

SPECIES HANDBOOK

Wart-biter Bush-
cricket

(*Decticus verrucivorus*)

Ecology, conservation, survey
and management



Conservation Status

ENDANGERED

- Facing a high risk of extinction in the wild
- Only three native sites remaining
- A further three reintroduced populations have been created

The Wart-biter Bush-cricket was once used exactly as the name suggests, as a method for removing warts. The cricket would be placed next to the affected area and it would slowly attempt to chew off the wart. This method is in fact ineffective, but was widely practised nevertheless.

Sadly, if we wanted to try this today, we would be seriously constrained by the incredible rarity of the species. It is now found at only six sites in the UK, and in relatively low numbers at each of these sites, which makes it highly vulnerable to extinction. The cricket also has very specific habitat requirements which make it vulnerable to any deterioration in habitat quality.



Description

A large member of the bush cricket family. The body is around 31-37mm in length, and usually dark green, mottled with brown. There is a second, rarer, colour form, the yellow/purple colour form, and individuals can also be found that are partially yellow/purple and partially green.

The wings are slightly longer than the body, but the species is effectively flightless in the UK. Its song is made up of a burst of clicks, which resembles a free-wheeling bicycle.



Lifecycle

Adult females lay eggs in the soil, where they spend at least two winters before hatching. After hatching out in April, the young crickets (nymphs) pass through a number of stages of development (instars) before reaching adulthood in July. The adults are present in the field until around the end of September.



Habitat

This cricket is a sun-loving species with extremely specific habitat requirements. It lives on chalk grasslands, but needs a heterogenous habitat, with a mosaic of vegetation classes and structures. Areas of short, open turf are needed, to allow the crickets to bask in direct sunlight to raise their body temperatures, while patches of bare soil are needed for females to oviposit their eggs. But taller grass tussocks are also important, as they provide protection for adults from predators.

The UK is at the northern edge of the overall distribution of this species, and it has been suggested that within the UK, the species is particularly dependent on these very specific habitat characteristics. This is because the average temperatures are lower and so it is more important that the habitat provides the crickets with a high exposure to the warming effects of the sun.

