NORTH EAST ENGLAND BRANCH

Newsletter

Issue 39: SPRING 2019

Butterfly Conservation

Saving butterflies, moths and our environment

North East England Butterfly Conservation

Contents

Cover picture: Hummingbird Hawk-moth. Brian Chandler

Spring 2019 Newsletter

Welcome to the 39th issue of the Branch Newsletter! I am writing this at the end of January when one can only guess at what kind of year 2019 will be for our butterflies and moths. 2018 was marked by two particularly striking weather events which both had the potential to affect lepidoptera. In late February 'the Beast from the East' brought a spell of particualrly wintry weather while the summer was characterised by a long period of hot dry weather. Butterfly records from last year have not yet been fully analysed so we don't know exactly how species were affected but it will also be interesting to see what knock-on effects there may this year. How species respond to weather events depends to some extent on the life cycle stage they are in during the event in question. Warm, sunny conditions are good for adult butterflies but might the survival of larvae have been affected by the drought conditions of last summer, for example? Another possible response to hot weather is for changes in 'voltinism' or the number of generations produced each year and on page 24 Terry Coult considers the evidence for Small Pearl-bordered Fritillaries in Durham producing a second brood in 2018.

In general, insects have a strong capacity to bounce back when their populations dip due to the ups and downs of the weather but what is more worrying is when populations are faced with adverse long-term trends such as loss or degradation of their habitats. The Dingy Skipper is potentially one such species, particularly as its prediliction for brownfield sites means that sites are often lost to development. This issue has a bit of a Dingy Skipper theme: Dave Wainwright considers how the species is faring in the region as a whole and reports on the results of the latest survey on page 15. Ken Dawson reports on an unusual new site for the Dingy Skipper in the Slaley Forest area on page 14 whilst on page 20 Roger Norman describes an upsurge in records of the species in North Tyneside.

As we reported in the last issue, there are some vacancies on the branch committee. In particular we need a new Chairman and (a) new coordinator(s) for the Wider Countryside Butterfly Survey and for Transect monitoring. Further details are given on page 5; if you are interested in taking on any of these roles please contact Peter Webb or any of the other committee members (contact details on back page).

As always, I am grateful to the various contributors to this issue - without whom there would be no newsletter! We sometimes worry that young people are not very interested in wildlife so it is pleasure to include an article from Louis Driver (who found time to write it while also studying for his GCSEs) who describes how his own

passion for lepidoptera got started. We also include articles by David Phillips and Bob Mawson who describe their discoveries in their own local patches and from Dave Stebbings who muses on the different colour forms of the larva of the Brimstone Moth. I am also grateful for the photographs and other artwork in this issue. I hope that readers may feel inspired to contribute their own articles, phhotographs or artwork for future issues.

By the time this newsletter drops onto your doormat it is likely that the first butterflies of Spring will have been reported on the wing and certainly within a few weeks of it butterflies will be appearing throughout the region. Many of our members already routinely send in records of the butterflies they see but I would like to encourage those who don't already do so to keep a note of what they see (which species, how many and where) and to submit their records to the Recorders. Much of what we know about changes in the distribution and abundance of species depends on records submitted by members of the public. The UK has a fine tradition of amateur recording of wildlife and it is something you can join in with. That record of a Peacock butterfly in your garden may not mean much by itself but added to the regional data-base it becomes part of a bigger picture that can tell us how the species is faring. Details of where and how to submit records are given at the end of this newsletter.

Jonathan Wallace, Editor

Please note that submission deadlines for the newsletter are:

Spring issue: 1st February Autumn issue: 1st September

www.northeast-butterflies.org.uk Facebook: www.facebook.com/BCNorthEastEngland/

Green Hairstreak. Photo Mike Carr

Committee Vacancies

As reported in the Autumn 2018 newsletter we have several vacancies on the Committee. These have still not been filled and invite anyone interested in taking on one or other of these roles to contact us. Details of what each of the roles involves are given below. It is worth mentioning that the roles of WCBS Coordinator and Transect Coordinatator share some common characteristics and are amenable to being held by a single person.

If you are interested in taking on one of these roles or would like to know more please contact Peter Webb (apwebb546@gmail.com).

Branch Chair The Branch Chair's role is to lead and manage the Branch and its activities (delegating tasks to other Branch committee members and post-holders as needed) in accordance with the Branch Rules and Butterfly Conservation's policies etc. The role includes chairing regular Branch Committee meetings and the Chair leads the committee and Branch post-holders in planning and reviewing the work and activities of the Branch. BC's Head Office can provide full information on BC's policies as well as guidance on running a Branch and Branch activities, and further information is available in the Branch Handbook via the BC website and in regular newsletters and other communications from BC's Head Office and Regional Offices. The Chair also has an important role in maintaining good relationships and communication within the Branch between committee members and post-holders, and between the Branch and BC Regional and Head Office staff, to further the work of the Branch and BC. More detailed information about the role of Branch Chair is available on request from info@butterfly-conservation.org.

Branch Committee Member - Branch committees run their local Branch of Butterfly Conservation and its activities, and in order to do that committee members attend regular meetings of the Branch committee, and take part in committee decisions. Guidance about committee meetings is available in the Branch Rules. Committee members help the Branch Chair in making sure that the Branch and its activities follow this guidance and BC's principles and policies in conserving butterflies and moths. More information is can be found in the Induction Pack for new Branch Committee Members. This is available from the Branch Organiser/Contact or from info@butterfly-conservation.org Many committee members also help with other activities of

the Branch or take up a specific Branch post. If you are interested in doing this, information about those roles is available from the Branch Chair and on the Branch Area of the BC website. If you feel you do not have time to attend regular Branch committee meetings, you may prefer to consider being an Associate Committee Member, which does not require attendance at regular committee meetings but you can still help with Branch activities or take up a Branch post. More information on this is available from your Branch Chair.

Branch WCBS Coordinator - The role of the Branch WCBS Coordinator is to promote the Wider Countryside Butterfly Scheme (WCBS) and to support the volunteers surveying the WCBS 1km squares. The WCBS Coordinator encourages the promotion of WCBS through the Branch newsletter, social media etc to recruit new volunteers to join the scheme, and then supports them with advice on setting up a route and carrying out the survey. You will be provided with full information about the scheme and survey method by the BC Surveys Officer at Head Office, as well guidance notes, survey forms etc for distributing to the volunteers. The role also involves reminding all the volunteers to survey their squares at the start of the season and submit their data at the end of the season, plus circulating back to the volunteers a summary of the year's results. More information about the role of Branch WCBS Coordinator, and about the survey, is available from BC's Survey Officer, Zoë Randle: zrandle@butterfly-conservation.org.

Branch Transect Coordinator - The role of the Branch Transect Coordinator is to oversee the transect recording in the Branch area each season. The role involves maintaining site information for all transects in the Branch area, advising and supporting the local transect recorders, and coordinating the collection and validation of the transect data and its entry into computerised systems. The Branch Transect Coordinator helps to ensure that the full annual transect data are made available to BC's Head Office, and liaises with County Recorders to make sure the data are made available to local datasets in suitable formats. The role also involves promoting transect recording and recruiting and training new volunteer recorders. It may also be necessary to establish new transects to fill gaps and improve the monitoring of key species and habitats. A more detailed role description for Branch Transect Coordinator is available on request from: info@butterfly-conservation.org Information about BC's methodology and policies for transect recording is available from BC's Butterfly

Monitoring Coordinator, Ian Middlebrook: imiddlebrook@butterfly-conservation.org

Small Copper. Photo: Mike Carr

Comma. Photo: David Phillips

2018 – Butterfly Transect and Wider Countryside Butterfly monitoring report
Brian Denham

Resignation

You will have seen in the recent newsletter that I am resigning from the posts of Transect and WCBS Organiser. The reason for this is that apart from the fact that I have been Transect Recorder for over fifteen years, I moved to Carlisle four years ago which means I cannot conveniently take part in the group's activities or meetings.

