

**Butterfly
Conservation**

Saving butterflies, moths and our environment



E-moth

Moths Count Update May 2019

It has been a slow start to the mothing season this year, we had a very early tease of spring for several days in February, which produced some interesting migrants. There were reasonable numbers of *Euchromius ocella* reported widely with a first new record for Northern Ireland at Murlough National Nature reserve in Co. Down on 22 February. Another interesting sighting was that of Levant Blackneck near Hayle in Cornwall on 23 February and last, but not least, a Crimson Speckled was recorded on 28 February on Islay, it was the first record of this species for Scotland since 1961.

The moth trap at Manor Yard has been run a few times this year and so far we've recorded 129 individuals of 31 species. The most abundant species have been Hebrew Character (26 individuals), Pale Brindled Beauty (19) and Early Grey (17).



Crimson Speckled (Robert Thompson)

#MothsMatter

We have recently launched a new social media campaign which aims to raise the public's awareness of moths and Butterfly Conservation's role in conserving them. As an organisation we receive thousands of moth related enquiries from members of the public each year. Quite often a casual encounter with a moth can ignite a spark in someone. We want to build on this passing interest and take them on a journey into the world of moths and moth recording, to enable them to build a life-long passion.

Every month the campaign will have a different theme, a focus on a couple of species and some supporting materials for example moth-related blogs, ID guides, quizzes and posters. For those of you who use social media, we encourage you to use the campaign hashtag #MothsMatter when posting interesting information about moths. It is clear from the results of a recent YouGov questionnaire, which showed that two-thirds of people thought moths were pests, that we still have much work to do change public opinion regarding moths. This is a massive challenge and it is only with a unified approach that we can get people to recognise the importance, value and beauty of these incredible insects. Until moths are held in higher regard, they will continue to be persecuted and misunderstood. It is our, Butterfly Conservation's and the moth recording community's responsibility to do this.



Lime Hawk-moth (Paul Pugh)

National Moth Recording Scheme update

The National Moth Recording Scheme (NMRS) was launched in 2007 and, thanks to the support of the moth recording community, it has been a massive success. There are currently 25.4 million macro-moth records and 2.9 million micro-moth records in the NMRS database. Over the past year we have received 38 macro-moth and 31 micro-moth vice-county datasets. These have not yet been imported into the NMRS due to work on the *Atlas of Britain and Ireland's Larger Moths*, however, import will resume in the near future. Many thanks to the moth recording community and the County Moth Recorder network for providing your records to the NMRS.



**National
Moth
Recording
Scheme**

UK Moth Recorders' Meetings

Our ninth UK Moth Recorders' Meeting (UKMRM) was held on Saturday 26 January 2019 at the Birmingham and Midland Institute in central Birmingham. It was another highly successful event and the feedback was incredibly positive. This annual event continues to be Butterfly Conservation's second largest annual event, attracting around 200 people every year.

We were very pleased to have Julie Williams, Butterfly Conservation's CEO to open the meeting. It was her first UKMRM and she was very impressed with the event and pleased to meet members of the moth recording community.

Speakers included County Moth Recorders and researchers from academic institutions. There was an update on the NMRS and a progress report on the forthcoming Atlas of Britain and Ireland's Larger Moths. Dr Katie Cruickshanks demonstrated the use of NMRS data for answering questions about strategic land management. Andy and Melissa



UK Moth Recorders' Meeting January 2019 (Jim Asher)

Banthorpe, County Moth Recorders for Bedfordshire, gave an overview of moth recording in their vice-county and examples of how different species are faring there. Graham Wenman spoke about the development of a multi-access key to aid the identification of micro-moth larvae (MIMOLA). Lightning struck twice as for the second time our international speaker could not attend due to Influenza. Fortunately Dr Adrian Spalding kindly stepped in with 36 hours' notice and presented a fascinating talk on moths and light pollution. Ben Smart gave a great talk on finding the early Stages of Micro-moths based on his book *Micro-Moth Field Tips: A Guide to Finding the Early Stages in Lancashire and Cheshire*. To round off the day Dr Chloe Denerley presented the findings of her PhD thesis, which was about the patterns in cuckoo and moth declines.

Our tenth UK Moth Recorders' Meeting will be held on **Saturday 25 January 2020** at the same venue. Further details will be available in the autumn. Please save the date in your diaries.

Atlas of Britain and Ireland's Larger Moths update

When we embarked upon this task we knew that it would be a challenge, I am pleased to report that progress towards the publication of an *Atlas of Britain and Ireland's Larger Moths* has been slow but steady. The production of the Atlas is later than anticipated and this article outlines some of the issues we have faced.

