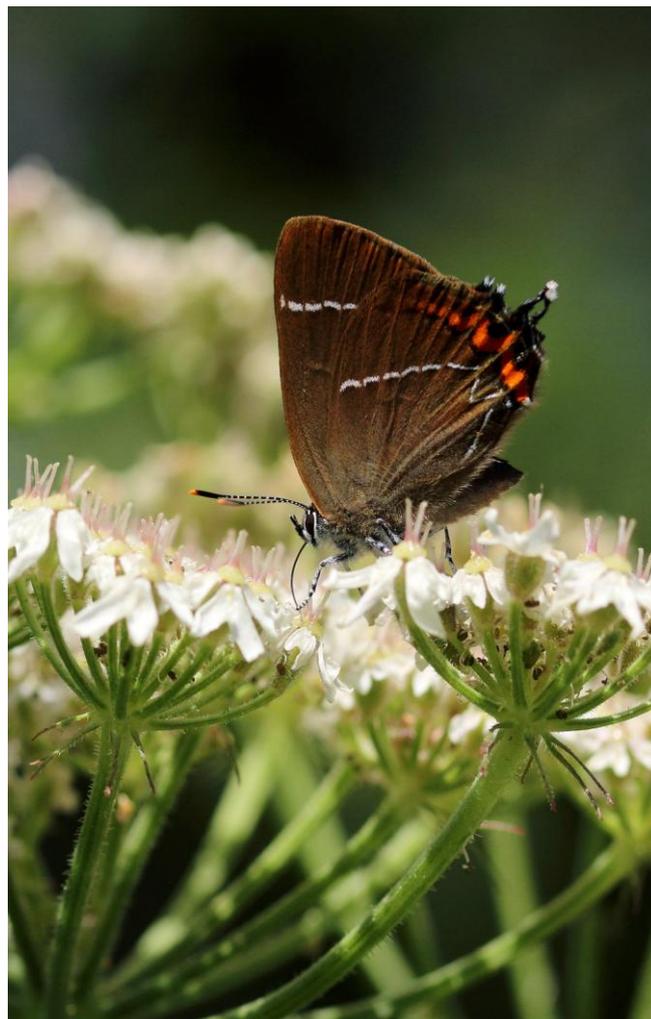
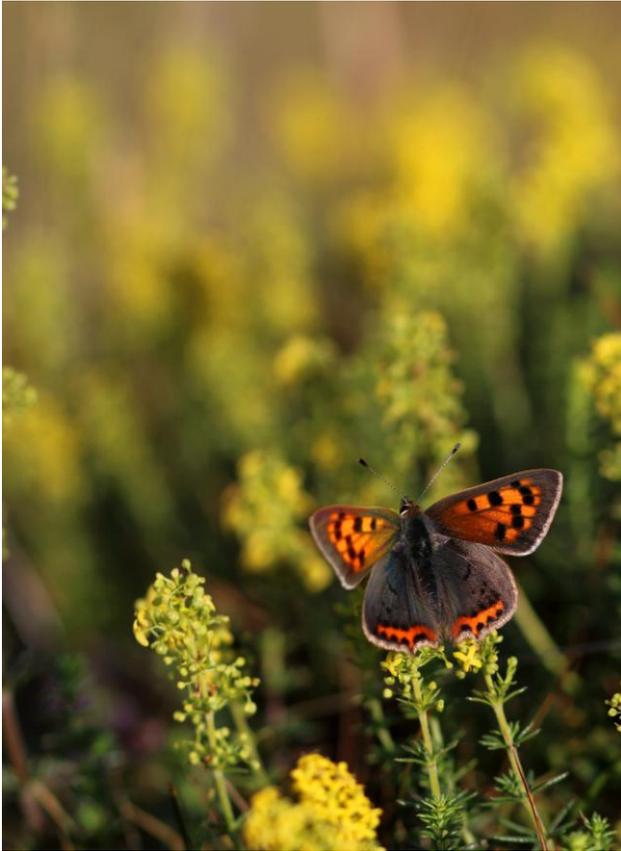


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Spring 2019

East Scotland Branch
Newsletter 26





Small Copper, *Iain Cowe*

Photographic credit: **Front Cover** – White-letter Hairstreak, Kelso, *Iain Cowe*.

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Common Blue, *Iain Cowe*



Northern Brown Argus, Soutra, *Richard Buckland*

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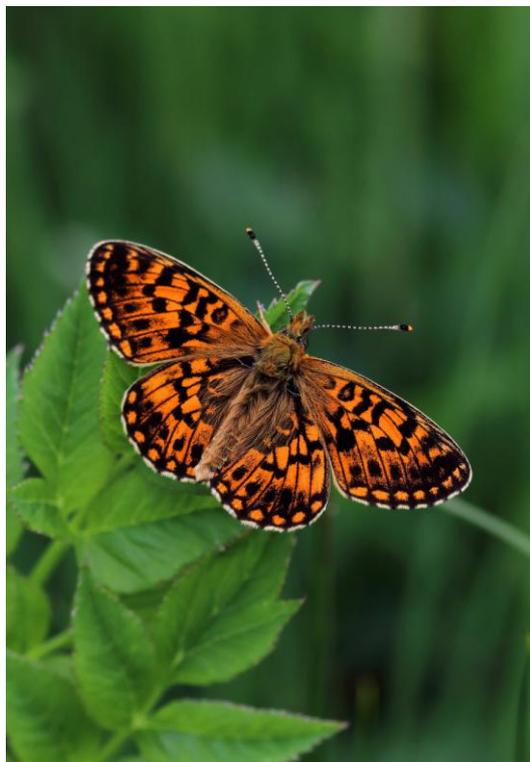
The Editors welcome written and/or artwork contributions on all aspects of Lepidoptera in East Scotland and its surrounding areas. Please send any contributions to the Editor: R. Buckland (contact details on inside back cover).

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Small Pearl-bordered Fritillary *Iain Cowe*

A Note from our Chair

Apithanny Bourne

I hope that by now spring has well and truly arrived in your corner of East Branch. There have been a number of “first butterfly sightings” submitted already – for me it was a Red Admiral during the unusually balmy last week of February. A welcome sight indeed, but also a stark reminder of the challenges presented by climate change and increasingly unpredictable weather patterns.

Whilst the colder months put many of our activities on hold, lots of you have been getting stuck into the fantastic Hibernating Herald survey. Thanks to all those who have ventured into “dark and dingy places” throughout the winter to help monitor this beautiful moth! Collecting records is such a vital part of our work, allowing us to direct our conservation efforts to where they are needed most. This summer will see the continuation of our Northern Brown Argus project, which aims to map the distribution of the butterfly and its habitat across the Scottish Borders. Whilst further north we’ll continue to monitor our newly created Grayling habitat in East Lothian and Dark Bordered Beauty sites in Aberdeenshire.

East branch has gone from strength to strength and I hope to keep this momentum going in 2019. We’ll continue to engage members through our popular social media streams and are currently working behind the scenes to develop a new blog for our website. At the end of last year East Branch achieved the highest average growth rate in membership – outperforming all other UK branches. This is partly down to the hugely successful “Big Butterfly Count” citizen science scheme, but also due to the outstanding effort of our volunteers. Inspiring the public is very important to us and each year we have a fantastic programme of events. In 2019 we’ll be kicking things off in the Royal Botanic Gardens in Edinburgh (April 28th) with our AGM - followed by numerous butterfly walks and moth trapping events throughout the year. You can find details of events in your area by visiting our website or keep up to date via our Facebook and Twitter accounts. We can’t always guarantee good weather – but we can promise good company and plenty of interesting things to see and learn! I thoroughly hope you can join us.

Finally, as I eagerly await my first Orange-tip of 2019, I’d like to wish you all a wonderful start to the butterfly and moth-ing season!

White-letter Streaks across the Border *Iain Cowe*

Since my chance discovery of a single adult White-letter Hairstreak a few hundred metres over the Scottish side of the border at Paxton in August 2017, we have managed to reveal so much more in a very short time. The introduction of expert White-letter Hairstreak spotters from Bolton, Lancashire, namely, Ken Haydock and Jill Mills during February 2018, gave us a real boost as they were able to discover breeding evidence on the Scottish side at Coldstream, Kalemouth, and Ancrum by finding eggs of the species on the Elm branches of several trees.

I did not have so much luck looking for eggs myself, and neither did anyone else that tried. It would take more than luck, so I began studying the lifecycle of the Butterfly and immediately became hooked as I was to discover over the next few months just how fascinating a lifecycle it is. My first port of call was Kelso. Kelso was to be base of operations during the late winter and early spring. The egg discoveries of Ken and Jill at Kelso were at Teviot Bridge, so I travelled out to Kelso to rediscover the eggs and found them, all five, with patience. I looked at other nearby trees using similar tactics yet found nothing. I was very sure I was looking in the right places, yet I was just not finding a thing. I didn't give up. The egg hunting continued with no return for my efforts. I was still concentrating on the Kelso area into spring, this time for the



caterpillar stages. The caterpillar, when it hatches from its egg, will bury itself into a nearby Elm flower bud, then move on to the developing seeds. I made my move on the 25th of May and headed for Teviot Bridge again, by now, a very familiar site. I carefully sifted through the bunches of seed pods on the tree to no avail. I knew the caterpillars were right in front of me, yet they

are so well camouflaged, I just could not see. My confidence ebbed. At the beginning of 2018 I acquired the use of a mobile phone that has very decent connectivity and I was able to *in situ* bring up Jamie Burston's online guide to looking for White-letter Hairstreak life stages. I immediately saw that Jamie suggested looking for seed pods with chewed holes in the centre. Well, right in front of me was a set of seed pods with just what Jamie described as seed pod feeding damage of the White-letter Hairstreak. A Eureka moment I can tell you, though much, much better was to come.



