Ledbury Naturalists' Field Club

Field Survey 2016

Broadmoor Common

January 2017

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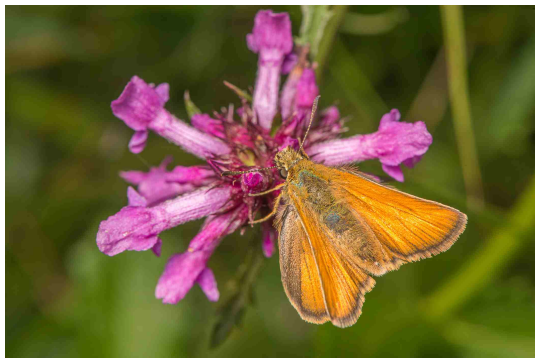
Geology comments: Moira Jenkins

Marbled White Butterfly



Essex Skipper

Introduction

Broadmoor Common has been a site of great biodiversity supporting species of local and national importance for many years and has had a chequered history of management. When domestic use by commoners dwindled the environment began to change. A comprehensive survey of the area with a proposed management plan was carried out in 1983 showing its wildlife value and in 1987 it was designated a Local Nature Reserve (LNR) by Hereford and Worcester County Council who took on the maintenance. The Club's President, Dr. Michael Harper, was instrumental in persuading the council to designate the common a LNR with his extensive studies of butterflies and moths in the area. A plant community survey (National Vegetation Classification) was commissioned by Natural England in 2014, but the intended new management plan fell foul of Herefordshire Council's budget cutbacks. In 2015 the Council closed its Parks and Countryside Service and resolved to dispose of Council properties the service had managed. It has agreed to transfer freehold title of its land at Broadmoor Common to Woolhope Parish Council (WPC).

Some arbitrary management in recent years has highlighted the need to better the situation for the site's ecology and amenity value. Local residents and Parish Councillors decided to take on the responsibility to keep it in good heart for the future, as they value the common greatly and appreciate its wildlife potential.

Consequently, grant funding was obtained for the preparation of a new management plan and initial work programme by consultants Swift Ecology and Footprint Ecology. This work is being overseen by local resident, Mark July, a retired professional ecologist. There will be an opportunity for public input in the process. The Ledbury Naturalists' Field Club was asked to conduct their annual field survey on the common in 2016 and add their data to the information being gathered by the consultants. The club was very happy to comply as it was a useful exercise in a delightful place and follows on from Dr. Harper's initial involvement.

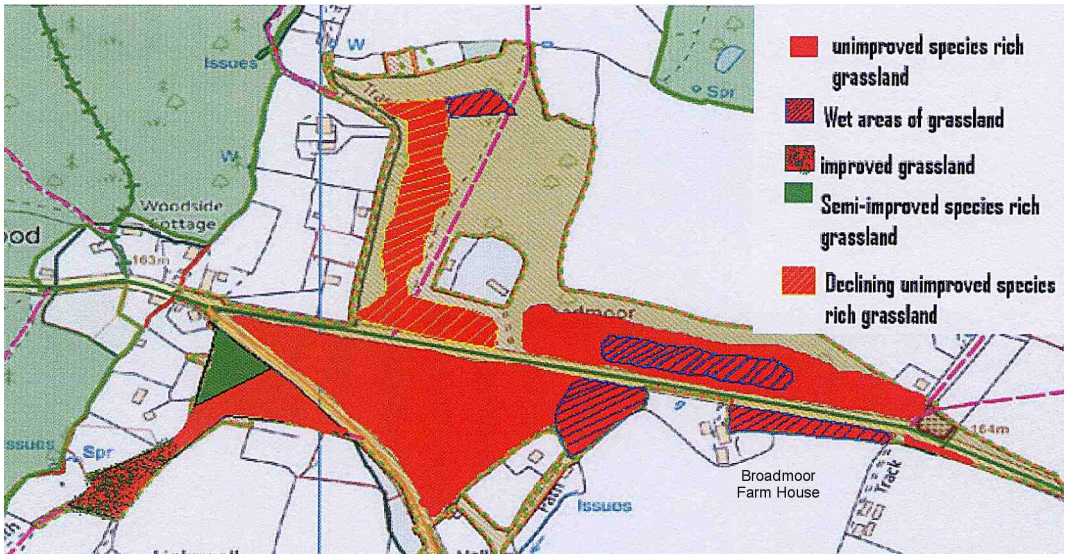
Background

Broadmoor Common covers an area of 14 hectares on the eastern edge of Haugh Wood at SO 603 363. It is on the central high part of the Woolhope Dome which is an inlier of mainly calcareous rocks. More details of the geology can be found in Appendix 1. What makes the Common particularly interesting is that due to its complex geology and topography, it has a mosaic of different habitats enabling it to support a wide range of vegetation communities with corresponding flora and fauna. The proximity of Haugh wood, itself a rich source of wildlife, means that mobile species can easily migrate to the common and add to its diversity.

