



DEVON MOTH GROUP

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NEWSLETTER 2016 ISSUE 1 (February)

Exciting moth sightings are usually very thin on the ground at this time of year, but that certainly hasn't been the case this winter. Capping off an astonishing year for migrant moths, the incredibly mild, and often strong, southerly winds that dominated December's weather continued to bring a host of visitors to our shores. Amazingly, these included two species new to Devon, *Cornifrons ulceratalis* and *Syncopacma polychromella*.

The single specimen of *C.ulceratalis* was caught in a 30W Actinic trap by Nigel Pinhorn in his garden in Exwick, Exeter on the evening of 28.12.2015. This moth had never been seen in the UK before December 2015, but the Exeter record was one of 14 sightings across England and Wales during the last two weeks of the year. Nigel had only moved to his new house a month before and had only recently restarted moth trapping, inspired by spotting several *Operophtera brumata* Winter Moth and *Erannis defoliaria* Mottled Umber on a nearby garage door!

Syncopacma polychromella, is a tiny but distinctive Gelechiid moth with a wingspan of only c.7mm. It occurs in southern Europe, Africa and the Middle East and has only been recorded in Britain on a handful of occasions prior to December, and never in Devon. That all changed on 16.12.2015, when visiting moth recorder Dave Grundy caught one at Prawle Point. The following night, two more were caught in the county: one by Mike Braid at Chittlehampton, south of Barnstaple, and thus the first ever record of this species in VC4 and the other by myself at Abbotskerswell near Newton Abbot. And then, on 18.12.2015, Phil Barden found two more, by day, at Buckland Abbey. These five Devon records of *S.polychromella* formed part of an unprecedented influx of this species into Britain during the week before Christmas. In all, around 70 sightings have been reported nationwide.

Other exciting immigrants included *Spoladea recurvalis* by Barry Henwood (17.12.2015) and *Eublemma ostrina* Purple Marbled by Clive Coombs (25.1.2016). Just shows that you should never pack your trap away for winter!
Richard Fox



Cornifrons ulceratalis (Barry Henwood)



Syncopacma polychromella (Richard Fox)

Members of Council: Richard Fox (Chairman) Nicola Bacciu (Membership & Distribution) Roy McCormick (Secretary/Treasurer)
Barry Henwood (Recorder), Rob Wolton (Conservation), Phil Dean (Ordinary member)

www.devonmoths.org.uk

Annual General Meeting on Thursday 28th January 2016

The AGM was held once again at the Kenn Centre, Kennford and attended by 27 members. Apologies were received from Julie Morris, Malcolm Scoble, and Sam and Tim Stripp. The minutes of the previous AGM were approved unanimously. The annual accounts, which had been distributed by email in advance of the meeting, were made available to those present. Roy McCormick, Treasurer, pointed out that while the accounts show an overall deficit in the last year, the Group still has substantial reserves in the bank. The apparent substantial increase in the costs of producing our newsletters and annual report was due to Roy purchasing a large stock of stamps for future use. No other issues were raised and the accounts were approved unanimously.

The annual election of Council members (including the Chairman) was then held. Bob Heckford had resigned from Council during the year due to pressure of other activities and was thanked for his contribution. The remaining current incumbents were willing to stand again. In addition, Phil Dean had been invited to attend Council meetings during the summer and autumn of 2015 as an observer and was nominated by Council to stand for election. There being no other candidates, Nicola Bacciu, Phil Dean, Richard Fox, Barry Henwood, Roy McCormick and Rob Wolton were elected unanimously to serve on Devon Moth Group Council for 2016.

Chairman's AGM Report

The weather during much of 2015 was about average and moth catches generally reflected this. However, there were two major exceptions. First, November and December were incredibly warm leading to some extraordinary moth records. Indeed December 2015 was the warmest December since records began in 1910. Second, migrant moths had an exceptional year throughout 2015. The combination of these two factors yielded *Cornifrons ulceratalis* and *Syncopacma polychromella* new to Devon in December, as well as *Spoladea recurvalis*, but the long list of impressive migrant sightings stretched back through the year. They included Devon's first *Chrysodeixis acuta* Tunbridge Wells Gem caught by Phil Barden in October and a *Hyles euphorbiae* Spurge Hawk-moth caught by Dave Wall in July. Over a few weeks in June and July, Mark Marshall caught two *Hyles livornica* Striped Hawk-moths and *Trachea atriplicis* Orache Moth in his garden! The early summer was dominated by large influxes of *Heliothis peltigera* Bordered Straw and *Spodoptera exigua* Small Mottled Willow. Indeed, I'd be surprised if anyone trapping regularly in Devon in 2015 hadn't caught the latter two species.