The dilemma then became how do I make sure that I can prove without doubt that this is White-letter Hairstreak if I can't find the caterpillar. I thought about it long and hard then decided to cut the end of the branch that had the most obvious feeding damage. I put the cut branch on a white sheet and very forensically began inspecting it in good light. Almost immediately I spotted the very familiar characteristics of a lycaenid caterpillar so beautifully rendered to completely mask itself against the bright green and yellow of the seed pods. Quite an astonishing find it was. I studied the caterpillar for several minutes before attempting to repatriate the butterfly back to its realm of Elm. It took great patience as small lycaenid caterpillars are so slow-mo it would make you cry. I found a very decent batch of seed pods and

gently held the cut branch with caterpillar close to each other, and finally, ...finally... the caterpillar crawled onto the new batch of seeds and melted almost immediately back into invisibility.

The flight period for this species, this far north, is pretty much undocumented, so knowing just when to look for adults we had guessed that mid-July would be a good time to look. The summer of 2018 was dry and hot and things in general were a little bit ahead of where we would normally be. I was at St Abbs Head of all places when catching up with emails discovered a mail from Christine Johnstone with photographs of a White-letter Hairstreak adult that Keith Knight had found in their garden that morning of June 31st at Coldstream. I was completely caught by surprise at this discovery and completely unable to follow it up as I was working that week. I had to wait till the following weekend. That was very frustrating indeed.

I was to spend the next three weekends at Kelso and Coldstream looking for adults. The 7th, 14th and 21st. My first trip out was the best of all on the 7th July at Kelso. It was a hot day with clear blue skies and on my way to Teviot Bridge where I had expected to perhaps catch a glimpse of a butterfly, I stopped at a site next to Springwood Park where I had failed to find eggs. After only a few minutes of studying the Elm canopy I saw three Butterflies zipping around the top of the tree in tight fast circles then disappearing. There was no mistaking these for anything else, what a moment of excitement. I watched for an hour and more in blistering heat the males chasing each other across the canopy but never settling on the lower branches. A little later I noticed some very different behaviour from one individual as it fluttered slowly around the base of the tree, stopping at head height and inspecting branches methodically. This was undoubtedly a female. I forgot all about the males and just started looking for females. The females were so very unperturbed by my presence and just went about their business laying multiple eggs on these lower branches for well over an hour. The female thoroughly tested each branch and potential egg laying site with her antennae and abdomen lowered. When she did fly, she only flew



a short distance from branch to branch, though most of the egg laying was done on foot. Meanwhile I had been studying nearby Umbellifers and Brambles for stray Butterflies that may require a little nectar. These Butterflies seldom use flowers at ground level as they can sustain themselves from Aphid honey dew in the crowns of the Elms, or nearby Ash, Oak etc I was to get very lucky though as one perfect female White-letter Hairstreak suddenly appeared on top of a Common Hogweed in full view. I was pretty much stunned into silence. This is what I had dreamed of seeing...and there it all was.

Over the course of the three Saturdays at Kelso and Coldstream I discovered a half dozen new sites and occupied trees, in fact, it seemed likely that every Elm I found would be occupied such was my confidence.

My discoveries were added to by Ken and Jill who returned to the Scottish Borders finding new sites themselves further afield at Jedburgh and Bedrule.

Most of the searches for the presence of the White-letter Hairstreak have occurred along the length of the Tweed. This is not a particular riverine species at all; it's just that the Tweed is a very convenient corridor for adult dispersion, in theory. The tributaries of the Tweed were studied to the west by Jill and Ken, for example, the Teviot at Kelso. The Teviot in itself has several major tributaries where Jill and Ken had great success.



Those tributaries were the Kale, Rule Water and Jed Water. The Teviot has one more tributary at Hawick, Slitrig Water which may well be worth searching. Out to the east, the most obvious feeder north would for me be the Till that cuts through North Northumberland and joins the Tweed at Twizel on the English side, and Lennelhill on the Scottish side. The Till is where any future searches for North Northumberland colonies really should concentrate. My hunch is that the Butterfly could well be found about Etal, Heatherslaw and Ford.

The Till, like the Teviot has several very interestingly situated tributaries such as the River Glen that skirts the northern boundary of the Cheviot Hills linking up east and west with the College Burn and Bowmont Water. Further south along the Till Wooler Water may bring the White-letters into the town of Wooler. The Till may turn up trumps all the way to Chatton and Chillingham. These spots are all worth a look. I would think that the White-letter Hairstreak shall be quite widespread into North Northumberland, but it's going to take some time to establish that. A breakthrough was made by Stewart Sexton and John William Rutter on the 22nd July at Alnwick. The first North Northumberland adults recorded. Other Tweed tributaries to look at are the ones north of the Tweed such as the Whiteadder, The Leader, Gala Water, and the ones out west such as Ettrick and Yarrow. Away from the rivers, the White-letter Hairstreak are using hedgerow and sucker Elm on field edges and roadsides, no doubt also using coastal corridors, railway lines disused and current. All the usual suspects. There has been since the end of July 2018 little further development though I did organise two outings in November 2018 and January 2019 for egg hunting purposes, and to show some folks how to look and where to look for them. The blind leading the blind in a way as I had such little success looking for eggs myself. I chose Kelso as a destination for the first White-letter Hairstreak egg hunting workshop and we had some very great success with finding 16 eggs at Springwood Park and Teviot Bridge. This was quite astounding. I didn't expect so many. For the second outing I chose Coldstream as a base of operations for a limited attendance of handpicked

volunteers to inspect an occupied Elm tree on the premises of Christine Johnston and Keith Knights garden. We failed to find the evidence as the branches are just out of reach; however, we did have much more luck into the afternoon at Lennel a mile from Coldstream on the Tweed banks where Ken and Jill had discovered the first Scottish eggs. Four eggs were revealed on the day confirming the continued presence of the species at these host trees. A very worthwhile exercise indeed.

There will be a further recount of eggs at Springwood Park Kelso this coming spring, however this newsletter may well be issued after the event. For the flight season there is at least one event planned for Kelso that I hope some of you can attend. Details in the newsletter. There will be others that will be planned on the hoof as the season progresses that will appear on social media outlets for East Branch.

The Strange case of *Palpita vitrealis*

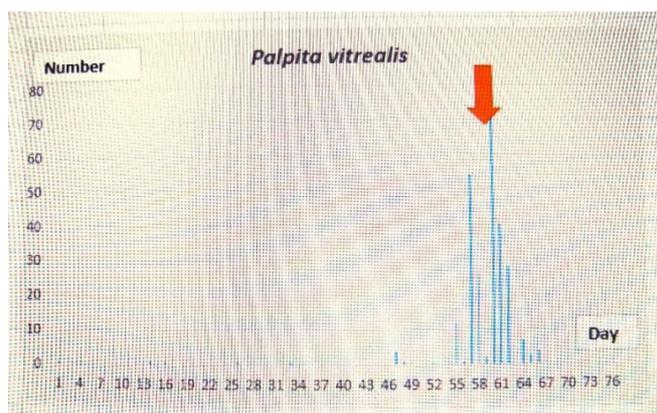
David Bryant

I was intrigued when a rare migrant moth arrived in my Bridge of Allan garden recently for a second time. Lightning doesn't often strike twice. While Scotland-wide there have been few recent records, an average of 300 per annum are reported from



Southern England. The most obvious explanation is that I twice got lucky during exceptional periods of immigration by the species: accordingly I made a rough and ready check. My first record of *Palpita vitrealis* was in late October 2013, which Clancy (via the Atropos website's 'Flight Arrivals') shows is one of only 2 years since 2005 when 800+ have been recorded in Britain (up to 2016). No comparable data are available for this year, but the daily pattern of occurrence in autumn 2018 is instructive. The first UK records

of *vitrealis* submitted to the Atropos website were on 17 August (in Devon, =Day 1 on graph) but daily occurrences were in single figures until 10th October. Peaks were seen soon afterwards, however, on 12th (n=54) and 15th (n=72). My record of a singleton on 13th was sandwiched between these two peaks (see Graph, day 58, orange arrow), implying it was part of a large synchronous immigration. It's pristine state (see photo) could perhaps imply an uninterrupted journey, most likely on high-level southerly winds. Hence, it seems that occurrences are, as expected, broadly linked to exceptional years or more specifically to exceptional daily peaks of immigration. It is perhaps no surprise that these immigration events generally peter out with increasing distance from the Southern European source, even during the generally southerly winds that are typical of these occurrences. Nevertheless, it suggests that such late October migrants are probably under-recorded in Scotland because many moth-ers have packed away their traps by this time or are based well away from the



coast. Perhaps it would pay to visit our east-coast headlands when the winds are right in autumn if we wish to establish the true status our migrant moths? The reward of an Olive-tree Pearl is surely reason enough?

The expansion of Speckled Wood (*Pararge aegeria*) in Fife and Clackmannanshire in 2018

Elsbeth Christie and Gillian Fyfe

The Speckled Wood has shown a dramatic expansion throughout Fife and Clackmannanshire over the last few years. The first record was at Shell Bay near Elie on the Fife coast on 22/08/2014.

