

Saving butterflies, moths and our environment



HERTFORDSHIRE AND MIDDLESEX BRANCH

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Welcome from Your New Chair, by Malcolm Hull

I'm delighted to be have been chosen to be your new Chair. I'm passionate about butterflies and keen to learn more about moths. In the coming year I'd like to meet as many members as possible and help you find ways to help butterflies and moths.

Our branch is now 21 years old and keeps growing and getting stronger. Our work seems to be paying off, with more members than ever before and butterfly numbers doing well in both counties.

We arrange an ever increasing range of activities for members to join in

- Our Guided butterfly walks, each led by a local expert provide opportunities to get out and see butterflies and moths. Everyone is welcome to attend, so please do come along to one near you, or if there's a particular species you'd like to see or photograph. And please feel free to bring a friend or two. There is an events program with this newsletter and any additions will be advertised on our website.
- Recording butterflies and moths is a high priority and there are many ways to help. Many of you will be familiar with the Big Butterfly Count, which this year will be from 19th 31st July. But we are keen to receive all your records, which can be submitted either by post, email, spreadsheet or the I-record app (see p.16).
- <u>Butterfly Gardening</u> is increasingly popular and we are delighted to be supporting the new British Butterfly Garden at Butterfly World in St Albans. Watch our website, Facebook page or Twitter account for latest news and sightings.
- <u>Visit our very own nature reserve</u>, Millhoppers Pasture, just outside Willstone village near Tring. Details are on our website, or contact the Reserve Manager, Jez Perkins.
- <u>Join us at a show this Spring or Summer</u>. Enjoy free entry and spend a few hours chatting about butterflies and more at our popular Butterfly Stall.

We will be holding a special introduction day for new members on 25th July. Those who have joined in the last year will receive a personal invitation nearer the date. Priority will be given to new members, but if any existing members would be interested then get in touch with Ian Small

(details on back cover) and we will let you know if places are available.

At the end of March we held our annual members' day at Welwyn, which attracted a record turnout from members. Dan Hoare, our head of regions gave a fascinating talk on the Duke of Burgundy butterfly, extinct in Herts & Middx, but still thriving on nearby at Ivinghoe Beacon in Bucks. A lot of BC resources are going into saving the species in the Chilterns and a return of the species to nearby areas of Herts seems to be a possibility. We also welcomed Lesley Davies of Herts & Middx Wildlife Trust and heard Andrew Wood our outgoing Chair give a guide to some of the best butterfly sites in our two counties (further details of all of these follow in later pages).

A bit about me

I'm 54, have two grown up children and live in St. Albans. I work in London as a surveyor, advising on the built environment. I've been on the branch committee for nearly 20 years and have had responsibilities for events, Butterfly World liaison, Brown Hairstreak species champion as well as leading various field trips and walking a transect at Bricket Wood Common. My favourite butterfly is the Green Hairstreak, though Silver-washed Fritillary is a close second. I have an allotment and garden, both packed with butterfly friendly plants.



A word of thanks:

Many thanks to the nearly one thousand people who submitted records of butterfly sightings last year. Thanks also to over 50 transect walkers, our Branch committee members and all our other volunteers, including those who helped construct and plant the new garden at Butterfly World (see article on p.17). And particular thanks to Andrew Wood for his achievements in four years as Chairman, as well as producing our excellent Annual Report.

Members' Day Report, by Ian Small

The Branch Members' Day and AGM were held on Saturday 28th March, at the Welwyn Civic Centre. The event was very well attended, with over 70 people present. In addition to the formal presentations, members enjoyed the annual photo competition (which this year attracted almost 150 entries into the 5 categories from nearly 30 entrants), the sales stall, the raffle, copies of the display material for the new British Butterfly Garden at Butterfly World in St Albans, lunch and refreshments.

The Best Butterfly Sites in Herts & Middx. - Andrew Wood

Following the formal AGM proceedings, Andrew Wood then gave a very informative presentation on great places to see butterflies in Herts. and Middx. His presentation focussed on 8 sites, 4 from each county, and covering the geographic spread of our Branch. Andrew gave information about ho to get to each of the sites, the habitats present at each and, of course, the main butterfly, and sometimes moth, species you would hope to see there. There are field trips organised to many of these sites, details of which you will find enclosed with this newsletter.

