

# About Portchester Common



## Introduction

Portchester Common is part of the bigger Portsdown Hill Site of Special Scientific Interest (SSSI). It has a rich chalk grassland flora and fauna. There is also a mosaic of scrub and coarse vegetation. The site was grazed until the 1950s and was, until this time, dominated by short grassland. The site remained unmanaged until the early 1990s, during which time scrub and coarse vegetation covered most of the site.

The site's remaining areas of species-rich calcareous grassland habitat gives it a high conservation, amenity and educational value, especially as it borders a large centre of population. Habitat management which includes scrub clearance and a grazing programme is now part of a wider management plan designed to reduce scrub cover and increased the biodiversity of the grassland (see below).

## Geology

Portsdown Hill is the product of an anticline in Upper Cretaceous chalk (84 to 90 million years old). It is considered an out-lier of the South Downs. The chalk forms a continuous stratum that outcrops to the north to form the South Downs and to the south where it forms chalk cliffs on the Isle of Wight. A borehole found the chalk to be 400 metres thick.

## Soil Conditions

The soil classification of England and Wales (Avery, 1980) place the soils of the Common are described as a 'chalky grey rendzina' with some loessial silt. An average soil pH of 7.83 has been recorded. The soil becomes more clayey at the base of the escarpment where the depth reaches 30 cm due to Coombe deposits. Higher up the slope the soil forms a layer less than 3 cm over considerable areas. There is a considerable variation in soil depth over short distances *i.e.* less than a metre. These variations are caused by historic disturbance such as the construction of defensive structures, trackways and turf stripping.



### Biological Conditions

The warmer conditions encourage plants and invertebrates that are at the northern extent of their range and thus uncommon in the rest of Britain. The site's accessibility and close proximity to large centres of population has meant the hill has attracted many naturalists over the years. Many biological records exist. The process of putting the available information on to a computerised database is ongoing.

### Flora

There are 86 recorded plant species within this site which includes *Gymnadenia conopsea* (fragrant orchid) and *Acinos arvensis* (basil thyme). There is also a good range of lichens (*Catapyrenium lachneum*, *Toninia coeruleonigricans*) and bryophytes (*Ditricum flexicaule*).

### Fauna

#### Lepidoptera

There are healthy populations of *Lysandra coridon* (Chalkhill Blue) as well as many of the commoner butterflies. *Aricia agestis* (Brown Argus) and *Argynnis aglaia* (Dark Green Fritillary) have recently been seen after an absence of several years.

Butterfly/ moth surveys are carried out on the site by the Butterfly Conservation Trust between March and September each year and 26 of the 52 UK native butterfly species were recorded in 2016 across the Porstdown Hill/ Portchester Common complex.

#### Hymenoptera

There are 51 species of bee and wasp found within the complex. The sun warmed sparsely vegetated banks are ideal habitat for many species that have life-cycles with an underground larval stage. Notable species include *Mutilla europaea* (wasp) and *Mellitta tricincta* (bee). The rare Blue Carpenter Bee *Ceratina cyanea* is also present.



## Orthoptera

There are 9 species of grasshoppers and crickets within the site. There is a large population of *Tettigonia viridissima* (Great Green Bush Cricket) and *Conocephalus discolor* (Long-winged Conehead).

## Diptera

There are 22 notable species found here which include *Asilus crabroniformis* (hornet robberfly), *Machizus rusticus* (downland robberfly), *Eudorylas horridus* (fly), *Cistogaster globose* (European fly).

## Birds—Reptiles—Mammals

The site is on a migration route and up to 20 different species have been recorded throughout the year.

The site also supports large populations of *Anguis fragilis* (slow worm) and *Lacerta vivipara* (common lizard).

Surveys revealed healthy populations of *Apodemus sylvaticus* (Wood mouse), *Microtus agrestis* (Field vole), and *Sorex araneus* (Common Shrew). *Oryctolagus cuniculus* (rabbits) are also common on the site.

Small numbers of *Capreolus capreolus* (Roe Deer) live here all year. There is also at least one active badger set.

Lastly, *Mustela erminea* and *M.nivalis* (stoats and weasels) have been recorded on site.



## Site Management

The management of Portchester Common has varied over the last 18 years. Using livestock to graze the site has long been a key factor and thanks to a good working relationship with a local farmer on the Southwick Estate, it continues to be possible to graze the site during the winter for between four and six weeks. Cob ponies are currently used.

In 2013, the Countryside Service developed a management plan in association with Natural England and a five year Higher Level Stewardship scheme was agreed so that the following four objectives could be achieved:

1. To improve boundary hedging and maintain existing habitats and associated fauna and flora.
2. To improve, maintain and increase (to 70%) the area of species-rich calcareous grassland.
3. Safeguard all notable species.
4. To provide for public access and educational use of the site and to enhance public awareness and appreciation of downland habitat, except where it compromises objectives 1, 2 and 3.

The current agreement is coming to a close and Natural England and the Countryside Service are due to develop a new management plan shortly.

Over the last five years, it has been possible to achieve the management objectives and work continues on site to sustain and develop further what has been achieved.

It would not have been possible to achieve the goals without the dedicated team of six volunteers. The people who work on this site already help the Countryside Service with conservation work once a week on other sites across the Borough through much of the year.

This small group of local people agreed to work an extra three hours a week between September and March over the last five years and as a result of their hard work we can now enjoy the fruits of their labours.



## About butterfly/ moth scrapes

What is a butterfly scrape?

A scrape is a simple and often effective way of providing the necessary habitat for butterflies and moths which need specific food plants and breeding conditions.

As the name suggests, the existing turf and top soil is removed to expose the substrate which, in this case, is chalk. Most scrapes measure 2.5m<sup>2</sup> with a trench running west to east which is between 20cm and 50cm deep.

The excavated soils are used to form a 'basking bank' at the rear and a low lip along the front.

Why create a butterfly scrape?

Many butterflies and moths depend on specific food plants which are quickly out-competed by vigorous vegetation like the dog wood and privet. These food plants are typically early colonisers of disturbed soils and need to germinate within patches of bare ground if they are to flourish. The creation of earth scrapes will produce a mosaic of sparsely vegetated patches. They then form a breeding area and a source of food for both the caterpillars and adult butterflies and moths specific to this type of landscape. They also offer warm basking areas that many butterflies and moths require.

In addition, scrapes will also help supply bare ground habitat that is needed by other insects such as beetles, solitary bees and wasps.

Why create a butterfly scrape on Portchester Common?

The numbers of the blue butterflies recorded over the last three has declined with only one small blue having been recorded each year. These species should be more common and following discussions with both Natural England and the Butterfly Conservation Trust it was agreed that the Council could help improve resident numbers by using this technique. This is a trial based on the model used on Magdalen Hill Down, Winchester.

The initial construction work took two days. However, the period of time needed to grow the appropriate food plants from seed, plant them and let them develop can take between twelve and fourteen months. During this time, the scrape will need to be kept free of any scrub regrowth.

Common Blue



Small Blue