The recorder's job has changed a lot in those fifteen years. When I started we used the Transect Walker programme which required recorders to enter their their data into the programme and then at the end of the year send it to BC Head Quarters. What actually happened was that, because very few people could use the programme, most recorders sent me their full season's records on paper and I had to enter them onto Transect Walker progamme and send to HQ. With the new on-line programme all our recorders except one enter their data on line. All I have to do is to check for dodgy records such as Large Tortoiseshell or Small Blues and Essex Skippers and the like being entered on sites where they probably do not exist.

It has been enjoyable and interesting but it's time now for someone younger to take over.

Butterfly Transect Report.

We started the year with forty seven transects, three of which were new. All have been recorded this year.

For simplicity's sake and to give an indication as to whether it has been a good or bad year, I have simply recorded the total number of butterflies recorded on each transect and compared the total number of butterflies recorded on all North East transects with previous years.

Compared with previous years, 2018 was a good year for the overall number of butterflies recorded. Total number recorded in 2018 was 33056 and the figures for the previous five years were: 2017 – 20666; 2016 - 24,669; 2015 – 30556; 2014 - 36952 and 2013 – 40395. These figures do not indicate variations in numbers of various species. This will be covered in the 2018 Summary when it is published later this year.

Whilst the North East England Branch records a good number of transects, a few new transects to replace the those lost over the years would help. If you would like

to record a transect please contact the new transect organizer for details of what is involved. *[Editor: at the time of going to press a new transect organizer has not yet been confirmed. Pending confirmation of the new organizer, please contact one of the branch committee members listed on the back page who will put you in contact with the right person*].

Details of how to set up a transect and how to use the on-line reporting system are given at http://www.ukbms.org/involved. I should stress, though, that the survey requires weekly visits between April and September (26 weeks) and must be done when weather conditions are suitable which means you cannot rely on being able to do it it at the same set time each week. You should consider carefully whether you can meet these conditions alongside your other commitments before you go to the trouble of setting up a transect that you might not be able to maintain.

Urgently Required

From 2019 onwards we urgently require recorders for two transects that have been recorded for many years but, for various reasons, have ceased to be recorded. The first is at Wingate Quarry map ref. NZ373374 and the second is at Littlewood LNR, near Quarrington Hill, map ref.NZ340376. Volunteers will be shown around the transects and given advice on recording.

If you can help please contact the Transect Recorder/Branch Committee for details.

Wider Countryside Butterfly Survey Report

Of the possible forty seven 1km squares available for recording in North East England only thirteen were allocated to individual recorders. Of these only 10 were recorded in 2018

You will realise from the above that we desperately need recorders for the Wider Countryside Butterfly Survey scheme so please consider giving it a go. As this survey requires only a minimum of two visits to the survey square each year it is much less onerous than the Butterfly Transect scheme so should be possible for a wider range of people. More details of the WCBS scheme and a list of the squares allocated for NE England are given in the following article.

With that I will call it a day and wish you all “Good Hunting” in 2019

Brian

Marbled Whites.
Photo: Brian Chandler

Wider Countryside Butterfly Survey

Are you interested in the conservation of butterflies?

Could you find time to carry out two visits to a site near you in the summer?

Would you be interested in being involved in some citizen science?

If the answer to these questions is yes. Please read on:
The Wider Countryside Butterfly Survey (WCBS) was established in 2009 to improve data on the population status of butterflies across the whole countryside. Strong emphasis has been placed on making sure that the WCBS is both scientifically sound (by sampling of the countryside through random sampling) and efficient (a scheme with fewer visits but still with sufficient power to detect change in butterfly populations across the countryside). The WCBS method is based on the BTO's Breeding Bird Survey (the 'BBS'), counting along two parallel 1 km long transects subdivided into 10 sections, located within randomly selected 1 km squares. The differences are that butterflies are counted in a more restricted area than for birds and at different times of the day. A minimum of just 2 visits each year are required compared to 26 visits required on the traditional UKBMS 'Pollard walk' transect.

Assisting with the WCBS takes no more than a few hours each year but the majority of the 1KM squares allocated to the branch remain unrecorded. 45 squares have been allocated to the Northeast England Branch and although some are on poor and difficult sites, many of them are potentially very interesting. WCBS is a fantastic scheme to be involved with as it provides such an array of important data using survey methods that are relatively easy for volunteers to learn.

The full list of WCBS 1 km squares is given opposite and is also on the branch website (www.northeast-butterflies.org.uk). If you look at list you can use the grid reference tool accessible from the branch website to see the location of the square.

If you would like to find out more about the WCBS the best place to look is on the UKBMS or Butterfly Conservation websites where you can read the annual reports. If you are interested in surveying one of the 1 km squares contact WCBS co-ordinator Zoe Randle (zrandle@butterfly-conservation.org).

In 2009 I volunteered to survey NZ2024, one of WCBS's randomly selected squares and have continued to do so ever since. NZ2024 is a one-kilometre square of mostly farmland, hedgerows and scrubby grassland. The surveys have shown that the area is home to at least seventeen species of butterflies which are flying during July and August.

WCBS reports that the most butterflies counted over a two visits summer survey was in Gloucestershire in 2011 where 831 were seen and the most diverse was 24

species seen over three visits on a site in Sussex. It is unlikely that anything this dramatic will occur in County Durham but I look forward each year to seeing what will be flying in NZ2024.

Assisting with the WCBS takes no more than a few hours each year but the majority of the 1KM squares allocated to the branch remain unrecorded.

Please contact me (apwebb546@gmail.com) if you have any questions.
Peter Webb

Grid ref.	Location (approx.)	Grid ref.	Location (approx.)
NT9145	7.5 north-east of Coldstream	NZ0393	Near Fontburn Reservoir
NT9935	7 km north of Wooler	NZ0480	15 km north-west of Ponteland, off A696
NU0436	Allocated	NZ0510	4.5 km south-west of Greta Bridge, off A66
NU0934	Allocated	NZ0630	0.5 km north-west of Hamsterley Forest Grove car park
NU2404	Allocated	NZ0825	Nr. Copley
NY6662	4 km SW of Haltwhistle	NZ0919	4km north-east of Barnard Castle
NY6849	5 km north-west of Alston	NZ0953	Nr. Shottley Bridge
NY6859	5.5 km SSW of Haltwhistle	NZ1030	2 km south-west of Hamsterley
NY6869	6 km NNW of Haltwhistle	NZ1070	3.5 km north-west of Heddon-on-the-Wall
NY7189	Nr. Hawkope, nr. Kielder Water	NZ1198	6 km south-east of Rothbury
NY7352	6 km north of Alston	NZ1212	3 km south-west of Ovington
NY7482	6 km south-west of Lanehead, nr. Kielder Water	NZ1427	4 km north-west of West Auckland
NY7691	11 km west of Otterburn - Kielder Forest	NZ1579	5 km east of Belsay
NY8063	Allocated	NZ2024	Allocated
NY8288	6 km north of Bellingham	NZ2075	Nr. Dinnington off A1
NY8525	5 km south-west of High Force	NZ2159	Nr. Sunnyside on A692
NY8583	Nr. Bellingham	NZ2327	1 km north-east of Shildon ctr.
NY8961	5 km south-east of Haydon Bridge	NZ2425	2 km south-east of Shildon ctr,
NY8974	Nr. Chipchase Castle	NZ2712	0.5 km east of Stapleton
NY9085	Allocated	NZ2712	0.5 km East of Stapleton nr. Darlington
NY9582	Allocated	NZ3934	2 km east of Trimdon
NY9796	4 km north-west of Elsdon on B6341	NZ4048	0.5 km North of Murton off A19
NY9971	Allocated	NZ4234	2 km west of Sheraton close to A19

Table: WCBS squares available in 2019. Squares marked 'allocated' have already got a surveyor assigned to them.