His first site was Aldbury Nowers, a renowned chalk grassland site near Tring where, on a good day in May, you could see Small Blue, Grizzled Skipper, Green Hairstreak and Dingy Skipper in the same day. Many other species are present, including many day-flying moths, and the Dark-green Fritillary is now common there.

Tower Hamlets Cemetery Park is a haven for butterflies within a densely built-up area, close to a tube station. It's a great place to see large numbers of common butterflies, but also to see Silver-washed Fritillary and Small Blue.

Bricket Wood Common is a mainly woodland site, with clearings to recreate heathland. When a gas main was laid through this area, it opened up a wide ride, which has to be maintained, and is a great place to see White Admirals and Silver-washed Fritillaries, and if you are lucky, Purple Emperors. This site was the last know location for Brown Hairstreak in our area, but has not been recorded there since 1998.

Trent Country Park in the Borough of Enfield comprises mainly meadows and grassland, but also has several lakes and mature woodland. Small Heath and Small Copper are numerous, and there are very large numbers of Ringlet. This is also an excellent place to find the Chimney Sweeper day-

flying moth.

Therfield Heath was once nationally known for the numbers of Chalkhill Blues (and particularly the aberrations that could be found as a result of the very high population). Numbers have been high again recently, and the site also hosts huge number of Marbled Whites. Dark-green Fritillaries have recolonised in recent years.

Horsenden Hill, in the Borough of Ealing comprises a mix of ancient grassland, hedgerows and woodland. This is a good place to see White-letter Hairstreak, which often come down to thistles and bramble flowers here, in addition to hosting good numbers of e.g. Small Coppers and Gatekeepers.

Hounslow Heath, particularly at the south-east end, still looks like a heath, with gorse, broom and heather. Green Hairstreaks breed on the gorse here and Speckled Woods are common.

Balls Wood hosts a rich fauna in addition to butterflies, including slow worms, grass snakes and great-crested newts. In mid-summer, however, it is the butterflies that are the star, with Silver-washed Fritillaries, White Admirals and Purple Hairstreaks.

Andrew will be converting his presentation for posting to the Branch website.

<u>Dukes on the Edge – Dan Hoare (BC Head of Regions)</u>

Dan treated the audience to a wonderful, inspiring presentation which had the sub-title – '5 Steps to Save a Species'. The process was illustrated using the project led by Dan on the Duke of Burgundy butterfly while he still Senior Regional Officer for BC in South-East England. This delightful little insect has suffered a 43% decline in numbers since 1980, coupled with a 30% contraction in its distribution – disappearing from marginal sites and becoming restricted to fewer, more isolated colonies.

Step 1 was to understand where the species now was, compiling a national site dossier. Of the remaining colonies almost 50% were in the south-east region.

Step 2 was to improve the management at all known sites. The habitat requirements relate primarily to the needs of the larval and pupal stages – eggs are laid on primroses and cowslips, but caterpillars do not complete feeding until August, by when all but the lushest and most shaded foodplants are suffering from the effects of drought and are unable to sustain the

caterpillars. Sheep grazing (often used for conservation purposes) can have catastrophic effects on populations if implemented in breeding areas.

The butterflies are able to disperse over distances of 2-4km, and so require a network of suitable sites within those distances. The best approach is to show land managers where the species is actually breeding on their land, and encourage them to safeguard and create more of the same. During the project, advice was given on 147 sites since 2011, the majority already used by the Duke, but a proportion that represented potential habitat that it could expand into.

The 3rd step is to look for long-term impacts, so that sites don't simply revert as soon as the project funding runs out. Much of this approach involves sharing knowledge and skills. This leads to step 4, which is to build and expand the habitat network – joining the dots between existing colonies. This is conservation at the landscape scale, and allows landowners to provide habitat diversity, benefitting a broader range of wildlife.

The 5th crucial step is to monitor the results, and use them to inform future management decisions. This is achieved by monitoring the amount of now usable habitat, the proportion where adult butterflies have been seen, and importantly where eggs/caterpillars have been found, as evidence of breeding.

