

**Butterfly
Conservation**

Saving butterflies, moths and our environment



E-moth

Moths Count Update January 2017

Last autumn saw an incredible influx of Radford's Flame Shoulder. Atropos' [flight arrivals website](#) reports at least 55 being recorded from late September to 21st October. To put this into context, there are currently just 28 records of this species in the National Moth Recording Scheme (NMRS) database from 1990 to 2015, all of which occur along the south coast of England, the Scilly Isles and Guernsey. Curiously, the 1980s records as mentioned in Waring and Townsend (2009) have not yet made it into the NMRS database. It will be interesting to see the up to date distribution of this moth once all of the records have been submitted to County Moth Recorders and, ultimately, the NMRS.



Radford's Flame Shoulder (Martin Cade)

The annual **31st March** deadline for submission of County datasets to the NMRS is approaching so please remember to submit your records to your County Moth Recorder as soon as possible. This year's deadline is particularly important as we have much work to do towards the forthcoming *Atlas of Britain and Ireland's Larger Moths*. If County Moth Recorders are concerned about getting their records to the NMRS in good time for the Atlas, please do not hesitate to contact us soon to see if we can lend a hand / rustle up some assistance for you. Work towards the Atlas has begun, we have decided upon a publisher, draft page layouts are currently being designed and a fundraising strategy being drawn up. The coming months are going to be challenging, exciting and busy!

UK Moth Recorders' Meeting – FULLY BOOKED

Our seventh UK Moth Recorders' Meeting will be held on Saturday 28th January 2017 at the Birmingham and Midland Institute, central Birmingham. Places **must** be booked and paid for in advance and the event is now fully booked with a waiting list – you cannot turn up and pay on the door! If you have booked a place but can no longer attend please let us know as soon as possible via events@butterfly-conservation.org, so that we can offer the place to someone else. The line-up for the day features speakers from the amateur moth recording community, academic researchers and the award winning writer and journalist Michael McCarthy. The programme for the day can be found [here](#). We will also have [Atropos](#), [British-Bulgarian Society](#), [Hachiware Art](#), [Pemberley Books](#), [Richard Lewington](#), and [Watkins & Doncaster](#) in attendance, so bring your purses and wallets to stock up on natural history books, moth-ing equipment and other moth-related things. If there is anything specific that you might require, please contact the traders in advance who can take pre-orders for collection on the day.

National Moth Recording Scheme Update

There are now 20.9 million macro-moth records in the NMRS database; 621,587 more records than we reported in September's E-moth. We still have a further 18 vice-county datasets to import and it is only a matter of weeks until verified 2016 data will start to flood in from County Moth Recorders! Records in the

NMRS database go back 300 or so years. The year when the greatest number of macro-moth records was generated was 2010 when an incredible 1,313,057 records were gathered.

It is great to see that 42% (63,064) of the refreshed records for VC's 69 & 70 Westmorland and Cumberland are historical (pre-2000). Historical records in the NMRS for these VC's have until recently been thin on the ground. The Cumbria Biodiversity Data Centre and Liz Still the moth verifier have been very busy working through the historical data. Angus is another area with limited historical records; however, we are hopeful that this important baseline data will be forthcoming as a result of a grant received by The Angus Moth project for the digitisation of the Lepidoptera collections held by several museums in the region.

The micro-moth dataset within the NMRS continues to grow. To-date we have received 791,853 micro-moth records from 28 vice-counties, all of these have been imported into the NMRS database. The top five vice-counties in terms of number of micro-moth records are VC31 Huntingdonshire (176,194); VC30 Bedfordshire (105,714); VC1 West Cornwall (79,197); VC66 Durham (70,811) and VC2 East Cornwall (50,121). Durham boasts the greatest proportion (51.2%) of historical (pre-2000) records.

