



Butterfly Conservation
Saving butterflies, moths and our environment

Butterfly Conservation Highland Branch

Newsletter 16

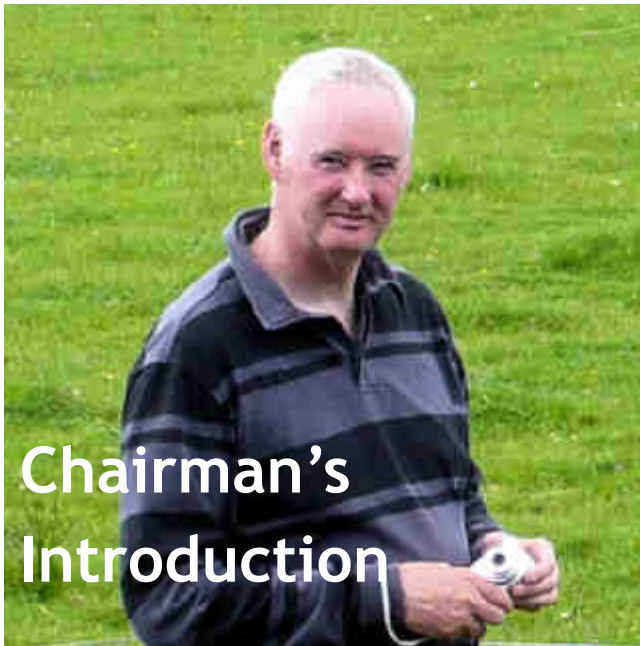
Spring 2011



www.highland-butterflies.org.uk

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Chairman's Introduction

Firstly, a very warm welcome to all those who have joined Butterfly Conservation recently and who have therefore automatically become members of Highland Branch. We look forward to seeing you at some of this year's field events which are listed towards the end of this Newsletter.

How often as butterfly and moth enthusiasts do we consider how lucky we are? Most of us live either in the country of just a stone's throw from it, and what a countryside we have in Highland. People pay good money just to get here and have a holiday, never mind live in our communities and sample our countryside. We have this all year round, in all seasons. We have loads of good sites to see butterflies and moths and, apart from the travel, it is all free.

Then every so often something becomes suddenly very clear; I was reading a Scottish Natural Heritage report "Involving people in biological recording", which I had in some small way contributed to by sending my comments in some time previously.

I can do no better than to quote the objective as follows: The objectives of the project were to help SNH to "understand how best to increase the numbers and range of people and organisations involved in voluntary biological recording and to increase the total pool of available skills and knowledge. We envisage doing this by developing better gateways and clearer routes through which people can get involved and can further

that involvement in voluntary biological recording."

What struck a chord with me as I ran through the questions and responses were how very many of the various elements I was interested in. A mish-mash of subjects and interests, the sum total of which gives one a tremendous return for one's efforts.

Just consider what goes into recording butterflies and moths and reflect on the whole life enhancing joy each one brings. Fresh air, a healthy walk, good companionship, travel, mental stimulation and an opportunity to learn every time you go out. Returning home you can update your records and become familiar with grid references, maps and identification. Use email to send off your records or the internet to check some niggling little detail. The whole subject is there to give joy and delight. Do we contribute to biological recording? Yes we do, all our records to to the national schemes to be used for the benefit of us all. We can see our own records but just as importantly we share them with others and other people share their records with us.

Of course none of this is learnt instantly, oh no, it is a slice at a time over quite a long period of time. Rather like learning to type. You sit at a keyboard for ages typing asdf repeatedly and wondering how on earth this will make you a typist. Then after what seems like an eternity you suddenly realise you are doing it without thinking and even at the same time as talking to someone. The analogy to learning to identify moths and butterflies is similar though you never quite get to the auto-pilot stage. Our government sees fit to compare the health of our butterflies to a barometer of the nations well-being and who am I to argue...

Then it became clear: Is there any other pastime which offers all this and more?

Please keep in touch with what is going on in the Branch via the Highland Branch website at: www.highland-butterflies.org.uk. Also, if you'd like to receive e-mail updates about events and any changes, you can be added to the Branch circulation list by contacting the secretary at:

tony.mainwood@btinternet.com.

Jimmy McKellar



Audrey Turner

In the last couple of years whilst out and about I've found a couple of stretches of old roads which are no longer in use. Both have been surprisingly good places to find wildlife, proving that nature reclaims our leftovers.

One stretch I found in 2008 is just to the south and west of Aviemore between Lynwilg and Kinakyle and is just to the west of the existing A9. It's a short stretch, barely half a kilometre long, which ends in a small open area surrounded by cliffs. There are piles of gravel at the road edge and in the open area, as well as some plastic drainage pipes. I think the area is used by the local estate as a storage area.

Although there is a line of trees on either side of the road, beyond these are south facing slopes with bracken. This spring I managed to net a couple of Fritillary Butterflies in flight and confirmed that they were Pearl-bordered Fritillaries, a find I was delighted with. These are only one of sixteen species of Butterfly I have found there, the others are Common Blue, Dark Green Fritillary, Green Hairstreak, Green-veined White, Meadow Brown, Northern Brown Argus, Orange Tip, Painted Lady, Peacock, Red Admiral, Ringlet, Scotch Argus, Small Heath, Small Pearl-bordered Fritillary and Small Tortoiseshell.

As well as Butterflies I have found a few species of day flying Moths including a Large Emerald, over 60 species of flowering plants and some 40 species of birds. I've also seen a couple of species of Damselfly, Green Tiger Beetles, some species of Ichneumon Wasp, a Common Lizard and my first ever Slow Worms. There is an absolute wealth of wildlife to be found in such a short stretch of old, crumbling tarmac.



Lynwilg, open area.



Pearl-bordered Fritillary



Northern Brown Argus



Large Emerald



Peacock,
Milton of Culloden



Lesser Periwinkle,
Milton of Culloden

The other stretch of disused road I've found is the old coast road from Milton of Culloden heading back towards Inverness. The road hugs the coastline and parallels the A96 and the Inverness to Aberdeen railway line.

I've only visited this site twice, once in late Autumn 2009 and once in Spring this year so I haven't had a chance to see many Butterflies. Even so, I've managed to see 5 species, Green-veined White, Orange Tip, Peacock, Red Admiral and Small Tortoiseshell. I've also seen over 40 species of flowering plant and 40 species of bird, not bad for the time of year.

Hopefully next year I'll manage to get there and see what summer has to offer, and in the meantime, I'll be keeping a lookout for any other stretches of disused road, they are certainly worth exploring.



Small Blues at
Loch Fleet

Tony & Helen Mainwood

When we re-started the butterfly transect on the north side of Loch Fleet in 2004 there had been no records of any Small Blues. The Large colony at Dornoch Beach, just 7km to the south, has been known about for a long time but the nearest record to the transect was from Coul Links on the south side of the Fleet in 1995. There were, however, a number of patches of kidney vetch along the middle part of the transect and we thought that there might be a possibility of finding some there.

We didn't have to wait all that long and in 2006 there were records of one on 18th and 28th June. They were in the same area so it may have been just one individual. It was perhaps significant that it was in 2006 that a couple of other colonies - or potential colonies - were located. David Whitaker found a reasonable sized colony at the Green Table on the coast north of Helmsdale and there were at least fourteen there on 13th

June. We also found one or possibly two at on the coast at the Sputie Burn just south of Brora. The Green Table colony is probably well established though not particularly convenient to get to. However, no Small Blues have been seen at the Sputie Burn since 2006 suggesting that 2006 may have been an exceptional year with individuals moving some distance from their colony of origin.

We were hopeful that 2007 would see more records at Loch Fleet and although the increase we had hoped for didn't materialise there was a single record on 18th June - again. This could have been just an isolated individual arriving from elsewhere or, as we had hoped, one resulting from a egg laid there the previous year. It was at least in the same area as the ones seen in the previous year and it was in the process of depositing an egg in a kidney vetch flower head!

Things certainly looked up in 2008 with the first seen on 31st May, no less than five on 4th June and one on 19th June.

2009 continued the trend with one on 12th June and nine on 20th, while this year, 2010, there were five on 31st May, fourteen on 3rd June, seven on 17th June and two on 27th June. Unfortunately, we haven't kept information on the amount of kidney vetch present over the years but we do have the general feeling that it has become better established and more widely spread recently and hopefully this will be sufficient to maintain this developing colony over the coming years.

There is a well documented colony at Dunnet Bay, Caithness that is also monitored with a transect but there could well be other colonies along the coast of Sutherland and Caithness that haven't been located. Anywhere with patches of kidney vetch are well worth a look from late May to early July and we might be able to fill in some more gaps on the maps.



Small Blue on kidney vetch flower-head (Tony Mainwood)



Small Blue underside, (George Mair)

Loch Fleet National Nature Reserve

How to get there:

Off the A9 between Dornoch and Golspie (three miles).

Parking with information panels on both south and north shores. Summer walks by SWT / Highland Council Ranger Service.

Contact:

SNH, The Links, Golspie Business Park, Golspie, Sutherland, KW10 6UB.

Tel: 01408 634063.

Scottish Wildlife Trust, Cramond House, Cramond Glebe Road, Edinburgh EH4 6NS.

Tel: 0131 312 7765.

Memorable Moments 2010

Ron & Dot Ruston



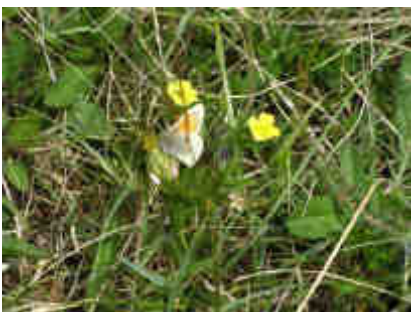
Field trip to Aldie Burn (opposite) on 22nd May produced sightings of the Green Hairstreak, which was a first for us not having seen this small lively butterfly before. We had not ventured far along the woodland track when somebody spotted our target and several photos were taken but ours was not worthy of print. However, no doubt someone got a good image.



Following on from last year's sightings in August of several moth larvae in our garden, including Poplar Hawkmoth, we were delighted to see the moth had emerged on ground near to where our ornamental poplar had stood. We were removing wire netting from around a bush and must have disturbed it. We think it was newly emerged as it was very lethargic and so we were able to get two good photos. After staying with us during the remainder of the day it disappeared overnight.



Our farming neighbour's pond, just a few hundred yards along the track from our house, proved very interesting this year with the variety of butterflies we saw in one particular area. One of these, the Small Heath, we had never seen before and thought it was a day flying moth until we checked our photo out and discovered it was a butterfly. Other sightings in this area were Common Blue, Meadow Brown, Green-veined White, Dark Green Fritillary and one of the smaller fritillaries which had unfortunately become caught up on a sundew plant and was left with only two remaining wings.



A visit to Jersey in the Channel Islands in early September proved very successful for butterflies. The weather remained warm and sunny for most days and we were able to walk the cliff paths along the north coast of the island.



The habitat, particularly between St. Brelade and Corbiere, was like a carpet and made up of ivy, heather and gorse. During our week there we spotted Small Tortoiseshell, an abundance of Speckled Wood, Peacock, Small Heath, Meadow Brown, Comma which we hadn't seen since moving North from Shropshire 7 years ago. Also two new butterflies to us, the Holly Blue and Gatekeeper - the latter of which we managed to photograph.

