

THE BIODIVERSITY OF BLAKENEY ESKER

Introduction

Blakeney Esker is an important geological site, but it is also home to an interesting variety of plants and animals. This variety of life is known as 'biodiversity', which is an abbreviation of biological diversity.

Norfolk County Council (NCC) owns the southern part of the esker, and this is divided into two sites. The eastern half is the Wiveton Down Local Nature Reserve and the western half is known as 'Blakeney Esker'.

Heathland

All the plants that you see at Blakeney Esker have colonised the site since the early 1990s. Aerial photos taken in 1988 show the entire surface of the site being reworked, with very little sign of vegetation. Since quarrying stopped, plants have colonised and the management that has checked this process has been occasional fires, intense rabbit grazing and the mechanical cutting of gorse in parts of the site. Without this, the whole site would by now be covered in scrubby woodland.

The vegetation on Wiveton Down has been around for much longer, so more species are found here. Can you tell the difference between the two sites?

The type of vegetation found on Blakeney Esker, and on Wiveton Down next door, is called heathland and acid grassland. This is made up of a collection of plants that require sandy, acidic soils with free drainage. At Blakeney, the following species are present:

- common heather
- bell heather
- common gorse
- tormentil
- bedstraw
- slender St John's wort
- bracken
- lichen



Top left Bedstraw. Photo Source: Paul Glendell / English Nature

Bottom left Common gorse.

Right Bell heather. Photo Source: Paul Glendell / English Nature

Unless heathland is grazed or cut, the tree species tend to take over and the open areas disappear under a cover of woodland. Maintaining this careful balance of open areas and woodland is the job of the NCC Countryside Officer. In the past natural events determined how open the site was.

The esker was of significance to Bronze Age man, as indicated by the burial mounds at the north end of the ridge near Morston (this section is not owned by NCC). The presence of this scheduled ancient monument is strongly suggestive of an open, treeless landscape. The word 'down' which is used here also conjures up images of short, grazed, open grassland.

Local stories have it that in more recent times, the progression to gorse and bramble used to be controlled by fire. Traditional uses of heathland, like grazing and collecting firewood, declined and it is likely that burning was used to counter the build-up of woody vegetation. It has been reported that the heather that once grew on the top of Wiveton Down, disappeared because of a wartime fire that could not be controlled. The fire burnt off all the heather and the organic soil, leaving a bare gravel surface that provided a foothold for the gorse that now dominates.

Lowland heath and acid grassland are both Biodiversity Action Plan priority habitats. This is because they are rare within the United Kingdom. Conservation bodies and NCC are taking special steps to make sure they are managed for the benefit of the wildlife that lives there.

Grazing

Rabbits graze sections of Blakeney Esker very heavily. Once they have finished the grassland and herb species they start on the gorse. Weird and wonderful shapes appear as the rabbits nibble their way up as far as they can go. These 'gorse sculptures' give a very special feel to this side of the site (Figure 2).

On the Wiveton Down side, the rabbit grazing was not sufficient to halt the bracken and scrub encroachment. This side has now been fenced and is grazed by sheep (Figure 3).



Figure 2 Gorse sculptures at Blakeney Esker due to rabbit grazing at the site.



Figure 3 Sheep grazing on vegetation at Wiveton Downs.

Photo: Norfolk County Council

Gorse management

Gorse is an important part of the site and we would not want to remove all of it, even if we could. However, if it is left unchecked (even where the rabbit grazing is intense) it tends to take over the site and shades out other more interesting species. Gorse is cut from the floors of the palaeochannels (Nye channels), as shown in Figure 4, to emphasise their location and orientation along

the length of the esker. Patches of gorse are also left for songbirds and certain types of insect. Some patches of gorse are cut to create a variety of age structures, leaving older gorse next to younger areas. Other patches are removed to create open areas where heather and low growing grasses can flourish. The word that conservationists use for this mixture of grass and gorse is a 'mosaic'. NCC leaves a bank of gorse around the edge of the site as this acts as a natural windbreak.