There is clear evidence of success with this project, and of the approach. Populations of Duke of Burgundy are growing back, habitats are improving and there have been new colonisations in Kent, Sussex and Hampshire.

Although directed and coordinated by Dan in his professional role in BC, much of the effort on the ground, especially monitoring and recording, has been done by local Branch volunteers. The project is a great example of how BC can leverage the strengths of its professional and amateur 'wings' to deliver real conservation benefit and deliver the prime objectives of our Society - to conserve our wonderful lepidoptera.

The Herts & Middx Wildlife Trust – by Lesley Davies, Chief Executive

Lesley gave the audience an overview of the strategies and objectives of HMWT, which she joined a year ago, during its 50th anniversary. Echoing one of the themes of Dan's earlier talk, she emphasised that nature reserves are no longer enough and we need to think more in terms of living landscapes.

A key strategy is to increase awareness and engagement, leveraging such projects as gardening for wildlife and the Living Rivers project, which aims to restore chalk rivers, and has already had significant success with the River Mimram. The HMWT has a number of nature reserves encompassing a variety of habitats. Two of these were included by Andrew is his 'great places to see butterflies' talk earlier – Aldbury Nowers and Balls Wood. Indeed, Aldbury Nowers achieved a record this year with the highest index count of any transect in a single day in our region – 1153 butterflies seen on the 26th of June transect, and the site now has records for 33 butterfly species.

A key focus is to inspire people, particularly young people, with wildlife and the natural world, and several major events are undertaken each year in support of this, e.g. the Wild Woods day and the Festival of Wildlife. Recording and monitoring is also a significant activity, with HMWT hosting the Herts. Environmental Records Centre. It was acknowledged that a highly significant 23% of all records held by them come from our Branch. The Trust are also attempting the influence the route of HS2, which is currently planned to run very close to Broadwater Lake SSSI.

Photo Competition Winners



Green Hairstreak. Photo © Sharon Monahan. Winner - UK Butterflies Category



Titania Fritillary 'courtship'. Photo © John Noakes Winner - Non-UK Category



Pale Tussock. Photo © Tim Alps Winner - UK Moths category



Lackey moth (?) Caterpillar. Photo © Ian Small Winner - Non-adult Category



Puddling, Laos. Photo © David Gower Winner - Behaviour Category

Butterflies of Herts and Middx, by Andrew Wood

In the last 30 years our area has seen the extinction of the Wall Brown (see article on p14), the decline of the Small and Essex Skipper, the spread of the Silver-washed Fritillary and Marbled White, the rediscovery of the Purple Emperor and many other changes affecting all of our butterfly species. It is now almost 30 years since Brian Sawford (Herts) and Colin Plant (London) published comprehensive surveys of our butterflies and so I have been invited to compile a new book on the Butterflies of Hertfordshire and Middlesex to be published by the Hertfordshire Natural History Society.

Much of it will cover new information and changes over the past 30 years but I also want to revisit the historical information that was included in these books to provide context for the later developments and to see if anything has come to light over the past 30 years. To do this I will be going through the published and unpublished literature of the last 400 years and I already have access to much of this thanks to the collections of the Hertfordshire and the London Natural History societies. Much of this was covered in the previous books but some of it will bear reinterpretation in the light of develops over the past 30 years. There has also been much published in that intervening period.

A stalwart band of volunteers has been working on species record cards compiled by Brain Sawford for his book and for the period between its publication and 1994. There are several tens of thousands records and they are all being added to spreadsheets before being loaded into the Branch database. I am grateful to the Hertfordshire Environmental records Centre and John Murray for making these cards available to me. Those volunteers who have spent hours copying this information are Tony Roberts, Roger Gibbons, Peter Clarke, Paul Why, John Eborall and Dick Middleton and I am very grateful to them as this will mean that both we and the Herts Environmental record Centre have a complete database for Hertfordshire butterflies. If any of you reading this have records or other information that has never been sent in or published I would love to hear from you.