Looking out of the window now and viewing the latest dumping of snow this winter, it is difficult to remember that we did get some summer weather and we think the most prolific on Polmaily transect in 2010 was the Speckled Wood. However, on 18th September at the end of the season, we joined with a good number of other hardy members and made Trojan efforts to clear scrub and young trees at Polmaily. Fortified with a plentiful supply of tea and cake we lasted well into the afternoon despite the weather. We hope we did our best to improve the habitat at Polmaily for the future of all our butterflies.

Looking forward to 2011.



Gatekeeper



Polmaily work party

Polmaily scrub bash

Jimmy McKellar

We are not noted for our active participation in reserve management. Indeed we seem to have actively avoided hard work for many a long year. All that changed on Saturday the 18th September when we were summonsed to attend at Polmaily near Drumnadrochit to cut back road-side scrub for the benefit of Pearl-bordered Fritillary and Dingy Skipper. We are grateful to Forestry Commission Scotland who own the site for giving us permission to undertake this habitat management.

The weather forecast was dire and on the day it was thoroughly miserable. Despite this I decided to give it a chance to clear up with the intention of showing face and having a go later on. The rain did not let up but with a feeling of guilt and the likelihood that the event would not go ahead anyway, I set off to see what was happening. I fully expected to find Tom sitting in his car drinking tea all on his tod and in need of moral support.

When I got to the entrance gate I was rather taken aback to see lots of signs indicating Butterfly Conservation were running an event, and with the gate open and inviting, I drove on up the brae to find lots of cars and most of the branch hard at work clearing scrub. I was not



Our work party



Dot Ruston



The end result

prepared for that nor the enthusiasm with which the troops were whacking away at the verges. It looked like a scene from the 1930s when all hands were sent out to work in the fields.

The advert suggested bringing old clothes, work gloves, secateurs, loppers and bowsaws. This intrigued me, aren't secateurs those dainty little things beloved of elderly lady gardeners with a few flowers to cut for an indoor display? The vegetation here needed something more extreme and that is what it got as I noticed one chap wielding the Scottish equivalent of a machete to good effect.

I had brought my saw and decided to tackle the verge down the hill from the turning point as it seemed to be in need of clearing, and from my experience that was one of the places the Dingy Skippers were seen using on a previous visit I had made. The trees were larger than I expected but that proved to be to my advantage as I was able to make a lot of difference with not too many cuts. That is not to say it wasn't very hard work. I was as wet on the inside of my jacket as I was on the outside but everyone seemed to be pulling their weight and getting on with the task in hand.

The short break we had was greatly improved by Tom's baking - a cake for every occasion. Who says men have no finesse? As a result to the obvious fun and super turn out, we had 14 folk attend, and despite the atrocious weather this could well become an annual event - so if you missed out on the fun there is always next year!

Dot and Ron have been carrying out a transect for this area for a number of years so the effects of our efforts should be evident early next year when the counts are done. We intend to return in the spring to see if we have helped - possibly mid-May? The management of

any area is not always straight forward and what helps one year may hinder in another so it is always best to do a little and see how it goes before going flat out and possibly making matters worse rather than better.

Dingy Skippers can be found from late April to Early June and Pearl-bordered Fritillary over a similar flight period. So two for the price of one - what are you waiting for? Go and have a look or come on our planned trip and remember to send us your records and pictures. The fresh air will do you good and the butterflies will lift your spirit.

Finally, thanks to all who attended and put in so much effort for such a worthwhile cause.

Polmaily is at grid reference NH484304 which is about 2 miles west of Drumnadrochit on the A831 towards Cannich.

Ruby Tiger bites back

Jimmy McKellar

I was once in the company of a well known entomologist who stated “that was a Ruby Tiger” as a moth flew past. As most of us know trying to put a name to some of the moths caught in moth traps is difficult enough but to do it while they are on the wing... I was in awe. Years later I can now do the same for the day flying Ruby Tiger as the moth actually has a ruby colour to it as it flits by.

The caterpillars of this same moth proved more problematic, as the first two I came across were on the Caledonian Canal towpath and of the more “bleached” looking specimens, a light yellow shade. Later I came across the more of the common brown variety which is featured in the book “The Colour Identification Guide to Caterpillars of the British Isles” by Porter. I thought I had it cracked at this point until I then came across a black caterpillar which bore an uncanny similarity to a Ruby Tiger apart from the dark colour. It too turns out to be a variety of the Ruby Tiger, so that I am now aware of all three forms. This caught me out as there was no mention of different varieties in the literature. The attached pictures show all three forms and may save some of you the trouble of trying to sort them out for yourselves.



Examples brown and yellow forms



Black form

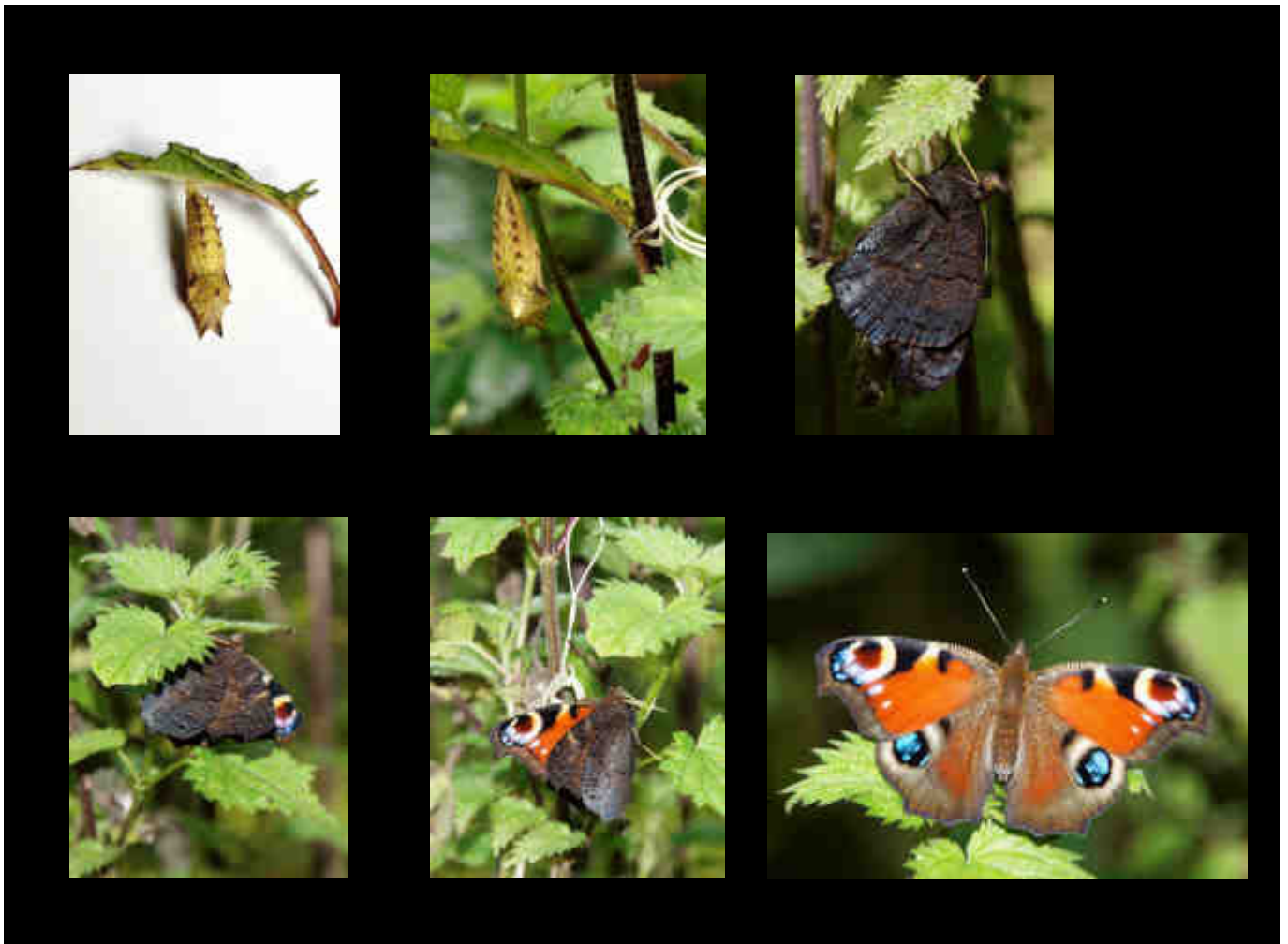
Peacocks in Ardnamurchan Janette Borwick

For the last 25 years Janette Borwick, who lives at Glenborrodale in Ardnamurchan, has saved a patch of nettles in her garden for butterflies. In 2010 there were appeared to be thousands of caterpillars, and she took lots of photos, some of which are reproduced below.

Janette wrote, 'One day while looking at the nettle patch, I noticed something fall. It was a pupa with a small snail on the end of the stalk. I picked it up and took it into the house to photograph. Later, I wondered what on earth to do with it and decided as a experiment I'd tie it back on to a nettle with a piece of thread.

'I'd never noticed any of the pupae hatching, but one day while watching the first I'd ever seen, I glanced round and there was the pupa I'd tied on, hatched and beginning to develop. I was entranced and spent the rest of the afternoon watching it and taking pictures. It didn't seem to mind and when it finally reached the top of the plant it turned round in the sun allowing me to take some good pictures. It then crawled down low among the stalks. I expect it was resting until the following day. I couldn't believe my luck, I thought it my special butterfly and wished I could follow it to see where it went.

'I found other pupae on the ground which I put in the tunnel and they hatched successfully. Had I left them, they would have been eaten by the frogs and toads waiting below for them and the fallen caterpillars. The pupae had a hard time, they were attacked by wasps, and the leaves they were under were eaten by caterpillars and snails. Many fell off because the stalks withered. Some newly hatched butterflies were blown from the nettles in a high wind and had to complete their development lying on the grass.'



Hungry Caterpillars turn out to be the Brightest Butterflies

A team from the Highland Branch entered, or rather were press ganged, into entering Inverness and Ross Friends of the Earth's Environmental Quiz night on 10th November at the Ramada Jarvis Hotel, Inverness. Over 25 teams of four from many different organisations including the RSPB, Trees for Life, Oxfam and several local environment groups took part, with each team donating prizes as well as providing questions for the quiz.



The branch team, **The Hungry Caterpillars**, comprised Audrey Turner, Margaret Currie, Brigid Primrose and Tom Prescott. However, despite this line-up and to everyone's surprise the Hungry Caterpillars claimed first prize! This included a vast selection of goodies as well as a cash prize of over £400 for the branch. It was decided that the branch would purchase a moth trap with the money and that the trap would be available for branch members and those of other organisations, particularly those at the quiz, to borrow so they can go over to the dark side and experience the joy of moths.

Highland Branch membership

Tony Mainwood produced this map, representing 169 "memberships" as at 24/01/2011 - quite a few of these are "family" memberships where there are 2 or more in the same household.

It does not include Orkney, (3), Shetland (4) or Western Isles (2).

The 9 in NW Sutherland may be in several 10K squares as IV27 covers a huge area with Lairg as the postal address.

There are 24 Highland Branch members in Argyll (12 of them on Mull) but Argyll isn't part of the Highland Branch area. There are others in other BC Branches as far south as Kent and Wiltshire.



Report from S Uist

John Kemp

Butterflies

Here, 2010 things started off OK up to June when Small Heath and Common Blues were present in close to normal numbers.

However, by July we were plagued by cloudy days - or fresh winds if we happened to get a sunny day. It was difficult to find suitable conditions for my transect and counts of most species plummeted. Graylings and Dark Green Fritillaries were in their usual haunts but there were never optimum conditions to get any idea of numbers.