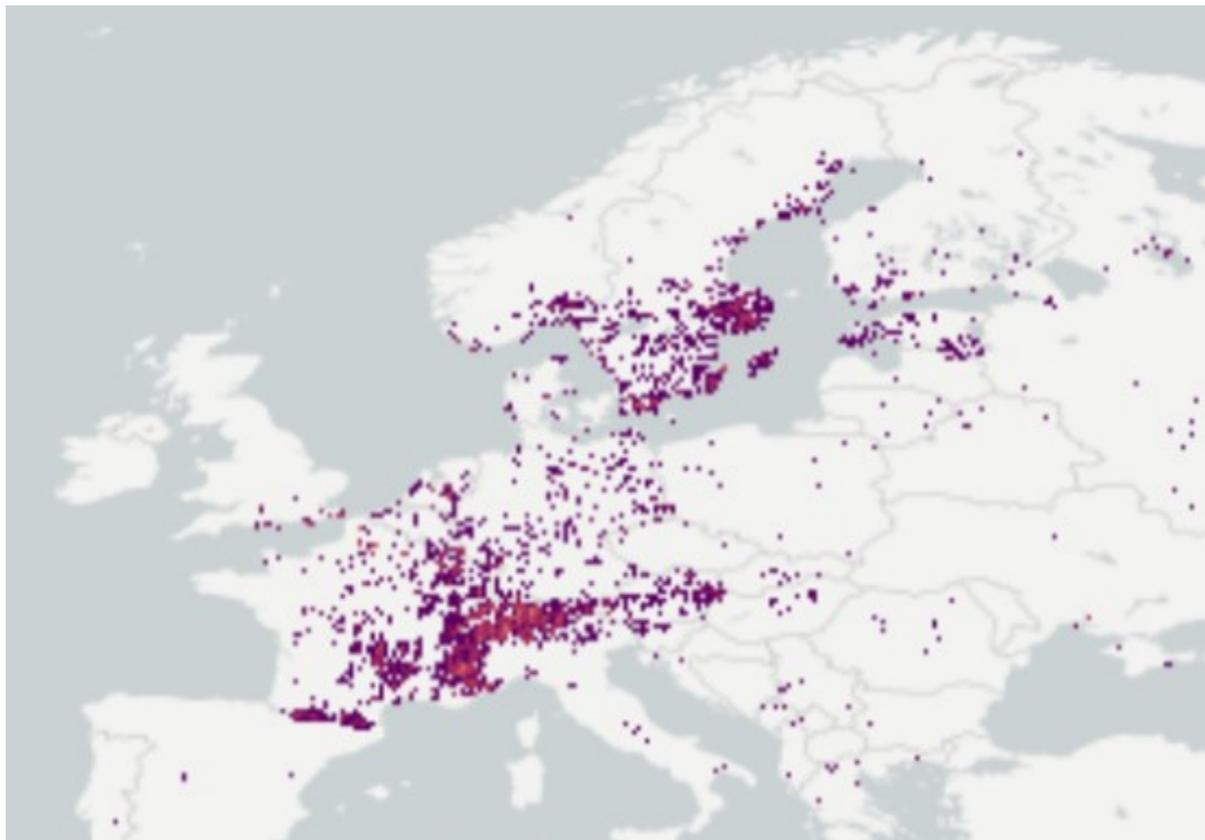
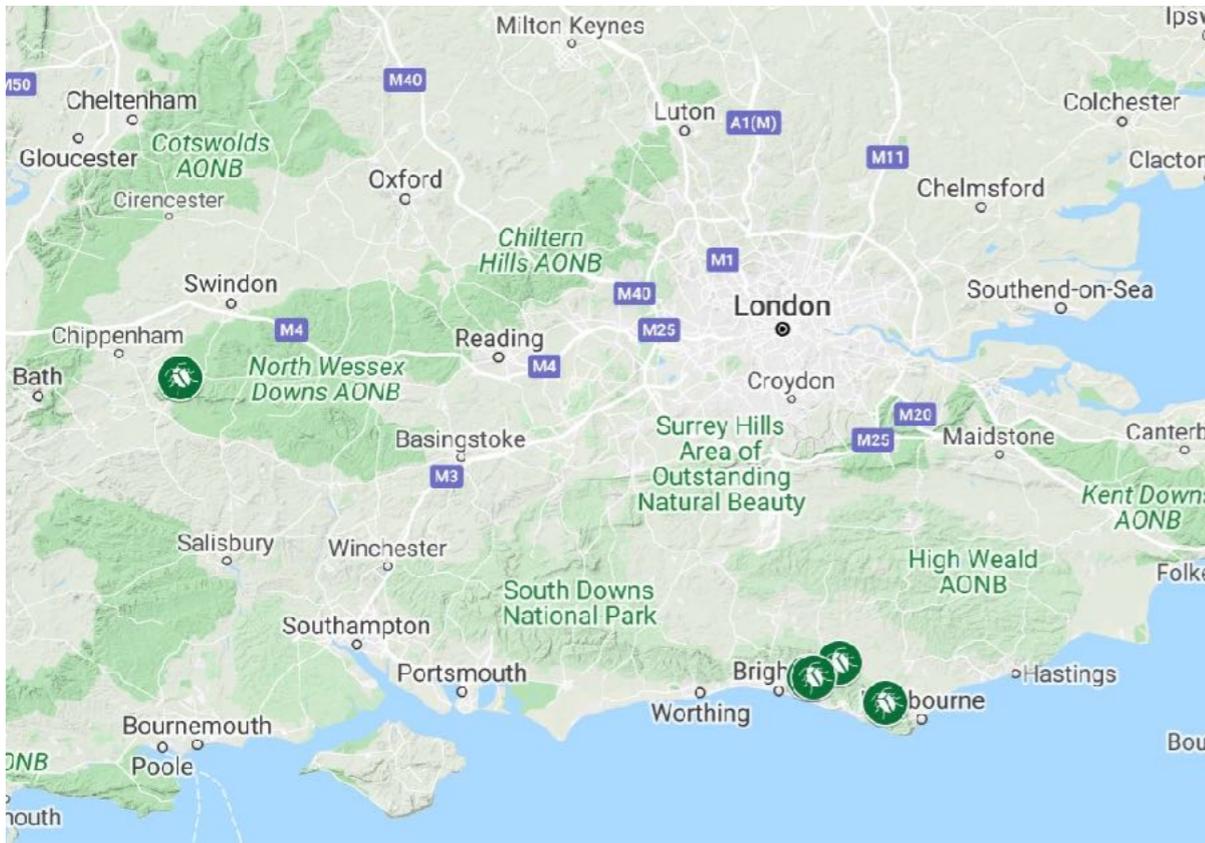
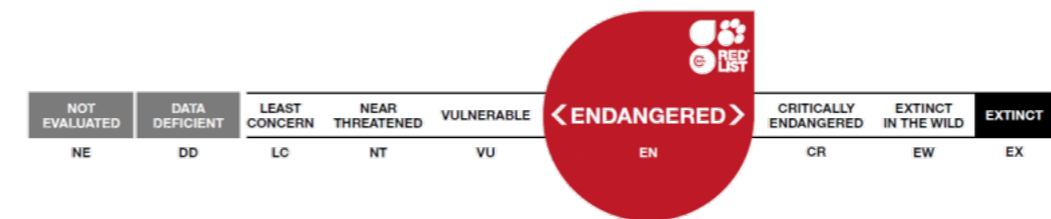
Distribution