Butterflies of Darlington David Phillips

With the ‘Beast from the East’ and then the summer heatwave our butterflies had to contend with a range of extreme weather in 2018! Whilst the North East may not have enjoyed such a prolonged hot and dry spell as the rest of the UK, the long hot summer, enabled me to see a total of fifty-four UK butterfly species. That, however, is another story and outside the scope of this article which aims to provide you with some of my local highlights.

A little bit of background first. Like many birdwatchers I have developed a passion for butterflies. I live in Darlington, which is a small market town experiencing substantial growth. Like many areas it is seeing its green spaces lost to development with houses and industry being constructed right on the very door step of many local nature reserves and wild spaces. Whilst you may not associate Darlington with butterflies, I believe that being situated in the south of the county, close to the River Tees, makes it uniquely placed to act as a crossroads for butterflies spreading northwards from Yorkshire; and east and west along the Tees Valley corridor.

My first butterfly of the year was a Peacock in the garden in mid-April, followed by a Large White and Small Tortoiseshell. Despite their abundance the previous autumn, Red Admirals were conspicuously absent in the area. They presumably succumbed to the ‘Beast from the East’. However, Peacock, Whites and several Orange Tips frequented Maidendale LNR. Sadly, most of the former meadows here are earmarked for a new access roads and industrial units.

It was May when things really started to pick up. I had not seen a Holly Blue so imagine my surprise when one flew past me by the River Tees at High Coniscliffe in early May. It soon settled and even basked with its wings open! Large numbers of Green Veined White and Orange Tips flitted along the banks of the Tees at Coniscliffe later in the month followed by another Holly Blue in the north of the town. A visit to Red Hall ponds revealed ten Dingy Skippers in late May. Following the River Skerne westwards to Rockcliffe LNR uncovered male Brimstone which briefly settled across the river before flying off high over the trees.

A Holly Blue seen at High Coniscliffe in May was a surprise but was subsequently followed by other sightings in the area. Photo: David Phillips

Whilst most of June was spent away from the North-East there was still plenty of time to see Small Pearl-bordered Fritillary around the Waskerley area and the more common species in Darlington.

Early July, saw me in Cumbria looking for Fritillaries before White-letter Hairstreak put in an appearance in Hummersknott, Darlington – thanks to Steve Kirtley, our Treasurer, for telling me where to find them. Comma also appeared in early July and from mid-July more Holly Blues were encountered with an astonishing five again seen at Hummersknott along with the ever present White-letter Hairstreak.

The 22nd July was an unbelievable day. Holly Blue numbers peaked at sixteen at two different locations in the town, with three White-letter Hairstreaks at Hummersknott and six Purple Hairstreaks on oaks in the Carmel area. I found a White-letter Hairstreak at nearby Baydale Meadows the following day. The rest of July saw plenty more Holly Blues and Hairstreaks with Purple Hairstreaks peaking at ten in late July. All the White-letter Hairstreaks were on Wych Elm. Both Hairstreak species remained high in the tree canopy and rarely ventured down, resulting in a somewhat stiff neck. Holly Blue, Hairstreaks and Comma continued to be seen until early August around the town.

For the moth enthusiasts, Magpie and a Hummingbird Hawkmoth were seen in my garden. Sadly, the latter did not linger.

Looking a little further afield, butterfly highlights include: Green Hairstreak at two locations in the Durham uplands, twenty-eight Grayling around Teesside and two-hundred Common Blue in the dunes between North Gare and Seaton Carew. Wall Brown, Dingy and Essex Skipper, more Purple Hairstreaks (including a melanistic individual) and Small Copper were other NE sightings. My WCBS revealed a healthy population of Wall Brown butterflies just over the border in North Yorkshire.

A fantastic year and one which will be difficult to surpass; with White-letter Hairstreak, Purple Hairstreak and particularly Holly Blue being the most memorable! I am now looking forward to 2019 with the aim of finding more butterflies. I want to be sufficiently familiar with my new camera to add a North-East Large Heath to my photo collection. Dark Green Fritillary is missing from my county list but hopefully for not much longer! I would also like to get closer views and better pictures of the local Hairstreaks and find a Gatekeeper in the county.

Finally, I must say a big thank you to my very understanding wife who tells me there is now no off season with me - looking for birds in winter and butterflies in the summer!

Dingy Skipper.
Photo: David Phillips

The Brown Argus on Raisby Way Bob Mawson

The story of the Brown Argus and the Raisby Way all started when I asked the council ecologists if they would put some rockrose plants on the south facing bank of the Raisby Way to try and get Brown Argus on site as they moved up from the South of England. My request was answered and I was told that Trimdon Grange Quarry, Little Wood, and the Raisby Way, were all having the rockrose planted.

The planting was arranged for 23 September 2000 and on that day I went along to the site to find a TV film crew present with the one and only Luke Casey and his camera man. Dr Sam Ellis, Director of Conservation and Regions for Butterfly Conservation, was also there as well as lots volunteers from the Durham Wildlife Trust and the council volunteers service who came along to help with the planting. It was nice and dry with sunshine and, once we got to the bank side (some call it Bob's bank - I am not sure why?), the volunteers soon had it planted out. Sam Ellis gave a very good interview, explaining that we were planting the rockrose to attract Brown Argus onto the site. He also said it was very unlikely that the related Northern Brown Argus would ever colonise the bank because it is a very sedentary species. He was correct; they never have. After Sam had finished with the TV crew, he thanked them for highlighting butterflies in County Durham and also thanked all the volunteers for their help. The TV crew then went on to Little Wood Nature Reserve where they filmed a group of school children planting out more rockrose with their head teacher Jim MacManus OBE.

So did the Brown Argus come? The first confirmed record in Durham was in Stockton-on-Tees in 2006 and the first record for the Raisby Way was 10 September 2007 with 2 Brown Argus and one more on the Lime Kiln bank. Did the one seen in Stockton-on-Tees inspire me to look for Brown Argus on my site? You bet it did! Then in 2010 the first eggs and larvae appeared on this site and butterflies were seen on 23 April 2011 - the same day as Devon had its first Brown Argus of the year - global warming? In 2015 two Brown Argus and one egg that was on the top side of the Rockrose leaf (most are laid on the underside or on the stems) were seen on the Raisby Way whilst 2018 saw the return of about 4 Brown Argus and a small number of eggs on the Rockrose. I am finding caterpillars also. Here's hoping they survive the winter.

Why did I choose the Raisby Way (a disused railway line) as an area of interest? I have always had a love of nature and the Raisby Way has turned up some rare species, but the common things are what I am more interested in. To be able to see Large White female butterflies or the Common Carpet moth is to see nature at work. With the assistance of my good friend Ian Waller I set up a butterfly transect on the Raisby Way many years ago and I have continued to monitor it ever since. When you have a heavy camera around your neck plus umbrella, stick monopod and a butterfly net, it's nice to cover a small area and I can walk to the Raisby Way from my home. Over the years it has become my patch and I have found a great assortment of plants, butterflies, moths, ladybirds and spiders. So, if you have a small area near you, have a go. You will possibly discover interesting butterflies or moths and make it your patch.

Three of the four life-cycle stages of the Brown Argus.

1. Egg

2. Larva

3. Adult

Photos by Bob Mawson

Ladycross Quarry Nature Reserve – An Unlikely Site for Dingy Skipper? Ken Dawson

Ladycross is a quarry at the edge of Slaley Forest, near Hexham. It produces a high quality level-bedded sandstone, used for roofing, paving and decorative work.
It is likely that this resource has been exploited since medieval times, and it can be seen on most roofs in the nearby village of Blanchland.