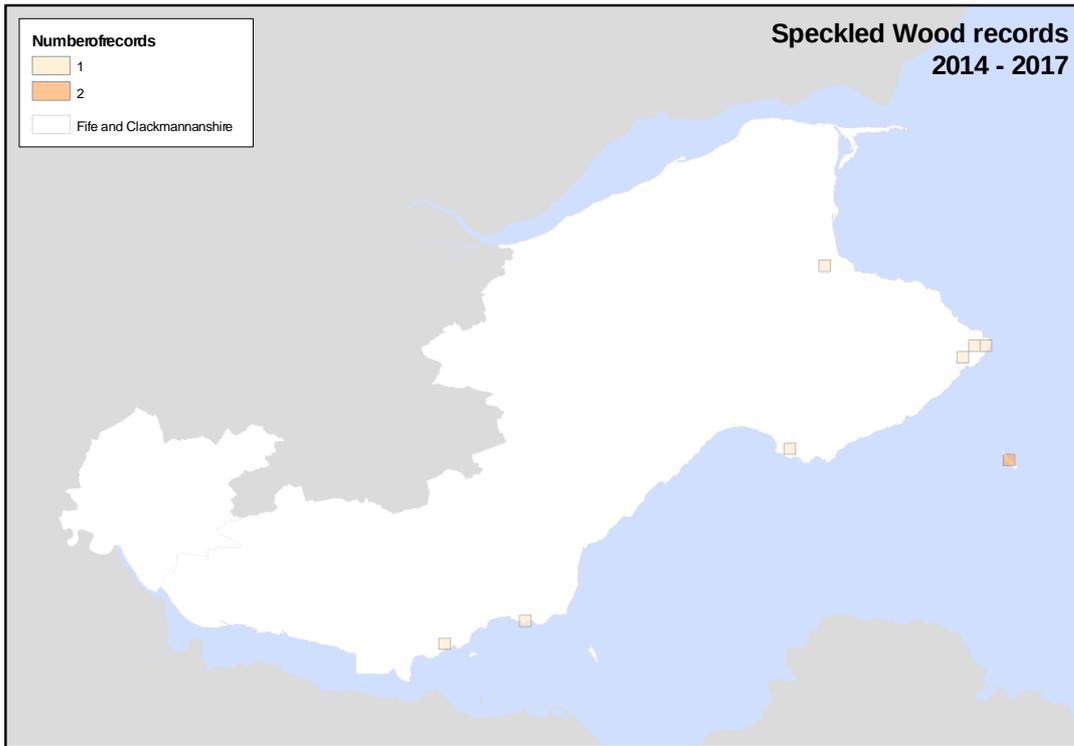
Four more coastal records followed in 2016 at Crail, Burntisland and Dalgety Bay (2). The following year five records came in from St Andrews, Crail, Fife Ness and the Isle of May (2).

These records have proved to be the start of a major expansion across Fife. Coastal records before 2018 have been followed by more from coastal locations but also inland records as well. Records from 2018 indicate a spread northwards through Fife and as far as the Tay estuary. In 2018 a total of 46 Speckled Wood were recorded in Fife with some recorders reporting up to 7 individuals. Most records came in from the south coast around Kinghorn but there were also records inland, at Markinch and Colinsburgh. In the north of Fife records were submitted from St Andrews, Morton Lochs, Tentsmuir and Lucklawhill. See Maps 1 and 2 below for distribution. A single record of Speckled Wood was also sent in from near Alva in Clackmannanshire. There were no records from Perth and Kinross in 2018, although records from Perthshire in 2017 suggest expansion into the area from the northwest.

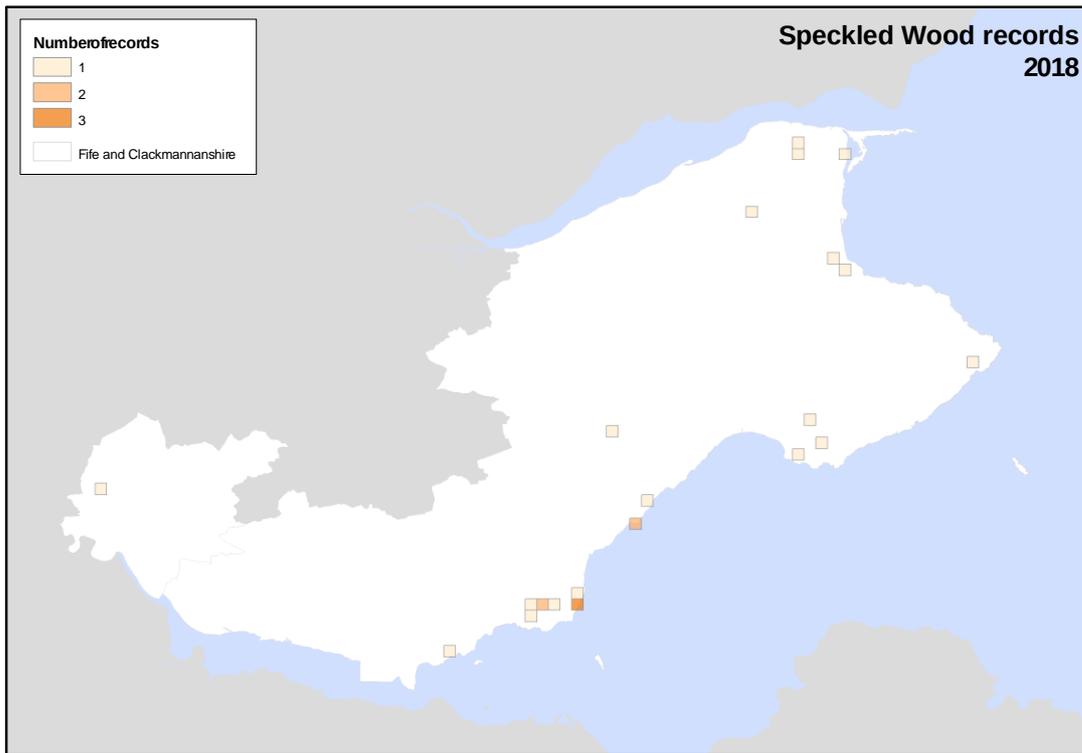
A single individual at Glen Clova in Angus was recorded in 2018.

Historically, Speckled Wood was widely distributed throughout England and into southern Scotland but it's range declined from the 1860s onwards (J. Thomas & R. Lewington, 2014. *The Butterflies of Britain & Ireland*. BWP.). By the 1920s it was mostly confined to the south of England and Wales.

A gradual expansion from that time has seen populations spread northwards again. The butterflies arriving in Fife are likely to have come from colonies of the subspecies *tercis* in the Borders and Lothians. A separate population of Speckled Wood (*oblita*) in the northwest Highlands has also expanded its range.



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The warm, dry summer in 2018 may have helped boost numbers of Speckled Wood and helped the northwards expansion of their range. The next few years will show whether this is part of a continued expansion and consolidation of colonies or not.

Highlights from the Borders 2018 *Barry Prater*

We live in an era when there is much depressing news for our butterflies and moths and, while this is always present as a back-drop to our activities, it can also act as a stimulus to find out what is still there and how we can help prevent further deterioration. Last year in the Borders we saw much that was positive both in terms of discoveries and the enthusiasm of people really wanting to get involved and contribute to the knowledge needed to develop conservation actions.



For butterflies it has to be the White-letter Hairstreak which gets the top award as a result of Iain Cowe's endeavours and you can read more about this new Scottish breeder in his article. Quite a few butterflies did well in terms of numbers counted at sites and gave indications of extending their ranges. So the Small Blue had counts of 50 or more at some of its sites during one of the two very successful coastal walks organised by Iain during June. Although this species seems to be pushing slightly further north it, along with the Dew Moth with which it shares locations, remains unrecorded north of Eyemouth.

We have started a big push on survey work for the Northern Brown Argus across the Borders where there are around 150 known sites, some of which are visited in most years but many have no up-to-date records. Perhaps more seriously, many of the colony habitats have not been assessed and potential threats documented and these are important components of the current survey which



will lead to work on the ground such as scrub, bracken and gorse removal or advice to landowners on habitat management and tree planting schemes. During 2018, over sixty colonies were visited, providing much valuable information and it is hoped that the team of volunteers will be able to tackle a similar number in 2019. Another outcome from the survey is the discovery of new colonies by searching sites with the foodplant Common Rock-rose. Both the Small, and to a lesser extent Large Skipper, continued their spread inland and northwards which was also true for the Speckled Wood and wall. Other butterflies having a good year were the Small White and Large White.

Small Tortoiseshell, Meadow Brown, Ringlet and especially Grayling seem to have done poorly. A single Clouded Yellow was spotted at Burnmouth and the first Borders Holly Blue for a decade at Coldingham. The lengthy hot and dry spell during the summer might have been good for adult butterflies, but there are concerns that the serious desiccation of larval foodplants will have impacted on the breeding success and so there is some anxiety over what the next season may bring. An example might be the Northern Brown Argus at Threepwood Bridge, where good numbers were seen on 23 June but by mid-July all the Rock-rose plants were completely dried up so there will probably be little breeding success in 2018. As well as the coastal butterfly walks, there was a good variety of other events aimed at showing people the local species and getting newcomers enthused about butterflies and moths. These were often joint events with other groups and included an outing led by Malcolm Lindsay for the local SWT group to the Chisholme Estate to



the west of Hawick on 7 July, which gave a good moths list (54 species) with many eye-catching moths for the 30 or so who came in the morning to see the results. July was also the month when Chris Packham did his UK Bioblitz tour of the country and we participated in his visit to St Abbs NNR, adding to both his and the site's species lists (Pinion-streaked Snout and Pimpinel Pug new for St Abbs). The Peebles U3A group were shown moths in the Manor Valley in August by Reuben Singleton and some of the attendees subsequently acquired a trap donated by Margaret Carlaw and Derek Ogston for their own use.

In May, Gordon Community Woodland played host to another session led by Iain Cowe which showed the power of pheromone lures to attract male Emperor Moths and allowed the 19 people attending to see 10 of these superb creatures. This species was also the object of a training exercise led meticulously by Nick Cook. He made Emperor eggs available to three keen volunteers and gave them detailed instructions and encouragement to take these successfully through to the cocoon stage; come the spring, females will be deployed to attract males (which seem to appear from nowhere) for mating, again relying on their pheromones. In this way new sites for the moth are discovered and eggs can be collected to repeat the cycle. We await the 2019 update on this really engaging project!