The book will be in full colour and fully illustrated so I am calling on the many talented photographers in the Branch to request the use of their pictures. We will be able to be reproduce them in a much larger format than the annual Herts & Middx Butterflies booklet. I am especially interested in pictures of non adult stages and of sites and habitats. Again please get in touch with me if you have material that you would be happy to be used.

Day-flying Moth and Caterpillar Recording, by Zoë Randle

Butterfly Conservation would love butterfly recorders to record dayflying moths and moth caterpillars when they are out and about. In 2018, in collaboration with MothsIreland, we will be publishing a Macro-moth

Atlas for Britain and Ireland. The majority of moth recorders use light-traps and, as a result, the many species of day-flying moths may be relatively under-recorded compared to nocturnal ones. Butterfly recorders can make a huge contribution to the forthcoming atlas by submitting records of day-flying moths such as Speckled Yellow (figure 1) and indeed distinctive caterpillars (e.g. Cinnabar) that they encounter while out looking at butterflies

The National Moth Recording Scheme run by Butterfly Conservation will provide the UK moth data for the forthcoming atlas. The scheme already holds over 17.3 million moth records and geographical coverage of the UK, Channel Islands and Isle of Man at 10km resolution is very good (97% have at least one moth species recorded). There are only 113 10km squares for which we do not have any records from the year 2000 onwards (see figure 2). However, in addition to these, there are 613 10km squares which we consider to be underrecorded - they possess 50 or fewer records of 25 or fewer species. You could really help by targeting these unrecorded or under-recorded squares 10km resolution. Open circles pre butterfly recording. To find out what onwards records 10km squares, or tetrads, are under-



Speckled Yellow. Photo © Pam Parsons



Figure 1: NMRS Provisional distribution map of Speckled Yellow at sightings during your 2000 records and solid dots 2000

recorded in your area please contact Colin Plant your County Moth Recorder via cpauk1@ntlworld.com or 01279 507697. If you wish to venture further a-field, the list of County Moth Recorders can be found on the Moths Count website (www.mothscount.org).

Many butterfly recorders already record the moths they see along their transects. In 2013, the UK Butterfly Monitoring Scheme (BMS) team extracted moth records entered into Transect Walker software. The data extraction exercise revealed data for 109.485 individuals of 123 moth species, with 13,622 records from 403 sites. The five most frequently recorded species (in descending rank order) were Silver Y, Six-spot Burnet. Cinnabar. Burnet Companion and Speckled Yellow.

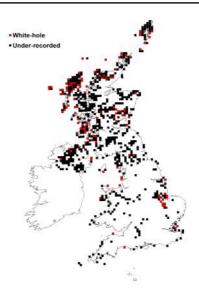


Figure 2: Map of National Moth Recording Scheme 'white-holes' and under recorded 10km squares from 2000 onwards.

These records will be re-patriated to County Moth Recorders in due course.

Participants in the Wider Countryside Butterfly Survey are also encouraged to record day-flying moths in their squares. In 2014 a record of Blood-vein in Gloucestershire was only the second for SP10 and the first since 1974.

In the run up to the forthcoming Macro-moth Atlas for Britain and Ireland all butterfly recorders can help boost coverage by recording moths, whether on butterfly/WCBS transects, during 'casual' butterfly recording or by specifically targeting areas that are under-recorded for moths. Your help will be very gratefully received. Records are best submitted to your local County Moth recorder on an annual basis by the end of the year to enable incorporation into local datasets and ultimately the National Moth Recording Scheme.

Third Time Lucky, by Jacqueline George

I first tried to see the famous Swallowtail butterfly in 2008 while on holiday in Norfolk, but arrived two weeks late to see them. In 2011, I had another chance when I went on a coach trip with the local RSBP group to Strumpshaw Fen. Some people saw it, but not me (boo hoo..).

In 2014 I joined another outing to the fen, but the signs were not good. The day started cloudy, windy and cold. "Have I any hope of seeing this magical butterfly?" I asked myself. I started with a walk around the meadow where I saw marsh orchids, ragged robin, bedstraw, yellow rattle, vetch, clover and, finally, two clumps of milk parsley, foodplant for the Swallowtail, but no butterflies of any sort.