Moth news from Wales

In August a new site for Welsh Clearwing *Synanthedon scoliaeformis* was found in the Brecon Beacons National Park in southern Wales. Emergence holes and cocoons were found in old birch trees around the edge of an upland common in Monmouthshire. Five sites have now been found in the National Park since the moth was first discovered in the area in 2013. These cover eight 1km squares, all in the Black Mountains in the eastern part of the National Park. The moth requires old birch trees with open, sun-lit trunks. Suitable-looking birches are found in other parts of the National Park but surveys have found no evidence of the moth.



A cherry picker survey for caterpillars of the Scarce Hook-tip *Sabra harpagula* was undertaken in the lower Wye Valley (Monmouthshire) in August. The moth breeds on tall Small Leaved-lime trees and the use of a cherry picker allows access to foliage high in the canopy. This was a repeat of a survey done in 2014, when three Scarce Hook-tip larvae were recorded over two days. This time around only one Scarce Hook-tip larva was found, on the last bit of the last tree surveyed! The larva was 13.5 metres above ground level, which is within the 13-17m range found in the previous survey and suggests the moth prefers to breed high on the trees. Larvae of two rare micro-moths, both dependent on Small-leaved Lime, were also recorded, totalling four larvae of *Salebriopsis albicilla* and an impressive 21 larvae of *Dichomeris ustalella*.

In early December, large numbers of December Moth *Poecilocampa populi* were reported in light traps across South Wales. An amazing total of 93 were recorded in two actinic traps in Ceredigion, with 38 in a single trap in Carmarthenshire, 23 in a Glamorgan trap and 23 in two traps in Monmouthshire.

Conservation updates

The second generation of both Dingy Mocha *Cyclophora pendularia* and Barberry Carpet *Pareulype berberata* (both Section 41 species) appeared to do well in 2016. Butterfly Conservation staff surveyed 20 sites for the former in late August/early September, focusing on east Dorset sites, but also taking in a couple of sites in the New Forest. Unfortunately, with the resources at hand, it is not possible to survey all potential sites in any one year, though we focus on various key sites (where we liaise with the site owners/managers on management) trying to survey these annually, whilst surveying additional sites as and when time allows. All survey work is undertaken on the larval stage. The species was found at 14 sites, covering seven 10km squares. A minimum of 231 bushes were sampled with the use of a beating tray and 59 larvae were recorded. This compares to a minimum of 346 bushes sampled in 2015, with 38 larvae found (also covering 20 sites). What appears to be a new site for the species was found in the New Forest, although just a single larva was found here and with relatively little suitable habitat present.

However, perhaps the highlight of the survey was the finding of the species at a private site in north Dorset after a gap of several years (last found here in 2010), despite searches in intervening years. This is particularly pleasing as we have been working with the site owner and Natural England and recently produced a management plan for the site promoting the importance of the habitat for Dingy Mocha.

Every year we try to monitor all extant Barberry Carpet sites, whilst also aiming to undertake speculative searches elsewhere. We are immensely grateful to the team of dedicated volunteers who, under licence (the species listed



Dingy Mocha (Keith Tailby)

on Schedule 5 of the Wildlife & Countryside Act, 1981), help by surveying individual or a series of sites. During 2016, larvae were found at nine sites. At the Dorset site larvae were found easily with 17 recorded from 16 bushes sampled over 9 sample points. Here the moth is clearly benefitting from the additional planting of Barberry that has taken place over the years, with more planned this winter. Nearby, barberry has been planted on a Dorset County Council managed site, and the plants are beginning to get to a size which could support the moth. More recently Barberry has also been planted at two further sites in the general area, with help of the Forestry Commission, all this to try to get barberry out into the wider landscape. A curious feature of these late summer surveys was the range of sizes of larvae found at several sites, with virtually fully grown and small larvae being found at the end of August, and small larvae still being found on 22 September. In addition, Butterfly Conservation, with Natural England, is putting together a bid to the Heritage Lottery Fund as one of the series of Back from the Brink projects to focus on the Barberry Carpet. The plan is to plant barberry over a four year period in the Wiltshire/Gloucestershire area and around the Dorset population to try to link up or provide 'stepping stones' between colonies or extend potential habitat. If successful, and we do not expect to hear until midway through this year, we aim to plant out 3000 bushes over a four year period.