The Large Red-belted Clearwing colony being nurtured in a woodland where David Long cuts birches to provide stumps for egg-laying, appears to be thriving with a total of 82 pupal cases recorded in 2018



along with a good number of adults being seen, some very recently emerged. Three records of the Tissue away from hibernating sites were made – all apparently attracted to lights, including one high up on Lammermuir moorland and away from any suitable habitat; it's 70 years since the last non-hibernating record in the Borders.

An equally unexpected find was a V-Moth in Peeblesshire; this species was quite regularly reported in the Borders up until the 1990s but since then there has been just the one record from 2004 until 2018. At the national UK level it has become



extremely scarce and any discoveries at new sites such as this by Reuben Singleton are very welcome. And the value of returning to previously well-recorded sites is demonstrated by David Bryant's trapping of the Southern Wainscot at St Abbs in

July, a new Borders species and perhaps a sign that this reedbed-loving moth is continuing to extend its range northwards. Moth-trapping at higher elevations can give spectacular results – when Malcolm Lindsay and Teyl de Bordes set out three traps at a high point of the Southern Uplands they were nearly overwhelmed by a 'blizzard of moths' which arrived and the stand-out species was the Northern Dart, 112 of which were recorded at this new, and only the second site, in this part of Scotland.



Following the discovery by Reuben Singleton of what is thought to be the only Scottish colony of the rare and much declined micromoth *Lampronia capitella* (the Currant Shoot Borer) in Eshiels Wood back in April 2017, and working as part of a team led by the Peebles Community Trust (PCT), a successful application was made to the Community Asset Transfer Scheme (CATS) to purchase Eshiels Wood, with the Forestry Commission offering the woodland for

£36,000. An application was then made to the Scottish Land Fund in July 2018 which sought money to assist with the wood's purchase and management. On 7 October 2018 a press release was issued by Scottish Land Fund/Big Lottery Fund with the excellent news that they were awarding £48,765 for the purchase and initial management of the Eshiels Woodland. The site includes a neglected conifer plantation and is popular with walkers and, as well as conservation work to help the moth, there are plans for better public access. PCT took ownership of Eshiels Wood in January 2019 and plans are in hand for increasing the number of Redcurrant bushes in the wood and to have a Launch Event this spring. This is all very exciting.

Surveying for the Northern Brown Argus in Perthshire *Cathy Caudwell*

The Northern Brown Argus is a UK BAP priority species and also listed in the Tayside Local Biodiversity Action Plan (LBAP). "Population levels of this butterfly have shown an ongoing decline, primarily caused by inappropriate grazing and in Scotland loss of suitable habitat to tree plantations. This butterfly is therefore a priority species for conservation efforts." (UK BAP status). There is a UK BAP 2007 for the NBA.



It was mooted - by Barry Prater if I remember rightly - at an East Branch Committee meeting a number of years ago that we needed to check out our local sites in order to update distributions, as many sites had not been visited since the 1990s.

We needed to monitor for decline or suspected decline in the species and the possible loss of sites due to

changes in land use or pressure on rock-rose populations from grazing regimes. The result was that our butterfly recorder, Glyn Edwards, provided us with records and prioritized them with the urgency of checking, depending on the age of the record. Help from volunteers was invaluable in checking out some of these sites. It was also useful to visit sites from which rock-rose was recorded, but not the butterfly, as one or more new sites were found this way. We distributed a recording sheet on which details of each site could be submitted. The recording sheet gathered details of site, aspect, times of visits, numbers of eggs, larvae or adults seen as well as amount of rock-rose present. Negative records were useful as well as sightings.

NBA History in Perthshire

I spent some time at Perth Museum looking at their historical records of the NBA in Perthshire. In his "Fauna Perthensis – Lepidoptera" published in 1871, Francis Buchanan White gives a list of species found in Perthshire. For each he indicates which regions of Perthshire they occupy, and gives a few sites close to Perth where they occur "for the benefit of collectors". Of the NBA he says " ...*Lycaena artaxerxes* of whose area of distribution this county is near the centre, occurs where ever its food plant *Helianthemum vulgare* grows". The areas for which he lists it are Forth, Earn, Gowrie, Perth and Rannoch. He regarded Kinnoull and Moncrieffe as good sites where it could be seen near Perth.

The species was clearly known from many more sites than those listed, and later W.Wylie included it in his 1912 "List of the Macrolepidoptera of the Kinfauns Area". In an annotated list of Fauna Perthensis, Wylie also adds the sites at Pitroddie and Glen Farg. Some of the sites from which it is now recorded, were not in fact mentioned in the early days. It seems unlikely that the rock-rose was absent from those sites at that time but perhaps the greater difficulty of getting around to remote sites may have concentrated effort on the sites closer to homes and stations. There was also a vast amount of over-collecting of NBA in order to satisfy the demand of dealers, and it is entirely possible that this could have caused local depletion or extinctions, although I have found no actual evidence that this occurred in Perthshire. One rather horrifying example is in the advert (1857) reproduced in "The Aurelian Legacy" by Michael Salmon - "Wanted to Purchase, about Twenty Gross of the Scotch Argus (*P. artaxerxes*), in good condition, either alive or set". No wonder that many naturalists were at pains to keep quiet about their own sites.

Survey at Lundie Crag

As has happened for the last 3 years now, in July this year members of the East Branch of BC took part in a survey for the Northern Brown Argus at Lundie Crag in the Sidlaw Hills. The Sidlaw Hills lie to the N of the Tay Estuary, run West to East and therefore have, in places, sunny south facing slopes which suit the NBA. The altitude of the highest hill (King's Seat) is 377m and the top of the crags at Lundie is about 350 m. There are some large areas of forestry, and where this is situated then the trees may provide some shelter to the exposed slopes. There are some fairly impressive outcropping crags, geologically composed of Andesitic lavas which, being base rich, support the growth of Common rock-rose (*Helianthemum nummularia*). The crags are particularly extensive at Lundie giving an area at least 1km long on which rock-rose is common on the slopes as well as on the more inaccessible and

rockier tops of the crags. We chose Lundie as our survey site since there was a lot of rock-rose and the site is large enough that stepping on plants by surveyors is not the problem that it perhaps could be at smaller sites.



We produced a brief guide for participants on the training day with information on the NBA which could also be used to inform landowners. Apart from carrying out an egg count, we had a great walk in an area good for plenty of other species, including Grayling, Dark Green and Small Pearl-bordered Fritillaries and Small Heath. Moths seen there at various times include Ruby Tiger, Wood Tiger, Mother Shipton, Small Argent and Sable. Lundie is an SSSI and its botanical diversity is reflected in its

Lepidoptera. Our survey was originally conceived as a training day for members to become familiar with the appearance of rock-rose as well as NBA eggs and adults. The eggs are easily spotted, being laid on the upper surface of the new growth of the rock-rose. We gained a relatively quick idea of how many eggs were there by replicating 3 minute egg counts over different parts of the site. The advantage of this is that surveying is then less weather dependent, the eggs are present even if the weather is poor or the time of day not ideal for adults flying. It also extends the survey season as the hatched eggs remain on the plant for some time after hatching.

The presence or absence of eggs is a valuable guide to whether or not the butterfly is at a site. As we repeated our methodology annually to date it is worth reporting what we found. The first year of our survey we found a much larger number of eggs present than in subsequent years, and we noted that sheep had grazed the rock-rose plants down in July 2017.

Mean counts over 3 different parts of the site – replicate counts were done at east, centre and west parts of the site. 31st July 2016 6.0. 29th July 2017 0.6, 15th July 2018 2.0

The results do correspond with a change in grazing pressure.

The condition of the site had been monitored by SNH in both 2016 and 2017. In 2016 the sward was thought rank with few forbs (flowering plants other than grasses) owing to a lack of grazing, so the farmer was asked to increase grazing pressure, and the grassland was thought to be in better condition by September 2017. It was however following this grazing that the numbers of NBA eggs decreased, so possibly the grazing had had a detrimental effect on the rock-rose but a beneficial one on the moist grassland forbs below the slope. This highlights the difficulty of achieving a happy balance for all the fauna and flora on a site – what is good for one species can be detrimental for another.

The results could also indicate a fluctuating population, be dependent on the season or weather conditions.

The time of maximum eggs present on rock-rose plants may not have coincided with the survey time. A transect which is walked regularly over the season would help to address these variables, and one such transect is taking place at a site nearer to Kinross, and another on the coast in Fife. The maintenance of a good growth of rock-rose at the site is of course critical to the survival of the species, as rock-rose is the sole larval food plant. At Lundie the rock-rose is not threatened by the growth of Gorse or other scrub, but it appears that sheep may be detrimental to the growth of the plant at a time when the larvae are feeding.

However trampling by sheep can also produce bare ground which seems to be to some extent advantageous possibly because the plant can seed there and the sun may warm the ground. The situation is different at another site near Lundie that was monitored in the 1980s as part of the SDLP project (reference below) project (reference below) the short sward there created by sheep is now quite long and grazed only by Roe deer. The percentage cover of rock-rose plants appears to have decreased, but the butterfly still survives there along with a good diversity of other butterflies and moths.

What next?

We need to continue to survey the existing sites to look for changes and extend targeted monitoring and survey work for the Northern Brown Argus and Grayling. If you can help to survey an individual historical site near you, please get in touch with the Perthshire and Angus butterfly recorder Glyn Edwards. Another Lundie survey and training day is planned for Sunday 7th July 2019 – all welcome. Further details are to be posted on the Butterfly Conservation website. If there are any volunteers who would like to take part please get in touch with Cathy Caudwell 01828 686709 or perthshire.butterflies@fireflyuk.net.