The weather was so miserable, we all sat in a hide watching birds and eating lunch. We were rewarded with the sight of four marsh harriers passing food in flight. Leaving the hide we saw our first butterfly, a Small Tortoiseshell, and had our first glimpse of the sun. I set off again and narrowly missed seeing an Elephant Hawkmoth emerging (drat! – unlucky again). However, I did see a newly-emerged Ringlet posing for its photograph, followed soon after by a Red Admiral, 3 Speckled Wood, a Comma, 2 Large Skippers, a long-horned moth and a Silver-ground Carpet. My day was improving at last.

Continuing my tour, I saw a bank vole run along the path. I was surrounded by damselflies – I was able to identify Common Blue,



Mating Swallowtails Photo © Jacqueline George

Emerald, Blue-tailed, Small Red-eyed and Small Red. I also saw a Banded Demoiselle and Brown Hawker, Hairy Dragonfly, Common Darter and Broad-bodied Chaser dragonflies.

Wandering casually along Lackford Run I saw members of our group ahead frantically waving and shouting "Guess what we found! Come and see" they called. I tried to run on the uneven ground and nearly tripped, but arrived unscathed

at a clump of tall white-flowered milk parsley where two Swallowtail butterflies were mating.

A large crowd of onlookers had gathered, so I was jumping up and down excitedly shouting "Let me see. Let me see my first after all these years". "Your turn will come" they replied "Get your camera ready!"

Finally, I was at the front. Fantastic! Wow! I just couldn't believe what I was seeing. Big butterflies with gorgeous black and yellow markings, prominent 'tails' with red and blue 'eyes' intertwined together. I now have four photographs. It made my day and I'll always remember the sight. Third time lucky! My quest is over (or is it?)

Shortly afterwards, I was staying in East Sussex recovering from an accident. In the local paper there was an article about European Swallowtails breeding at a secret location nearby. The hunt is back on?

Will the Wall Ever Make a Comeback? By Peter Clarke

In the current climate, we know the butterfly is believed to be extinct in our area. The decline started from the early 1990s (earlier further south in counties like Surrey) and although some other species have also suffered none more drastic than the Wall. Records suggest that peaks populations occur in hot, summers - not surprising considering that the Wall is a sun-loving species. Big declines usually result in the years following hot summers and then recovery takes place. Nationally.



Wall Brown Photo © Ian Small

this is what occurred after 1976 but after 1983 in some inland areas south and west of England there was no recovery. Although there were good numbers in the hot, dry summers of 1989 and 1990 the decline afterwards was more widespread and prolonged in inland areas in England. One likely reason for the decline is the desiccation of grasses, including the larval foodplant, in drought conditions. Inland areas are normally drier and warmer in the summer than coastal sites but summer droughts probably influence larval mortality similarly in all areas. There may well

be other factors including the effects of climate change.

An article by Richard Fox from Butterfly Conservation, refers to an experiment carried out in Belgium relating to the state of the Wall because a similar event happened over there where colonies died out in inland areas but not along the coast. To cut a long story short, results suggest that there may well be a lost generation resulting from a third brood of adults in the autumn. Increased populations in a third brood magnify the impact. Andrew Wood provided me with records in Hertfordshire prior to 1994 for the Wall so that I could check possible third brood sightings. Looking at our area there appeared to be at least a partial third brood in 1989 (3 November), 1990 (1 October, 7 October and 1 November) and 1991 (13 and 20 October). I am making the assumption that sightings in October onwards are third brood specimens and not late second brood ones. Unfortunately there are no definite third brood records for 1976 and 1983 but there was a third generation in 1947 when a specimen was seen on 19 October (Sawford). From our small sample of sites the best year was 1990 with 1989 a very close second. 1991, however, saw a drastic decline (about 80%) and any hoped for recovery in the fine summer of 1995 did not materialise. How significant was the effect of the third brood in 1990 in our area?