Against a backdrop of a seemingly poor year in the southern part of its distribution, the Striped Lychnis *Cucullia lychnitis* (a Section 41 species) bounced back along certain roadsides in the Winchester area, Hampshire, due to drastic management undertaken a couple of years ago by Butterfly Conservation, with funding through a landfill tax grant from Veolia. In Hampshire a minimum of 219 larvae were recorded from a minimum of 1,583 Dark Mullein plants, with the larvae recorded from four of the six 10km squares searched. However, the bulk of the larvae were found in two areas, both of which were large stretches of the road verge that had scrub removed and nutrient rich soil buried to leave the chalky soil exposed. Here, Dark Mullein was also seeded to supplement any existing plant/seeds already in the area. At one of these sites 33 larvae were found on just over 500 plants on 26 July, this thought to be the highest count of larvae here since 2003. This success was surpassed at a nearby site where 158 larvae were found on 166 Dark Mullein plants in and around the habitat creation area. To provide some context, the next highest total count of larvae in this survey was just seven (all on one plant in Old Alresford). Management tasks are planned to maintain these open conditions and reduce the competing vegetation, and plans will be made to try to build on this success in the general area, perhaps by encouraging growing the plant in gardens locally.

Over the years we have co-ordinated ad hoc surveys for the Straw Belle *Aspitates gilvaria* and evidence indicates this species is still declining. Unfortunately we do not have the resources to ensure each site for this species is surveyed annually, so sometimes it is two or three years before a particular site gets visited, and a lot can happen on individual sites over that sort of timescale. In England this Section 41 species is confined to a few sites on the North Downs, it frequenting areas with short and long grass, and plenty of small patches of bare ground. There are still gaps in the knowledge of the ecological requirements of this species, but a clear challenge has been to try to maintain a longer turf with small patches of open ground through management, typically through the use of grazing animals. Several of the sites where this mix of micro-habitats occurs are steep downland sites with terraces created by grazing animals, but here the difficulty can be getting the animals to graze the slopes in the first place, particularly when there is flatter ground nearby. There have also been incidents of over-grazing and this does appear to have led to the loss of one small colony. Another small colony, where grazing is not an



Straw Belle (Mark Parsons)

option, has suffered through high visitor pressure and scrub invasion, and again this may have been lost in the last couple of years. At a further site, grazing ceased a few years ago and the grass has become rather dense, with scrub encroaching; the moth has not been recorded here since 2014, despite searches. It now seems likely that this species survives on c.10 sites only in the country. This year, with a team of key volunteers and staff from other organisations, 14 sites were surveyed with the moth located at seven sites, although low numbers were seen at most of these. Several of the sites were seemingly more grassy than in previous years. Transects or timed counts are undertaken at two key sites, and at both of these (which are in conservation

management) numbers fared well, with the highest peak count at one of these since 2012 and numbers considerably up on the peak count last year at the other site. As an aside, during a search at one former site for the Straw Belle (with none being located), several mines of *Phyllonorycter scabiosella* (a Section 41 species) were found at is what is thought to be a new site for the species. If you live in Kent, and would like to help with Straw Belle surveys/monitoring in the future, please get in touch.

In 2016 we again undertook surveys for the Shoulder-striped Clover *Heliothis maritima* focusing on sites in the New Forest, but also surveying a site in Dorset. This year appeared to be a poor one for the larvae, being recorded from only three of the seven sites visited. Never-the-less the results were compiled and a brief report circulated to key individuals. This report helps the Forestry Commission to identify areas for burns for the commoners where this species occurs with the aim of encouraging a continuity of suitable habitat. Unfortunately the moth was not found at the Dorset site, where it was last seen in 2014. We have no records of the species from Surrey since the early 2000s and we are therefore encouraging survey to try to ascertain its status in that county.