The only bright spot was seeing a single Ringlet for the third year running at South Glendale, where they must be breeding.

Migrants were very poor.

Moths

Species new for Outer Hebrides in 2010, seen in South Glendale, consist of Dark Spectacle, Silver Hook and Scalloped Oak.

Elsewhere on the islands, Tissue and Bordered Grey were seen for the first time.

Also several species were caught which had not been recorded for decades eg. Cloaked Minor, Sallow, Gothic, Gold Spangle, Setaeous Hebrew Character.

With four people now regularly operating light traps on South Uist, micros are another story, many new species are being recorded.



Ringlet at Glendale (John Kemp)



Dark Spectacle (John Kemp)



Scalloped Oak (John Kemp)



Silver Hook (John Kemp)

2010 Moth Summary - Shetland

Paul Harvey, County Moth Recorder, VC112

It was an interesting start to the year with Shetland's second confirmed record of a Green-veined White on the 4th January, although it was presumably imported into the islands being found inside a house. The spring was relatively quiet although good numbers of Hebrew Character and a few Shears provided enough inspiration to keep a few folk setting traps. An Angle Shades on Noss on 2nd April was the highlight. A visiting 'mother' located Shetland's second record of the micro moth *Incurvaria masculella* on Unst in mid-May and a few migrant butterflies - Red Admirals, Painted Ladies and the occasional Peacock began to appear in June. Shetland's first Sandy Carpet trapped at Virkie (south mainland) on 21st June was a surprise, although a handful of Silver Ys suggested that the odd migrant might be about.

Some fine weather in July provided an interesting scatter of migrant moths with the undoubted highlight Scotland's first Splendid Brocade again at Virkie on 19th. Virkie also provided another new moth for the islands on 28th July when a Lempke's Gold Spot was trapped. In addition there were eight Burnished Brass (only 6 previous records), three Small Dotted Buffs (9th-11th records), two Bright-line Brown Eyes and a Flame Shoulder all in the south mainland, while the now annual influx of Magpie moths occurred late in the month. This was a rare moth until the last few years, but breeding in the islands has yet to be confirmed. A Hummingbird Hawk Moth was seen on Whalsay on 12th.

August too, was not without its highlights. A Plume Moth - *Stenoptilia pterodactyla* trapped at the northern tip of Unst was new to Shetland and three Snouts were trapped in the south mainland (6th-8th records). The latter species, first recorded in Shetland in 2002, was then proved to be breeding when over 30 were found in a dense clump of nettles at nearby Quendale on 12th. September, often exciting for migrant moths, was actually quite poor although Clifden Nonpareils on Whalsay and at Virkie on 9th September (9th-10th recent records) provided some excitement - especially for their two finders who were both school girls.



Clifden Nonpareil (P Harvey)

Visit the Shetland Entomological Group's pages of the Nature in Shetland website at:

<http://www.nature-shetland.co.uk/entomology/index.htm>

Moths Count in Wester Ross, VC105

Brian Neath, County Moth Recorder, VC105

Following on from the article by Barbara and Brian Ballinger in last year's Newsletter I thought it would be timely to give a report on the situation in Wester Ross now that the records to date have been incorporated into the provisional distribution maps of the National Moth Recording Scheme.

To date I have entered 102,732 records into MapMate to which no less than 70 people have contributed. Almost three-quarters of the records (72,969) are from the Rothamsted sites at Beinn Eighe, Inverpolly, Knockan and Rassal even though only records up to 2003 have been submitted to the Moths Count project so far. Amongst individual recorders I am well in the lead at present with 7414 records followed by Ishbel Cameron and family from Drumbuie with 2109. The other major contributors have been Sue Agnew with 1621, Barry Nattress and Colin Eadon with 1022, Max and Sue Pittman with 685 and David Barbour with 396. Barry and Colin have visited Kinlochewe every year since 2005 and have run a trap every night during their stay hence their large number of records. Sue Agnew and Max and Sue Pittman reside in the Ullapool area and have contributed many important records for that area. David Barbour carried out an invertebrate survey for the National Trust for Scotland on their Balmacara Estate in 1992 and most of his records are from that survey. The results of his survey were instrumental in arousing my own interest in moths.

The checklist to date for the vice-county amounts to 358 species. The most numerous species is the Dark Marbled Carpet with 13,539 individuals recorded followed by Hebrew Character (12,055), True Lover's Knot (11,697), Silver-ground Carpet (7,815), Chevron (7,628), November Moth (5,918), July Highflyer (4,844), Double-striped Pug (4,669), Antler Moth (4,637), Map-winged Swift (4,458), Small Wainscot (4,358), White Ermine (4,209) and Magpie Moth (4,138).

If we look at the most frequently recorded moths there is some variation in the top 12 species. Dark Marbled Carpet still comes top with 2,126 records followed by Silver-ground Carpet (1,760), Hebrew Character (1,642), Chevron (1,588), Green Carpet (1,513), True Lover's Knot (1,504), July Highflyer (1,490), Square-spot Rustic (1,376), Small Square-spot (1,292), Flame Shoulder (1,225) and Barred Red (1,098). I must admit that I would not have predicted Dark Marbled Carpet to be the most common moth in the vice-county, nor the high placing of the Chevron. I find it surprising that none of the "yellow underwing" species nor Common Quaker or Clouded Drab feature in either list.

At the other end of the scale there are 26 species which have been recorded only once. These include Orange Underwing, Vestal, July Belle, Broom-tip, Rannoch Brindled Beauty, Ringed Carpet, Bedstraw Hawk-moth, Archer's Dart, Heart and Club, Northern Dart, Double Lobed, Rosy Minor, Large Wainscot and Dark Spectacle.

The Nationally Scarce moths include one RDB species (Broad-bordered White Underwing - recorded in four 10km squares), eight Na species and 17 Nb species. These are listed below.

The most widespread of the scarce moths are Yellow-ringed Carpet (eight 10km squares), Chestnut-coloured Carpet (eight 10km squares), Slender-striped Rufous (six 10km squares), Argent and Sable (14 10km squares), Manchester Treble-bar (eight

10km squares), Scotch Annulet (11 10km squares), Great Brocade (six 10km squares) and Saxon (nine 10km squares).

Perhaps the most surprising of the nationally scarce moths is the Bordered Grey, singles of which have been recorded at Drumbuie in NG73 in the four years 2004, 2008, 2009 and 2010. Although this moth has been recorded on Canna, Rum and the Ardnamurchan peninsula in the past the current provisional distribution map for the National Moth Recording Scheme shows only one site other than Drumbuie in Scotland and very few in the whole of Britain. The other Scottish site is at St Cyrus, Kincardineshire on the east coast.

Nationally Scarce A Moths

Slender-striped Rufous	Black Mountain Moth
Barred Carpet	Northern Dart
Rannoch Brindled Beauty	Northern Arches
Bordered Grey	
Ringed Carpet	

Nationally Scarce B Moths

Yellow-ringed Carpet	Small Chocolate-tip
Chestnut-coloured Carpet	Plain Clay
Argent & Sable	Square-spotted Clay
Bleached Pug	Great Brocade
Thyme Pug	Sword-grass
Broom-tip	Angle-striped Sallow
Manchester Treble-bar	Saxon
Scotch Annulet	Marsh Oblique-barred
Narrow-bordered Bee Hawk-moth	

Slender-striped Rufous, Rannoch Brindled Beauty, Scotch Annulet and Black Mountain Moth occur only in the northern half of Scotland. Northern Dart is mainly a moth of northern Scotland with just single 10km squares in England and Wales.

I have recorded Barred Carpet every year from 2004 to 2010 with a count of 28 on 26th July 2006. However there are only two other records for Wester Ross at Inverinate (Barry Henwood) and Plockton (Dr Iain Matheson). It has not been recorded north of Lochalsh within the vice-county.

Other species which are spreading north include the Scorched Wing which I have also recorded every since 2004 at Carr Brae, Dornie. Surprisingly this moth has still not been recorded at any other sites in the vice-county, even within the Lochalsh area.

Provisional Distribution Maps

If you have not yet looked at the NMRS Provisional Distribution Maps on the Moths Count website it is well worth having a browse. However be warned that it can become compulsive viewing! What is quite worrying about the maps is the number of 10km squares in which many species have not been recorded since 2000. One gets the impression that the status of many moths will have to be re-assessed once the maps become finalised. The website is www.mothscount.org

REPORT FROM THE WEST COAST 2010

Brian Neath

SUMMARY

As usual this report covers the known sightings of butterflies and moths in the Lochalsh area of Wester Ross. Every year tends to be slightly different but with certain constant themes. We always like to see something new and with only one new moth species I was feeling slightly disappointed with the year 2010. However looking back through the records I was lucky to see several nationally scarce moths and other species which I had recorded on very few occasions previously. With butterflies it is not so easy to add new species and the interest lies in the yearly trends with some species increasing and others decreasing. The only likely new butterfly for Lochalsh is the Ringlet but this species does not appear to be advancing northwards up the west coast to the same extent as it is in the east.

BUTTERFLIES

The number of butterfly sightings in Lochalsh submitted to David Barbour for the year was well down on the record total for 2009 but comparable to 2008.

The first reported butterfly sighting of the year was of a Peacock seen by Jean Saville on 4 April at Glenelg. Despite the most severe winter for many years the Peacock appeared to have survived in good numbers and was widely reported from 11 April until 14 June. However it did not appear to have a very successful breeding season as the numbers later in the year were well down on last year. Nevertheless it was widely reported and is now established as one of the commonest butterflies in Lochalsh. The last sighting was of one in Dornie on 16 October making it both the first and last butterfly to be recorded during the year.

By contrast Red Admiral sightings have been far fewer during the last three years than previously. The only spring Red Admiral to be reported was seen by Ishbel Cameron at Drumbuie on 16 April and there were only six records between 22 August and 11 October. I saw my first and last Red Admiral of the year in our garden on 11 October.

Small Tortoiseshell sightings were also well down compared with former years. The first sighting of the year was of a single seen by Ishbel Cameron at Drumbuie on 10 April. I saw my earliest ever Small Tortoiseshells the following day, one in the garden and one on the Carr Brae transect. Subsequently there were just two records in April, one in May, one in July and two in August.

The only Painted Lady to be reported was seen by Ishbel Cameron at Drumbuie on 15 June.

It was a good year for the Orange-tip which was widely reported between 26 April and 14 June. Two at Camas-luinie on 10 June were the latest Orange-tips that I have ever seen, this butterfly having a very short flight period in our area.

The Green Hairstreak is another early butterfly that has a short flight period. During 2010 it was only observed during the period 8 to 25 May but nevertheless in good numbers. Roger Cottis found it to be particularly numerous in Glen Ling on the 8 May and I saw good numbers in the same area on the 18 and also in Glen Attadale.

There were only four reported sightings of Common Blue, which is very disappointing, and perhaps we ought to think about a more detailed search for this attractive butterfly in future years.

It was a reasonable year for our three fritillary species. These are not regularly reported by the general public due to the difficulty in separating the species. Pearl-bordered Fritillary is still only known from the Carr Brae transect where it was recorded from 8 May until 26 June peaking at 16 on 23 May. The Small Pearl-bordered flight period ran from 8 June until 8 August with numbers peaking at 20 on the rather early date of 14 June. It was good to see two Small-pearl-bordered Fritillaries at the Glen Shiel Battle Site on 25 June, rather a high altitude for this species. James Merryweather photographed one at Reraig on 18 June.