Many theories have been postulated. Inland sites are generally cooler in the winter but does the climate itself affect third brood larvae, the majority of which probably overwinter in the first or second instar stage. more than the larger and more mature second brood larvae? The fact that these creatures are cold-blooded suggests not. I looked at weather trends for the winters following the hot summers of 1976, 1983 and 1990. Interestingly, the series of winters following 1990 were generally very mild and wet whereas there were very cold winters during the previous two periods, more so between 1976 and 1983. This suggests that mild winters could be indirectly having an impact. There was a study carried out in 2001 on the effect of predation of Speckled Wood larvae by a generalist predator like the Spiked Shieldbug Picromerus bidens. The results conclude that there was a higher risk of predation the faster the larvae grew. In other words, the more feeding on grasses by the larvae which went on, the more likely they were killed per unit time. This may imply that the more mobile and active larvae are, the more vulnerable they are to predators in general. Coming back to the Wall, we can speculate that milder winters encourage both the larvae to come out of diapause and possibly feed, and predators to become more active and

therefore instigate a higher mortality rate among the larvae. The question is 'Are third brood larvae more vulnerable?' Due to their smaller size do they need to feed more during the winter than second brooded larvae? We will know in due course as there is much interest on the reasons for the decline of the butterfly.

Other theories suggest a parasite or virus is a major factor and that the infection spread northwards to correlate with the Wall's contraction in range.

There is some good news, however. Reports from Sussex suggest that numbers of Wall have increased in the last few years even on inland localities and the range is expanding northwards in the county. If the cause of the Wall's demise is mostly due to a virus or parasite which has spread north then indications are that the butterfly has adapted and recovered in this part of the world and expansion could potentially continue to other parts of the country.

iRecord Butterflies, by Andrew Wood

Butterfly Conservation recently released a new Smartphone app called *iRecord Butterflies* It is completely free and is available for Apple and Android devices

iRecord Butterflies will guide you through the identification of any butterfly than you see in the UK. You can compare you own photo with those from the app's extensive image library, filter species by colour, pattern and size, and see distribution maps and identification tips for each butterfly species.

The *iRecord Butterflies* app is much more than just an aide to butterfly identification. It provides an easy, single-step route to contributing your butterfly sightings to Butterfly Conservation's national recording scheme. Such sightings (termed 'records') provide the essential foundation for much-needed conservation work to help the UK's declining butterflies.

The national butterfly recording scheme has collected millions of sightings stretching back several centuries and these enable us to see how butterflies are faring and to target conservation effort at those most at risk of extinction. The records can also be used by scientists to understand the impacts of climate change and other environmental issues on our butterfly populations. The records underpin the management of important butterfly sites, help protect habitats through the planning system and enable

Butterfly Conservation to produce regular State of the UK's Butterflies reports, local and national atlases and Red Lists of priority species.

Simply by sending in some basic information about the butterflies that you enjoy watching, even if just from your garden, you can make a real contribution to their conservation. Once you've identified the butterfly, simply enter a few simple pieces of information, such as the number that you saw and a place name (important so that the sightings can be checked on maps) and submit. The app will automatically calculate where you are (using the GPS in the Smartphone) and provide a grid reference for your sighting.

All your records go into a holding area where they are verified by us before being added to the county and national databases. Several hundred records for 2014 have been sent in for our area, so why not try it in 2015?

If electronic recording isn't for you, you will find enclosed with this newsletter a copy of our standard recording sheet which you can use for your records. Records can also be sent electronically to Andrew as a simple spreadsheet, if preferred. 2015 marks the start of the new 5-year recording cycle, so lets get of to a flying start!

Butterfly Worlds' British Butterfly Garden, by Louise Hawkins (Butterfly World Lepidopterist and Ecologist)

With the support of Butterfly Conservation Hertfordshire & Middlesex Branch, Butterfly World has created a beautiful new British Butterfly Garden for Spring 2015. The garden aims to provide inspiration for thousands of visitors each year demonstrating how it is possible to create their own beautiful gardens that are a haven for British butterflies, and giving tips and advice to budding gardeners.

Redesigning the garden has been a huge project for the Butterfly World gardening team. Head Gardener Tim Kirk comments, "The previous area was designed according to butterfly habitats rather than for aesthetic appeal, which meant it was overlooked by visitors." The new British Butterfly Garden is beautifully designed and landscaped, creating a visually stunning area, proving that you can have an attractive garden both to gardeners and wildlife.