A panel of regional experts and BC staff have been scrutinising the distribution maps and highlighted c.10,000 possibly dubious records for 482 species. Each of these has been referred back to the appropriate County Moth Recorder for a final decision to accept or reject. In addition, important missing records for at least 80 species have been tracked down.

The production of the phenology charts that will appear in the Atlas provided another level of verification/validation of the records and highlighted further potential errors in the dataset. The dates of c.12,000 records for 587 species were investigated. Some of the date issues were due to MS Excel formatting dates as serial numbers where years are changed to 1905 - sometimes these are obvious when examined in detail e.g. the recorder is known and still alive, but the record suggests that they must be well over 100 years old! Another issue occurred due to data being submitted in American date format. A total of c.4,000 records were affected by these two issues alone.

The phenology charts were produced on adult only records, however, something else that came to light in the checking process, was that there were mismatches between life stage and sampling methods. For example:

Taxon Common Name	Date	Obs Abundance	Sample type	Obs Comment
December Moth	23/05/2014	30 Count of Adult	Bred ex pupae	Caterpillars hatched- 18/04/14- from eggs laid 26/11/13, 50-60mm long by 23/05/14
Welsh Clearwing	08/09/2002	1 Count of Adult	Cocoon	

This affected c.6,000 records which have subsequently been removed from the phenology charts as the records are not actually for adults.

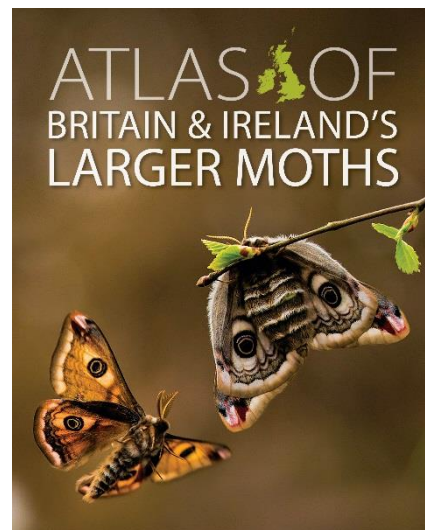
Les Evans-Hill then had the mammoth task of correcting all of these records, or flagging them so we can exclude them from the phenology charts.

The NMRS holds approximately 25 million records so to put some perspective on these errors only 0.05% of records were checked for potentially dodgy dates and only 0.04% were potentially dubious in terms of distribution.

After this major verification process, the statistical analyses (occupancy modelling) to produce up-to-date distribution trends have been re-run and we have now have long-term and/or short-term trends for around 590 species. The final maps and the phenology charts have also been produced. After months of work by the Centre for Ecology & Hydrology, Rothamsted Research and Butterfly Conservation, we also now have updated Rothamsted Insect Survey (RIS) abundance trends for 426 species. These new abundance trends include data up to 2016, nine years more up-to-date than those produced for the State of Britain's Larger Moths 2013 report, as well as trends for 92 additional species. We are also hoping to include new GB Red List statuses for all species in Atlas, based on a species status review that Butterfly Conservation has been undertaking over recent years.

Images have been sourced for all of the species that are having full species accounts and the species accounts have been drafted and are currently undergoing a final edit.

We are aiming for publication by Christmas 2019 and based on current progress this should be achievable. The pre-publication offer has been extended to reflect the revised publication date, to order your copy follow this [link](#). In Greek mythology, Atlas was the god of endurance...we have been enduring!



Adult Caddisflies: A New Guide

Caddisflies belong to the insect Order Trichoptera (meaning hairy wings) and are a sister group to the Lepidoptera (meaning scaly wings). They are a charismatic group of freshwater organisms, the larvae of which are very well known and appreciated by many due to the behaviour of some species, which construct larval cases from a wide variety of materials, these are often encountered when pond dipping and river sampling.

By contrast the adults are often regarded as uninteresting and rather drab looking and, consequently, less attention has been given to recording this phase in the caddisfly life cycle.

This is a disappointing situation as the adults are critical, of course, for completing the life cycle through reproduction, as well as for dispersal, and more information is needed on their distributions and habitat requirements.



Adult male *Halesus radiatus* (Sharon Flint)

Though there are many examples of adult caddisflies which are generally brown or black and look rather uninteresting, there are quite a number which are very distinctively marked, and which are bordering on interesting looking, possibly even pretty.