Acknowledgements

Thanks to Glyn Edwards, David Barbour, Elspeth Christie (SNH), Barry Caudwell, Mark Simmons (Perth Museum), and all those who helped with surveying. Also to Tom Prescott for introducing us to the survey method and Dr Mark Young for sending the report on “Scottish Diurnal Lepidoptera Project: Sites, Protocols and Distribution” by Pearce, Barbour, Bayfield, Young, Watt and Holman. CEH 1996.

Event in East Scotland in 2019

Aberdeenshire

Saturday 11th May 10.30am (for moth trap opening) & drop-in until 4.00pm

MARVELLOUS MOTHS & POWERFUL POLLINATORS

As part of the Cairngorms Nature BIG Weekend, local ranger services and wildlife experts will offer a day of activities for families and nature lovers around Braemar, including this event: Discover the amazing variety of our pollinating insects – how you tell your bumblebee from your hoverfly and what we can do to help these tireless workers. In the morning we will open live traps set last night to see what moths have been caught. Throughout the day there will be a stand where you can make bug homes, find out about planting for pollinators, and more! Under 16's must be accompanied. Event organised with Aberdeenshire Council Ranger Service. Booking not required, donations welcome.

MEET: Cairngorms Nature Big Weekend hub at Braemar Highland Games Park, Broombank Terrace, Braemar AB35 5YX

CONTACT: Visit <http://www.cairngormsnaturebigweekend.com/> or phone Aberdeenshire Council Marr Area Ranger on 01467 538171

Saturday 11th May 2.30pm – 4.30pm ON THE WING WITH BUTTERFLIES

As part of the Cairngorms Nature BIG Weekend, local ranger services and wildlife experts will offer a day of activities for families and nature lovers around Braemar, including this event: Join Aberdeenshire ranger Helen Rowe and field ecologist Petra Vergunst for a fun-packed family event in which we live and think like butterflies and explore the woods and heaths of Morrone Birkwood as if we are our fluttering friends! Under 16's must be accompanied. Bring outdoor clothing suited to weather & stout footwear. Includes walk of up to approx. 1.5km/1 mile on gravel tracks & paths with some gentle inclines & uneven ground. Free transport provided from meeting point at hub to duck-pond car park. Event organised with Aberdeenshire Council Ranger Service. Booking essential (see below or sign up at CNBW hub at Braemar Highland Games Park on day of event), donations welcome.

MEET: Cairngorms Nature Big Weekend hub at Braemar Highland Games Park, Broombank Terrace, Braemar AB35 5YX (Alternative parking at duck pond car park, top of Chapel Brae, Braemar AB35 5YT – please say if you plan to make your own way here instead of minibus transport from games park)

CONTACT: Book via <http://www.cairngormsnaturebigweekend.com/> or phone Aberdeenshire Council Marr Area Ranger on 01467 538171

Saturday 15th June 10.00am – 12noon WINGED & WATERY WONDERS

Meet some wee woodland beasties, including live moths caught the night before and discover who is lurking in the pond at Burnett Park! Under 16's must be accompanied. Bring outdoor clothing suited to weather + stout footwear. Event organised with Aberdeenshire Council Ranger Service. Booking essential, donations welcome.

MEET: tennis court car park, Burnett Park, Banchory AB31 4AE

CONTACT: Book via <https://www.aberdeenshire.gov.uk/leisure-sport-and-culture/ranger-service/events/> or phone Aberdeenshire Council Marr Area Ranger on 01467 538171

Friday 26th July 8.30pm - late MOTHS & BATS AT LEITH HALL

Join us to learn more about the fascinating world of moths and help set up light and sugar traps (that don't harm moths) to attract these night-flying creatures. While the moths gather, we will go on a bat walk around the hall using bat detectors to see what is out and about and learn more about bats and their nocturnal lifestyles. Then we will go back to see if we have caught any moths. Under 16's must be accompanied. Bring warm clothing, stout footwear, sunglasses/wide-brimmed hat (to shield eyes from bright moth trap light), midge repellent & torch. Event organised with National Trust for Scotland and Aberdeenshire Council Ranger Services. Booking essential – please mention any special requirements; cost £5.00 per person (+ parking charge for non-NTS members).

MEET: Leith Hall car park, Kennethmont AB54 4NQ

CONTACT: Book via <http://www.nts.org.uk/> or for queries phone National Trust for Scotland Rangers on 01330 844810

Sunday 28th July 12.00noon - 4.00pm

MOTHS & MORE AT DUTHIE PARK ENVIRONMENT DAY

Come and visit the Butterfly Conservation stand at Duthie Park Environment Day. We will show live moths from overnight trapping plus have children's activities and free leaflets to take away.

MEET: Our stand along with those of other organisations will be on the old bowling green in front of the Rangers Office, Duthie Park, Polmuir Road, Aberdeen AB11 7TH

CONTACT: Aberdeen City Council Duthie Park Rangers at wintergardens@aberdeencity.gov.uk or 01224 580165

Tuesday 30th July 10.00am – 12.30pm **MARVELLOUS MOTHS**

Discover the amazing diversity of moths and their roles in nature. We will unveil last night's live moth trap catch, then search for day-flying moths and butterflies if time and weather allow. Find out how to take part in the Big Butterfly Count and attract pollinating insects in your own garden too. Under 18's must be accompanied. Event organised with Aberdeenshire Council Ranger Service & Scottish Natural Heritage. Booking essential, donations welcome.

MEET: Burn o' Vat Visitor Centre, near Dinnet AB34 5NB

CONTACT: Muir of Dinnet NNR Manager on 013398 81667

Friday 2nd August 8.00pm – late **NIGHT HUNTERS AND THEIR PREY**

Get up close and personal with bats and moths. Come and dispel all your fears of these intriguing animals. Under 16's must be accompanied. Bring warm clothing, stout footwear, sunglasses/wide-brimmed hat (to shield eyes from bright moth trap light), midge repellent & torch. Event organised with Aberdeenshire Council & Balmoral Estate Ranger Services for Ballater Victoria Week: <http://www.ballatervictoriaweek.co.uk/> Booking essential, donations welcome.

MEET: car park by Visitor Information Centre, Crathie AB35 5UL

CONTACT: Balmoral Estate Rangers on 013397 55059

Saturday 28th September 6.30pm – 11.00pm **A WILD NIGHT OUT AT SEATON PARK**

On the weekend of national Moth Night 2019, enter the mysterious world of night creatures! This will include setting up sugar and light traps to attract moths – which we will release unharmed after identification - and using detectors to pick up ultrasound of hunting bats. Ideal for adults & older children; under 16's must be accompanied. Bring warm clothing, stout footwear, sunglasses/wide-brimmed hat (to shield eyes from bright moth trap light), midge repellent & torch. Event organised with Aberdeen City Council & Aberdeenshire Council Ranger Services. Booking essential, donations welcome.

MEET: Seaton Park car park, Don Street, Aberdeen AB24 1XS

CONTACT: Book via <http://accountrysideranger.eventbrite.com> or phone Aberdeen City Council Rangers on 01224 326429

Saturday 28th September 6.30pm – late **MOTH NIGHT AT ST. CYRUS**

St. Cyrus National Nature Reserve is home to a huge variety of butterflies and moths, but many people miss the moths that fly at night. On the weekend of national Moth Night 2019, join local experts to discover the amazing diversity of moths and listen out for night hunters including owls and bats with a bat detector! Event organised with Scottish Natural Heritage. Suitable for age 5+; under 18's must be accompanied. Booking essential, donations welcome.

MEET: St. Cyrus NNR Visitor Centre, The Old Lifeboat Station, St. Cyrus DD10 0AQ

CONTACT: St. Cyrus NNR Manager on 01674 830736

Perthshire

Sunday 7th July 2019: 10.30am

Northern Brown Argus Survey Day. Join the East Scotland Branch on this survey training day and butterfly walk where we will look for the Northern Brown Argus and its eggs as well as other insects. Meet at grid reference NO263360 (nearest post code: PH13 9LA) at the Tullybaccart car park which is on the west side of the A923 Dundee-Coupar Angus road about 10 km N of Dundee. There will be a walk of approximately 2.5 to 3 km both to and from the site. There is a rough track at first and the site itself is on a steeply sloping vegetated hillside. Make sure you bring good outdoor gear and a packed lunch.

Please ring or email in advance so we know how many to expect. Contact Cathy Caudwell perthshire.butterflies@fireflyuk.net (or tel. 01828 686709) for numbers and further details of meeting place.

Saturday August 10th. 11:00am-3:00pm.

Butterfly walk for Scotch Argus and Common Blue at Craigower Hill, Perthshire.

Meet at the Ben Vrackie car park. Grid reference NN94385952.

The walk will be led by Hamish Johnston and is a walk of approx. 2km by the golf course with a further walk to the base of the hill and 1km up the hill. Wear stout footwear and bring a packed lunch. Sorry no dogs.

The event is free but it would be helpful if you could advise Glyn, glynedwards19@yahoo.com if you are planning to attend.

Moths on Saturday, 13 July: Moths in the morning at Murton Farm Park. Drop-in session to see last night's moth catch at 10am.

Murton is situated on the A923 about 1.5 miles east of Forfar on the road to Arbroath. Murton Farm car park is at NO493512.

Fife

Moth nights

There will be regular outings at Tentsmuir this year.

Friday, 3 May: Meet at Kinshaldy car park (NO499242). Then at Tentsmuir again on: 31 May, 28 June.

Friday 10 May: at Devilla – meet at Devilla car park at NO964871.

Friday 12 July: **moth night** at Kinraig, meet at Kinraig car park at NO469004.