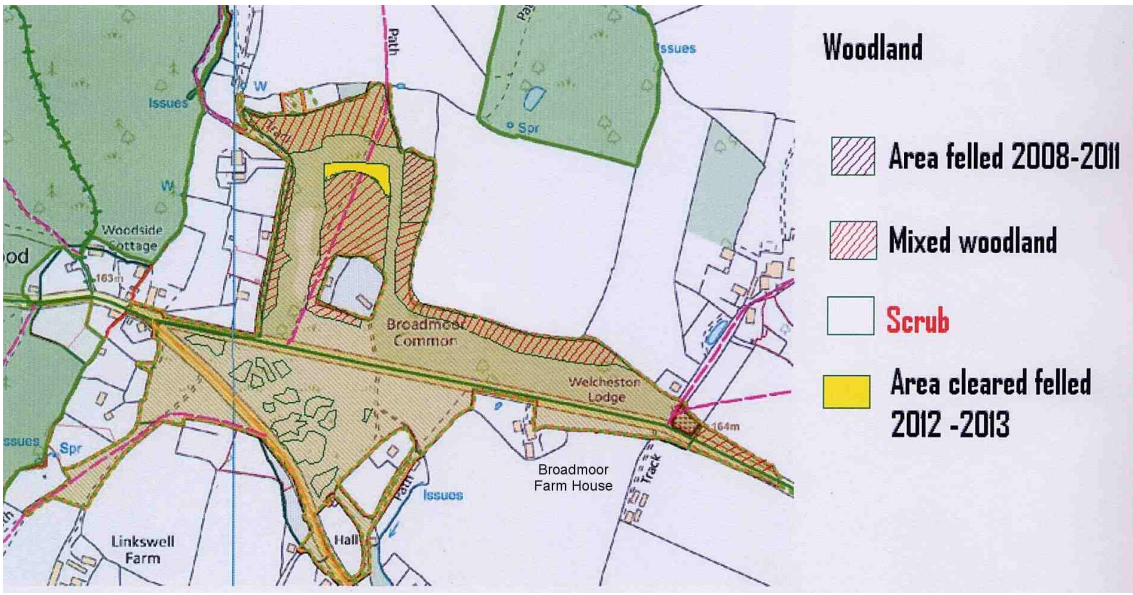
To the south of the Woolhope road is a large area of unimproved grassland on mainly sandy soil supporting several grassland species which are not common in Herefordshire. To the northern side is more grassland which regularly floods in winter and is dominated by coarser grasses and rushes. There is an area of woodland to the north and much scrub, encroaching in many places, though the woodland edge makes an extensive and valuable habitat. Another area of fen meadow is to the west and north of the woodland, and there are two dwindling ponds though historically there were more. A small strip of rather neglected woodland goes east from the car park. On the south west corner there is a thin strip of common which has been "improved" for agriculture and is consequently far less biodiverse.

The maps show the areas more clearly.

Broadmoor Common – Grassland habitats



Broadmoor Common – Wooded areas



Adapted from maps from proposed Broadmoor Management plan 2014-19 by Hannah Dalton for Natural England

Conducting the Survey

Volunteers from Ledbury Naturalists' Field Club paid eight visits to the site between March and October in 2016 to carry out the survey. The dates of the general meetings were March 23rd, April 20th, May 18th, June 15th, July 20th, August 17th, September 14th, and October 19th. Dormouse tubes were set up in the woodland by volunteers in late April and some members ran moth traps in the evenings on August 3rd, and September 15th. Moira Jenkins conducted a geological survey of the area.

On each date members spent about 3 hours in the afternoon walking around the site. All flowering plants, grasses, trees, fungi, ferns, birds, insects, and other invertebrates found along the way were recorded. Visits at other times by members and friends have added more

species to the records.

Hilary Ward supervised the botany and Michael Bradley and Rob Hemming tackled the Lepidoptera. Cherry Greenway identified the fungi. Peter Garner, County Botanical Recorder, joined our team on several outings. Kate Wollen of the Forestry Commission organised the dormouse survey. The club is fortunate to have the support of these experts in their fields, and great trouble was taken to verify each record to ensure the reliability of the survey as far as possible. However the records are doubtless an underestimate of the species present due to the limited time spent and in some cases due to lack of expertise available. Unfortunately no moss or lichen experts were available this year. The lepidoptera are well represented in the invertebrate list but some of the other families suffer from lack of expertise. Complete details of the survey can be found in Appendix 2

In summary the following numbers of species were noted.

