Welcome to the fifteenth edition of “Speckled Wood”, an email newsletter produced by Butterfly Conservation and Forestry Commission England (FCE) about the conservation work to benefit threatened butterflies and moths on priority sites on FCE land. Thank you for all the positive feedback we have received for previous issues and the articles sent for inclusion.

This issue contains articles relating to Priority Sites and Species from the North District covering targeted management and species responses as well as volunteering and monitoring.

The promotion of new publications is located on page 6. Details of volunteer opportunities threatened butterflies and moths factsheets and Butterfly Conservation events can be found on page 7.

**Lepidoptera Strategy, North District Review Update**

Caroline Kelly, Conservation Officer, Butterfly Conservation

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In 2014 there were three FC District reviews in North, Central and Yorkshire. The reviews highlighted the importance of Lepidoptera species records getting to the FC District Ecologist who can then inform the FC Planning Officers and Beat Foresters where the best areas are for targeting their annual management.

In the Morecambe Bay area, there are concerns that the populations of Pearl-bordered Fritillary are declining and losing this species is a potential threat. Some suggestions were put forward that a management plan should incorporate the SSSI's at a landscape scale.

In terms of the Priority Species in the North District, sites have remained similar to the original Strategy document but it was highlighted that monitoring on certain sites would be beneficial. However there have been two sites which have been colonised by Dingy Skipper; Dalton Crags (Grade A) and Hamsterley Forest (Grade C). Dalton Crags also has records of Grayling which has increased these sites ‘Species Score’ by ten and Hamsterley Forest has increased by five which changes the ‘Site Grade’ from C to B.

An additional bonus of some of the funded woodland management work is the response of beautiful Nationally Scarce moth *Anania funebris* which is not currently a priority species in the Lepidoptera Strategy. This moth favours rocky limestone habitat as well as frequenting woodland rides and edges with the larvae feeding on Goldenrod *Solidago virgaurea*. During the 2013 Butterfly Task Force project surveys in Morecambe Bay, it was recorded on two out of six strategy sites (Underlaid Wood and Whitbarrow) in that area of the North District and an additional strategy site has also had recent records. It was recorded in woods that are adjacent or within colonising distance and hopefully targeted management for the Fritillaries will benefit this species.

The articles in this issue focus on the Morecambe Bay area and the results of some of the monitoring that has taken place through the Morecambe Bay Limestone’s project.

The ability to update the Strategy document would not be possible without the efforts of both FC staff and BC Branch volunteers and we would like to take this opportunity to acknowledge their time and effort and express our thanks.
Since 2007 a coordinated and targeted programme of woodland management work in the Morecambe Bay area has been led by Butterfly Conservation. This has involved directing funding from Woodland Improvement Grants, the SITA Trust, GrantScape and the NIA to sites supporting rare and threatened butterflies such as the Pearl-bordered Fritillary and High Brown Fritillary, and providing advice, training, volunteer recruitment through the HLF Butterfly Task Force Project and the NIA.

In the summer of 2014 Butterfly Conservation commissioned a survey of all the clearings and rides which had been created since 2007 under the various schemes. This involved a number of surveys across 38 sites of 175 individual patches (clearings or rides) being conducted in the Morecambe Bay Limestones NIA, following a standard methodology.

The following Priority Species were targeted: High Brown Fritillary, Small Pearl-bordered Fritillary, Northern Brown Argus and Grayling as well as those of conservation concern: Dark Green Fritillary, Silver-washed Fritillary and White-spotted Sable moth.

The High Brown Fritillary was recorded in very low numbers, confirming the UKBMS findings that the species is still in decline and under threat with preliminary analysis of transect data indicating that 2014 was the worst year for the species since systematic monitoring of the species began in 1990.

Despite this, High Brown Fritillaries were found in 17 clearings or rides, at 6 out of the 38 sites, which in terms of occupancy of the managed patches is slightly less than 10% of the total 175. Some of these records indicate that some rides that were targeted for management have been colonised.