Dark Green Fritillaries were seen at Carr Brae, Glen Ling and Avernish during the period 19 July to 2 September. The peak count on the Carr Brae transect was 9 on 23 July.

Speckled Wood had the longest flight period stretching from 8 May until 30 September with just a gap from 19 June until 18 July but numbers were well down on 2009 with 10 at Avernish on 2 August being the highest count.

Very few Meadow Brown were recorded on Carr Brae but 14 were seen in Glen Ling on 22 July.

The first Scotch Argus was seen in Glen Ling on 22 July while the peak count on the transect was 65 on 8 August with the last individual seen on 4 September.

The Small Heath flight period ran from 14 May until 25 August and the maximum count on the transect was 38 on 14 June. Small Heath were observed in many parts of Lochalsh and were abundant in the north of Skye on 16 and 17 June. One was seen at the early hour of 07:55 at Loch Lundie on 14 June.

My only Large Heath of the year were two in Glen Ling on 22 July. The visit to Glen Ling on this date was nominally a BTO Atlas timed tetrad visit. There were disappointingly few birds about but the number and variety of butterflies, moths and dragonflies more than compensated for the lack of birds.

MOTHS

My total number of macro-moth species recorded during the year dropped below 200 for the first time since 2005. This probably reflected the fact that very little trapping was carried out away from the garden. There were two notable exceptions - a trapping at Loch Duich Primary School on 29 June and another just three days later at Drumbuie run by Barbara Macritchie of the National Trust for Scotland.

The trapping at the primary school followed on from a talk a few weeks earlier about birds, butterflies and moths as part of their environmental preparations prior to applying for their Green Flag Award. This trapping was most notable for the record count of 63 Buff Ermine, by far the highest count ever recorded in VC105. It was inevitably the Poplar and Elephant Hawk-moths that caught the children's imagination but Drinker, Pebble Hook-tip, Brimstone, Grey Dagger and Beautiful Golden Y were amongst the 29 species also appreciated by pupils and teachers.

The Drumbuie catch included 87 moths of 33 species with Poplar Hawk-moth and Garden Tiger being the spectaculars on this occasion. Map-winged Swift, Pebble and Coxcomb Prominents, Burnished Brass and Spectacle were amongst the other crowd-pleasers.

Visiting moth recorders to Lochalsh included Paul Waring who did some moth-trapping at Morvich and Ratagan and featured the results in his regular round up of moth reports in British Wildlife magazine. The main interest was an Old Lady, the first record for Lochalsh and only the third for Wester Ross. Other notable species included Flounced Rustic and Setaceous Hebrew Character.

Jeff Waddell recorded a Slender-striped Rufous at a remote upland site between Loch Alsh and Glen More on 22 September. This followed on nicely from one recorded by Pete Moore near Morvich on 14 September 2009. These were the first two records for Lochalsh of this Nationally Scarce A species and the first in Wester Ross since one at the Beinn Eighe Rothamsted site in September 1996.



Vapourer eggs (J Rooney)



Vapourer larvae (J Rooney)

John Rooney found a batch of eggs on the gable end wall of an annexe building at Balmacara House on 15 September 2009. Through a search on the internet he managed to identify them as eggs of the Vapourer moth. He kept an eye on them throughout the winter and eventually saw them begin to hatch during May and June 2010. Unfortunately he didn't see any of the larvae develop to full size and suspects that they were gradually eaten by birds through being in such an exposed situation. This story came to light during a casual chat with John when my interest in moths came into the conversation. He forwarded some photographs to me and I was able to confirm that they were the eggs and larvae of the Vapourer. It transpires that this was only the third record for Lochalsh and the eighth for Wester Ross. There are just two old records for Skye.

My largest catch of the year was on 10 April when 400 moths of 19 species were recorded. This was mainly due to the record numbers of the *Orthosia* species (92 Clouded Drab, 82 Hebrew Character and 78 Common Quaker). However the more notable species were single Grey Birch and Brindled Ochre.

The largest number of species was trapped on 28 July when there were 187 moths of 48 species. Triple-spotted Clay was the only numerous moth with 44, while seven Barred Carpet were perhaps the most significant.

My only new species of the year, Northern Deep-brown Dart, was one of 28 species trapped on 31 August. The best of the rest were Tawny Speckled Pug, Plain Clay and my first Centre-barred Sallow since 2006. Other highlights of the year included my third record of a Scarce Prominent on 26 April, a Dark Sword-grass on 26 August, a Merveille du Jour on 25 September and my second record of Streak on 27 September.

Ishbel Cameron and Charlene and Laura MacLeod run two traps in Drumbuie village and had another successful year. The highlight was another Bordered Grey on 5 August. Single specimens have been recorded in Drumbuie in 2004, 2008, 2009 and 2010 all within the period 13 July to 7 August. These are the only records for VC105 of this very rare moth. A Miller on 22 June was the first record for Lochalsh and this was followed by a larva of this species photographed by William Greig near Kyle on 14 September. These represent the 6 and 7 records of the Miller for VC105.

Other notable records from Drumbuie include a Puss Moth on 19 May, 8 Grey Scalloped Bar on 21 May, 14 Clouded Buff on 21 June, a Saxon on 22 June, 10 Scotch Annulet on 5 August, 13 Anomalous on 18 August and a Pale Eggar on 31 August.

The year ended with sub-zero temperatures but during a brief respite on 10 December 54 moths were attracted to our lighted windows - 47 Winter Moths, 3 Scarce Umber, 2 Mottled Umber, a December Moth and a Chestnut. The following evening there were 7 Scarce Umber but only 8 Winter Moths.

ACKNOWLEDGEMENTS

Butterfly records were kindly provided by Ishbel Cameron, Roger Cottis, Duncan and Tina Glen-Riddell, John Holt, Hubert Hunton, Roger Knight, Alison MacLennan, Charlene Macleod, Barbara Macritchie, James Merryweather, Pat Mucklow, Jean Saville and Jan Voisey.

Many thanks also to the moth recorders quoted in the text.

REFERENCES

Dr Paul Waring. British Wildlife Vol. 22 No.1 October 2010. Page56.



Northern Deep-brown Dart (B Neath)



Scarce Prominent (B Neath)



Dark Sword-grass (B Neath)



Streak (B Neath)

Macro-moth records received in 2010 for VC96, East Inverness-shire

Pete Moore, County Moth Recorder, VC96

I have so far received a total of 2400 moth records for 2010 but I expect more to trickle in over the next few months. Most records come from a small number of regular resident moth trappers and observers but there are also quite a few records from visitors to the area. The most interesting records of the season are described below.

Six new species for the Vice-County!

The first of these was a **Dingy Shell** found by Mike Taylor near Ferness in June. This is probably the most northerly UK record. Next up was **Magpie** (not to be confused with Small Magpie) found by Barbara Brodie in her Culloden garden on two consecutive nights in July. There are records of this species in neighbouring vice-counties and so it is perhaps surprising that it had not been previously recorded in VC96. Amazingly, the very next night Barbara caught another VC first, **Dark Spinach**, of which there are few Highland records. In August, Dan Tomes caught a **Slender Brindle** in his Tomich garden. Looking at the recently published macro-moth atlas, this may be not only the most northerly UK record but perhaps the only record for the Highlands! On exactly the same day, Robin Wynde discovered a colony of **Dark Bordered Beauty** at Insh Marshes RSPB reserve. This very rare moth was previously only known from three sites in the UK (two in Scotland and one in England). Ironically, to safeguard the future of this species, BC and RSPB are working on a joint project to introduce the species, via a captive breeding programme, to RSPB Insh Marshes! It was during monitoring as part of this project that the Insh Marshes colony was discovered. (There is one previous record of this species for VC96 but it is unsubstantiated).

Finally, Steve North caught **Large Wainscot** on two dates in September near Beaully.

It strikes me as impressive that six new species were found for the vice-county in one season. I think this reflects the increasing interest in moths and moth trapping.

UK Biodiversity Action Plan species

It was a great year for **Narrow-bordered Bee Hawk-moth** with 20 records received during 2010. This compares with only 31 previous records..... ever! There were just two records of **Swordgrass** (both Steve North near Beaully), two records of **Argent and Sable** (Anthony Hadley near Laggan and Jane Bowman in Glenmoriston), six records of **Cousin German** (John Grierson in Glen Feshie and Robin Wynde at RSPB Insh Marshes), two records of **Goat Moth** (both Jane Bowman in Glenmoriston), three records of **Netted Mountain Moth** in the Cairngorms (Roger Edmondson & Martin Evans and Barry Henwood) and finally two records of **Small Dark Yellow Underwing** (Roger Edmondson & Martin Evans, Cairngorms and Mo Richards, near Dalwhinnie).

Species with ten or less previous VC records (Number of previous records is given in brackets)

Marbled Beauty (2), Barbara Brodie, Culloden.

V-Pug (2), Steve North, Beaully.

Lunar Marbled Brown (5), Brigid Primrose, Inverness.

Welsh Clearwing (6), Jane Bowman, Glenmoriston.

Clouded Silver (8), Steve North, Beaulieu.

Barred Carpet (8), Rosemary Holt, Inverfarigaig.

Yellow-barred Brindle (9), John Thorpe, near Kingussie.

Coronet (9), Ewan Munro, Inverness, John Kemp/Steve Duffield, Kilmorack and Fiona Hay, Kincaig.

Pinion-streaked Snout (10), John Kemp/Steve Duffield, Kilmorack.

Many thanks to all those who have sent in records. (For those who haven't yet done so then get on with it!) A milestone was recently reached when the East Inverness-shire database topped **100,000** moth records (both macro-moth and micro-moth combined)! Thanks to Tom Prescott for sending in the 100,000th record. You can see that it has been a great year for moth records and I look forward to seeing what turns up in 2011.

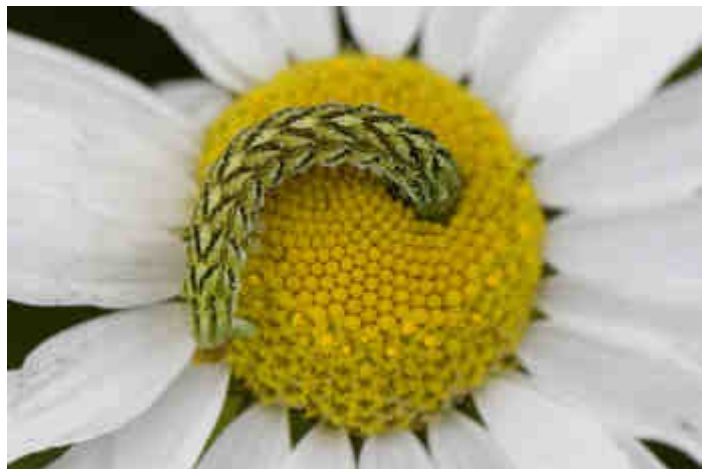
Some moth highlights from Moray

(VC95) Mike Taylor, County Moth Recorder, VC95

The growing band of resident moth recorders plus a couple of visitors submitted an impressive 3770 macro moth records and 505 micro moth records for Moray last year. I know that there are a few more to add to these totals so confidently expect a combined total in excess of 4500 for 2010. To put this in perspective, this is more than 10% of all of the records that are held for the vice-county therefore a very big thank you to all.

Whilst the majority of the records are for the more common species there are amongst them some records which are worthy of a little additional publicity. This is not to say that the more common species have little importance as it is these species which allow us to assess population trends and movements.