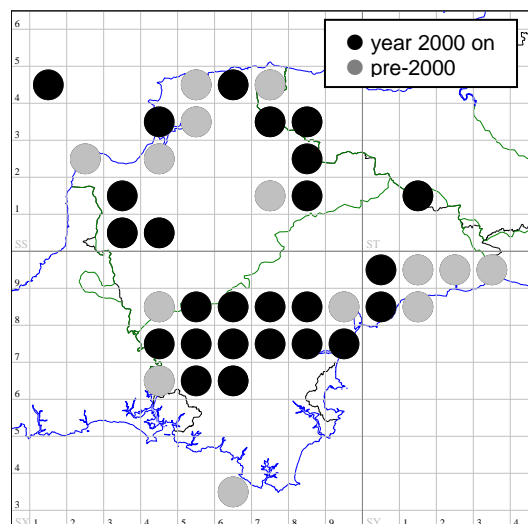
Another highlight came in October, when Roy McCormick caught Devon's first ever *Dryobotodes tenebrosa* Sombre Brocade near Teignmouth. With all the immigrant activity, it might easily have been put down as a migrant, but Roy and Colin Hart revisited the site over subsequent days and caught more Sombre Brocades. It seems clear that the species is a newly established colonist in the county. Other new discoveries during the year included the micro-moths *Pachyrhabda steropodes* found by Kim Leaver and *Cydia illutana* by Phil Barden.

Away from moth sightings, one of the high points of the year was the award of the HH Bloomer Medal to DMG member Bob Heckford by the Linnean Society. This is a very prestigious award befitting the huge contribution that Bob has made to the study of micro-moths and other insects in Britain and overseas.

I must thank the many people who have helped to run Devon Moth Group during 2015. These include members of Council, the County Recorder, Barry Henwood, and his team of people who collate, digitise and help verify records, those who have run field meetings, given talks or written material for our newsletters. I am very grateful for all your hard work and expertise. On the subject of newsletters, please remember that any members can submit notes, images or articles – they would be gratefully received!

And finally, a few words about the year ahead. Butterfly Conservation and MothsIreland are planning to publish the first ever atlas of larger moths in Britain and Ireland in 2018, using records gathered up to the end of 2016. This means that we only have the rest of this year to ensure that the moths of Devon are adequately and accurately reflected in this landmark publication. Some areas of the county remain extremely under-recorded, while even in better recorded parts, particular species may be neglected due to their habitats, flight season or other factors. For example, the current map of *Saturnia pavonia* Emperor Moth (right) suggests that the moth has been lost from the far east of Devon and parts of VC4. Has it really or is it simply under-recorded? This is the year to find out!

Richard Fox



Secretary's AGM Report

The Group is still gaining new Members, but membership is down on last year and on 26.01.2016 (when this report was produced) we had 122 members. We have 16 members who do not live in the county, with a high proportion of these living in Cornwall. We have two Honorary Members, and we still have two who get free membership, with one of these our Accountant. We now only have 23 Members who get their newsletters by post with the remaining 99 receiving it by e-mail. This makes a considerable saving on our expenses, but the cost of printing the 25 newsletters for posting has gone up considerably, with the last bill around £1.00 for each copy, and the cost of second class stamps @ 54p each makes a further £12.42 making a total of around £37.50 for "snail mail" distribution of our last Newsletter; we publish around six of these a year.

Despite a few reminders, may I remind you all again that our subscriptions are now £8 for single Members and £12 for a family; this was passed at our indoor meeting on 25.10.2013.

We held four Indoor Meetings at the Kenn Centre in Kennford at £25 a meeting, with most of these attracting around 35 + Members. Our Christmas event at The Welcome Stranger, Liverton, was moderately attended with only 17 people coming. We had six Field Meetings booked and these were led by Barry Henwood, Rob Wolton, Richard Fox, Paul Butter, Kim Leaver, John Boon and others; as far as I know no events were cancelled.