The nature reserve is the brainchild of Colin Jewitt, a local naturalist, who worked at the quarry for many years and eventually became the owner. His idea was to create a nature reserve that could be developed and maintained whilst the quarry was being worked. To support this initiative, a committee was formed, to raise funds and develop ideas etc. A programme of walks, talks and events is ongoing, and there is also a 'friends group'.

Most of the spoil derived from quarrying has been spread and landscaped within the site. Much of it is low in nutrients, thereby supporting a variety of grasses and flowering plants. A key species, abundant in places, is birdsfoot trefoil, and this year, When Colin told me he'd seen over 20 dingy skippers and showed me his photograph, I decided to visit the quarry to look at the habitat.

As well as being a 'new' Dingy Skipper site in Tynedale, Ladycross may be unusual in that it is at an altitude of 360m (almost 1,300ft). The nearest known site, at Frankham, is at around 130m. It is intended to continue monitoring DS in the reserve, and it will be interesting to see if the population increases.

Ladycross is well worth a visit, but as it is a working quarry, access is restricted, and only by arrangement. Information about events is advertised locally and can be found online.

View of the reserve showing drifts of Bird's-foot Trefoil.

Log piles have been put out to provide habitat for invertebrates, small mammals and amphibia.

Photos: Ken Dawson

The Continuing Trials and Tribulations of the Dingy Skipper in North East England

Dave Wainwright, BC's Conservation Manager for Northern England

Dingy Skipper. Photo: Brian Chandler.

I have a confession: I have a soft spot for Dingy Skippers. Way back in 2003, conserving this species in the North East was my first task as a Butterfly Conservation employee and our paths have continued to cross on a regular basis ever since. My job as a part-time Project Officer involved examining historic records of Dingy Skippers in Northumberland and Durham and, where possible, mapping the sites where the colonies were found. Sometimes this was easy, say where a colony was located on a reserve with known boundary; in others, a site visit determined the precise area in which the species was breeding. As a consequence, I got to visit any number of brownfield sites, dune systems, forest rides, operational industrial sites, limestone grasslands, railway lines both used and disused along with all other myriad forgotten corners where the species turns up – as did the dedicated crew of volunteers who helped me in this work. In addition to boundary mapping, we made estimates of population sizes based upon numbers counted during surveys, recorded a whole host of habitat characteristics and identified both threats and management requirements of various sites. We also identified those colonies that had experienced extinction and in many cases were able to determine probable cause(s).

In some regards, the work confirmed what was already known. The turnover of Dingy Skipper sites was rapid, with an extinction rate of some 34% per decade. Clearly, such a rate of attrition would be unsustainable in the long term but, fortunately for the Dingy Skipper, we found many new sites, amongst them a fair number that had obviously been colonized relatively recently. However, these newer sites tended to be smaller than many of their predecessors, particularly those associated with the heavy industries of mining, quarrying and steel production as well as with railways. Shrinkage of these industries was the main reason why the area of habitat known to be occupied by the butterfly had diminished.

Even before the project began, some of the factors affecting the Dingy Skipper

nationally were known. The North East was found to be no different with most extinctions attributable to redevelopment of brownfield sites and lack of management allowing vegetation to develop unchecked. However, unlike most other English regions, the butterfly showed the capacity to colonize new habitat rapidly, possibly on account of the close proximity of source sites but almost certainly also because the butterfly is more mobile than is often thought. This makes sense; a species occupying ephemeral habitats is unlikely to fare well if it is unable to exploit new areas as its old ones are built upon or deteriorate. It stands to reason that it can do this most effectively where the density of occupied sites is greatest – and North East England is as good as pretty much anywhere in this regard!

Site management varies hugely for the species in our region. Broadly speaking, there are three site categories:

1) Coastal slopes and “soft”cliffs. Butterfly populations were found to be largely stable in these habitats. Although there was some evidence of localized extinction, there were plenty of instances where new habitat patches had evolved. Management requirements for these sites were found to be low, with erosional processes and associated slippages creating bare ground upon which the principal larval host, Common Bird’s-foot Trefoil was able to establish itself.
2) Magnesian limestone grasslands and secondary grasslands on limestone quarry spoil. Populations here also tended to be stable. Many such sites are designated nature reserves, SSSIs and the like and are, as a rule under favourable management regimes with scrub being controlled and either grazing or cutting inhibiting colonization of breeding areas by tall grasses or other rank vegetation. These would otherwise inhibit the growth of Bird’s-foot Trefoil and create cooler conditions close to the ground where the larvae develop (the species requires warm conditions, hence its liking for the short sward/bare ground mosaics that heat up readily in sunshine and in which it is usually found).
3) The other category of sites found to be occupied by the butterfly was man-made habitat. These included industrial sites both operational and extinct, road and railway cuttings, forest rides surfaced with crushed aggregates, spoil heaps and other disturbed ground in a huge variety of settings. These were the sites where the butterfly’s problems tended to be centred.

The butterfly’s liking for bare-ish ground has been mentioned. Not only do such conditions create the warm microclimate needed for larvae to develop, they also provide a good environment in which the host plant establishes well. The plant’s persistence may be limited, as it is soon out-competed by more vigorously growing vegetation wherever soils are nutrient-rich. However, where soils are nutrient-poor and the rate of moisture loss through drainage is high, the plant may persist at high levels of abundance for decades. Not surprisingly, these slow-changing sites are generally the best for Dingy Skippers. However, Common Bird’s-foot Trefoil can often be the architect of its ultimate downfall. This plant, like others in the Legume family, is able to enrich the often skeletal soils in which it grows by a process known as nitrogen fixation. This process is undertaken by bacteria that infect the plant and

cause it to form root nodules in which the bacteria convert atmospheric nitrogen, which is largely non-reactive and cannot be used by most plants, into ammonia which most certainly can. This propensity of Legumes to convert nitrogen explains why members of the family, which includes Gorse, Vetches, Trefoils and Clovers, are usually amongst the initial colonizers of nutrient-poor soils. However, the decay of these plants eventually releases this chemical into the soil, effectively enabling colonization by a different suite of more vigorously-growing species that if left unchecked eventually displace many of the early colonizers, including Bird's-foot Trefoil.

On account of their nature, most entirely man made habitats are not managed for nature conservation and vegetation is left to develop unchecked. Such changes were found to have brought about over one third of colony extinctions identified by our survey work. An even greater number were brought about through more direct habitat loss arising from redevelopment of brownfield sites. Dingy Skippers enjoy no legal protection as such although their listing in the UK Biodiversity Plan at that time ensured that some Councils, though by no means all, could be prevailed upon to afford protection to sites, or to mitigate some of the impacts arising from development. One of the final achievements of Butterfly Conservation's two-year project was to host a conference, attended by over 100 stakeholders including amongst others many planners, in order to highlight the issues affecting the Dingy Skipper and the many other taxa sharing these brownfield sites. At the conference, reports documenting all 108 occupied inland sites were circulated to all in order to secure as well as possible the future of the butterfly in North East England.

For the next few years after the 2003 survey the Dingy Skipper enjoyed a level of protection as high as anywhere in the country. In County Durham, its presence on a site was adopted as a criterion for that site to be elevated to County Wildlife Site status. County Wildlife Sites (CWSs) are effectively the next tier down from Sites of Special Scientific Interest and represent, as their name suggests, the best examples of wildlife habitat within a county. The rationale of protecting sites with Dingy Skippers was not to solely protect the butterfly but also the myriad creatures that share their habitat preference. I believe this approach was unique within the UK and is testimony to the support BC's project received from partner organizations throughout the North East.