Moth nights and butterfly days continue at Drumoig Wildlife Centre on 20 July, with further moths nights at Tentsmuir on 2 and 30 August and 26, 27 and 28 September. There will be further moths nights at Tentsmuir on 30 August and 26, 27 and 28 September.

Butterfly walks:

Sat. 4 May: at Tentsmuir then on Sat. 11 May, Sat. 1 and Sat. 29 June and 3 August.

Sat. 11 May: at Dunn moss and Loch Shaw, meet at Dunn moss – NS986924.

Sunday 12 May: Loch Shaw – NS988910.

Saturday 13 July: coastal walk at Kincaig. Meet at Kincaig car park (NO469005).

10 August: A butterfly day is planned for at the Scottish Deer Centre and another at Wormitt-Cemex quarry - date tbc.

Please consult the East Scotland website (www.eastscotland-butterflies.org.uk) for more details of all outings.

The Lothians

Sunday, 16 May. A trip to Glencorse Reservoir to see if our management of a site for Green Hairstreaks has been successful. Meet at the car park at the visitor centre at Flotterstone (NT230633) at 10.30am. Contact: Richard Buckland, t: 07711453605, e: r.buckland@blueyonder.co.uk.

Sun. 7 July to Toxside moss, nr Gladhouse Reservoir to see Small Pearl-bordered Fritillary and possibly early Dark Green Fritillary and Large Heath. From Penicuik take the B6372 for about 4 miles to the crossroads at Mount Lothian farm and take a right along to Cockmuir farm. Meet at the end of the track through the site at Cockmuir, at 10.30. Contact: RB (as above).

Sun. 14 July. To Limerigg in West Lothian to see Small Pearl-bordered Fritillary. Meet at the end of the track off the village green (NS857888) at 10.30. Limerigg is on the B825 from Avonbridge. Contact: RB (as above).

Sun. 21 July to Bothwell Water in deepest East Lothian to see Northern Brown Argus. Meet at the car park at Whiteadder Reservoir (NT667632) at 10.30. Contact: RB, as above. For all outings please bring waterproof clothing, sturdy footwear and a packed lunch if you intend staying for the afternoon.

Moth days at Haddington

28 Apr.; 26 May; 30 June; 28 July; 25 Aug.

All at Amisfield Walled garden, Haddington. At 9.30am. in each case.

(www.amisfield.org.uk). Contact: Katty Baird e: kattybaird@gmail.com.

The Borders

Saturday 15 June 2019 *Butterflies and Bees of the Borders*

Meet at 10.00am at Chapel Mains Farm House, Blainslie, TD1 2PN (NT551424). This will consist of an indoor butterfly and bee ID workshop aimed at beginners or those new to recording starting with "last night's moths" and we'll then go on a guided walk looking at butterflies, bees and wildflowers in the surrounding habitats. Tea, coffee and cake provided but please bring some lunch and suitable outdoor walking shoes & clothing.

For further details **and to book a place** (workshop space is limited) please contact Apithanny Bourne chair@eastscotland-butterflies.org.uk.

Many of the outings include the Northern Brown Argus as a target species. We are currently working on a comprehensive survey of this butterfly across the Borders and the sites being visited are ideal for learning about its habitat requirements and how to identify the adult and search for eggs (which can be done whatever the weather).

Saturday 22 June 2019 *Northern Brown Argus, Other Butterflies and Moths at Abbey St Bathans*

Meet in the car park in Abbey St Bathans by the Whiteadder Water (NT762619) at 11.00 am. We will explore Edgar's Cleugh where there is a strong Northern Brown Argus colony as well as other butterflies such as Dark Green Fritillary and Small Heath together with many day-flying moths including the Cinnabar. If conditions permit the contents of an overnight moth trap will be examined. It is not a long walk but the track up the cleugh can be rather overgrown so appropriate footwear and clothing is advised. Bring a packed lunch.

Contact: Barry Prater 018907 52037 barry@prater.myzen.co.uk

Sunday 23 June 2019 *Northern Brown Argus Ecology and Survey Training Day Peebleshire*

Meet at 10.30 am at the Leithen Lodge road end, four miles north of Innerleithen on the B709 Innerleithen to Heriot Road (NT328423). Parking on the road-side. The event provides the opportunity to see the Northern Brown Argus butterfly in one of its strongest Borders colonies at an easily accessible location. We will learn tips on how to find the butterfly, identify its larval foodplant and find eggs, and to recognise threats to its habitat. This will equip attendees to undertake their own surveys for NBA. Bring warm clothing, waterproofs, packed lunch and enthusiasm.

No dogs as this a working sheep farm.

Contact: Reuben Singleton reuben@tweedecology.co.uk

07783 047398

Saturday 29 June 2019 *Walk around Tofts Hill for Northern Brown Argus*

Meet at 10.30 am at Upper Tofts Farm steadings (NT546138). This is a left turn off the A6088 about 3 km SE of Hawick. The plan is to walk over Tofts Hill and on to Cuckoo Plantation. A botanically interesting area, the steeper slopes have plenty of rock rose and so it should be possible to see adult Northern Brown Argus and look for eggs; it was last recorded here in 2005. Terrain is largely dry grassland on a not very exposed plateau with steep slopes to south which can be avoided. Wear clothing appropriate for the time of year and weather.

Contact for further details is Sarah Eno on 01750 76398 or 07810 492286.

Saturday 13 July 2019 *Hare Moss & Dunhog Moss SWT Nature Reserves*

A short walk organised by the Scottish Wildlife Trust Central Borders Group. Meet at St. Dunstons car park (Health Centre) Melrose (TD6 9RX) at 1:30pm to organise car share or at the reserve at 2.00pm.

The vehicle entrance to the reserve is on the left-hand side of the A7 two miles south of Selkirk (just after the large TV mast) at NT466242. A walk of 1-2 miles during which we will visit the Hare Moss hide and surrounding areas to see a variety of birds, wild flowers and insects. Northern Brown Argus and

Narrow-bordered Five-spot Burnet moth should be on the wing as will several species of damselfly. Wear stout shoes or boots and clothing to match the weather. Finish 4.30 pm.

Contact: Alison Smith (walk leader) on 01896 754082.

Saturday 13 July 2019 *Kelso for White-letter Hairstreak*

We're teaming up with the Edinburgh Natural History Society for this exciting event seeking the latest addition to Scotland's breeding butterfly list. The meeting place will be by Mayfield Garden Centre at 10.30 am, where there is spacious free car parking by the riverside walk at NT730336. We will walk from Mayfield towards Kelso Bridge where there is a colony of the White-letter Hairstreak and also explore other sites nearby. The total distance will be between around 2½ – 3½ miles. Footwear and clothing to suit town and country walking. Paths are pretty much flat with no steep gradients and should suit most if not all abilities. Bring lunch, a waterproof just in case and binoculars might be handy for a small butterfly that spends its time at the top of a tree. Contact: Iain Cowe, 6 Lammerview, Chirnside TD11 3UW. Mobile: 07904 274310 Email iainacowe@gmail.com Facebook message <https://www.facebook.com/iain.cowe.5>

Saturday 27 July 2019 *St Mary's Loch (Ring of the Loch pathway)*

A walk organised by the Scottish Wildlife Trust Central Borders Group. Meet at St. Dunstons car park (Health Centre) Melrose (TD6 9RX) at 10.00 am to organise car share or at the car park below the James Hogg Monument at the south end of the Loch (NT237204, nearest postcode TD7 5LH) at 11.00 am. A 7½ mile walk around the loch on the "Ring of the Loch" pathway. A shorter 3½ mile option along only the south-eastern side of the loch via Bowerhope should be possible. The whole walk is very scenic and there should be interesting plants, insects and other wildlife. A colony of Northern Brown Argus is present on the path near Cappercleuch. Wear stout shoes or boots and clothing to match the weather. Bring picnic lunch. Finish at 4.00 pm. Contact: Jim Russell (walk leader) 01835 824898.

Friday 27 & Saturday 28 September 2019 *Moths at Woodside Walled Garden*

Celebrate the annual Moth Night at this wonderful family- and wildlife-friendly site situated near Harestanes; turn off the A68 at Ancrum and it's just 1km along the B6400 at NT643249. Come along on the Friday evening at 6.30 pm for a couple of hours when we set up and monitor moth traps. £5 per person to include refreshments. 6.30pm – 8.30pm.

On the Saturday morning we'll be emptying the traps from 9.00 am and finding out which species have turned up. So, make a return visit to Woodside and also enjoy bacon rolls (veggie option available). £5 per person to include breakfast.

Booking is necessary for both sessions and to book your place contact Woodside Walled Garden 01835 830315 emma@woodsidegarden.co.uk

For more information on the moths contact Charlotte Cavey-Wilcox charliecheese@hotmail.co.uk

Butterfly Year 2018 in the Lothians *Simon Metcalfe*

This article summarises the butterfly year in 2018 across the Lothian region which comprises vice counties East Lothian, West Lothian, Mid Lothian and Edinburgh.

The year started slowly compared to last year, in 2017 the warm winter weather resulted in the early emergence of hibernating butterflies in January and February. In 2018 the hibernating butterflies began to emerge in late March and only really got going in mid to late April due to a period of cold and wet weather. Unsurprisingly the overall number of sightings in 2018 increased from 2017 reflecting the very good

weather from mid-April to early August during which time there was very little rainfall. The number of records being submitted for the Lothians region has increased over the last 5 years from 4,500 in 2014 to 9,500 in 2018. Whilst there would be more records submitted in good butterfly years the increase is also a reflection of more people becoming interested in butterflies and submitting records. Hard work by Butterfly Conservation in its efforts to get the public involved in the Urban butterfly project, Big Butterfly Count and Garden Butterfly Survey has raised awareness and caused more people to contribute records.

The following sections provides a few details on how the individual butterfly species fared during 2018.