We will continue to hold our meetings on Thursday evening with a starting time of 19.30 for 20.00, this to accommodate our North County Members who find it difficult to get there on time with the distance they have to travel. Our Christmas event will be on a Saturday and will continue to be held at The Welcome Stranger, Liverton. Our Annual Report will continue to be issued at the Spring Meeting, as many records do not come in until the beginning of the year; this creates a big rush to get it out on time and with the changes in this document, it has become impossible to issue this sooner.

Your Council held four meetings during 2015 with the main topics of discussion: trying to find speakers for our Indoor Meetings, arranging Field Meetings and discussions about other matters relevant to the smooth running of the Group. DMG still remains a prominent partner in Biodiversity Action Plans (BAPs) activities along with Butterfly Conservation (BC) and the National Moth Recording Scheme (NMRS).

I reiterate my thanks to the people who are helping to keep the group running taking on most of the work I used to be involved in with most of this being taken over by Richard Fox and Rob Wolton; I certainly could not have been able to carry on without this valuable help. Thank you Richard and Rob.

Roy McCormick

AGM illustrated talk: *The secret lives of butterflies and moths* by Richard Fox

Have taxed our brains with all things to do with committee meetings, Richard Fox enthralled us with several synopsis of current Lepidopteran research.

Firstly, Complex Cabbage Capers!

When Large White (*Pieris brassicae*) butterflies lay their eggs (on cabbage), compounds passed from the male butterfly to the female during mating attract minute endoparasitic chalcid wasps (*Trichogramma* sp.), which lay their eggs in the butterfly ova. When Large White caterpillars feed on the cabbage, the plant responds by producing volatile chemicals that attract a hymenopteran braconid, *Cotesia glomerata* to parasitize the caterpillars. Research has shown that this complex foodweb may consist of four trophic levels. The fourth level involving several species of hyper-parasitoid wasps that lay their eggs inside the *Cotesia* grubs inside the butterfly caterpillars. The Diamond-back Moth (*Plutella xylostella*) is also involved. These micro-moths can also sense the chemicals emitted by the cabbages, and prefer to lay their eggs on cabbages already infested with Large White caterpillars.

Secondly, Gripping Green-veined White Goings-on!

Unlike most other female lepidopterans, Green-veined White butterflies (*Pieris napi*) mate twice (polyandry) in their life. A male Green-veined White gives a female a large spermatophore 'gift' whilst mating. Radioactive tracer analysis has shown that the female uses these gift proteins for bodily repairs in addition to egg formation. The greater the spermatophore size, the more eggs are laid. Such breeding behaviour allows the Green-veined White female to produce more eggs and live longer than butterflies that mate only once.

Thirdly, Peacocks Predator Put-downs!

There are several methods that insects can use to reduce predator attack. For example, being aposematic (poisonous), mimicry (pretending to be poisonous), camouflage (physical and or behavioural) and having eyespots.

The function of the latter is still debated. Peacock butterflies (*Aglais io*) use physical camouflage (underside), eyespots and behavioural techniques (flashing wings). Two short video clips showed how a bluetit and chickens reacted to a Peacock flashing its wings. The predators were frightened so the Peacock wasn't attacked. 'Painting' over the Peacock 'eyes' with black ink, resulted in the chickens not being scared and so they ignored the butterfly. Predation rates increase where moths (with eyespots) rest with wings open, and do not flash their wings.



Peacock (Richard Fox)

Fourthly, Wandering, (Warmish), Winter Moths!

These geometrids (*Operophtera brumata*) have winged males and reduced-winged females. Research has found that their thoracic temperature was in sync with their ambient outside temperatures. Usually moths' thoracic temps need to be around 35 degrees centigrade to be active, irrespective of external environmental conditions. Effects of light pollution on moth populations is complicated and largely unknown. Studies on Winter Moths using lit and unlit tree trunks, has noted that fewer females ascend trees with illuminated trunk (to lay eggs on leaves above), fewer males are attracted to female pheromones on lit trunks and that a lower proportion of females are mated on lit trunks. The effects of green or white light were generally greater than red light.

Finally (due to limiting time), Marvellous Migratory Means!

It has been shown that individual Painted Lady butterflies (*Vanessa cardui*) have an innate sense to migrate. This is directly related to day length; going north in spring and south in autumn. They use the sun to navigate. Monarch butterflies (*Danaus plexippus*) are thought to have inbuilt magnetic compasses too. Obligate migrants, such as the Silver Y (*Autographa gamma*) can select wind direction and speed at different altitudes to assist in their migrations.