This happy state of affairs was probably too good to last and a number of changes occurred which were to the detriment of the Dingy Skipper. Foremost among these was Council re-structuring. In 2005, when BC's project officially ended, both our counties were overseen by respective County Councils. Under their umbrella operated a number of Borough Councils. Similarly, four Councils operated under the flag of Tyne and Wear and a similar number were present in the lower Tees Valley. Many had their own ecologists and most had rangers able and willing to protect and manage sites on their own patch. Development proposals were flagged up at an early stage, some were prevented and many were only approved conditional upon appropriate mitigation being undertaken. The situation changed for the worse with

the advent of Single Unitary Authorities and the abolition of many of the Borough Councils that had previously underpinned much of the conservation taking place at a local level. Although the County Council took up much of the slack, this restructuring was not carried out with the aim of preserving jobs and despite some Borough staff migrating to the County Councils, much local expertise was lost.

Inevitably, given reduced staffing and an increased workload, councils began to struggle to accommodate conservation interests to the extent they once did. Matters worsened as further cuts followed the financial crash of 2008. Pressure on Councils to facilitate, rather than regulate development increased and I know of certain counties (not ours, I hasten to add) where staff with the latter remit have been marginalized by colleagues tasked with the former. It may come as a surprise to some to learn that some County Councils now choose to operate without an ecologist who might otherwise have determined the significance of wildlife threatened by various proposed schemes, preferring instead to tender out such work. Potential conflicts of interest are obvious and it is to be hoped our Councils never go down this route.

Conservation organizations were now also being impacted as funding became harder to come by, leading to difficulties with regard to managing sites and co-ordinating the volunteers who underpin much of the management, survey work and monitoring that deliver so much of the conservation work done in the UK . Harder to prove is the claim that some funders became increasingly impressed by what “conservation” projects might do for people rather than what they might do for wildlife. Some argue that the link is increasingly slender. Meanwhile, previous sources of funding, such as landfill tax and the aggregates levy, both of which funded some sound conservation projects, ceased to exist as funding sources.

Against such a backdrop, it is inevitable that a somewhat un-glamourous species like the Dingy Skipper would suffer, along with many others. Here at Butterfly Conservation, I was aware of good butterfly sites being built upon, as indeed is the case on formerly-industrialized sites along the Cumbrian coast, in South and West Yorkshire and in many other places where the species formerly thrived. Sometimes the schemes proposed are flagged up to me, often they are not. Butterfly records yield valuable information about species present at a site but if no records are submitted it is impossible, in the absence of further knowledge, to infer whether that means a colony is extinct or merely that no-one visited the site. Accordingly, in 2016 I co-ordinated a new survey of Dingy Skipper sites, the purpose of which was to determine what proportion of the 108 sites identified in the 2003 & 2004 surveys survived. To accomplish this, I enlisted help from numerous sources: BC members, Wildlife Trust staff and volunteers, Council staff, Natural England and INCA staff, students and members of the public. As in the initial survey, sites were visited in the May-June flight period of the butterfly, adult counts were undertaken and site conditions recorded.

Not unexpectedly, the survey results were depressing overall. On the positive side,

86 of the 108 inland sites were re-surveyed. On the negative side, 29 of these were assessed as being extinct. Weather-wise, the year was reasonable enough for the sites to have been visited during good weather in the main and, barring the odd exception, the butterfly was found where suitable habitat remained in situ. Most losses were ascribed to the usual principal causes of vegetation succession and redevelopment with the weighting more toward the latter than the former (in the initial survey the balance was roughly equal) which is perhaps significant. Overall, the rate of site attrition was found to be just under 31% per decade, broadly similar to the initial survey (note: this figure is calculated from an 11-year period between surveys). Few managed sites were lost and although there was the odd exception, these were mainly sites that were very small. A number of sites were lost through disused railway lines being surfaced and converted into cycle paths but more had been built upon. And many of the larger sites, while still occupied, supported smaller areas of habitat on account of having been partially redeveloped.

All that said, the butterfly appears incredibly resilient. Although not targeted by the recent survey, a great many inland sites, usually of one hectare or less, have come to light in the years since our initial surveys which ensure that our region continues to support what is perhaps the densest concentration of occupied Dingy Skipper sites in Britain. Despite the simultaneous efforts of humans to both conserve and destroy it.

Dingy Skipper: clinging on in the North East despite loss of sites to development and succession. Photo: Jonathan Wallace

Dingy Skipper in Newcastle & North Tyneside (east of the Great North Road) Roger Norman

There has been a notable upsurge in the number of reports of Dingy Skipper *Erynnis tages* in the North Tyneside area in the last two years so it seems appropriate to detail them, to show where they are being found and in the hope that more sites may be discovered. This article then covers the last eleven years of records. BC-led research in 2005 showed that nationally, colonies were being lost at a rate of 32% per decade, although some new sites were being created through development and industrial activities[1]. Surveys have shown that our region is a stronghold of the species in the UK, however, the most recent regional survey, in 2016 and 2017 suggested that losses were taking place in our region.

The majority of our records have always come from County Durham and south of the River Tyne, many either on the coast or on former industrial sites of various descriptions. In the north of the region, in Newcastle, North Tyneside and Northumberland, the species has been present in scattered sites, typically on brown field land such as at the Spetchells, Havannah Nature Reserve and in the Chevington area. However, until fairly recently, there have been either no records or almost none in North Tyneside.

If we move east from the line of the old Great North Road, the first site we come to is Weetslade Country Park where there have been four records since reclamation. There was a record of a single in 2010, two in 2011, and one in 2012, but none since, suggesting that in some way it is unsuitable for the species. This is despite there being large areas of Bird's foot Trefoil growing on areas of very low nutrient value and with southerly aspects that will heat up in spring sunshine. With occupied sites just to the west at Havannah and Brenkley old pit head, this is somewhat disappointing. Moving east, there are records of one and two in Walker on very small sites in 2010 along an old the railway line and there are two records from the Rising Sun Country Park in 2011, both of two individuals. This latter site is the most westerly dot on the sketch map below.

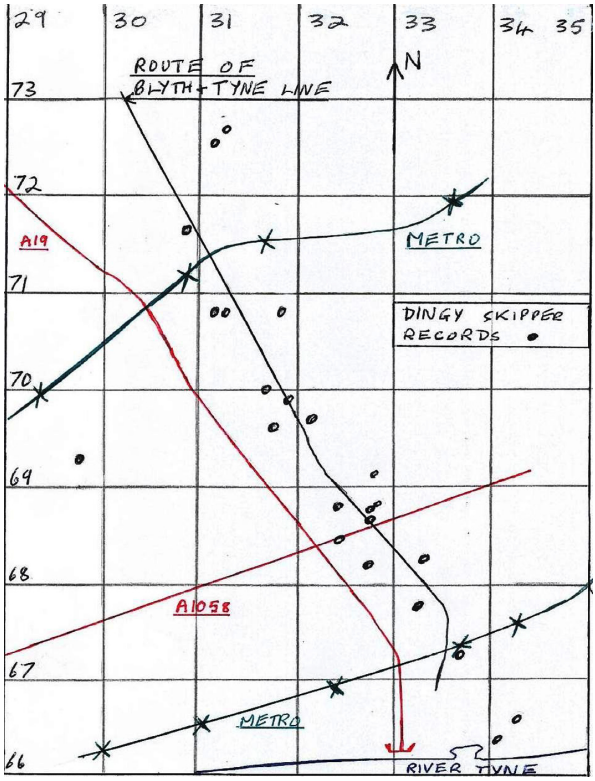
All the more recent records lie further east and are distributed along an approximately northwest-southeast line on the old Blyth and Tyne railway, as seen in the map. The map has been compiled from a total of 62 records from 2010 to 2018, with no records found in 2008 or 2009. Remarkably, there were 10 records in 2017 and 21 in 2018, so half of all records have occurred in the last two years. The largest counts, and the only ones in double figures have been 15 and 20 on two visits to Fenwick old pit, and 10 and 14 at High Flatworth on two visits. The next highest count was of 8 behind the Royal Quays. All these counts were in 2018. These lie at the northern and southern ends of the old line. Counts in the centre part, many in Silverlink Park LNR were all in single figures.