Because of this, it has become our objective to provide a guide to these characteristically marked adult caddisflies for those who may come across them and be able to record them. Many adult caddisflies come to light whether it be actinic, mercury vapour or LED, and around half of the 199 species of adult caddisflies in the UK can be reliably identified from photographs of live specimens. It is our hope that members of the moth recording community might develop an interest in recording these more distinctive species when they find them in their light traps. Records of adult caddisflies can be submitted to the National Trichoptera Recording Scheme via iRecord (www.brc.ac.uk/irecord/).

The new guide on which we are working with Ian Wallace the National Recording Scheme Coordinator is intended for use with live specimens. We are attempting to introduce the user to techniques for handling these live adults and, if necessary, using a hand lens to look closely at the tip of the abdomen. Some species will have accompanying photographs of the tips of the male and female abdomens, some of which are very easy to see, especially on larger species, such as *Halesus radiatus* and *Phryganea grandis* (as shown in the photographs below), to aid identification. Many moth recorders are familiar with the need to examine the genitalia of 'critical' species, but it is much easier with caddisflies as it is the external secondary sexual apparatus of both males and females which is characteristic.



Male *Phryganea grandis* genitalia (Sharon Flint)



Female *Halesus radiatus* genitalia (Sharon Flint)

Contributed by Sharon Flint.

Carrion Beetles – Moth Trap Invaders

Whilst sorting through the contents of your moth trap you'll have no doubt found the occasional smelly visitor... a carrion beetle. Often an unwelcome guest and unimportant by-catch, but not to everyone. There is a national recording scheme for this group, run Ashleigh Whiffin, Matthew Esh and Richard Wright. They seek to improve existing knowledge on distribution and phenology of these fascinating beetles.

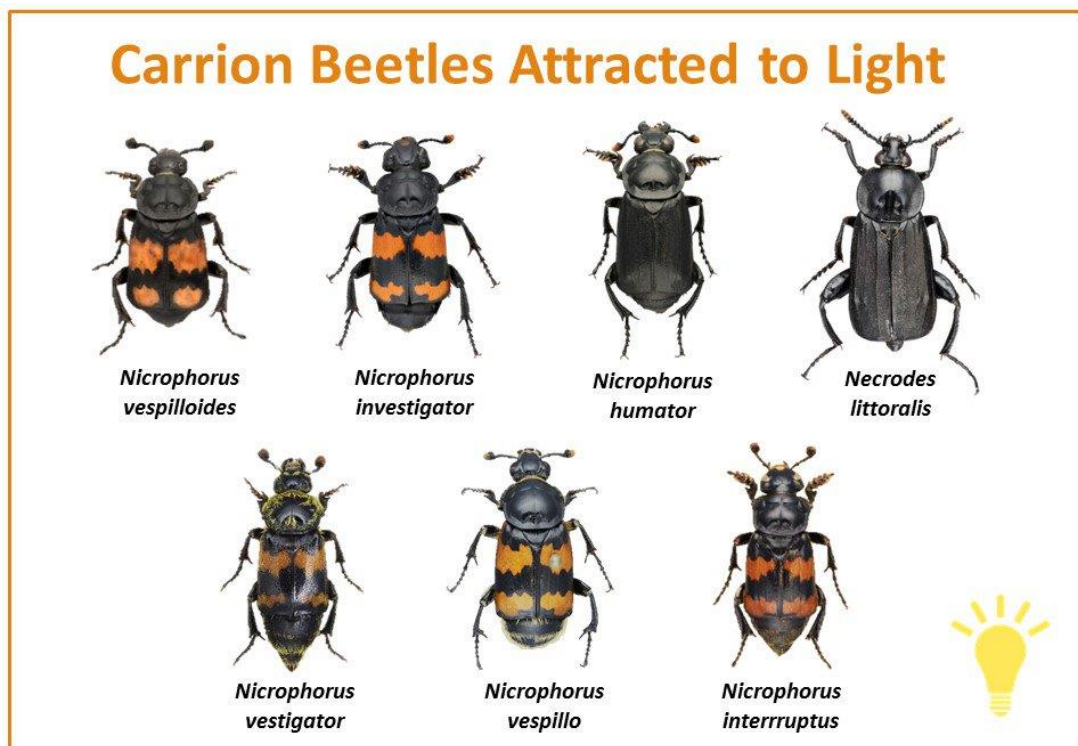
Most species in this group (family: Silphidae) are associated with dead vertebrate animals, with species in the genus *Nicrophorus*, commonly referred to as burying beetles or sexton beetles. They are well known for their habits of burying small vertebrate carcasses to avoid competition from other carrion feeders, as well as being devoted parents, who care for the young and fiercely defend the carcass. Other species will feed and breed on carrion but do not care for their young. There are also a few members of this group that aren't associated with carrion at all, some are herbivores and a couple are even predatory! In total, there are only 21 species recorded from the UK and most of these are reasonably large in size, making identification a little bit easier than some other groups of beetles.