There were three new macro moth species added to the vice-county list. The first was Chamomile Shark a species that we had been looking for as it has been moving eastward along the Moray coast. Britt Taylor found a caterpillar feeding on the flowers of scentless mayweed along a field edge near Kintessack, just north of Forres. We subsequently found two more of these colourful caterpillars at other locations near the coast proving that its eastward movement is continuing.



Chamomile Shark caterpillar (M Taylor)



Cloaked Pug (M Taylor)

Next was a Cloaked Pug. Britt and I had set some light traps amongst oaks in Darnaway Forest looking to see if we could relocate an unlikely but well verified record of Maiden's Blush from 1984. No joy with the Maiden's Blush this time but in one of the traps there was a large and very well marked pug that I could not initially put a name to. It turned out to be a Cloaked Pug, a moth that is rarely seen and was probably

associated with some of the very large specimen spruces in that part of the forest, and as a bonus also in the trap was what turned out to be the third record of Coronet for the county.

The third new species was a V-Pug caught in our garden in Boat of Garten. With just a couple of records of this species in northern Scotland it was not one I had been expecting anytime soon.

There was briefly a fourth new species, a Brindled Green found by Paul Millard who had set a trap in a different part of Darnaway whilst on a fishing trip to the Findhorn. It turned out to be a short lived first as I obtained an earlier record from the 1940s when the Biological Records Centre data was released, still Paul's record is the first for some considerable time and as it was accompanied by a photograph, properly verified, which is more than can be said for some of the historic records.

Other notable macro moth records include second, third and fourth records of Scarce Tissue from a couple of sites in Grantown in April and May, all from Pete Moore. V-Moth was found in Aviemore in June by John Grierson, although this was the fourth record



Large Red-belted Clearwing (M Taylor)

for this species it was the first since 1968. In June Britt and I found a third record of Marsh Pug flying in the morning sunshine at Cloddymoss in Culbin Forest and later the same day we saw our first clearwing, a Large Red-belted Clearwing resting on bracken in Darnaway. Unfortunately the clearwing moved off before I could take a photograph so we went back the next day with a pheromone lure to try to relocate it but as nothing approached

the lure we started to look at the bracken again and just feet away saw and photographed what was almost certainly a female nectaring on cuckooflower. Finally, in August an unexpected inland find of Portland Moth was made by Robin Wynde beside the River Spey near Grantown.

Lepidoptera in Banffshire VC94 in 2010

Roy Leverton, County Moth Recorder VC94

- Ghost Moth *H. humuli* NJ5755 20.vi-19.vii; 1-2 on five dates. Also NJ1618, NJ6352.
- Gold Swift *H. hecta* NJ5755 two males on 7.vii.2010 were the only record.
- Map-winged Swift *H. fusconebulosa* NJ5755 one only, on 6.vii.2010. Also NJ1618, NJ6352.
- Six-spot Burnet *Z. filipendulae* NJ5755 eclosed cocoon 16.vi.2010 - first proof of breeding here. Also on coast.
- Thrift Clearwing *S. muscaeformis* NJ4868, NJ4968; Larva and feeding signs, 14.ix.2010.
- December Moth *P. populi* NJ5755 26.x-18.xi; max only 4 on 26.x.2010, at windows.
- Pale Eggar *T. crataegi* NJ5755 one only, at mv 1.ix.2010.
- Fox Moth *M. rubi* NJ4968 one by day on 20.v.2010 (George Mair).
- Emperor *P. pavonia* NJ5755 no adults seen; one larva on 18.vii.2010.
- Scalloped Hook-tip *F. lacertinaria* NJ165183 one to mv on 1.7.2010 (Liz Still).
- Peach Blossom *T. batis* NJ5755 22.vi-7.vii; three singles only. Poor year.
- Common Lutestring *O. duplaris* NJ5755 female at sugar on 1.vii.2010.
- Yellow Horned *A. flavicornis* NJ5755 one to mv on 9.iv.2010.
- Large Emerald *G. papilionaria* NJ5755 two to mv on 13.vii & two more on 19.vii.2010.
- Small Fan-footed Wave *I. biselata* NJ5755 13.vii-18.viii; 1-4 on many dates. Also NJ5249, NJ5167, NJ5267.
- Small Dusty Wave *I. seriata* NJ5755 one to window on 19.vii.2010. NJ5167 one on 2.viii.2010.
- Riband Wave *I. aversata* NJ5755 singles at mv on 2.vii & 25.vii.2010. NJ6352 one on 3.viii.2010 (RS).
- Flame Carpet *X. designata* NJ5755 Gen.I: 15.v-2.viii; max at mv 17 on 19.v.2010 - highest-ever numbers.
Gen.II: 3.viii-11.ix, max 9 on 18.viii.2010. Also NJ1618, NJ4654, NJ5149, NJ6352.
- Red Carpet *X. munitata* NJ5755 one to mv on 3.viii.2010 - scarce in recent years.
- Red Twin-spot Carpet *X. spadicearia* NJ5755 singles to mv on 22.v & 20.vi.2010.
- Silver-ground Carpet *X. montanata* NJ5755 15.vi-6.viii; max at mv 22 on 30.vi.2010. NJ1519, 1618, 6352, 7164
- Garden Carpet *X. fluctuata* NJ5755 Gen.I: 26.iv-12.vi; 1-4 on many dates; Gen.II: 30.vii-22.ix; 1-2 on many dates. Also NJ4654, NJ6352.
- Shaded Broad-bar *S. chenopodiata* NJ5755 3.viii-18.viii; singles on five dates. NJ1519 one on 8.vii.2010 (AT).
- July Belle *S. luridata* NJ5755 singles at mv, 13.vii & 23.vii.2010. NJ3565 one as early as 3.vi.2010.
- Small Argent & Sable *E. tristata* NJ5755 one by day, 22.vi.2010: new for site.

- Common Carpet *E. alternata* NJ5755 22.vi-20.viii; max at mv 7 on 19.vii.2010. Also NJ1618, 5249, 6352.
- Yellow Shell *C. bilineata* NJ5755 singles by day, 23.vii & 2.viii.2010. Also NJ1519, NJ5267, NJ7264.
- Grey Mountain Carpet *E. caesiata* NJ5355; two very worn, 31.viii.2010.
- Shoulder Stripe *A. badiata* NJ5755 22.iv-16.v; singles on five dates.
- Water Carpet *L. suffumata* NJ5755 12.iv-1.vi; max at mv 7 on 25.iv.2010. Also NJ4654 (JW).
- Purple Bar *C. ocellata* NJ5755 20.vi-23.vii; 1-4 on various dates. Also NJ1618 (LS).
- The Chevron *E. testata* NJ5755 18.viii-9.ix; 1-3 on four dates only. NJ2920 one on 9.ix.2010 (Pete Moore).
- Northern Spinach *E. populata* NJ5755 2.viii-20.ix; 1-3 on various dates. Also NJ5455.
- Barred Straw *E. pyraliata* NJ5755 13.vii-2.viii; six singles only - poor year. Also NJ6352, up to 10 (RS).
- Small Phoenix *E. silaceata* NJ5755 20.v-13.vii, max at mv 8 on 15.vi.2010. NJ6352 inc.Gen.II on 3.ix.2010.
- Red-green Carpet *C. siterata* NJ5755 28.iv-22.vi; 1-5 on seven dates. Then 29.viii-28.x; max 18 on 10.x.2010.
- Autumn Green Carpet *C. miata* NJ5755 one on 10.iv, then 9.ix-30.x; 1-3 on various dates.
- Dark Marbled Carpet *C. citrata* NJ5755 28.vii-20.ix; max at mv 20 on 1.ix.2010. Also NJ5455.
- Common Marbled Carpet *C. truncata* NJ5755 13.vii-27.vii; 1-2 on six dates only: poor year.
- Barred Yellow *C. fulvata* NJ6352 single at mv on 3.viii & 3 on 15.viii.2010 (Rosemary Smith).
- Blue-bordered Carpet *P. rubiginata* NJ5755 pupa, ca. 7.vii; adult at mv on 20.viii.2010.
- Pine Carpet *T. firmata* NJ5755 18.viii (two), 22.viii (two) and 1.ix (four) at mv.
- Grey Pine Carpet *T. obeliscata* NJ5755 Gen.I(?) on 2.viii, then Gen.II 18.viii-11.x, up to 8 (1.ix & 9.ix) at mv.
- Spruce Carpet *T. britannica* NJ5755 different singles at mv on 9.x & 11.x.2010.
- Broken-barred Carpet *E. corylata* NJ165183 one to mv on 1.vii.2010 (Liz Still).
- Mottled Grey *C. multistrigaria* NJ5755 12.iii-24.iv; max only 5 at mv on 9.iv.2010 - poor year.
- Green Carpet *C. pectinataria* NJ5755 30.vi-6.viii; 1-5 on many dates. Also NJ1618, NJ6352.
- July Highflyer *H. furcata* NJ5755 2.viii-29.ix; max at mv 32 on 9.ix.2010. Also NJ5167, NJ5267, NJ6352.
- November Moth *E. dilutata* NJ5755 20.ix-11.x; max at mv 9 on 9.x.2010.
- Autumnal Moth *E. autumnata* NJ5755 9.x-9.xi; 1-2 on six dates only.
- Small Autumnal *E. filigrammaria* NJ5755 one at mv on 8.ix. NJ2920 & NJ3023 singles on 9.ix.2010 (PM).
- Winter Moth *O. brumata* NJ5755 30.x-29.xii; max 13 at lighted windows on 22.xi.2010.
- Northern Winter *O. fagata* NJ5755 male by torch on 9.xi.2010.
- Rivulet *P. affinitata* NJ7264 six at dusk on 1.vi.2010.
- Small Rivulet *P. alchemillata* NJ5755 22.6-2.viii; max at mv 11 on 13.vii.2010. NJ16118 14 at mv 1.vii (LS).
- Grass Rivulet *P. albulata* NJ165183 one to mv on 1.vii.2010 (Liz Still).