These counts are encouraging in the short-term for the future of Dingy Skipper in North Tyneside, given that it is dependent on sites with the food plant, Bird's-foot

Trefoil, and that this typically flourishes on ground with low nutrient level, often post-industrial land. The problem is of course that such land is a prime target for redevelopment, either for new industrial use or residential. The longer-term outlook for this butterfly must therefore remain uncertain, given current redevelopment pressures in a very urban area.

Acknowledgements. This article, and our knowledge of the Dingy Skipper is of course wholly dependent on dedicated observers submitting records. Several observers contributed records to our database, and special mention must be made of Keith Smith who contributed three-quarters of the records. Other observers also weighed in so thanks, in alphabetical order, must also go to Mike N. Coates, Alan Davis, the late Harry Eales, Hew Ellis, Dave Stebbings, Tom Tams, and Jonathan Wallace.

[1] Wainwright D in Butterfly Summary 2016, pp7-8. Waller I J, Perkins M, and Norman R, North East England Branch, Butterfly Conservation



Sketch map showing Dingy Skipper records between 2008-2018 in part of North Tyneside.

Second Small Pearls

Terry Coult

Small Pearl-bordered Fritillary. Photo: Mike Carr

At the end of July 2018 Dave Wainwright noticed what he thought might be the beginning of a second brood of Small Pearl Bordered Fritillary, Boloria selene, butterflies (SPBF) in Black Plantation near Satley, County Durham. Subsequent checks, as part of ongoing annual surveys works, by Dave Liddle at known SPBF sites found nothing at Emma's Wood, Cat Back, Rail Gap and Stuartfield to suggest a second brood, but his surveys at Black Plantation, Nanny Mayors, Burnhill and Horselyhope Burn all showed second brood SPBF (Table 1). Each location producing a second brood on average 33 days after the first brood ended and ranging from the 30th of July to the 13th of August. In each case the count numbers were much lower than the first brood. This appears to be the first recorded second brood for SPBF in Durham.

In response to a request from Dave Liddle, Dave Stebbings the Butterfly Conservation, Conservation Officer for Northumberland checked the Northumberland SPBF sites with negative results.

Small Pearl Bordered Fritillary is known to produce a second brood in the south of England, for example The Millennium Atlas of Butterflies in Britain and Ireland (Asher et al, 2001) states that: "*There is a partial second brood in parts of southern England, and occasionally in south Wales, with adults appearing in August*".

There does not appear to be any precedent in literature or in anecdote for a second brood of SPBF in either Durham or Northumberland. The Butterflies of Yorkshire (2005) however does record: "*Occasional Aug records suggest possibility of token second brood in some recent years: eg 1 seen in Deepdale on 19/08/1998 [John Hume]*."

The Environmental Records Centre for North East England (ERIC) holds no record later than the end of July for Durham and Northumberland with one exception, an unconfirmed very late record for Waldridge Fell on the 28th of August 1996 the recorders being J.W. Aitchison, K.A. Crowther, L.J. Redgrave and P. Dullaghan. In Aug 2000 "The Common Lands of England a Biological Survey" was published by the Department of the Environment, Transport and the Regions, the authors being

John Aitchison, Karl Crowther, Martin Ashby and Louise Redgrave. The field work in support of the document was carried out over the previous twelve years and Peter Dullaghan is acknowledged as one of the botanical surveyors within the text. The multiplicity of recorder names and the replication of some names as authors for the above report suggest that the 1996 date may possibly be an interim reporting date rather than a record of the butterfly.

Further enquiries via Dave Wainwright at Butterfly Conservation produced second brood records for SPBF in Cumbria at Oxen Park and at Holme Park Fell where the transect recorder Mark Pattison recorded a single SPBF on the 25th of August, 2018 and at Fen Bog on the North York Moors. Even further north, Owen Figgis reported a single SPBF on the 27th of August 2018 in Lauriston Forest, Galloway and Glyn Edwards received a report, from a member of the public, of SPBF photographed in Glen Doll, Perthshire between the 30th of August and the 6th of September; a very late and northerly record.

Locations where the caterpillar food plant is recorded include both Marsh (Viola palustris) and Dog Violet (Viola canina) sites. In Durham the second brood sites have both species of violet present.

Transect name	Date	Numbers	Transect name	Date	Numbers
Nanny Mayors	5.6.18	2	Burnhill	7.6.18	34
	11.6.18	14		10.6.18	51
	22.6.18	4		19.6.18	40
	26.6.18	3		26.6.18	44
	2.7.18	1		1.7.18	22
	7.8.18	*2*		12.7.18	2
				7.8.18	*5*
				13.8.18	*3*
Horsleyhope Burn	7.6.18	4	Black Plantation	1.6.18	38
	10.6.18	4		5.6.18	32
	22.6.18	3		10.6.18	42
	24.6.18	3		19.6.18	14
	1.7.18	4		*30.7.18*	*3*
	5.8.18	*2*		*2.8.18*	*6*
				9.8.18	*2*

Table 1. SPBF counts, second brood numbers are highlighted.

Learning Lepidoptera

Louis Driver

Drinker moth: one of the species recorded by Louis in his moth trap.
Photo: Louis Driver

Early evening, and I'm switching on my small Heath trap for the night. The small catches take me very little time to process in the morning, yet there is always enough variety to keep things interesting. Many of you readers will know the excitement of opening your traps, however the feeling is far more difficult to explain to teenagers, most of whom simply see moths as brown and boring.

'Why moths?', many ask, seemingly disgusted. This is always a hard question to answer, but whenever I turn over an egg box to reveal a Buff Tip or an Early Thorn, the question seems more to be 'why not?' Ever since I first clapped my eyes on a White Ermine from the MV trap at the BTO's Young Birders Camp in 2017 I have been amazed by lepidoptera. The wonder of seeing these beautiful species so close, the fascinating diversity so easily found in your local area, the challenge of the smallest micro moths; it is unbeatable.

And so, my trap is set for another night. It is almost nine months since my first trap – what a journey it has been so far! I have learnt so much, for which I must thank the great community of moth recorders in Northumberland, in particular Stewart Sexton and Tom Tams. From micro moths and pugs in my trap, leaf mines in my local woodland, or attempting netting at my local pond, there has always been help and support, for which I cannot be thankful enough. Supporting young people with an interest in moths and butterflies is a great way to keep them involved, however how do we interest them in the first place?

Buff-tip.
Photo: Louis Driver

One thing I have observed is that most of my peers are very quick to judge. They will think of moths as 'uncool' and 'uninteresting'; yet, if they are shown the diversity of amazing species right on their doorstep, their attitude soon changes. To make sure lepidoptera are looked after and recorded long into the future, we must involve as many young people as we can with the amazing wildlife around them and inspire them to take action to help, especially under our changing climate. It is over the coming years that recording and caring for nature will be of paramount importance, as there will be extreme change in very little time. We are already seeing the effects of this, with Box Tree Moths entering the county along with the rather less distinctive Copper Underwing.

One example of this is the two *Endothenia nigricostana*, very kindly confirmed by county moth recorder Tom Tams, that I recorded last summer at my local pond. This

is a species that may be colonising the county, first recorded in 2017 with three recorded last year. It's fair to say I'll be keeping my eyes peeled at the site this year, now all geared up with a proper butterfly net! I've found some interesting moths at this site so I'm excited to see what it will produce this coming season – and, of course, I will continue pestering my friends to let me tell them about the joy that is moth recording!