Herbaceous Plants	Grasses Sedges Rushes	Trees	Fungi and Ferns	Birds	Mammals and other Vertebrates	Insects and other Invertebrates
162	**51**	**40**	**41**	**49**	**10**	**257**

Discussion

Overall 162 herbaceous plant species were recorded along with 51 species of grasses sedges and rushes and 7 types of fern. As the common has a range of vegetation zones, the plants found are distributed differentially according to their requirements. The main areas of neutral grassland to the south of the Woolhope Road and by the car park, are fairly sandy and well drained and very rich in herbaceous plants. These include a variety of indicator species such as Meadow Vetchling, Common Knapweed, Ox-eye Daisy and Bird's Foot Trefoil as well as

Heath Spotted Orchid

Southern Marsh Orchid

Adder's-tongue

good populations of Common Spotted, Heath Spotted and Southern Marsh Orchids, with rare occurrences of Adder's-tongue and Grass Vetchling. The most prominent grasses were Red Fescue, Sweet Vernal Grass and Common Bent. In damper sections of this area, sedge lawns of Glaucous Sedge and Carnation Sedge occur. In all 12 species of Sedge were recorded

Wet areas to the North of the main road

Some of the grassland mainly north of the road, is of less botanical interest being dominated by False Oat Grass indicating lack of management. On the western side of the common a small area has in the past been semi-improved and has a high frequency of Rye Grass.

There are a few areas of calcareous grassland mainly along the roadside near the car park, with such typical species as Common Rock Rose, Salad Burnet and Wild Basil.

Damp grassland habitats in the poorly drained areas feature plants such as Pepper Saxifrage, Wild Angelica, Lesser Spearwort, Lousewort and Devil's Bit Scabious. Tawny Sedge and Spiny Rest-harrow, a couple of Herefordshire rarities, were also recorded from the area south of the road.

Angelica

Spiny Rest-harrow

Areas of fen meadow on base rich flushes are characterised by Fleabane, Jointed Rush, Hard Rush, Greater Bird's Foot Trefoil and various Sedges. In areas of moderately acidic, poorly drained land, rush pasture is found with plants such as Soft Rush, Devil's Bit Scabious, Sneezewort, Lesser Spearwort, Tufted Hair Grass and Velvet Bent.

As well as being a very diverse habitat for plants, the common is most attractive with its changing colours and has particularly fine stands of Devil's-bit Scabious and Fleabane later in the year providing food for insects.

Fleabane in August

Large Skipper on Bird's-foot Trefoil

Overgrown pond

The two remaining ponds were very disappointing as they are overgrown and silted up and the one at the west end may well have run-off from the adjoining field. Newt eggs and Frogs were seen and Caddisfly, Diving Beetle and Marsh Beetle larva were found in the water as well as a few other invertebrates. Water plants were Water Starwort, Marsh-marigold, Yellow Iris,Water Mint and Bulrush but nothing in great abundance the water being well shaded and overgrown.

In the woodland areas, 40 species of trees and shrubs were recorded. There was nothing of great note, the dominant species being Oak, Ash and Silver Birch some of which have reached a good size since stock grazing ceased in the 70s. A large stand of Aspen is an attractive feature to be encouraged. There is a great deal of scrub, mainly Hawthorn and Willow, encroaching on the grassland in many places which needs sensitive management. Complete removed would not be desirable as it is a good habitat for birds and insects, especially along the hedge fringes. The main woodland section has an impoverished ground flora due to grazing pressure from Muntjac and Fallow deer who seem to frequent it constantly and were often sighted. Plants such as Wild Daffodil, Bluebell, Wood Anemone, & Scaly Male Fern were recorded but at low frequency.

Blackthorn in hedgerow

Woodland section

There is a small fragment of woodland, possibly ancient in origin, at the eastern end of the common which supports plants such as Wild Service, Field Maple, Yellow Archangel, Woodruff and Herb Robert.

On 24th July, Rob Randall, the national *Rubus* referee, paid the common a visit and identified 9 different species of Brambles. It was interesting to know there was such diversity in a well known plant which had possibly not been noticed before.

Not a great many fungi were recorded, but 32 species were noted. They were mainly typical woodland species such as Blushing Bracket, 3 Brittlegills and Scaly Earthball. An attractive group of Fly Agarics were found at the northern edge of the wood. The main woodland was not very productive as it was rather dry and trampled by deer. There were some grassland species along the edges of the open areas.