The condition of the patches varied greatly depending on when the management work was done. The majority of sites had bracken and violets present, but the abundance and distribution varied across sites. The images below illustrate the variety of vegetation found in the managed patches.
The presence of nectaring plants such as bramble, a result of coppicing and ride management, has benefitted a wide range of the more common butterflies, with 19 species recorded, the most numerous and widespread being the Meadow Brown and Ringlet butterflies. The Ringlet has only recently spread into the Morecambe Bay area and is now very widespread.

Other unusual species were recorded such as the Least Minor Moth (Photedes captiuncula) and the White tailed bumble bee was the most common species recorded.

In conclusion:

- More than 60ha of woodland management work has been carried out in the Morecambe Bay area to potentially benefit the rare and threatened species of butterflies in the last 4 years.
- Awareness of the species, habitat requirements and management has grown both in the conservation world and with the general public.
- At least ten woodlands in the Morecambe Bay Limestones area are now in a better condition to support the species of butterfly which are only found here.
- However, the butterflies still appear to be in decline and under threat, but it is early days. If other factors such as weather become more favourable, it is possible that the butterflies can build up their populations again.

Acknowledgements: The achievements would not have been possible without the partnership work with the Forestry Commission, the Wildlife Trusts, Arnside & Silverdale AONB, Lake District National Park, Friends of the Lake District, the RSPB, Natural England, National Trust, private landowners, contractors and volunteers.

Looking for a butterfly in a forest-needle in a haystack!

Grizedale Forest, Priority Site Grade A

Hillary Smith, Morecambe Bay Butterfly Task Force Project Officer,
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The High Brown Fritillary butterfly is giving cause for concern nationally and locally, with the numbers and distribution decreasing dramatically since the 1970’s. The UK Butterfly Monitoring Scheme shows that for populations on individual sites the long term trend from 1978 – 2013 shows a rapid decline of 63.4%. The only area in the north of the UK which supports two thirds of the population is the Morecambe Bay Limestones and South Cumbria Low Fells area.

In north-west England, High Brown Fritillary adults fly from late June to late August and overwinter as eggs which are laid singly on leaf litter (often dead Bracken), or amongst moss growing on limestone outcrops. The larvae feed on Common Dog-violet Viola riviniana in all habitats, but Hairy Violet V. hirta is also used in limestone areas. It may occasionally use Heath Dog-violet V. canina and Pale Dog-violet V. lactea.
Butterfly Conservation has been concentrating its survey and monitoring efforts on sites where the High Brown Fritillary is still present but is also investigating older records.

One of the more fascinating sites, is the Forestry Commission’s Grizedale Forest which covers 2447 hectares to the east of Coniston in the Lake District.

Records for the High Brown Fritillary in Grizedale are sparse, with the earliest record held by Butterfly Conservation being from 1995. Although the Forest area has predominantly been managed with conifers for at least 75 years, it was coppiced broadleaved woodland for centuries before that. It is surprising, given the 150,000 visitors a year to Grizedale, and the people working in the Forest that there are so few records for this butterfly. Occasional records, from the wet mire areas around the streams, since 1995 initiated a more intensive survey in 2013. However only one butterfly was found in a similar location, together with another sighting to the north.

The 2013 record has hailed this site with the distinction of holding the most northerly record for the High Brown Fritillary butterfly in 2013. Unfortunately this glorious title may be short-lived as repeat surveys in 2014 have failed to record the butterfly.

The elusive High Brown Fritillary at Grizedale Forest has raised many, as yet, unanswered questions:

- Which food plant and where-as the habitat is not typical for the species, is it feeding on marsh as well as dog violets on the edges of the wet mire habitat, or is it using violets which grow in profusion on the edge of the stone tracks?
- The butterfly will travel 1 – 2 km to feed so perhaps the individuals recorded are from an undiscovered breeding colony?
- Is there really a tiny population or are they being falsely assumed to be the more common Dark Green Fritillary or perhaps they are off the beaten track?
- Given the size and nature of the Grizedale Forest what is the best method of surveying?
- Are there more conifer sites in Cumbria with High Brown Fritillary present in a forgotten sunny corner?

The peak flight time is July, but given the Lake District location, sunny days cannot be guaranteed when the large number of surveyors are needed to cover the area. Surveys by car and bike have been trialled in 2014 and shown useful for identifying potentially good habitat.