White Ermine: the species that started it all for Louis. Photo: Jonathan Wallace

With their largely nocturnal habits moths can seem something of a mystery but, as Louis recounts, once you start to look for them it is very easy to get bitten by the bug! We have a tremendous variety of moths here in the North East and seeing what you have in the trap in the morning can be very exciting. Having said this, a moth trap is a moderately expensive piece of equipment to purchase so it is perhaps a good idea to try before you buy.

Low cost ways of getting into moths include starting with day-flying species, leaving an outdoor light on in your garden and actively hunting moths with a torch and a net. It is also worth going on a public moth-trapping session and these are occasionally organised by various local conservation and natural history groups so keep an eye out for announcements on their web-sites. For people who are willing to commit to submitting weekly records to the Garden Moth Scheme there are sometimes a small number of traps that are available on loan from the scheme and Mike Cook, the NE England coordinator for this scheme can advise on this (michael_j_cook@btinternet.com).

Identification can be a challenge at first but there are now very good guides available in book form and on-line. This includes the excellent www.northumberlandmoths.org.uk. Also do not be embarrassed to ask for help with identification. Details of where and how to submit records of moths are given on page 35.

Musings on the Brimstone Moth
David Stebbings

Alder Buckthorn is the caterpillar food plant of the Brimstone butterfly, *Gonepteryx rhamni*. About 18 months ago I was given some cuttings from a plant in his garden by a butterfly enthusiast. The idea was to plant them around the region in suitable places, with the permission of the relevant land owners, to try to encourage wandering Brimstone butterflies to breed in the area. I have planted some out but have quite a few more growing in pots in my garden. At the beginning of October I got excited when I discovered a caterpillar on one of the plants, had a Brimstone butterfly actually laid eggs on the plants in my garden? Reality quickly kicked in when I remembered Brimstones overwinter as adult butterflies and the caterpillars are only found in June and July, and a quick check in butterfly books revealed the caterpillar I had found looked nothing like a Brimstone.

What had I found? After a flick through my moth caterpillar book I identified the caterpillar as a Brimstone moth, *Opisthograptis luteolata*, not a Brimstone butterfly. A strange coincidence of name. This prompted me to find out a bit more about the Brimstone moth, which turned out to more interesting than I was expecting. It is a fairly common moth throughout Britain that uses a number of larval food plant species although the literature does not explicitly record Alder Buckthorn amongst these. It commonly flies just before dusk and is also frequently found in moth traps. I have caught many in my garden moth trap over the years, but never seen the caterpillars before. However, for a common moth there are some surprising gaps in our knowledge about its life cycle. For instance there seems to be some doubt about how many generations there are a year. There is certainly more than one in the north east as they fly throughout the summer, but some authors[1] say there is a consistent pattern of three generations every two years in the south of England. In northern Scotland, however, there is only one generation per year.

There are two colour forms of the caterpillar, a green version and a brown one. The first caterpillar I found on the Alder Buckthorn was a green one which I spotted because it was so noticeable. A further search revealed a brown one on a different plant. This one was beautifully camouflaged to look exactly like a broken twig and took some finding. Apparently, the green form is more common in the north of Britain and the brown form more common in the south where the green form is almost

Green form of the Brimstone Moth larva.
Photo: David Stebbings

Brown form of the larva: an excellent twig mimic.
Photo: David Stebbings

unknown. Based on my findings both forms are found in my garden in Newcastle!

Another feature of this moth, like the Speckled Wood, is its ability to overwinter as a caterpillar or a pupa. The books say the Brimstone moth can overwinter as a caterpillar on the food plant or as a pupa in the leaf litter or in crevices[2]. From my observations I believe the green form would stand out like a sore thumb on the food plant if it was hibernating as a caterpillar during the leafless days of winter, making it easy prey for birds. However, the brown form is a perfect stick mimic and could easily pass unnoticed on the food plant. So perhaps the green form, found in the north, overwinters as a pupa, hence there is no great need for camouflage. Whereas the brown form, found in the milder south and being better camouflaged, is better adapted to overwintering as a caterpillar on the food plant. There is a another slight difference between the two colour forms: on the caterpillar's sixth segment there is a hump which is smaller in the green caterpillars compared to the brown ones. Quite why the larvae of the same species should look and behave differently in different parts of the country is apparently a mystery.

A chance find lead me to look at this common moth more closely and discover a fascinating life cycle which is not fully understood. Why do the caterpillars differ both in colour and structurally in different parts of the country? Could this mean it is evolving into two species? Are there two species of the Brimstone Moth present now, as yet unidentified, in the same way that the Wood White butterfly was discovered to be more than one species recently? Whenever one looks more closely at butterflies and moths there is always something new and surprising to be uncovered.

[1] Porter J - Colour Identification Guide to Caterpillars of the British Isles
[2] Waring, Townsend and Lewington - Field Guide to the Moths of Great Britain and Ireland

Adult Brimstone Moth.
Photo: Jonathan Wallace

Five species to look for and places to go in 2019
Roger Norman

Here are some thoughts on the coming season. This newsletter should reach you just as things are starting to warm up. As I am writing, it's January, the temperature is at zero and no butterflies are in visible in the garden, - how surprising!.

Of the five species for which we would like more records, the first, alphabetically is Essex Skipper. Since its first discovery in 2015, the number of records has been declining quite markedly. From 37 records and 92 individuals in the first year of discovery, there were 17 records in 2016 and 5 in 2017. Last year, 2018, there were only 4 records with 4 individuals noted. What is causing this decline? Is the weather on Teesside too inclement for Essex Skipper or is it a lack of observers getting a good look at Small Skippers in south-east Durham? The weather during the flight period (July) was very hot so I suspect it is down to a lack of observer effort. Can 2019 improve on the very poor tally of records over the last two years, and maybe even expand the recorded range?

The second species that deserves a bit more effort on the recording front is Grayling. This is one of our rarest butterflies. We have two known areas in Northumberland, the Lindisfarne region and Cambois. Grayling is on brownfield land at the latter site. In Durham there are records from Teesside every year. Away from this industrial area there have been records in the recent past from Kibblesworth, but none since 2015. Previously there were a number of records from 2008 to 2011. The site seems to cover two 1-km grid squares, NZ2556 and NZ2656 just to the west of the main railway line. A second site to have a look at is the landscaped area at Dalton Park shopping centre, which lies immediately to the west of the A19 near Murton. There has been a new record (2018) from there. We also have two records in 2015 from two other areas, Fishburn Lake and Hawthorn Hive, both of single individuals. .
.
The remaining three other species are for those who work the more northern parts of the region. The number of Large Hearth records we receive each year is very low and more would be welcome. It is generally distributed on our wet moorland areas of Northumberland, and should be searched for with care and always with a companion. The last two species are two of our Hairstreaks, the White-letter and Purple Hairstreaks. White-letter has now been found on the River Tweed catchment, yards outside our border with Scotland! but records in 2018 in Alnwick on the River Aln suggest that it should be present in the area between Alnwick and Berwick. One possible area to search would be on Elms around Tillmouth and along the southern bank of the River Tweed. We also have a record of Purple Hairstreak from the Alnwick Garden so they too could be present in the northern part of Northumberland on suitable oaks.

The flight season for all five species is during July and into August so good luck this summer.