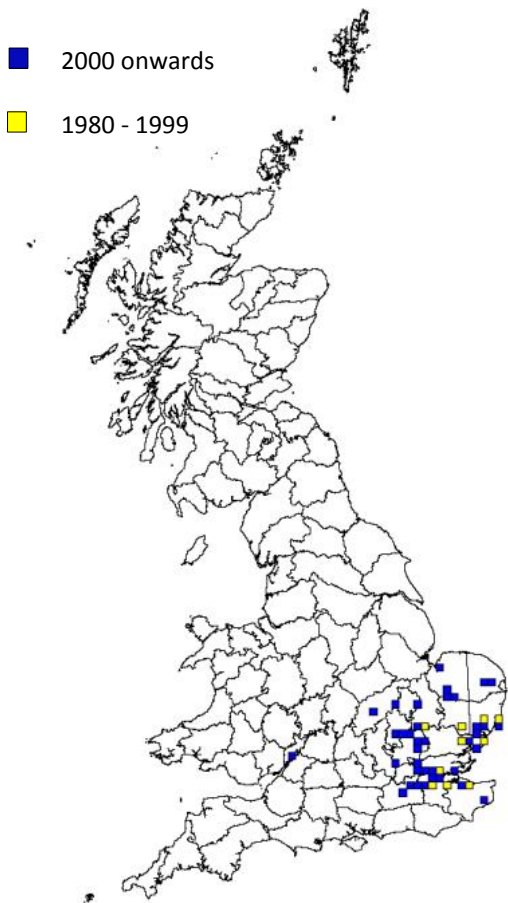
In October, volunteers from Butterfly Conservation Scotland's Highland branch undertook a work party to clear encroaching scrub and pull leggy heather in partnership with Network Rail on an embankment on the main Inverness to Perth railway line just south of Newtonmore, Inverness-shire, to benefit habitat for the Small Dark Yellow Underwing *Anarta cordigera*. We are also working closely with a neighbouring estate who are proposing a woodland creation scheme on an large area of *Arctostaphylos* heath, the moth's sole habitat. It is hoped that the best areas of suitable habitat will not be planted up and that these will be sympathetically managed in the future.

Over the last few years we have been surveying for and encouraging survey of several of the Priority micro-moth species in order to gain a better understanding of their status. In the last newsletter we included maps of four species, including *Epermenia insecurella*. It should be noted that on that map there should have been a dot in East Sussex, not Surrey (a grid reference error!). With thanks to Colin Pratt for spotting the mistake. Four further distribution maps of Section 41 (NERC Act) species are given below, these cover: *Nemophora fasciella*, *Phyllonorycter sagitella*, *Agonopterix atomella* and *Anania funebris*

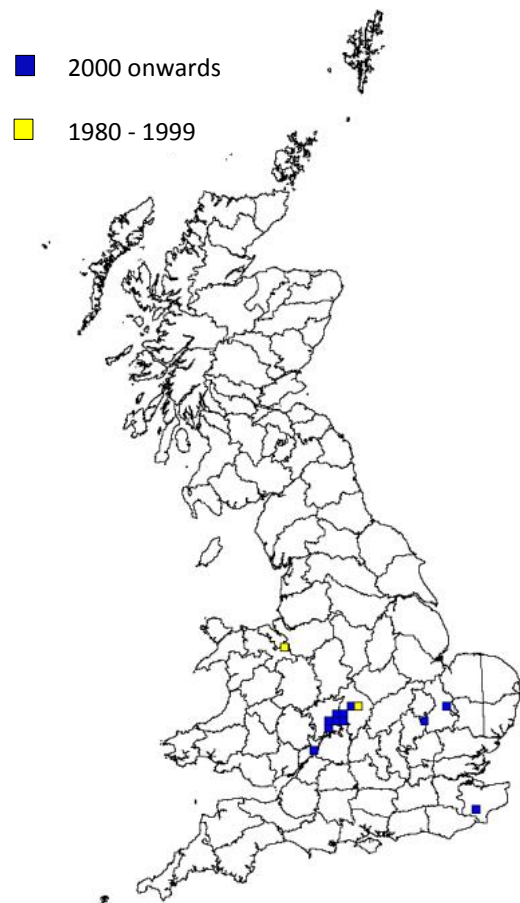


Volunteer work party (Tom Prescott)