Figure 4 Gorse clearance within the palaeochannels courses at Wiveton Downs Local Nature Reserve.

Trees

The stand of beech trees on Blakeney Esker is rather unusual for a heathland. However, it is an important landscape feature, instantly recognisable for miles around. NCC will therefore keep the existing trees in a safe condition. Any deadwood cut from the trees will be left in situ to provide rotting wood habitats for invertebrates. Replacement beech trees will be maintained to perpetuate this important clump.

In Spring on the Wiveton Downs side, carpets of bluebells grow amongst scattered trees and open grassland. It is unusual to see bluebells growing on such an exposed site. This area is managed by controlling the spread of bracken

and gorse. The bluebells at Wiveton Down (Figure 5) are our native variety, and not Spanish bluebells which are increasingly found in many of our woodlands. The bluebells are a protected species, and it is illegal to dig them up and plant them in your own garden.



Figure 5 Bluebells at Wiveton Downs SSSI. Photo: Norfolk County Council

Young trees that are seeding naturally onto the site are being removed to continue the open downland feel of the site. Larger trees are left in situ as they provide shelter for the sheep and food sources, habitats and song perches for birds. The oaks are particularly favourable for purple hairstreak butterflies.

Birds

Heathlands tend to be very good sites for birds. Blakeney Esker is particularly good because it is so close to the north Norfolk coast, a major bird sanctuary, and the first section of coastline that migrant birds come to when they are on passage (i.e. migrating). The site therefore has its regular species, many of which will breed there, but it will also occasionally attract rarities. If a really

rare birds turns up, then the site may be subject to 'a twitch', where large numbers of birdwatchers turn up to try and see the celebrity!

Some birds that you may expect to see or hear on a normal summer's day include:

- blackcap
- linnet
- stonechat
- swallow
- kestrel
- sparrowhawk
- whitethroat
- lesser whitethroat
- skylark
- mistle thrush
- goldfinch
- blackbird
- dunnock
- yellowhammer



Figure 6 Left: Kestrel. Centre: Skylark. Right: Yellowhammer. Source of photos: P N Watts / English Nature.

On an early summer's day if you're really lucky:

- red-backed shrike
- wheatear
- whinchat
- wryneck
- dartford warbler
- ring ouzel
- hobby
- wood lark
- tree pipet
- woodcock

On a winter's day if you wrap up warm, and are really, really lucky:

- great grey shrike
- waxwing
- short-eared owl (at dusk)
- hen harrier

Butterflies

Heaths are good sites for butterflies, and on a bright sunny day you may be lucky enough to see green hairstreaks feeding on flowers like birdsfoot trefoil. Purple hairstreaks also live on the site, but they live in self-contained colonies on oak trees. Both these types of butterfly are extremely beautiful, and quite unusual. More common species you can also expect to see in the summer include orange tip, peacock, meadow brown and painted lady.



Figure 7 Meadow brown butterfly

Photo Source: Peter Wakely / English Nature

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Discussion points / homework topics

1. What species would you expect to find in the boggier, chalkier (calcareous) lowland around the esker? Are the species different to those on the esker? Why?

ANSWER: You would expect lime-loving plants such as upright brome *Bromus erecta*, blue moor-grass *Sesleria caerulea*, and common rock-rose *Helianthemum nummularium*. Calcareous grassland is often considered to be species rich and more fertile than other soils. Blue butterflies are often associated with calcareous grassland. The types of species found will be those that require wetter soils that retain more moisture and nutrients than well-drained soils, i.e. very different to those found on the esker.

A huge amount of information is available on the web.

2. Why is the north Norfolk coast so good for birds?

ANSWER:

- Reclaimed marshes are a good habitat because birds feed on the grasses.
- The landscape is varied with lots of different habitats.
- Its east coast location makes it the first port of call for birds migrating from Scandinavia and the Arctic (such as geese).