The concept of the garden is based around two distinct areas. The central wildflower area surrounds a revitalised wildlife pond, and incorporates

plants and grasses of varying heights, which provide nectar and shelter for insects. Caterpillar Corner has been planted with larval food plants, encouraging adult butterflies to lay their eggs in the area. The garden also includes a 'Moth Mount', which has been created to specifically attract a wide variety of moth species.

During the design process branch members were invited to Butterfly World to discuss the plans for the new garden and offer advice on the



The first day of work, October 2014 All photos in this article © Juliet Morton, a Branch member.

new garden and offer advice on the best planting to encourage the widest selection of species possible.

The creation of the new garden would not have been possible without a dedicated team of volunteers. There were 16 volunteers, seven of which are members of Butterfly Conservation, working one day per week from October to March. Butterfly World also established a partnership with the Community Matters team from St Albans Waitrose who volunteered hours throughout the project.

Although the basic layout of the British Butterfly Garden was remaining the same, getting all the work done in time for Butterfly World reopening in March was a huge project. Soon after work on the garden began it became apparent that the soil in the garden was poorly drained and

stagnant. To overcome this required thorough digging of the existing soil, and removing large flints, weeds and other debris which hindered the soil permeability. Copious amounts of soil improver were then incorporated which has helped break up the clay and subsoil.

The next task was to raise the levels in the informal flower



Working on the redesign of the pond on a very wet day!

borders with imported topsoil. This will help to keep the roots of the new

plants out of the more waterlogged soil.

The existing pond was reshaped, deepened and relined. The previous pond was too shallow to encourage much wildlife and would often dry up in the summer months.

The garden paths have been widened to allow for good wheelchair and



Moving the stones to line the widened paths

pedestrian access, Decorative sandstone rock which previously lined the garden paths was removed and replaced, to facilitate the widening of the paths.

A few British Butterfly Garden statistics

- Construction time 24 weeks
- 120 Man hours, equivalent to 5 twenty four hour days from each volunteer
- 40 Tonnes of topsoil
- 30 Tonnes of soil improver
- 624 Wildflower plugs
- 2,335 New formal plants

Once all the heavy labour was completed the more pleasurable job of planting could begin. The outer informal flower borders. encompassing the wildflower island of cultivated comprised herbaceous plants, shrubs, and trees, all chosen for



New plants positioned and ready to be planted

their ability to provide nectar throughout the year.

Top five plants found in the new British Butterfly Garden

1. <u>Stinging Nettle *Urtica dioica*</u>

Nettles are a food source for over 30 species of moth and butterfly, including Peacock, Comma, Silver Y and White Ermine.

2. Rock Rose Helianthemum nummularium

<u>Green Hairstreak</u>, Brown Argus, Cistus Forester and Silky Wave are among species that feed on Rock Rose as caterpillars.

3. <u>Wild Marjoram Origanum vulgare</u>

Wild Marjoram is an excellent source of nectar and pollen for many butterflies and other insects. It is also the foodplant for several species of moth.

4. Tobacco Plant Nicotiana alata

The flowers of ornamental tobacco plants give off a fragrance in the late afternoon into night. This provides a good nectar source for night flying moth species.

5. Red Valerian Centranthus ruber

This strong smelling plant attracts many insects to feed on it's nectar. It is the caterpillar food plant for the Angle Shades moth and Humming-bird Hawk-moth, plus many more.

A key part of the garden was to educate visitors to attract butterflies to their own gardens. A series of information boards have been created in conjunction with the Herts. & Middx. Branch of Butterfly Conservation, who kindly donated £1000 towards the printing of these boards.

Butterfly World is pleased to offer Butterfly Conservation members entry at the discounted £5 per adult group rate. Membership cards must be shown when purchasing tickets.

Butterfly World has an active volunteer programme with many opportunities from planting new gardens, surveying the wildlife on site or preparing pupae, to giving talks, guided walks or photographing the insects. If you would like to get involved we would love to hear from you. Please call 01727 869203, email info@butterflyworldproject.com or visit www.butterflyworldproject.com to download an application form.

