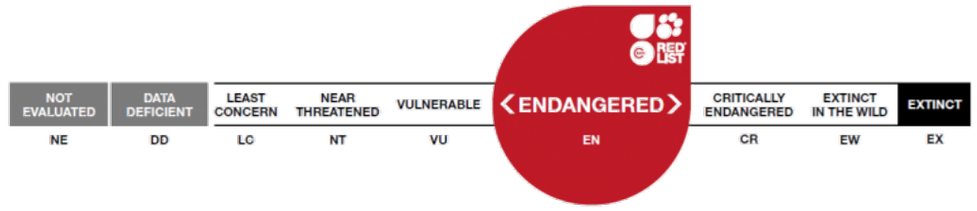
The Southern Oyster Mushroom Beetle has primarily been found on oyster mushrooms on beech trees, suggesting that this may their primary habitat, but it has also been found on ash, elm, holly, gorse, elder and birch. Further information is needed to refine our understanding of the habitat requirements of this species.

Distribution

In the UK, the species stronghold is in the New Forest, but there are also scattered records from sites across southern England. Sadly, it may now be extinct at many of these sites.

Status

Endangered, meaning it is facing a high risk of extinction in the wild (IUCN European Red List of Saproxylic Beetles 2010).



Reasons for decline

Loss of ancient woodland, and therefore the oyster mushrooms that the species depends on, is thought to be the primary reason for the decline of the species. Within its remaining sites, it is suspected that human foraging of its host fungi species, oyster mushrooms, may have had an impact on population numbers, but this has never been assessed.

Protection under the law

None at present.

SURVEY

Habitat

Survey work should be targeted at ancient, semi-natural habitats with trees, not necessarily just woodland but also heathland, downland and saltmarsh sites that are bordered with trees or have a scattering of trees across the site.

What to look for

It is worth focussing on oyster mushrooms on beech trees but ash, elm, holly, gorse, elder and birch are also worth surveying. Oyster mushrooms can be found on an even wider range of broad-leaved and coniferous hosts, including oak, rowan and Salix, though there are no records from these trees.

On locating fruiting oyster mushrooms, visual examination of the underside of the bracket may reveal beetles but the most effective way to find them is first to put a tray under the bracket, then break off the bracket, break it up and sieve it over the tray. Because this is a destructive sampling technique, no more than a quarter of the brackets should ever be broken off. Afterwards, the fragments should be tipped into a pile at the base of the trunk or next to the fallen deadwood where they can still provide habitat for invertebrates despite the damage.

The best oyster mushroom brackets to target seem to be those that are beginning to wilt and wrinkle - ones that would no longer be worth collecting for the pot.

SURVEY

When to survey

The beetles can be found between 9th May and 25th September at least. Oyster mushrooms may be found in any month of the year but the best times to look for them are probably either in the spring (April-June), which is the peak fruiting season for Pleurotus cornucopiae, or in the early autumn which is the peak fruiting season for Pleurotus ostreatus.

What to record

- Numbers of beetles
- Location (8 figure grid reference or GPS if possible)
- Availability of suitable habitat (i.e. numbers of oyster mushrooms and dead wood)

Confusable species

There are three closely related species with which Southern Oyster Mushroom Beetles may be confused. A guide to identifying the species is available here

Triplax scutellaris (1) is similar in size (4-5.5mm) but is has a red abdomen under the elytra and its elytra are more distinctly narrowing towards the apex.

Triplax aenea (2) is similar in size (2.7-4.5mm) but it has bright bluish-black elytra.

Triplax russica (3) is larger in size (4.5-7mm) and has a red abdomen underneath the elytra.

1

2

3

MANAGEMENT

Oyster mushrooms are edible and fungal foraging for personal consumption or sale is a potentially serious threat to the beetle. However, the impact of this has never been assessed. There is a need for research into the extent and impact of mushroom foraging on ancient woodland and on the Southern Oyster Mushroom Beetle.

In terms of woodland management, the key is providing the right conditions for oyster mushrooms. To achieve this, the optimum woodland management would be where livestock grazing maintains open wood-pasture and where trees are allowed naturally to mature, decay, collapse and fall creating a large volume of deadwood. It is unlikely that more intensive management for timber can create optimum conditions for oyster mushrooms nor for the beetles.

OUR WORK

- **Surveyed sites in Kent, New Forest and Sussex, providing further evidence that the New Forest is the stronghold for the species**
- **No records were found in Kent and Sussex, suggesting that the species may be struggling here**
- **Surveyed the habitat at a site in Kent, finding that although the habitat looked broadly suitable, no oyster mushrooms were present.**

Our survey work to date indicates that the Southern Oyster Mushroom Beetle continues to survive within the New Forest. However, we have not been able to rediscover the species at any of its other sites, and the presence of oyster mushrooms on these sites was low. It is tempting to assume that this is result of over-foraging, particularly as these sites are located in one of the most densely populated regions of the UK.

At present there is no robust evidence that this is the case. We therefore need to undertake research to assess the extent and impact of mushroom foraging on these sites. If we can identify that this is indeed contributing to the decline of the species (as well as potentially other rare species associated with ancient woodland), we can work to resolve it.

The Species Recovery Trust is a charity set up to tackle the loss of some of the rarest species in the UK.

There are over nine hundred native species in the UK that are classed as under threat, with several hundreds more currently widespread but known to be in significant decline. The countryside is now bereft of many species that were a familiar sight a mere generation ago.

A small number of these species are on the absolute brink of existence, poised to become extinct in our lifetimes; our goal is to stop them vanishing.

Our aim is to remove 50 species from the edge of extinction in the UK by the year 2050. In addition we are reconnecting people with wildlife and the natural world through training programmes and awareness raising.









the species recovery trust

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