

# Dartmoor Delivery Plan for Blue Ground Beetle

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## Description and Importance of the Species

The blue ground beetle is the largest and one of the rarest ground beetles found in the UK. Both larvae and adults are mainly nocturnal, and thought to feed largely on tree slugs. The larvae have only been found on a handful of occasions in the UK. All of the sites where it has been found on Dartmoor are ancient woodlands, mainly oak with occasional beech, in river valleys with a south-westerly aspect. They are all damp woodlands, with abundant mosses and are at least occasionally grazed by sheep.

This beetle has always been considered a rare insect nationally and is currently known from only ten sites in the UK, five of which are within Dartmoor National Park. The other sites are on the southern edge of Bodmin Moor and in south Wales. Searches in a further 10 historical sites nationally indicate it has probably been lost from these at some point in the last 200 years. It is included in Category 1 (Endangered) of the Red Data Book and is widespread, but local and declining in Europe.

This delivery plan builds on the objectives and actions set in national plans for the blue ground beetle. The most recent of these are '*Continue to monitor at its stronghold sites*' and '*Undertake focussed habitat management in sites adjacent to known populations*', which are the two national actions sought by Natural England (NE, Nov 2013) due to its status as a NERC Act, Section 41 Species (listed as Priority 1, Global concern).



Blue ground beetle, copyright DNPA

## **Current Status on Dartmoor**

The species is locally common on the five Dartmoor sites, which range in size from 10 – 200 hectares. They probably hold at least 80% of the total UK population. Three sites are owned or managed by nature conservation organisations, Dartmoor National Park Authority (DNPA), Natural England (NE) and Devon Wildlife Trust (DWT), who take account of the species known requirements in their management of the sites. The other two sites are in several different private ownerships.



Typical woodland for blue ground beetle, copyright DNPA

The beetle has been recorded at four of the Dartmoor sites in the last three years, whilst it has not been searched for at the fifth site since 2008 when it was still present. The conditions at all sites appear to have remained appropriate and it is not thought that they have been lost from any sites in the National Park in recent years.

## **Issues affecting the Species on Dartmoor**

Knowledge of the history of the beetle on Dartmoor is poor, so it difficult to certain of the key factors. However, studies of its ecology here in the early 2000s indicate that the following are likely to be important.



1. Over tidying of woodland sites where standing and fallen deadwood is cleared.
2. Loss of grazing in woodlands, leading to dense grasses and understorey in woodlands
3. Loss of site connectivity within the valley woodlands where the beetle occurs
4. Conversion of broadleaves to conifer in woodlands adjacent to known sites

### **Current Initiatives on Dartmoor**

1. At the three main Dartmoor sites, the needs of the beetle are an integral part of the woodland management plans of the conservation bodies involved
2. Ongoing conversion of plantations on ancient woodland sites is taking place in two of the 5 valleys where they are found
3. Encouragement to landowners to leave deadwood in woodlands through management agreements and guidance from Forestry Commission (2010), Natural England and the Woodland Trust



Blue ground beetle in over-wintering 'cell' under moss carpet on a dead branch, copyright DNPA

## Target

1. Maintain viable populations at all five sites

## Delivery and Monitoring

1. Management undertaken at each site to maintain high levels of deadwood and preferably some extensive grazing
2. Investigate further the ecology of the larval stage and the key prey species, the slug, *Limax marginatus*
3. Monitor all sites for the beetle and woodland management practices at least every 5 years

	Lead	2014	2015	2016	2017	2018
Ensure appropriate management at all 5 sites	NE/DNPA/DWT	x	x	x	x	x
Research into the ecology of the larvae and <i>Limax marginatus</i>	Buglife?/NE	x	x	x	x	x
Monitor all sites at least every 5 years for presence and woodland management	DNPA/NE		x			