- Sandy Carpet *P. flavofasciata* NJ4968 one by day on 27.v.2010 (Catherine MacLeod) - new 10km sq.
- Twin-spot Carpet *P. didymata* NJ5755 two on 2.viii & singles on 20.viii & 22.viii - poor year! Also on coast.
- Foxglove Pug *E. pulchellata* NJ5755 singles to mv on 19.vii & 23.vii.2010.
- Lime-speck Pug *E. centaureata* NJ5167, NJ5267 five larvae on ragwort flowers, 2.viii.2010 - new 10km sq.
- Satyr Pug *E. satyrata* NJ2414 20 by day on 14.vi.2010 (Julian Clarke).
- Wormwood/Ling Pug *E. absinthiata* NJ5755 one on 2.vii & two on 13.vii.2010.
- Currant Pug *E. assimiliata* NJ5755 three singles only: 2.vii, 8.vii & 13.vii.2010.
- Common Pug *E. vulgata* NJ5755 17.v-2.vii; max at mv 9 on 15.vi.2010. Also NJ6352.
- Grey Pug *E. subfuscata* NJ5755 22.v-8.vii; 1-2 on six dates only.
- Tawny Speckled Pug *E. icterata* NJ5755 one only, to mv on 25.vii.2010.
- Ochreous Pug *E. indigata* NJ5755 male to mv on 22.v.2010.
- Narrow-winged Pug *E. nanata* NJ5755 singles on 30.vi & 2.vii.2010. NJ1618: 7 to mv on 1.vii.2010 (Liz Still).
- Golden-rod Pug *E. virgaureata* NJ5755 three on 22.v & single on 4.vi.2010.
- Brindled Pug *E. abbreviata* NJ5755 worn single to mv on 22.v.2010.
- Double-striped Pug *G. rufifasciata* NJ5755 15.v-11.viii; 1-4 on many dates. Also NJ4654, NJ5167, NJ5267.
- The Streak *C. legatella* NJ5755 27.ix-11.x; 1-2 on six dates only.
- Welsh Wave *V. cambrica* NJ5755 one only, to mv on 11.viii.2010.
- Early Tooth-striped *T. carpinata* NJ5755 singles on 24.iv, 25.iv & 29.iv.2010. NJ6352 singles 10.iv & 26.iv.10
- Magpie *A. grossulariata* NJ5755 windblown strays to mv on 25.vii (three) and 27.vii.2010.
- Clouded Border *L. marginata* NJ5755 4.vi-27.vii; 1-4 on various dates: good year. NJ6352 three singles (RS).
- Tawny-barred Angle *Macaria liturata* NJ3664 one by day, 3.vi.2010.
- Brown Silver-line *P. chlorosata* NJ5755 four strays on 22.v.2010. NJ6352 two strays 22.v; NJ7264 one, 1.vi.10.
- Brimstone Moth *O. luteolata* NJ5755 22.v-30.vi; max at mv 9 on 20.vi.2010. Also NJ6352.
- Early Thorn *S. dentaria* NJ5755 30.iv-4.vi; 1-4 at mv on nine dates.
- Lunar Thorn *S. lunularia* NJ5755 one on 22.v & two on 22.vi.2010 at mv. NJ6352 one at mv on 22.v.2010.
- Scalloped Hazel *O. bidentata* NJ5755 22.v-23.vi; 1-2 on five dates only. Also NJ1618 (JC), NJ4654, NJ6352.
- Scalloped Oak *C. elinguaris* NJ5755 three on 6.viii & one at 19.viii.2010 at mv. NJ6352 one on 15.viii.10 (RS).
- Swallow-tailed *O. sambucaria* NJ5755 female to mv on 25.vii.2010: New for VC94**
- Feathered Thorn *C. pennaria* NJ5755 male to mv on 14.x.2010.
- Pale Brindled Beauty *A. pilosaria* NJ5755 one 14.ii, 7 on 6.iii, singles 8.iii & 8.iv.2010 at house lights.

Peppered Moth *B. betularia* NJ5755 22.v-2.vii; 1-2 on four dates. NJ1618 one on 1.vii.2010 at mv (Liz Still).

Scarce Umber *A. aurantiaria* NJ5755 22.x-9.xi; 1-2 on four dates only.

Dotted Border *A marginaria* NJ5755 one only, by torch on 19.iii.2010.

Satin Beauty *D. ribeata* NJ5755 four to mv on 6.viii & singles on 7.viii (buddleia) & 20.viii.2010 (mv).

Mottled Beauty *A. repandaria* NJ5755 30.vi-25.vii; 1-3 on five dates. Also NJ1618; NJ5167 one on 2.viii.2010.

Brussels Lace *C. lichenaria* NJ5755 2.vii-13.vii; 1-3 on four dates at mv.

Engrailed *E. bistortata* NJ5755 singles on 19.v & 22.v.2010 at mv - never numerous here.

Common Heath *E. atomaria* NJ5755 15.v-2.vii; up to 20 (31.v) by day. NJ2414 five on 14.vi.2010 (J. Clarke).

Bordered White *B. piniaria* NJ5755 one only, on 20.vi.2010. NJ3664 two on 3.vi.2010 by day.

Common White Wave *C. pusaria* NJ5755 22.vi-24.vii; 1-2 on four dates only.

Common Wave *C. exanthemata* NJ5755 22.v-25.vii; 1-3 on various dates. Also NJ1320 (AT) & NJ6352 (RS).

Light Emerald *C. margaritata* NJ5755 2.vii-11.viii; 1-4 var. dates; small fresh Gen.II (?) 22.viii. NJ1519, 6352.

Barred Red *H. fasciaria* NJ5755 23.vii-18.viii; five singles to mv. NJ6352 one to mv on 24.vii.2010 (RS).

Annulet *C. obscurata* NJ5267 one at flowers, 2.viii.2010 (new 10km square).

Poplar Hawk-moth *L. populi* NJ5755 31.v-2.viii; max at mv 6 on 15.vi.10. NJ1618 two on 1.vii.10. NJ6352.

Hummingbird Hawk-moth *M. stellatarum* NJ4968 two on 3.viii (GM); one 8.viii (CM); one 18.viii.2010 (GM).

Elephant Hawk-moth *D. elpenor* NJ5755 15.vi-27.vii; 1-3 on 9 dates. NJ333395 larva, Sept. Graham Robertson.

Small Elephant Hawk-moth *D. porcellus* NJ5755 singles at mv on 2.vi & 2.vii.2010.

Buff-tip *P. bucephala* NJ5755 one to mv on 15.vi.2010.

Puss Moth *C. vinula* NJ5755 one only, at mv on 22.v.2010.

Sallow Kitten *F. furcula* NJ5755 22.v-8.vii; max at mv 5 on 30.vi.2010. NJ1618 one at mv on 1.vii.2010 (LS).

Iron Prominent *N. dromedarius* NJ5755 singles to mv on 15.vi & 2.vii.2010. Two larvae, alder and birch.

Pebble Prominent *N. ziczac* NJ5755 22.v-6.viii; max at mv 5 on 30.vi.2010. NJ4654 one on 19.v.2010 (JW).

Lesser Swallow Prominent *P. gnoma* NJ5755 22.v-2.viii; 1-3 at mv on various dates. NJ1618 two on 1.vii (LS).

Swallow Prominent *P. tremula* NJ5755 two at mv on 23.vii.2010.

Coxcomb Prominent *P. capucina* NJ5755 15.vi-2.viii; 1-3 at mv on various dates.

Pale Prominent *P. palpina* NJ5755 singles at mv on 22.v & 15.vi.2010.

Vapourer *O. antiqua* NJ5755 2.ix-6.x; 1-2 males seen flying on five dates. NJ6863 larva on 10.viii.2010.

Dark Tussock *D. fascelina* NJ5755 singles to mv on 15.vi & 30.vi.2010.

Wood Tiger *P. plantaginis* NJ5755 one only, by day on 21.vi.2010.

Garden Tiger *A. caja* NJ5755 30.vi-6.viii, then single on 9.ix; max at mv 13 on 13.vii. Also NJ1618, 6352, 7264

White Ermine *S. lubricipeda* NJ5755 17.v-6.vii; max at mv 15 on 22.vi.2010. Also NJ4654, NJ6352.

Ruby Tiger *P. fuliginosa* NJ5755 larva 18.iii, adult to mv 22.v.10. NJ1420 larva 18.iii.10 (Hilary Swift).

Least Black Arches *Nola confusalis* NJ5755 two at mv on 22.v.10. NJ463545 one to mv on 19.v.10 (JW).

Dark Sword-grass *A. ipsilon* NJ5755 5.ix-2.xi; 1-4 on 23 dates, mainly at sugar and buddleia, few at mv.

Total of 47 moths, but some presumably were retraps.

Flame Shoulder *O. plecta* NJ5755 31.v-6.viii; max 62 at sugar 7.vii.10. Gen.II? one, 18.viii. Also NJ6352.

Large Yellow Underwing *N. pronuba* NJ5755 30.vi-28.ix; max at mv 193 on 6.viii.10. Also NJ6352, 7164.

Lesser Yellow Underwing *N. comes* NJ5755 28.vii-27.ix; max at mv 11 on 1.ix.10. Also NJ5167, 5267, 6352.

Broad-bordered Y U *N. fimbriata* NJ5755 singles at mv on 6.viii & 20.viii.2010.

Lesser Broad-border *N. janthe* NJ5755 25.vii-19.ix; max at mv 22 on 18 & 22.viii.10. & NJ5167,6352,6864.

Double Dart *G. augur* NJ5755 7.vii-11.viii; 1-6 on many dates, mainly at sugar. Also NJ6352.

Autumnal Rustic *P. glareosa* NJ5755 14.viii-9.ix; 1-5 at mv on seven dates only - poor year.

True Lover's Knot *L. porphyrea* NJ5755 30.vi-2.viii; max at mv only 8 on 30.vi.10. NJ1618: 19 on 1.vii.10.

Ingrailed Clay *D. mendica* NJ5755 1.vii-1.ix; max 16 at sugar on 20.vii.10. Also NJ1618, NJ5167, NJ6352.

Barred Chestnut *D. dahlii* NJ5755 19.viii-5.ix; four singles and 4 on 1.ix.2010.

Purple Clay *D. brunnea* NJ5755 7.vii-12.viii; six dates only, max 5 at sugar on 7.vii.2010.

Small Square-spot *D. rubi* NJ5755 22.vi-11.viii; max 48 at sugar on 7.vii; GII singles 16.viii, 3.ix & 29.ix.10.

Northern Dart *X. alpicola* NJ2414 three pupae, 14.vi.2010 (Julian Clarke).

Set. Hebrew Ch. *X. c-nigrum* NJ5755 7.vii-6.viii; 1-2 on four dates only. Two (M?) on 9.ix.10. Also NJ6352.

Double Square-spot *X. triangulum* NJ5755 2.vii-2.viii; 1-2 on five dates only. Also NJ6352.

Dotted Clay *X. baja* NJ5755 13.vii-22.viii; max at mv 19 on 6.viii.2010. Also NJ6352, e.g. 12 on 15.viii.2010.

Six-striped R. *X. sexstrigata* NJ5755 30.vi, then 13.vii-18.viii; max at mv 20 on 6.viii.10. Also NJ5167, 5267.

Square-spot Rustic *X. xanthographa* NJ5755 22.vii-21.ix; max at mv 29 on 18.viii.10. Also NJ6352.

The Gothic *N. typica* NJ5755 singles at light on 23.vii, 9.viii, 16.viii.10. NJ6352 one to mv on 17.vii.10 (RS).

Green Arches *A. prasina* NJ5755 20.vii-12.viii; 1-3 on four dates. NJ1618 one, 1.vii.10. NJ6352 one, 24.vii.10.

Red Chestnut *C. rubricosa* NJ5755 three to mv on 25.iv and single on 28.iv.10 - very poor year.

The Shears *H. plebeja* NJ5755 one at mv on 2.vi.10. NJ165183 one to mv on 1.vii.2010 (Liz Still).

Pale-shouldered Br. *L. thalassina* NJ5755 19.v-8.vii; 1-4 on many dates. Also NJ1618, NJ4654, NJ6352.

Bright-line Brown-eye *T. oleracea* NJ5755 22.v-6.viii; 1-5 on various dates. Also NJ1618, NJ6352.

Glaucous Shears *P. biren* NJ5755 seven to mv on 22.v, but no others. NJ4654: 3 on 18.v; NJ2414, NJ6352.

Broom Moth *C. pisi* NJ5755 22.v-7.vii; 1-2 on seven dates. NJ165183: 14 to mv on 1.vii.2010 (Liz Still).

The Champion *H. rivularis* NJ5755 2.vii-27.vii; max at mv 5 on 13.vii.10. NJ1618 five to mv on 1.vii.10 (LS).

Marbled Coronet *H. confusa* NJ5755 stray at mv on 22.v.2010; NJ7264 larva on sea campion.