Whites (Pieridae Family)

All the white butterfly species had a very good year. Orange-tips had their best year



yet even better than 2017 which was also a good year for this species, in both years this was due the good Spring weather.

The Large White had a very good year with a 600% increase in those seen compared to 2017.

Orang-tip laying *Richard Buckland*

The number of Small Whites seen this year was up by 800% compared to last year with several locations where 100 – 200 butterflies were seen in one day such as Longniddry Bents, Aberlady Local Nature Reserve and Traprain Law.

Skippers (Hesperiidae)

The only Skipper species that can be regularly seen in the Lothians is the Small Skipper. There were a few sightings of Large Skipper in East Lothian in 2017 but no further sightings in 2018.

The Small Skipper is a recent colonist to the region first appearing in 2011 with a small number of sightings at Aberlady and Gullane. The numbers seen has increased in subsequent years reaching a total of 580 in 2018. Over the past few years this butterfly has spread across East Lothian and has recently moved into Edinburgh. The principle sites to see this butterfly are Aberlady Local Nature Reserve, Holyrood Park and the grasslands next to the Royal Infirmary.

Browns / Fritillarys (Nymphalidae Family)

The individual species within the family have mixed fortunes in that some are increasing in number and colonising new locations whilst others are generally

unchanged or gradually on the decrease.

The species that have increased and colonised new locations are the Wall and Speckled Wood. The Wall started being recorded in 2010 and increased to 540 individuals being recorded in 2018. The Wall can be seen along the East Lothian coast at Yellow Craig, Dunbar and Barns Ness.



The Speckled Wood has increased more dramatically from a few sightings in 2009 to 2,500 seen in 2018. It has spread throughout East Lothian and is currently colonizing Edinburgh. There are records from Roslin Glen and one sighting in West Lothian.

Wall Brown at Dunbar *Richard Buckland*

It is likely that the Speckled Wood will continue to spread from east to west in the Lothians region over the next few years.

There have been a few sightings of Large Heath this year at a location near to Gladhouse, in the previous four years there have been no sightings so it could be that Gladhouse is the only location where the Large Heath can be seen in the Lothians.

In previous years sightings of the Meadow Brown and Small Heath have been decreasing probably due to the poor weather that has been experienced in July in recent years. In 2018 the numbers seen improved compared to 2016 and 2017 although they are lower than 2014 and 2015.

The Ringlet has a very good year with the total number seen being 5,000.

The numbers seen each year has been increasing gradually over the past 10 years and it a species that seems to be expanding its range probably due to climate change.

Graylings can only be found at few locations in the Lothians region such as Holyrood Park, Calton Hill, Hermitage of Braid and Blindwells.

The numbers seen in 2018 increased by 300% from those seen in 2017, this is partly as a result of the good weather and a new transect in Holyrood Park.

Of two species of fritillaries that can be found in the Lothians region the Dark Green Fritillary numbers appear to fluctuate over a 3-4 year period.

The numbers seen in 2018 increased from 2017 and could possibly peak in 2019. East Lothian is where this species is mainly seen at locations such as Aberlady Local Nature Reserve. The Small Pearl Bordered Fritillary is a more specialist species on bogs / heathland and can only be seen at a few locations such as Bavelaw Marsh, Easter Inch Moss and Toxside moss. Numbers seen vary each year from 20 – 65.

The Comma had a good year in 2018 with 270 seen across the Lothians, majority of sightings are in East Lothian and Edinburgh. Red Admiral has a very good year last year with the number seen at 2,000. This year only half of this number were seen however this was still greater than the numbers seen in years prior to 2017.

The Peacock had its best year in the records with 3,250 individuals seen in the year. The Small Tortoiseshell had a similar year to 2016 and 2017, however since 2014 the numbers seen have been decreasing. Number of Painted Ladies seen each year varies between 100 – 400, 2018 was a good year at just under 400 seen.

Blues / Hairstreaks / Coppers (Lycaenidae)

The only hairstreak that can be seen in the Lothians is the Green Hairstreak at locations in the Pentlands, Linn Dean and Saltoun Forrest. The numbers seen in 2018 are in line with those in previous years.

Small Copper had a very good year with a 200% increase on 2017 and can be seen throughout the Lothians region with sightings mainly in East Lothian and Edinburgh. Common Blue had a better year in 2018 than 2017 with numbers seen being slightly higher than the historical average.

Northern Brown Argus can only be found at few locations including Holyrood and Linn Dean. The numbers seen in 2018 increased from those seen in 2017 to 152, this is due to the weather and a new transect that has been formed in Holyrood Park.

A few Holly Blue were seen in 2018 mainly in East Lothian.

Finally, I would like to thank those who have submitted records during the past year.

Submitting Butterfly Records with iRecord

Anthony McCluskey

Thanks to technology it is easier than ever to send in sightings of butterflies. Thousands of records are received this way every year now, and it has helped open the world of butterfly recording to people who may never have recorded an insect. **But how can you go about it?** The recording system called **iRecord** is used by a growing number of organisations to provide a place where anyone can send in records of any wildlife. Butterfly records can be entered in a number of ways; in this article, I will describe to you how to use the iRecord website, and the iRecord Butterflies app. Let's start with the website. The web address is unfortunately still clunky: www.brc.ac.uk/firecord, you can also find it through a search engine. On that first page you should follow the clear instructions to create a new account (here's a tip: write your username and password down in your recording notebook!). Following this, when you log in you will see a bar with various options. Bring your mouse over **Record** and a list of options will appear (see figure 1).



To submit a single record, choose **Enter a casual record**; to enter multiple records for a single site on a single date choose **Enter a list of records**; and to enter records for multiple sites on a single date, choose **Enter records at several places**.

What Did You See? | Where Was It?

Record destination: Ad-hoc non-group records
Choose whether to post your records into a group that you belong to.

Date: *

Recorder Name: *

Enter the recorder's name, if different.

Please enter all the species you saw at one site on a single day and any other information about them. Then move to the **Where was it?** tab before submitting your records.

Species	Certainty	Quantity	Sex	Stage	Identified By	Comment	Add photos
Red Admiral [Vanessa atalanta] insect - butterfly	Certain	1	not recorded	not recorded	McCluskey, Anthony	Nectaring on Michaelmas	
	Certain		not recorded	not recorded	McCluskey, Anthony		Select a species first

If you choose **Enter a list of records**, you will be brought to a page with two tabs (see figure 2). The first is called **What did you see?** First of all you need to enter the date you saw it. Then in the boxes below you can type the species (this has an auto-completed function so you can easily find all you need). Also enter the number seen. The other fields (sex; stage; identified by) I usually leave blank. You can add a comment too, such as the nectar plant or behaviour. You may also add a photo from your computer; while it's not necessary it may help when your record is verified. Complete this process for all the species you saw at this location on that date. Following that, click the **Where was it?** Tab. Here you need to give the location a name; if you don't know a proper name, something like 'Car park near library' will suffice, as you will also provide a grid reference (see figure 3). The next box down is **Enter a**

Enter a list of records (for a site on a date)

New feature. After adding a species, click the +/- button which appears at the right hand end of the row to show and hide attributes that do not fit on the row.

What Did You See? | Where Was It?

Location: *

Provide the name of the site, ideally using one that is recognisable from an OS map. Do not enter a postal address as the information you provide will be visible to others.

Enter a spatial reference: *

Or search for a place on the map:

Or simply click on your rough position on the map.

Habitat:

Overall comment:

spatial reference. This is where you can enter the grid reference (if you know it already). But in most cases it will be easiest to go to **Search for a place on the map.** This allows you to type a place name, post code, etc., and find where you were! So in my example I have typed **Bridge of Allan Library**, and the map brings up the library and surrounds. At the top right corner of the map you will see the little plus sign. If you click it and choose **Google satellite** you will get a better view of the area (see figure 4). If all the butterflies you saw are in a small area, just click the



map as it is and it will automatically enter a precise grid reference for you! However if they were over a slightly larger area of say 10m or 100m, just zoom out and click the larger square and it will give you a new 100m grid reference, as you can see in my example. Following that you can go down the page and enter the habitat information if you know it, then just click the submit button and you're done!

The **iRecord Butterflies** app can be downloaded for free for smartphones and tablet



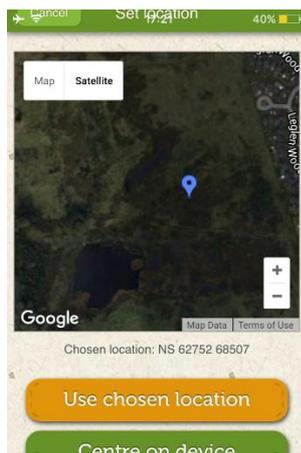
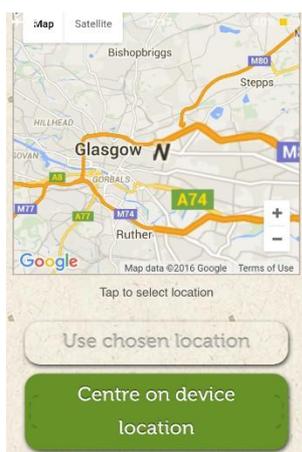
computers. It can only be used to record butterflies, but has a complete guide to all the butterflies found in the UK. When you download it you will be asked to sign up for an iRecord account. On the front page you'll see the three options listed in the pictured in figure 5.

If you want to record a single species from one place, choose **ID/Record a butterfly**, but if you want to send in records of several species, or to record as you walk along in a defined area, choose **Survey an area**. For the rest of

this guide I'll be discussing how to survey an area. Once you've chosen **Survey an area**, you will see the screen in figure 6.

You must give a site name, but you can choose to add that to your favourites so it will come up next time. You should also select the approximate size of the area, which ranges from point location (such as in a small garden) to 1km x 1km.