Unfortunately it was time for all of us to migrate home, full of many fascinating tales of lepidopteran life. A great talk. The wonder of wildlife never ceases to inspire. Thanks Richard.

Una Garland

New Plume moth to VC4

Having sent in all my moth records up to 2014 to the County Recorder, Barry Henwood, it is not unusual to have a few queries regarding micros in particular. One record raised some doubts with Bob Heckford who we are lucky enough to have in Devon to scrutinise the micro records. The record of particular interest was of *Merrifieldia baliodactylus*, which I found in a disused section of a quarry at Westleigh near Sampford Peverell on 18.7.1999.

Although it was 16 years ago I remember the day quite clearly as it was a marvellous site and full of Marjoram *Origanum vulgare*, which was attracting a lot of insects of all kinds. Most notable though were 20-30 unfamiliar plume moths flitting around the Marjoram plants, which I identified as *M. baliodactylus* due to the obvious foodplant association (Marjoram is the larval hostplant of this moth) and thought no more of it.



So imagine my delight to find that after 16 years I have a “new” moth for VC4. Thanks to Bob Heckford for confirmation of identification, information about the hostplant and noting that Westleigh is in North Devon.

Marjoram is a rare plant in VC4, which explains the rarity of the moth, but there seems to be a concentration in the Tiverton area, including Westleigh. I plan to re-visit the area in 2016 to see if the colony has persisted.
Paul Butter

Moth survey requested

Is anyone willing to carry out moth recording at Trill Farm near Axminster, with the additional possibility of taking part in educational events? Interested members should contact Mike Ridge on 01297 444519.

Mothing in winter 5

Coleophora juncicolella (Coleophoridae) is a fairly common species whose larva feeds on the leaves of Heather *Calluna vulgaris* and Bell Heather *Erica cinerea*. But because the moth is the smallest in the genus (6–8 mm wingspan) and the forewings are a uniform grey, it is not only visually one of the less exciting species of Microlepidoptera but also one that is difficult to see.

It is easier to find it as a larva. It makes a case out of leaves of the foodplant that it has mined, arranging them in a herring-bone fashion. The completed case usually has seven leaves. The mined leaves forming the case are brown. The usual recommended way of finding the cases is to sweep the foodplant in April, when the larvae have fixed their cases near the tips of the stems ready for pupation.

A better way is to find them earlier in the year when they are feeding. The accompanying photograph shows a larval case that I found on 16 January this year on a sprig of Heather at Trowlesworthy Warren. It is quite cryptic sitting amongst fresh and dead leaves (some mined).

Bob Heckford



Coleophora juncicolella
larval case on Heather
Calluna vulgaris
(Bob Heckford)

Forthcoming events (see www.devonmoths.org.uk for more details)

Thursday 31 March 2016 Spring indoor meeting at the Kenn Centre, Kennford (www.kenncentre.co.uk) 19.30 for 20.00 start. *Pug identification workshop* led by Barry Henwood. Please bring along unidentified pug specimens if you have any.

Welcome to New Members

Judith Badger, Beare
Andy & Shirley Park, Duloe
Chris Tyler-Smith, Linton (Cambridgeshire)



Spoladea recurvalis caught in Devon on 17.12.2015 (Barry Henwood)

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2016 Membership subscription for Devon Moth Group

Membership subscriptions, **£8.00 for single and £12.00 for a family annual membership**, were due at the start of the year. Please send by the end of February or it is likely you'll be removed from the mailing list and miss out on future newsletters and the Annual Report.

Name: _____

Address: _____

Email address: _____

Phone number: _____

I am happy to receive Devon Moth Group newsletters by email.

Please return with a cheque payable to Devon Moth Group to: Roy McCormick, 36 Paradise Road, Teignmouth TQ14 8NR.

For payment by Standing Order, please obtain the necessary form from your Bank. The account details are: **Devon Moth Group, A/C No: 94850593, sort code: 60-21-47 at NatWest Bank, Den Road, Teignmouth, TQ14 8AR.** Make the reference your own name as that will then be shown on our statements. Payment date is 1st January 2016, or a date soon after that, and 1st January from then on.