Antler Moth *C. graminis* NJ5755 2.vii-23.viii; max at mv 15 on 25.vii.10 - good year. Also NJ6352.

Pine Beauty *P. flammea* NJ5755 one to mv on 14.iv.2010. NJ5249 larva on 11.vii.2010 (Rosemary Smith).

Common Quaker *O. cerasi* NJ5755 22.iii-22.v; max at mv 16 on 28.iv; NJ6352 e.g. 14 on 10.iv.10 (RS).

Clouded Drab *O. incerta* NJ5755 19.iii-22.v; max at mv 32 on 9.iv.10. NJ6352 eg 12 on 26.iv.10 (RS).

Hebrew Character *O. gothica* NJ5755 3.iv-2.vi; max at mv 55 on 25.iv; NJ6352 eg 78 on 26.iv.10 (RS).

Brown-line Bright-eye *M. conigera* NJ5755 one only, to mv on 25.vii.2010. Scarce in recent years.

The Clay *M. ferrago* NJ7264 one at rest by day, 13.vii.2010.

Smoky Wainscot *M. impura* NJ5755 6.vii-1.ix; max at mv 29 on 6.viii.10. Also NJ5167, NJ5267, NJ6352.

Common Wainscot *M. pallens* NJ5755 one only, to mv on 6.viii.2010.

Shoulder-striped Wainscot *M. comma* NJ5755 one to mv on 22.vi.2010 - always scarce here.

The Shark *C. umbratica* NJ5755 singles to mv on 30.vi & 16.vii.2010.

Minor Shoulder-knot *B. viminalis* NJ5755 three on 18.viii & two on 20.viii.10 at mv. Scarcer in recent years.

Brindled Ochre *D. templi* NJ5755 9.ix-11.x; 1-4 on five dates only. Far scarcer in recent years.

Black Rustic *A. nigra* NJ5755 20.viii-30.ix; max at mv 11 on 1.ix.2010. NJ7264 larva on sea plantain, 1.vi.10.

Red Sword-grass *X. vetusta* NJ5755 18.iii-22.v; 1-2 on many dates; then 8.ix-11.x; max 14 at sugar on 6.x.10.

The Sword-grass *X. exsoleta* NJ5755 18.iii-12.iv; 1-2 various dates; then 19.ix-12.xii; 1-5 at sugar many dates.

- Green-brindled Crescent *A. oxyacanthae* NJ5755 22.ix-5.x; four singles to mv or sugar.
- Merveille du Jour *D. aprilina* NJ5755 one at sugar, 10.x.2010.
- Dark Brocade *B. adusta* NJ5755 22.v-2.vii; 1-2 on six dates. NJ165183: 11 to mv on 1.vii.2010 (Liz Still).
- Grey Chi *A. chi* NJ5755 two singles only, at mv on 31.viii & sugar on 12.ix.2010. Scarcer in recent years.
- Satellite *E. transversa* NJ5755 10.iii-9.iv; 1-2 various dates. Then 30.ix-30.xii; max at sugar 8 on 13.xi.2010.
- The Chestnut *C. vaccinii* NJ5755 6.iii-12.iv; 1-3 various dates; then 21.ix-30.xii; max at sugar 21 on 9.x.10.
- Brick *A. circellaris* NJ5755 5.ix-27.x; max at sugar 89 on 30.ix.2010 - good year.
- Red-line Quaker *A. lota* NJ5755 10.ix-4.xi; max at sugar 32 on 6.x.10 - good year. Also NJ6352.
- Yellow-line Quaker *A. macilenta* NJ5755 9.ix-29.x; max at sugar 13 on 2.x.2010 - good year.
- Brown-spot Pinion *A. litura* NJ5755 4.ix-7.x; 1-3 on many dates. NJ7264 larva on thrift, 1.vi.2010.
- Centre-barred Sallow *A. centrago* NJ5755 one only, to lighted window on 18.ix.2010.
- Pink-barred Sallow *X. togata* NJ5755 11.viii-7.x; max 21 at sugar on 10.ix.10. Also NJ6352.
- The Sallow *X. ictertia* NJ5755 6.viii-18.ix; max 22 at mv on 1.ix.2010. Also NJ6352.
- Miller *A. leporina* NJ165183 one to mv, 1.vii.2010 (Liz Still).
- Grey Dagger *A. psi* NJ5755 9.vi-25.vii; eight singles. NJ165183: 6 to mv on 1.vii.2010 (Liz Still).
- Knot Grass *A. rumicis* NJ5755 22.v-7.vii; 1-3 on seven dates, to sugar or mv.
- Coronet *C. ligustri* NJ5755 singles at sugar on 7.vii & 24.vii.2010.
- Marbled Beauty *C. domestica* NJ5167 one at ragwort, 2.viii.2010; NJ6863 one on wall, 10.viii.2010.
- Brown Rustic *R. ferruginea* NJ5755 20.vi-2.vii; 1-2 on four dates only.
- Small Angle Shades *E. lucipara* NJ5755 15.vi-15.vii; max 5 at sugar on 30.vi.2010. Also NJ6352.
- Angle Shades *P. meticulosa* NJ5755 8.vii-11.x; 1-5 on many dates, mostly early October. Also NJ6864.
- Suspected *P. suspecta* NJ165183 one to mv, 1.vii.2010 (Liz Still).
- Dark Arches *A. monoglypha* NJ5755 6.vii-9.ix; max at mv 88 on 6.viii.2010. Also NJ6352.
- Light Arches *A. lithoxylaea* NJ5755 16.vii-18.viii; 1-2 on various dates. Also NJ7164.
- Clouded-bd. Brindle *A. crenata* NJ5755 12.vi-3.viii; max 32 at sugar, 7.vii.. NJ1618: 18 on 1.vii.10. NJ6352.
- Dusky Brocade *A. remissa* NJ5755 20.vi-6.viii; max 20 at sugar on 7.vii.10. NJ1618: 18 on 1.vii.10. NJ6352.
- Rustic Shoulder-knot *A. sordens* NJ5755 15.vi-13.vii; five on 30.vi.10 plus four singles. Poor year.
- Marbled Minor *O. strigilis* NJ5755 30.vi-6.viii; 1-2 on four dates only.
- Middle-barred Minor *O. fasciuncula* NJ5755 12.vi-28.vii; max 49 at sugar, 30.vi. NJ1618: 16 on 1.vii. NJ6352.

Rosy Minor *M. literosa* NJ5755 6.viii-20.viii; four singles only. Also NJ5167: 25 on 1.viii.10. NJ5267.

'Common Rustic' *M. secalis/didyma* NJ5755 16.vii-9.ix; max at mv 72 on 18.viii.10. NJ6352: 72 on 15.viii.10.

Lesser Common Rustic *M. didyma* NJ5755 larva in June, adult (ab.) on 11.viii.2010, both gen. det. M.R.Young.

Small Dotted Buff *P. minima* NJ5755 15.vi-11.viii; max at mv 20 on 8.vii.10. Also NJ1618, NJ6352.

Small Wainscot *P. pygmina* NJ5755 1.ix-11.x; max at mv 8 on 18.ix.10. NJ6352: 21 at mv on 21.ix.10 (RS).

Large Ear *A. lucens* NJ5755 6.viii-9.ix; 1-6 on various dates.

Crinan Ear *A. crinanensis* NJ5755 18.viii-10.ix; 1-5 on five dates.

Ear Moth *A. oculatea* NJ5755 male to mv on 9.ix.2010, gen. det. - always scarce here.

Rosy Rustic *H. micacea* NJ5755 6.viii-11.x; max at mv 11 on 9.ix.10. NJ6352: 7 on 3.ix.10. NJ5167 one, 2.viii.

Frosted Orange *G. flavago* NJ5755 8.ix-21.ix; 1-3 on four dates only. NJ6352 two to mv on 21.ix.10 (RS).

Crescent *C. leucostigma* NJ5755 one (migrant) to mv on 18.viii.2010.

Haworth's Minor *C. haworthii* NJ5755 18.viii-22.ix; max 7 at sugar on 10.ix.2010.

Bulrush Wainscot *N. typhae* NJ5755 singles to mv on 9.ix & 29.ix.2010.

Anomalous *S. anomala* NJ5755 singles to mv on 18.viii & 9.ix.2010.

Nut-tree Tussock *C. coryli* NJ5755 three to mv on 22.v.2010. NJ463545 one to mv on 19.v.2010 (JW).

Burnished Brass *D. chrysitis* NJ5755 30.vi-19.viii; max at mv 22 on 13.vii.10. Also NJ1618, NJ6352.

Gold Spot *P. festucae* NJ5755 8.vii-7.viii; 1-3 on seven dates only. Also NJ6352.

Lempke's Gold Spot *P. putnama* NJ5755 2.vii-19.viii; 1-6 (6.viii) on sixteen dates; larva in May.

Silver Y *A. gamma* NJ5755 4.vi-9.x; max 25 at buddleia on 9.x.10, then no more - early end to flight period.

Also NJ1618, NJ2520, NJ3565, NJ5354, NJ6352.

Beaut. Golden Y *A. pulchrina* NJ5755 20.vi-11.viii; max at mv 39 on 30.vi.10. NJ1618: 23 on 1.vii.10. NJ6352.

Gold Spangle *A. bractea* NJ5755 27.vii-16.viii; 1-2 on four dates only. NJ6352 one on 3.viii.10 (RS).

The Spectacle *A. tripartita* NJ5755 22.v-27.vii; max at mv 5 on 8.vii.10. NJ1618: 9 on 1.vii.10. NJ6352.

Herald *S. libatrix* NJ5755 27.iv-15.vi (three) on six dates. Then 4.ix-13.x; singles on six dates. NJ4654 one, 18.v.

The Snout *H. proboscidalis* NJ5755 20.vi-1.ix; max at mv 13 on 19.vii.10. Also NJ5167, NJ5267, NJ6352.

Pinion-streaked Snout *S. costaestrigalis* NJ5755 singles 13.vii & 20.vii, two on 6.viii & two on 11.viii.2010.

Small Fan-foot *H. nemoralis* NJ5755 one to window, 19.vii.10. NJ165183 one to mv on 1.vii.2010 (Liz Still).

Selected micros

Y. evonymella NJ5755 migrants 25.vii-18.viii; max at mv 30 on 6.viii.10 (high count). Also NJ6352.

P. xylostella NJ5755 9.vi-25.vii; 1-6 noted on four dates only - poor year.

Clepsis consimilana NJ631524 one to mv on 24.vii.2010 (Rosemary Smith). **New for VC94.**

Acleris bergmanniana NJ631524 one to mv on 24.vii.2010 (Rosemary Smith). **New for VC94.**

Grapholita lunulana NJ3565 six by day on 3.vi.2010. **New for VC94.**

Catoptria permutatella NJ5755 singles to mv on 8.vii, 2.viii & 18.viii.2010.

C. falsella NJ631524 one to mv on 15.viii.2010 (Rosemary Smith).

Nomophila noctuella NJ5167 one at ragwort on 2.viii.2010 was the only sighting of the year.

Butterflies

Dingy Skipper NJ3565 two on 3.6.10 (WS, GM & RL).

Large White NJ5755 first 16.vi; Transect Index only 3. Also NJ6352 on 17.vi.2010 (RS).

Small White NJ5755 18.viii-30.9; four singles & 3 on 3.ix.2010 were probably migrants.

Green-veined White NJ5755 from 28.iv; TI = Gen.I: 357; Gen.II: 250. Also NJ6352, NJ7264.