Critically Endangered Butterfly Hits 10- Year High

This is the text of a press release issued by Butterfly Conservation on 2nd April

One of the UK's rarest butterflies has recorded its best year for a decade thanks to 2014's warm spring weather and work to restore its habitat, a study has revealed.

Last year the critically endangered High Brown Fritillary experienced its best season since 2004 with numbers increasing by more than 180% compared to 2013, the UK Butterfly Monitoring Scheme (UKBMS) led by Butterfly Conservation (BC) and the Centre for Ecology and Hydrology (CEH) found.



High Brown Fritillary Photo © Butterfly Conservation

The striking orange and black butterfly once bred in most large woods in England

and Wales but habitat loss has resulted in alarming declines raising fears that it could be heading toward extinction in the UK.

The High Brown Fritillary, one of only two critically endangered butterflies in the UK, is now restricted to a handful of colonies in North West and South West England and one in Wales.

The butterfly benefitted from warm spring weather and work by wildlife charity Butterfly Conservation and partners targeted at restoring its habitat. Elsewhere, the warmer than average spring and early summer saw many butterflies thrive with the Marbled White, Ringlet and Brimstone all experiencing their best years since the UKBMS began in 1976. Orange-tip and Speckled Wood had their fourth best years on record and the threatened Duke of Burgundy rallied with a 26% increase in numbers compared to 2013.

The UK's skipper butterflies fared well especially those that peak in abundance during early to mid-summer, with all seven species studied showing an annual increase.

The Large Skipper was up 86% compared to 2013 and the rare Lulworth Skipper saw numbers climb by 15%. More than half of the 56 species studied saw their numbers rise compared to 2013.

The warm start to the summer gave way to colder conditions later in the year which resulted in the butterfly season peaking slightly earlier in July rather than August which was colder and wetter than average.

Last year's losers included the 'cabbage white' butterflies with the Small White down 66% compared to 2013 and the Large White declining 69% for the same recording period.

Some butterflies associated with high summer also struggled in the cold August weather with the Chalk Hill Blue numbers down 55% compared to 2013 and Adonis Blue down 43%.

Dr Tom Brereton, Head of Monitoring at Butterfly Conservation, said: "The High Brown Fritillary is one of only two butterflies classed as critically endangered in the UK so it is fantastic news that numbers are at their highest level for more than a decade.

"A huge amount of work co-ordinated by Butterfly Conservation has been put into conserving this butterfly in recent years, especially though wildlife-friendly farming schemes, so the results will come as a welcome boost to all involved.

"There is a long way to go before the long-term decline has been reversed, with ongoing targeted conservation efforts crucial in this."

The UKBMS has run since 1976 and involves thousands of volunteers collecting data through the summer from around 2,250 sites across the UK.

The UKBMS is run by Butterfly Conservation, the Centre for Ecology and Hydrology, and the British Trust for Ornithology, in partnership with the Joint Nature Conservation Committee, and supported and steered by Forestry Commission, Natural England, Natural Resources Wales, Northern Ireland Environment Agency, and Scottish Natural Heritage. The UKBMS is indebted to all volunteers who contribute data to the scheme

Check it out - the OPAL Bugs Count

There is an online survey collecting sightings of a huge range of 'bugs'. One of the 'species quest' targets this year is the Small Tortoiseshell butterfly. Full details at http://www.bugscount.org/bugscount.

Butterfly Stall Events

We are planning to attend the following events this Spring to share help and advise on how to help butterflies and moths. If you might be willing to spare a few hours to help, please contact Alex Radley (details on back cover), our events organiser, who will be happy to provide more information. Previous experience is not necessary

- 11 April Pollinators! Natural History Museum London.
- 15 April Spring into Nature, Fairlands Valley Park, Stevenage
- 19 April Rye Meads Fun Day, Hoddesdon, Herts.
- 23 May Big Nature Day, Natural History Museum, Tring, Herts
- 27 June Butterfly World Conservation Day, St Albans, Herts (volunteer needed)

Twitter

The Branch now has an account on Twitter, as well as our Facebook and web sites. Twitter will always have the latest information. Links to all of these sites are at the foot of the back cover.



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