Nicrophorus investigator in light trap (Ashleigh Whiffin, ©National Museums Scotland)

The burying beetles (*Nicrophorus* spp.) are large, chunky beetles, with big eyes, clubbed antenna and truncated wing cases (elytra). There are 6 species in the UK and all attracted to light, so regularly turn up in moth traps. The other carrion beetle regularly recorded at light is *Necrodes littoralis*. It's entirely black apart from the very tips of the antenna which are orange. It's similar to *Nicrophorus humator* but without clubbed antenna, and does not participate in the burying of its food, nor is it an exceptional parent.

The National Silphidae Recording Scheme need your help! If you find them in your traps then see if you can identify them (there are free identification keys [here](#)) and please share these moth trap intruders with the scheme by submitting your sightings to [iRecord](#).



The seven species of carrion beetle attracted to light, (Ashleigh Whiffin, ©National Museums Scotland).

National
Silphidae



You can find out more about the **National Silphidae Recording Scheme** and how to recognise the rest of these fascinating beetles here:

<http://www.coleoptera.org.uk/silphidae/home>

When submitting your records to [iRecord](#), **please include photos**.

Any questions - email us: Silphidae@brc.ac.uk

Follow the scheme on Twitter: [@SilphidaeUK](#)
and get involved by using the hashtag [#MothByCatch](#)



Contributed by Ashleigh Whiffin, Assistant Curator of Entomology at National Museums Scotland.

University Moth Challenge

University Moth Challenge (UMOC) is a joint initiative by the UK's youth nature network [A Focus on Nature](#) (AFoN) and Butterfly Conservation. Together our aims are:

- To encourage more biological recording at Universities
- To encourage more young people to take an active interest in moths
- To give young people valuable biological recording and identification skills
- To link young people and Universities with the [National Moth Recording Scheme](#)
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We are inviting students studying in colleges and universities across the UK to form a team and use a range of survey and trapping techniques to discover moths on their campus and beyond. To make things more interesting, we have set this up as a competition, running from 1st April to 31st July 2019. Teams compete against each other to win some exciting prizes (kindly donated by our sponsors, [NHBS](#)) in a number of different categories.

If you know of any students, post-docs or teaching staff who might be interested in taking part, please let them know about the competition. They can find all the details at www.butterfly-conservation.org/moths/university-moth-challenge. Thank you!



'Feelers' on buzzers (Kerry Staddon)

Contributed by Kate Merry, Head of Volunteering & Education, Butterfly Conservation.

Moth Night

Moth Night is the annual celebration of moths and moth recording. It is organised by Atropos, Butterfly Conservation and the Centre for Ecology & Hydrology. In 2018 moth night ran from 14 to 16 June 2018 and the theme was Pyralid Moths. A total of 372 moth trapping events took place, generating 10,955 records for 754 species. A report will be available in the journal *Atropos* in due course.

This year marks the 20th Moth Night since the launch of the event in 1999. It will take place from **26 to 28 September 2019**. As usual the event has a theme and the twin focuses of this year's Moth Night will be the stunning Clifden Nonpareil and migrants moths.

Since 2007, the Clifden Nonpareil has colonised many southern coastal counties and is expanding its range westwards and northwards. Participants in Moth Night can contribute to and increase our knowledge of this impressive moth's distribution. The date of Moth Night 2019 should coincide with the peak of this species flight period, which runs from late August to late October. Prime habitats to target are woodlands and parks where Aspen and other poplars are present. As the moth also arrives in the UK as an immigrant, it could turn up anywhere, including in your garden moth trap as well as along the coast.



Clifden Nonpareil (Mark Parsons)

Late September is also a great time of year for moth immigration into the UK, with (relative) giants such as the Convolvulus and Death's-head hawk-moth through to tiny micro-moths borne to our shores on warm southerly winds.

Of course you do not have to follow the theme of Moth Night at all, although it does provide the encouragement to go and record moths somewhere new. You could simply run a trap in your garden and invite friends and family over for the evening to show them some stunning moths or have them round for breakfast whilst inspecting the previous night's catch.

Many moth groups run Public Moth events for Moth Night, if you're planning one you can advertise it for free [here](#).



National Moth Recording Scheme contacts

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