Now, to define the location with a grid reference, you can choose from **Get my current location**, or **Enter using Map** (see figure 7). **Get my current location** only works if you have location services enabled—this is what is used by GPS, navigation, etc. It finds where you are and uses that as your location for your record. This option is very useful if you're out for a walk and see something, especially if you don't know exactly where you are.



The other option is **Enter using map**. This will bring up a map of the UK, into which you can zoom by pinching the screen and expanding it. You can switch between a normal map or a satellite view. Once you've found the place where you want to make your record, just tap that point on the screen and you will see the blue pin drop on it. You will also notice that the **Use Chosen Location** button turns from grey to orange (figure 8), and you can now press that to proceed to the next step. You will then see a screen similar to that shown in

figure 9. It will automatically use today's date for your record, so change that if you need to. Press **Add species to survey** and you will see a list of butterflies which is arranged based



on the likelihood of you seeing them at that time of year. So common and widespread species will be at the top but if you want to see all species, simply scroll down and select **Show Additional**. For each species you see, just tap the photo. Following that, you can use the plus and minus signs to increase or decrease the number. If you press the little grey square to the top right of the species name box you will be allowed to type in a number, or choose from a series of options such as: **1; 2-9; 10-29; etc.** It's best to give an actual number instead of one of those number ranges, as recorders need to have a real number. Once you're done, press **Send**. You will then see two options, **Send now**, or **Save and Send Later**. You can use the latter option if you want to keep adding records or you don't have a Wi-Fi or internet signal. When you finally do want to send those records,

go back to the home screen, press the file icon in the top left, choose **My sightings** and choose to send your survey. You can also go there to update surveys to which you'd like to add species.

One drawback about the iRecord system is that not all Butterfly Recorders (the people who verify the records and send them to the national databases) download and use the system. While all of the app records are actually downloaded by BC head office and sent out to the relevant Butterfly Recorders, the records on the website rely on the Butterfly Recorder actively going online and verifying them. If you are unsure whether the Recorder for your area is using iRecord, please feel free to contact the Scottish office on scotland@butterfly-conservation.org and we can check for you.

Moths in the Garden *Katty Baird*

For the last two years there has been a monthly moth-ing session in Haddington, East Lothian. Descriptively called "Moths in the Garden" (or MITG) the sessions have taken place on a Sunday morning at the beginning of each month (colder months excluded). We started it to provide an opportunity for members of the public to see and learn about local moths and moth trapping, but it has also become an excellent way for existing moth trappers to meet, get help and share trap highlights



(There's nothing like a bit of moth geekery with fellow enthusiasts on a Sunday morning). Our venue is St. Mary's Pleasance, a public garden in Haddington managed by Haddington Garden Trust. It is centrally located, relatively easy for people to get to and locked overnight which provides security for the traps. On the downside, there is no mains power so less powerful battery-run traps have been the only option. Moth-wise the gardens have not been brilliant and our macro

list has only reached 28 species. The weather has often been less than ideal, but possibly the well-tended borders are the main limit to the diversity of species on offer. Nevertheless, we added Orange Swift and Garden Dart to the 10K square; the latter is not a frequent moth in the Lothians and was trapped in both years. To add to the variety, local trappers bring moths from their own traps to "show and tell". This has allowed us to marvel together at some of our more impressive or showy species (Elephant Hawk-moth, for example) and, for



those that wish, to debate the identity of smaller, difficult or worn specimens. Some people have become MITG regulars (one couple have borrowed a trap for their garden – and then proceeded to catch East Lothian's very first Buff Arches on their second go!), but each time there have been new faces, who have learned a bit about the moths that exist all around us yet we never normally see.

So, now what? MITG is set to continue in 2019, but we have decided to move to Amisfield Walled Garden on the outskirts of Haddington. A more varied habitat and the opportunity of some different moths. Dates are still being confirmed – keep an eye on the East Branch website and Facebook pages where details will be posted. As with last year, there will be a handful of other events taking place around the county and maybe even into some of the other Lothians. Suggestions for

Garden Dart

locations are very welcome!

Thanks to Donald Smith who runs the sessions with me, and to everyone who has turned up and supported MITG so far (in particular to Sheila and Malcolm for moths and moth knowledge). And a huge thank you to Haddington Garden Trust for allowing us regular access to their gardens and for tasty mulberry foraging.

Over the past year, Butterfly Conservation members in North East Scotland have continued to engage in recording and raising awareness of butterflies and moths to encourage more people to become involved. Several events were arranged during 2018, many in partnership with other organisations.

Moth nights/mornings, butterfly walks and more were held at nature reserves and other local sites across Aberdeenshire and city. We were again invited to have a BC stand at the Environment Day in Duthie Park, Aberdeen and also had displays during the summer at the Burn O' Vat Visitor Centre.



Many events were coordinated by myself (Aberdeenshire Council Ranger & BC East Scotland branch Aberdeen Area Organiser) with support from and additional events run by other BC members/volunteers in the area or colleagues from Aberdeen City Council, National Trust for Scotland and Balmoral Estate Ranger Services, Scottish Natural Heritage, North East Scotland Biological Records Centre (NESBReC) and community organisations. Through such events people of all ages have discovered the diversity of butterflies and moths on their doorstep and learned about their importance in ecosystems and need for conservation.

2018 Highlights included the following:

A butterfly recording workshop was organised in Aberdeen as part of BC Scotland's Urban Butterflies Project with BC Scotland's Anthony McCluskey and NESBReC. About 20 people from novices to experienced butterfly recorders attended and some have gone on to establish a new transect on Kincorth Hill, Aberdeen. Others have got involved with recording and monitoring elsewhere in the area.

'Marvellous Moths' has become an annual summer fixture at Burn o'Vat on the Muir of Dinnet National Nature Reserve and attracted lots of visitors as well as 50 species of moth to the light trap.

A big thank you goes out to everyone who helped make the events a success as well as to all those who have participated in butterfly and moth recording in the area in the past year!

There were also opportunities to encourage participation in the Big Butterfly Count and share moth trapping with schools and other groups - seeing children's enthusiasm as they meet butterflies and moths close-up is always rewarding. BC members gave talks to community groups such as gardening clubs, encouraging them to grow butterfly and moth food-plants and report sightings. All this has helped to promote Butterfly Conservation's work to a wide audience.

Recording efforts continued for two priority moths that are also part of the Rare Invertebrates of the Cairngorms project: Kentish Glory had a good season and through use of new pheromone lures that mimic the females' scent and identification of potential young birch habitat, the species was found to be present in several new 1km squares adjacent to known sites. On one memorable occasion I was standing between two lures and a male Kentish Glory approached so fast that it hit me in the face and proceeded onwards!

The Dark Bordered Beauty had a mixed year – the species was recorded at two new and many existing Deeside sites, sometimes in reasonable numbers. More potential sites were discovered, but late in the season as emergence was early this summer. However, moths were not found at a number of known sites, although some still appear to have good habitat (aspen suckers). Others require protection from overgrazing so it is hoped to establish more fencing.



Another moth highlight was the rediscovery of the rare Small Dark Yellow Underwing at two sites south and north of the Dee/Don watershed on the Crathie to Corgarff road, where they were last seen in 1989 (last 10km square record 2006) and 1990 respectively (which was last 10km square record). The only other more recent Aberdeenshire sighting was from the Lecht in 2014, so it was encouraging to find the species still present at its previous haunts. See BC Scotland e-news Summer 2018 for more details and also about pheromone luring for Red-belted Clearwing by a local volunteer: <https://butterfly-conservation.org/in-your-area/scottish-office/newsletters>

Small Dark yellow Underwing

Butterfly-wise, 2018 was certainly much better than the previous couple of years. The Pearl-bordered Fritillary had a great season on Deeside, helped by warm sunny spring weather,

which produced some record high timed count numbers on annually monitored sites and a few 'new' colonies were discovered in some sheltered spots on high ground, one actually just over into Donside (at the same place on the same day as one of the SDYU moths). The continuing heatwave resulted in early



emergences of some species and some second generation Small Pearl-bordered Fritillaries were spotted on Mar Lodge Estate in late August, which is unusual for this butterfly, especially in north Scotland.

There were quite a few reports of Commas in the region in spring and late summer 2018, as far west as Invercauld, so they continue to spread slowly. Several sightings of Speckled Wood were submitted,

as far west as Glen Muick and east as Aberdeen as this butterfly steadily increases its range.

A new Butterflies of North East Scotland ID guide (funded by Butterfly Conservation East Scotland & Highland Branches) was produced, in partnership with Aberdeenshire Council Ranger Service and NESBReC to enable people to learn about butterflies in the region and encourage them to submit sightings. It is available to download from the BC website: <https://butterfly-conservation.org/in-your-area/east-scotland-branch/suggested-butterfly-sites>

Free printed copies have been distributed to various local outlets in Aberdeen, Aberdeenshire and Moray, including some of the suggested sites to see butterflies mentioned on the leaflet, visitor centres and libraries. If anyone in Aberdeenshire/Aberdeen would like larger numbers for other outlets or groups, contact Helen Rowe: helen.rowe@aberdeenshire.gov.uk or NESBReC: nesbrec@aberdeenshire.gov.uk who will arrange to get some delivered.

Please contact Audrey Turner, BC Highland Branch: unicorn64@btinternet.com to request them in Moray/Highland.

For other areas, please send a large SAE to the BC Scotland Office.

If you live in Aberdeenshire/Aberdeen and would like to be more involved in local branch activities in 2019, whether events or surveys – you don't necessarily need to be a butterfly or moth expert to help! - please contact Helen Rowe: helen.rowe@aberdeenshire.gov.uk or 07787583976.

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Green-veined White *Richard Buckland*