Shaggy Scalycap

Fly Agaric

The afternoon meetings were not the best time to spot birds, however, 49 species were recorded. These included 4 species of tit, Green and Great Spotted Woodpeckers, Barn and Tawny Owls and Swift, Swallow and House Martin. Many, such as Stock Dove, Woodcock and Cuckoo, have conservation status. A comparison of historic records from the late 1970's to early 1980's was carried out by Hilary Ward and is in Appendix 3 This shows that many of the birds historically seen are still on the common and 19 now have some level of conservation status and are either priority species on the UK Biodiversity Action Plan 2005 (BAP) and/or on the red or amber lists of UK Birds of Concern 4, 2015. This emphasises the need to maintain the common as a good habitat for dwindling threatened bird populations for which it has great potential.

The invertebrate list is much longer as 257 species were recorded, the bulk being moths caught in the traps run on 2 nights in the summer. The most interesting one was the Brussels Lace Moth which is a lichen feeder and which was considered extinct in the county and has now turned up. Several species are classed as endangered or vulnerable on the International Union for Conservation of Nature (IUCN) Red List in Appendix 3. This is just a snapshot of the total population, demonstrating a rich population on Broadmoor which would probably yield more nationally and regionally scarce species if recorded all year. There were also butterflies found in the day such as Small Tortoiseshell, Orange tip, Brimstone, Small Copper, Speckled Wood. Large, Marbled and Green-veined Whites,

Mother Shipton Moth

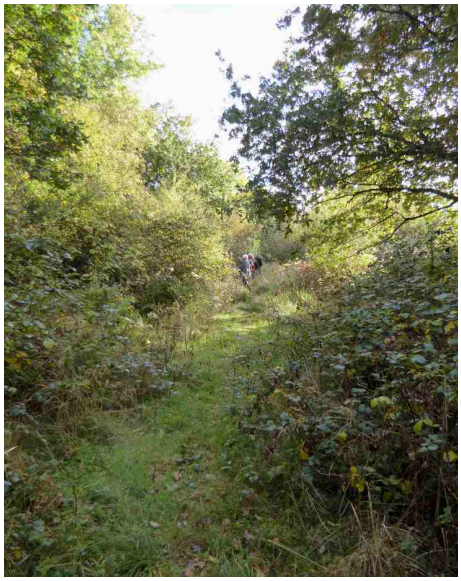
Painted Lady

Common Blue

Comma, Common Blue, Gatekeeper, Large, Small and Essex Skipper and Red Admiral. There was a range of other invertebrates recorded including 3 Bumble Bees, a Honey Bee, 5 gall wasps and a Hornet though no common wasps. These seemed to be rare everywhere this year. This big range of insects emphasises the value of the common for birds which are insect feeders.

The proximity of Haugh Wood is reflected in the range of mammals recorded. Several Dormice were found in the tubes set up in the spring and 2 species of Pipistrelle Bat, Common and Soprano, were recorded on the common. These species are protected under the Conservation of Habitats and Species Regulations 2010 and Wildlife and Countryside Act 1981 (as amended). Dormice and Soprano Pipistrelle are included in the UK Biodiversity Action Plan. The Herefordshire Biodiversity Action Plan also has Species Action Plans for Dormice and Bats.

Fen Meadow



Woodland path in September

There were also many fallow Deer which are having an impact on the woodland in particular and Munjac prints were found regularly. There were also Moles and Rabbits and no doubt many other small mammals which were not tracked down.

Conclusion

The club's survey has shown that Broadmoor Common continues to host a wide range of wildlife across many taxa. The varying vegetation zones in the grassland areas are particularly rich in flowering plants, grasses, sedges and rushes with some local rarities, and need to be maintained with an appropriate mowing regime with cuttings removed so as not to enrich the soil. Scrub is encroaching in various areas and, though having its own value for insects and birds, needs to be checked appropriately. The woodland supports a different range of wildlife but suffers from the impact of deer, an increasing issue in the Woolhope Dome. Insect life is prolific reflecting the wide range of habitats and providing food for birds. The remains of the old ponds do not currently contribute much to the biodiversity of the common and have potential to be much improved and be a valuable wildlife habitat.

It was good to see that many things recorded historically are still to be found on the common though some species are now endangered. The new management plan, when implemented, should ensure that this delightful and valuable area is maintained and not allowed to degrade and will be a continuing source of interest and enjoyment for parishioners of Woolhope and the general public far into the future.

Distribution

1. Ledbury Naturalists' Field Club, survey team and committee members
2. Swift Ecology consultancy
3. Woolhope Parish Council
4. Mark July
5. Peter Garner Botanical Recorder for Herefordshire
6. Herefordshire Nature Trust.
7. Natural England.
8. Herefordshire Ornithological Club.
9. Herefordshire Biological Records Centre
10. Ledbury Town Council
11. Ledbury Library
12. Woolhope Naturalists' Field Club

Common in June

Appendices

Appendix 1 Geology notes by Moira Jenkins

Appendix 2 Species records collated by Janet Parry

Appendix 3 Historical records collated by Hilary Ward