Found across Europe (except in extreme south) and in temperate Asia. Also in the UK, but only in southern England: four sites in East Sussex and one in Wiltshire and one in Kent. Three of these sites are reintroduction sites.

Importantly, studies suggest that as the climate changes, the species will lose much of its habitat in continental Europe. For the long-term survival of this species, it is therefore crucial that we protect the small remnant populations that remain in the UK, as they may be pivotal to the overall survival of the species under a changing climate.

Status

Endangered, meaning it is facing a high risk of extinction in the wild.



Reasons for decline

Loss of high-quality calcareous grassland; inappropriate management of habitat (typically over- or under-grazing).

Protection under the law

Protected under Schedule 5 of the Wildlife and Countryside Act 1981 which prohibits the killing, injuring or taking by any method of the species.





SURVEY

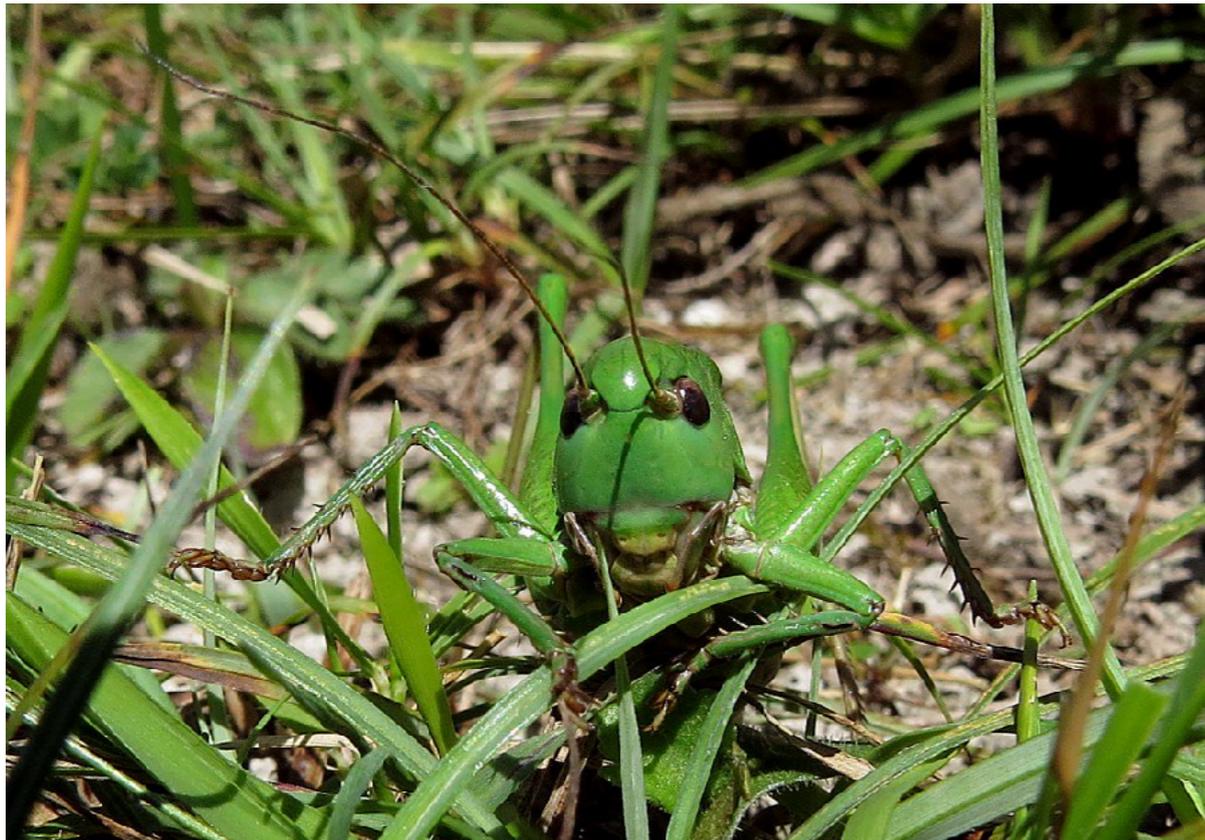
Habitat

Focus on areas of habitat comprised of a mosaic of short sward and more tussocky patches.

What to look for

Slowly walk through the search area, carefully observing the ground and nudging taller growth to “flush out” concealed individuals. This requires concentration, and individuals that are disturbed often drop or retreat into a tussock rather than moving into the open.

Detection of adults where the population density is low, or where vegetation is more or less uniformly dense, may be achieved most effectively by listening for stridulating males.



SURVEY

When to survey

Crickets can be found from April (as nymphs) to September. But survey effort should be concentrated on the hottest, sunny and still days of July and August.

What to record

What to record

- Number of crickets seen
- Colour form and sex of cricket (if known)
- Number of crickets heard stridulating
- Location (grid reference or GPS if possible)
- Take photos, if possible, of the crickets and the habitat