Essex Skipper (male). Photo: Ian Waller

Grayling. Photo: Brian Chandler

Large Heath.
Photo: Graham Beckwith

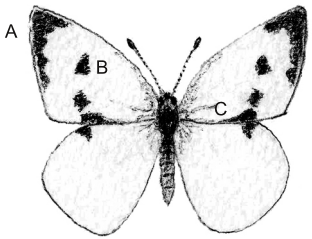
White-letter Hairstreak.
Photo: Mike Carr

Purple Hairstreak.
Photo: Graham Beckwith

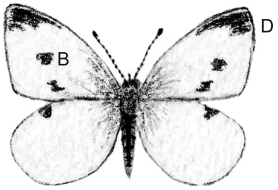
Five species to look out for.

Identifying Whites

Jonathan Wallace



Large White, female.



Small White, female.

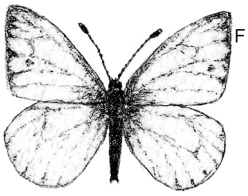
With just 34 regularly occurring species in the region there are no really serious butterfly identification challenges in the North East. Having said that, there are some groups or pairs of species that can cause confusion to the unwary or the beginner and these include one of the very commonest groups, the whites or Pieridae. There are four common species from this family that all have a superficially similar appearance with white wings bearing black or dark grey shading in the apex and dark spots in the wings and, despite their familiarity, it is quite easy to confuse them. In this article I highlight the key differences between these species.

The pair of species that are perhaps most easily confused are the Large White and the Small White, collectively labelled by gardeners as 'Cabbage Whites" on account of their preference for laying eggs on Brassicas and the resulting crop damage caused by the larvae. As the names suggest there is a significant size difference between the two with the large White having a wing-span of 55 - 65 mm and the Small White a wing span of 45 - 55 mm. The two species have broadly similar markings but of the two the Large White tends to be the more boldly marked with a strong contrast between the black markings and the white of the wings whilst the Small White's markings are often greyer. The key difference, though, is in the black/grey marking in the apex of the upper side of the forewing. In the Large White this extends well down the side of the wing (A) whereas in the Small White the mark just cuts across the very tip of the wing (D). In both species the female has two black spots on each forewing upperside (B) and in the Large White there is also a black bar (C) along the trailing edge of the forewing. These marks are absent from the upper wing of the male Large White, whilst the male Small White has only rather faint dark spots on the upper side of the forewing.

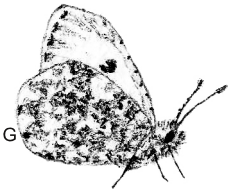
The next species to consider is the Green-veined White. This species is our most widely distributed butterfly in the North East and is well-recorded in the west of the region where the two cabbage whites are rarely seen but also occurs within the same habitats as those two so confusion is possible, particularly in flight. The Green-veined White overlaps in size significantly with the Small White but is on average slightly smaller. A clear view of the underside of this species when it is perched on vegetation is sufficient to identify this species confidently. The green-veins (E) that give the species its name are very distinctive particularly on the hind-wing and

Drawings by Daria Wallace

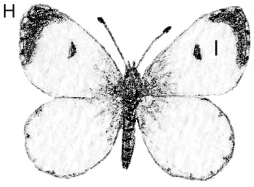
Green-veined White, underside.



Green-veined White, upper side.



Orange-tip, female, under side.



Orange-tip, female, upper side.

amongst the species present in our region unique to this species. In contrast both the Large and the Small White have a more-or-less featureless yellow-white underside to the hind-wing.

The upper side of the Green-veined White is quite variable and spring brood individuals are usually less strongly marked than summer brood individuals. Because of this variability care has to be taken to avoid confusion with the Small White but the key points to note are the generally more pronounced veins of the Green-veined White and, especially, the fact that where these veins reach the outer margin of the forewing they end in a small black triangle (F) which is not the case in the Small White.

The final member of our group of four confusable species is the Orange-tip. It is the male of this species that bears the orange wing tips that give it its name and which cannot be confused with any other species occurring in our region. The females, though, with their grey-tipped white wings can potentially be confused. This species tends to occur in damp grassy habitats including meadows, roadside verges and woodland rides. Size is a good identification indicator as this is the smallest of the species considered here although its size range does overlap with that of the Green-veined White. As with that species, though, a view of the underside of the female Orange-tip is sufficient to clinch the identification very easily. The underside of the hindwing in both sexes is attractively mottled with green on a white background (G) and this is a feature shared with no other species in our region.

The upper side of the female Orange-tip does also have some distinctive features. The forewing-tips are more rounded than those of the other species and tend to have white checquering on the border around the edge of the grey marking on the apex (H). The dark mark in the centre of the forewing tends to be crescent shaped in contrast to the round marks on the wings of the other species (I). This species also tends to have a dark grey-black smudge at the base

Male Orange-tip - not confusable with any other British species.
Photo: Graham Beckwith

of each wing either side of the thorax although this feature is also often present on the Green-veined White.

As well as the physical features of the butterfly, flight period can also be a helpful indicator with respect to the Orange-tip. All four species over-winter in the pupal stage and emerge as adults in early Spring (late March/early April) but in contrast the Orange-tip normally produces only a single brood each year and consequently is rarely seen after the end of June or very beginning of July. The other species all produce a strong second brood every year and can be seen on the wing through September and often into October.

With reasonable views most specimens of these four species can be readily identified based on the characters described but as a final word of caution it should be said that in flight it is not always possible to see the distinguishing features especially if the butterfly is more than a few metres away. Sometimes we just have to accept that identification to species is not possible!

Small White on one of its favoured food-plants, Nasturtium.
Photo: Jonathan Wallace

Submitting butterfly & moth records 2019

Records are the bedrock of conservation and observers are encouraged to send in their records of moths and butterflies seen or trapped within the region to the relevant recorders. Different arrangements are in place for butterflies and moths.

Moths

Separate databases are maintained for Durham and Northumberland and records should be submitted to the appropriate recorder depending on where they are made. Recorders are encouraged to use Mapmate recording software (www.mapmate.co.uk) to file and submit their records but an excel spreadsheet, suitable for use in both counties, can be downloaded from www.northumberlandmoths.org.uk/submit_records.php. This also gives guidelines on the information to be recorded.

Durham (Vice County 66)
Records should be sent to either of the Joint Moth Recorders for Durham.

Keith Dover
4 Lindisfarne Avenue
Chester le Street, Co. Durham

e-mail: k.dover879@btinternet.com

Tim Barker
26 Farrier Close
Pity Me, Durham, DH1 5XY

e-mail: tim@tapandspile.co.uk

Northumberland (Vice Counties 67 and 68)
Records should be sent to the Moth Recorder for Northumberland

Tom Tams
191 Links Road,
Tynemouth, NE30 3TQ

e-mail: tom-tams@blueyonder.co.uk or recorder@northumberlandmoths.org.uk

Butterflies

Irrespective of which county they relate to, all butterfly records should be e-mailed to:
records@northeast-butterflies.org.uk

Electronic records are preferred but any paper records should be sent to:

Roger Norman
1, Prestwick Gardens,
Kenton,
Newcastle upon Tyne
NE3 3DN.

Records will be reviewed by the Recorders, Mike Perkins (Northumberland) and Stephen Lowther (Durham) prior to being added to the data-base.

A spreadsheet is available for the submission of records and this can be downloaded from www.northeast-butterflies.org.uk/downloads.html.

Records should be submitted by 30 November in order that they may be considered in the Annual Butterfly Report for the year in question. Valid records received after this will still be added to the data-base but may not be included or credited in the Annual Report.

Validation

It is important that records are accurate and based on correct identifications. It is the responsibility of the Recorders to scrutinise submitted records to ensure that this is the case. Where records concern rare species, species that are outside their known range or flight periods or species that are easily confused they may ask for supporting evidence to be supplied. This may include good quality photographs or, in the case of moths, sight of the actual specimen (moths can be kept alive without harm for a day or two in a pot stored in a cool place).

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