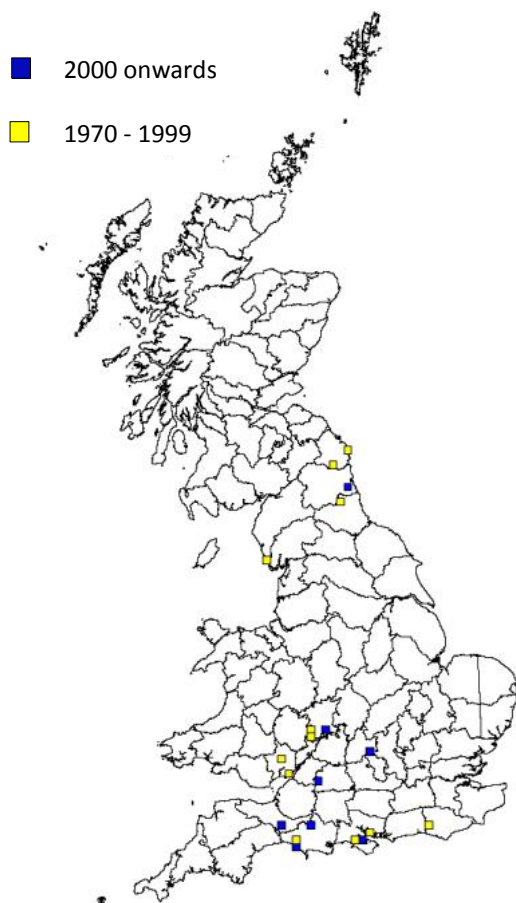
Please let us know if you are aware of any additional sites for these species and ensure all records are forwarded to the relevant county recorder, as these will be incorporated into the National Moth Recording Scheme in due course.



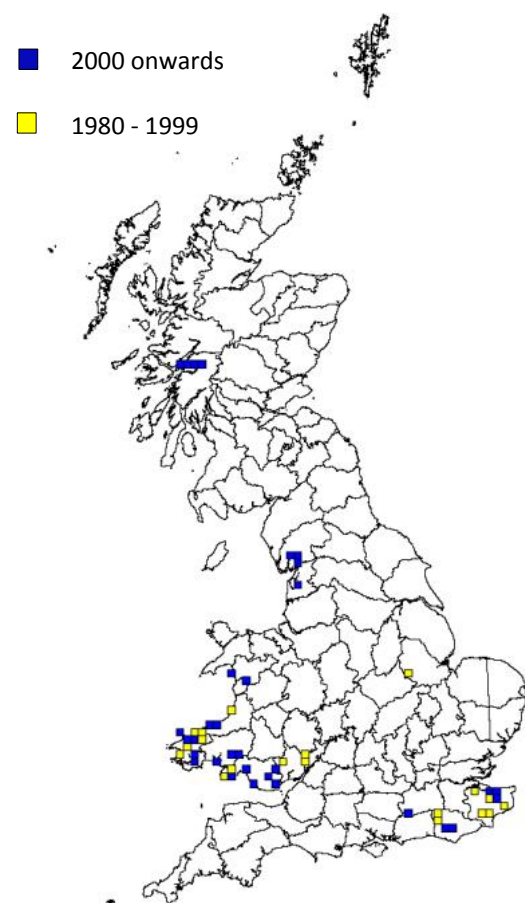
NMRS provisional distribution map for *Nemophora fasciella* at 10km resolution



NMRS provisional distribution map for *Phyllonorycter sagitella* at 10km resolution



NMRS provisional distribution map for *Agonopterix atomella* at 10km resolution



NMRS provisional distribution map for *Anania funebris* at 10km resolution

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