Perhaps the answer is to appeal to everyone using and working in the Forest to take a note of any large orange/brown butterfly they see, to help direct Butterfly Conservation’s expert survey effort, and help the rare High Brown Fritillary survive in this unusual environment.

If you would like to help survey for this elusive butterfly in 2015 please contact #.#.#.#.#.#.#.#.#.###.

The Big Butterfly Count is a nationwide survey run by Butterfly Conservation and is aimed at helping us assess the health of our environment. This summer the Big Butterfly Count runs from Friday 17 July to Sunday 9 August.

To take part, simply count butterflies for 15 minutes in bright weather during the Big Butterfly Count. Records are welcome from anywhere: from parks, school grounds and gardens, to fields and forests. You can submit separate records for different dates and places that you visit. Remember that your count is useful even if you do not see any butterflies or moths.

Visit the website www.bigbutterflycount.org to download an identification chart and submit your sightings or use the free Big Butterfly Count smartphone apps available for iOS and Android.

Britain’s Habitats - A Guide to the Wildlife Habitats of Britain and Ireland
Sophie Lake, Durwyn Liley, Robert Still and Andy Swash
Princeton University Press. £27.95

Occasionally a book comes along the like of which you have never seen before. This is such a book. The beautifully produced work is a wonderful celebration of the rich diversity of Britain and Ireland’s habitats, stunningly illustrated with more than 650 fantastic photographs. This is much more than a coffee table book, with detailed descriptions of our habitats and their conservation, the breadth of coverage and knowledge imparted is quite staggering. This is an essential reference book for anyone interested in our wildlife habitats, their extent, location, conservation and much, much more.

Dr Nigel Bourn

Irreplaceable Woodlands
Charles Flower Papadakis. £25

This personal account of woodland management by one of the country's leading botanists, Charles Flower is a well thought out and inspiring work. Flower’s passion for restoring our countryside and woodlands is evident throughout this well-illustrated book, which combines practical management advice with personal anecdotes and experiences.

The chapter on Insects and Spiders includes descriptions of butterflies and moths viewed in the 10 hectare Mapleash Copse in Berkshire, including the ‘magnificent’ Silver-washed Fritillary, the White Admiral and ‘inquisitive’ Purple Emperor. Whether you are interested in dead wood, wild flowers or hazel coppice this easily accessible book is perfect to inspire those managing woodlands or for people who simply want to learn more about our woodland heritage.

Rachel Jones
Encouraging volunteers to survey and monitor priority sites

Volunteers play a key role in surveying and monitoring Lepidoptera on Forestry Commission England sites. The data this provides is vital to enable understanding of the changes in Lepidoptera populations and provides a basis for management advice. To encourage further survey work at Forestry Commission England sites, get in touch with the local Butterfly Conservation branch (http://butterfly-conservation.org/49/in-your-area.html) and other local volunteers. If Forestry Commission staff request survey work, there may be Forestry Commission England funds available to fund volunteer expenses. If you require assistance to set up monitoring please get in touch with Butterfly Conservation Regional Branches (http://butterfly-conservation.org/49/in-your-area.html) or Caroline Kelly (contact details below).

Training Days

Details of training events can be found on Butterfly Conservation’s website www.butterfly-conservation.org/events. Please contact us if you are interested in arranging specific events.

Butterfly Conservation Factsheets

Butterfly Conservation has factsheets detailing the ecology of more than 50 different butterflies and moths (the majority of which are UK BAP priority species). Habitat management recommendations are also included. If you would like copies of any other factsheets please contact Butterfly Conservation, or download them from www.butterfly-conservation.org/Butterfly-Factsheets, www.butterfly-conservation.org/Moth-Factsheets, www.butterfly-conservation.org/Habitat-AdviceFactsheets.

Next Issue

If you have any news about butterflies and moths from your district, (new projects, information or management advice) that you would like to appear in this newsletter then please write an article of no more than 400 words and send it and any accompanying photos to Caroline Kelly (ckelly@butterfly-conservation.org) by 1st September 2015 so it can be included in the next newsletter.

Key Contacts

For further information please contact Caroline Kelly at Butterfly Conservation (ckelly@butterfly-conservation.org, 01929 406029)