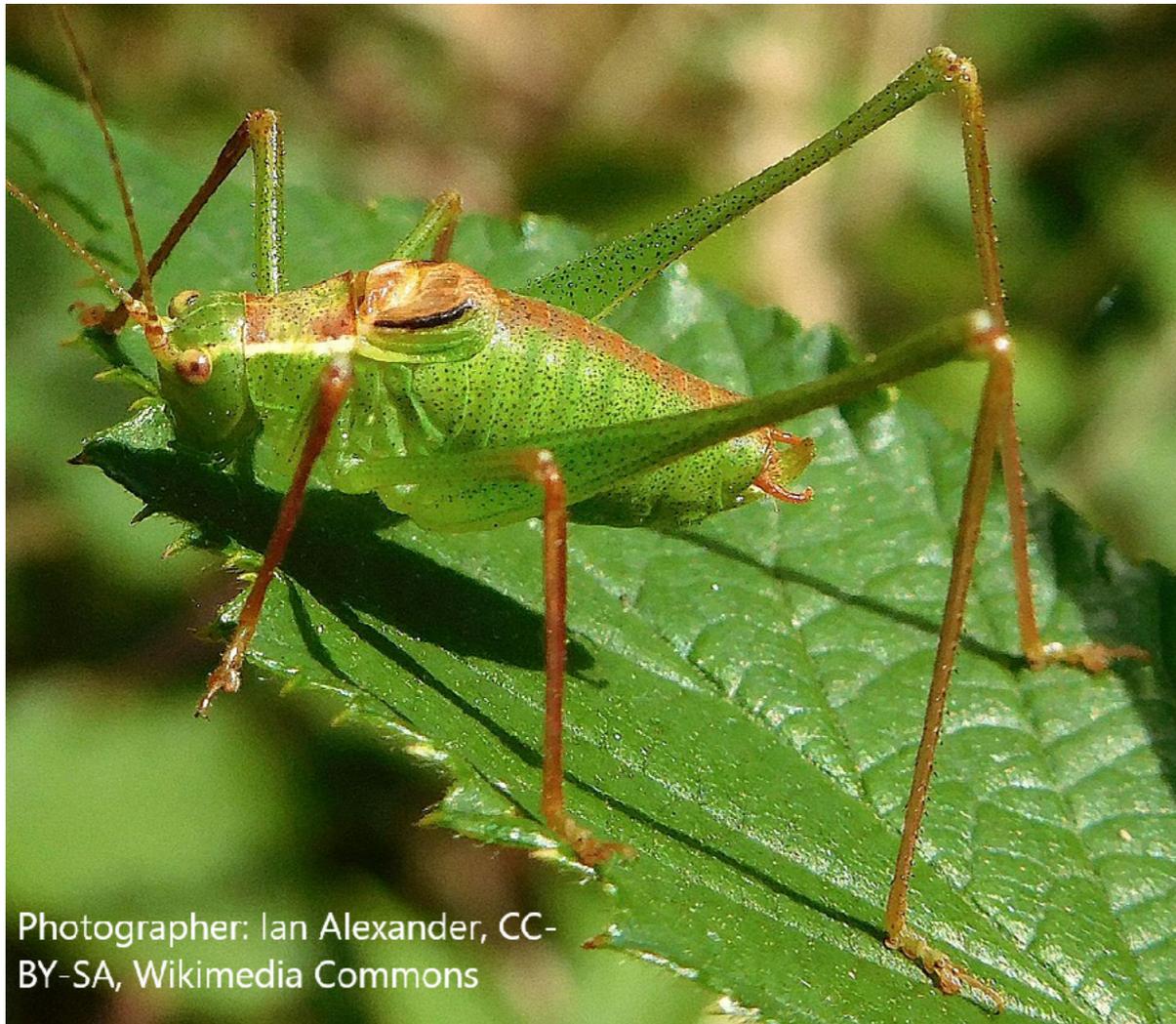


Photographer: Armin Kübelbeck, CC-BY-SA, Wikimedia Commons

Confusable species

It can be confused with the Great Green Bush Cricket (above), but this species is larger (40-55mm).

It can also be confused with the Speckled Bush Cricket (below), but this species has a brown stripe along the middle of the back and is covered in fine brown speckles.



Photographer: Ian Alexander, CC-BY-SA, Wikimedia Commons

MANAGEMENT

The key for management for Wart-biter Bush Crickets is ensuring a heterogenous habitat structure, with a mosaic of vegetation classes, a flower-rich sward and areas of bare ground. *Brachypodium* patches can provide important shelter, but care should be taken to ensure that these do not become too tall or too dense.

Suitable habitat can be achieved by keeping the area relatively free of scrub through periodic scrub clearance and through an appropriate grazing regime. It is important to note that grazing should be avoided when nymphs or adults are likely to be present (April to September).



OUR WORK

- Undertook habitat work at Lydden Temple Ewell, including the creation of a habitat corridor to expand the area of suitable habitat available
- Carried out surveys at Lydden Temple Ewell and trained volunteers to survey for the cricket
- Used modelling approaches to predict the effect of climate change on the distribution of the species across Europe

SUCCESS

- Improved and expanded the habitat at Lydden Temple Ewell, one of the key sites for the species
- Improved our understanding of the size and distribution of the population at Lydden Temple Ewell
- Trained volunteers to survey for the cricket

Our work to date has focussed on the site in Kent, Lydden Temple Ewell. From 2014-2016 we carried out extensive habitat work to improve the quality of the habitat on the site for Wart-biter Bush Crickets. However, because the species has such specific habitat requirements in the UK, this work needs to be repeated on a relatively regular basis. We now need to return to the site to check that it remains suitable and undertake any further work.

Our work has also demonstrated that the distribution of the cricket may decline across Europe as the climate changes, particularly at the southern edge of its range. This means that the UK populations (which are at the northern edge of the species range) are likely to be extremely important for the future survival of the species. We therefore need to redouble our efforts to protect this species in the UK, before it is too late.

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.



A photograph of a forest floor in spring. The ground is covered with a dense carpet of purple bluebells. In the foreground, a large, moss-covered tree stump lies on the ground. The background is filled with tall, slender trees with fresh green leaves, suggesting a healthy woodland environment.

**the
species
recovery
trust**

www.speciesrecoverytrust.org.uk
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