Orange-tip NJ5755 9.v-15.vi; TI=32 (2009 = 11). Also NJ6352, singles 19.v & 2.vi.2010 (RS).

Small Copper NJ5755 singles on 17.vi & 2.ix.2010. NJ3664 one on 3.vi.2010.

Small Blue NJ3565 fifty on 3.vi.2010 (WS, GM, RL).

Common Blue NJ5755 2.vii-8.viii; TI=14 (2009 = 1). Also NJ5149, 5250, 5167, 5267; 7264: 10 on 13.vii.10.

Red Admiral NJ5755 from 22.vi (only spring sighting). TI=20 (2009 = 17).

Small Tort. NJ5755 7.iv-20.v, then 18.vii-26.ix; TI = S5, A65 (2009 = 5, 35). & NJ5167, 5267, 6352, 7264.

Painted Lady NJ5755 one, 4.vi.2010. NJ6352 one, 25.viii.2010 (RS).

Peacock NJ5755 10.iv-15.v, then 26.viii-26.ix; TI=S5, A45 (2009 = 3, 89). Also NJ3664, NJ6352.

Dark Green Frit. NJ5755 singles 22.viii, 30.viii & 2.ix.; NJ5167; NJ5267:10 on 20.vii; NJ7264: 8 on 13.vii.10.

Speckled Wood NJ5755 from 11.vii, one brood; TI=7 (2009=7). NJ3664: 8 on 3.6.10 (WS, GM, RL).

Also NJ5149, NJ5249, NJ5250; NJ6352 one on 3.ix.2010 (RS).

Scotch Argus NJ5755 3.viii-2.ix; TI = 21 (2009=11). Also NJ5250, one on 29.vii.10.

Grayling NJ7264 larva 1.vi.10, by torch at night; 4 adults on 13.vii.10.

Meadow Brown NJ5755 30.vi-19.viii; TI = 44 (2009=20). NJ5167, 5267, 7164; NJ7264: 25 on 13.vii.10.

Small Heath NJ5755 4.vi-18.vii; TI = 7 (2009=2). Not noticed elsewhere.

Ringlet NJ5755 2.vii-8.viii; TI = 39 (2009=36). NJ5267: 20 on 20.vii; NJ7264: 15 on 13.vii; NJ6352 one, 5.viii.

Sites and methods

As usual, most records are from my home address, Whitewells NJ574556, where a 125w Robinson mercury vapour moth trap was run on suitable nights between early April and mid October, the weather being poor thereafter. The trap was often switched off around midnight or 1am if rain was forecast, or if few moths were arriving. Sugar was used almost nightly from mid March to late October, and even in November and December on mild evenings. Lighted windows produced further records, as did floral attractions such as buddleia. Daytime fieldwork was also employed, and night sessions with a torch. For the 20th year, butterflies were monitored by weekly counts along a fixed transect for the national scheme, where the site is known as Culvie Wood. The sum of the weekly transect counts provides an annual index of abundance, here called the Transect Index (TI). A few visits were made to the Banffshire coast, including Spey Bay, Cullen, and Tarlair near Macduff, though unsuitable weather reduced opportunities in the latter part of the summer. Fortunately records were augmented by Rosemary Smith at Aberchirder, and by more visiting observers than is usually the case. Liz Still had one good night's mv session at Tomintoul, catching some interesting species in this rich but underworked area. Other records were received from Julian Clarke, Catherine MacLeod, George Mair (via Bill Slater), Pete Moore, Graham Robertson, Hilary Swift, Audrey Turner and Jeff Waddell. Many thanks for these contributions. Even so, much of Banffshire remains poorly covered. At least that made it comparatively easy to computerise the macro-moth records for the NMRS, despite the backlog. All records to the end of 2009, including those from the old BRC scheme, were successfully input and forwarded by the April deadline and appear in the Provisional Atlas.

Where appropriate, the above systematic list gives first and last dates for species recorded at Whitewells, together with the maximum number seen on a single night, whether at mv or sugar.

Results

In total, 221 species of macro-moth were recorded in Banffshire in 2010, out of the 342 species now on the VC94 list. One new species was added, Swallow-tailed, not unexpected as it has gradually been moving northwards. It took the Whitewells total to 295 since observations began in 1990. Small Argent & Sable, seen by day on a butterfly transect count, was the only other new species for the site. Three new micros were added, all tortricids, two by Rosemary Smith. The latest Scottish Micros Chart produced by Mark Young and others lists 347 micros for Banffshire, but comparison with neighbouring North Aberdeenshire suggests at least another 50 species await discovery, perhaps as many as 100.

After three poor summers in a row, 2010 at least returned to average as far as moths were concerned. In fact, it started well, with fine weather and good catches in May and June. At Whitewells, 41 species of macro-moth were trapped on 22nd May, remarkable for this site and date. However, the weather deteriorated after early July and there were few good subsequent mothing nights.

In the end, the Whitewells total came to a very average 202 species of macro-moth. Some familiar regulars were scarce, or not seen at all, particularly species associated with heather. This was predictable, as excessive burning of the neighbouring hillside by a local farmer in early 2009 coincided with serious damage caused by the heather beetle in unburnt areas. Many plants were killed by the feeding damage and the rest were seriously retarded. Satyr Pug, Heath Rustic and Beautiful Yellow Underwings were not recorded here in 2010, while the highest catch of True Lover's Knot was only eight. Many Common Heaths seemed smaller than average.

Less easy to explain is the continued absence of Mouse Moth, last seen in 2006 but previously a regular, especially at sugar. Other formerly resident species that have been apparently lost include Heart & Dart, Cabbage Moth and Plain Golden Y. None of these is northern and, in theory, climate warming should have helped them. However, Elephant Hawk-moth reappeared in good numbers following a two-year absence, as if it had never been away. Six Pinion-streaked Snouts (including one a sugar) suggests this normally more western species has now colonised,

and two Coronet were seen after being absent since 2006. In autumn, the *Agrochola* species did particularly well, with record numbers at sugar, though far fewer at light.

The most interesting larval record was of Lempke's Gold Spot, a caterpillar I had searched for over the years without success by using a torch at night. Ironically I found this one in the daytime, purely by chance, though had to wait until the moth emerged to confirm its identity. It was slightly smaller and slimmer than the very similar Gold Spot, and also seemed a bit more strongly patterned. Images of caterpillar, pupa and adult are now on the ukleps.org website.

In early August, the coastal cliffs east of Cullen were visited after dark in the hope of locating a second Banffshire site for Annulet. Eventually one moth was found nectaring on angelica. As a bonus, caterpillars of Lime-speck Pug were fairly common on ragwort flowerheads, only the third VC record for this distinctive species and also a new 10km square, likewise for the Marbled Beauty found nectaring on ragwort.

Otherwise there were few highlights in 2010. In particular, migration was poor yet again, the last notable year being 2006. Although it was a good year for Dark Sword-grass, with 1-4 at sugar or buddleia at Whitewells on many nights in September and October, there were no other obvious migrants with them apart from Silver Y, and those were probably local-bred. Four coastal Humming-bird Hawk-moths at favoured Portknockie (one supported by video evidence!) more or less completed the list of migrants.

Among the butterflies, the outstanding event was the confirmation that Dingy Skipper is still present in VC94. As far as I know, until this year there had been no recorded sightings since Bill Slater recorded this species in Banffshire in the early 1960s near Portknockie. It has long disappeared from that area, now that the grassy coastal braes are no longer grazed by Orkney sheep in winter, and we feared it had been lost entirely from the vice-county. If not, Spey Bay seemed the most likely place

Moths of Caithness:

www.caithnessmoths.org.uk

Neil Money, County Moth Recorder for Caithness (VC109), has set up this new website to make information about the status and distribution of moths in Caithness openly available, and to encourage greater interest in the recording of moths in the County.

Neil explained, "The moths data base for Caithness sits on my computer and the only person with access was me, so my motivation was to try to find a way in which as much as that information as possible could be made available publicly. I hope that the site achieves that end.

"Also, I hope it will encourage other areas to produce their own sites. I do not have formal IT skills and could not afford the fees of a professional web designer, so I used a freely available soft programme called Nvu which I downloaded from the internet and taught myself how to use it. The site is hosted at payh.uk.co who charge a modest monthly fee for an excellent service and can also arrange registration of the domain name."

Neil added that he will be pleased to share his experiences with anyone else who wants to undertake a similar project for their own area.

The site is easy to navigate and is structured with the following main menu headings:

Macro Alphabet List; Micro Alphabet List; What's Flying Today; Recording Moths; Recent Catches; County Moth Recorder (Neil's contact details); Past Recording; Species Diversity; Photos Needed.

Please visit the site - perhaps you can contribute photographs?

The web authoring program that Neil uses can be downloaded at www.nvu.com.

Rearing Moths Roy Leverton

I've been rearing moths in captivity for over 50 years now, a rather worrying statistic. As a small boy growing up in an industrial area with limited wildlife, I began by keeping caterpillars as pets, along with tadpoles, goldfish, sticklebacks and almost anything my parents would allow me to have. Alas, these early attempts at rearing invariably ended in failure due to my lack of knowledge. Providing my caterpillars with fresh leaves was simple enough, but I had no idea what they needed beyond that. There was nobody around to give me advice and nothing on the subject in our local library.

I was almost a teenager before success arrived in the shape of a superb Elephant Hawk-moth, reared from a monstrous snake-like larva found on the rosebay willowherb that had invaded the bomb site at the end of our road. After that, there was no looking back. Other spectacular species quickly followed: Eyed Hawk-moth from the tallows by the derelict canal, Northern Eggar from a large hairy caterpillar found on a hiking trip in Yorkshire. Now I was getting the hang of it! Rearing moths was easy, or at least some species were.

These early efforts were from already well-grown caterpillars, casually found while pursuing other interests such as angling or hill-walking. Nor were my motives particularly scientific. I was doing this for fun. So it was something of a landmark when, for the first time, I boxed a female moth with the express purpose of obtaining eggs and rearing a whole brood from scratch. It was a Green-brindled Crescent, not a common species in my area. Moreover, the few I'd seen had all been worn and dull, nothing like as attractive as the illustration in the field guide. Maybe the answer was to rear some? The female obligingly laid eggs on the hawthorn twigs provided. The tiny caterpillars duly hatched in early spring and fed up without problems. They made cocoons in the soil and pupated at the appointed time. Eagerly I awaited the moths. Sure enough, these emerged in early autumn, but still they did not match their picture in the book! All were deeply melanic, dark brown with scarcely a trace of green. Well, what would you expect? This was soot-polluted Salford, after all. Even their caterpillars had been black. I wrote to Dr. Bernard Kettlewell in Oxford, the authority on industrial melanism, and told him all about them.

Since those early days I've reared many more species, latterly to document their life history and also to provide a photographic record. Recently I made a rough count; it came to around 490 different macro-moths. (How embarrassing! Am I really such a nerd?) Admittedly a few frustrating failures are included in that total, species that defied all my best efforts. Overwintering some caterpillars can be very tricky, so I was delighted to get half a dozen Barred Carpets through to April. Then they died, one by one. Eight months of painstaking care were wasted! Or the Thyme Pugs that had almost reached full growth when the thyme flowers ran out. Surely they would eat the leaves, or seedpods? No they wouldn't, but this discovery came too late. You can't win them all! Although such failures still rankle, at least they have been counterbalanced by some hard-won victories - Haworth's Minor and Ear Moth from the egg, for instance. Even persuading these females to lay is difficult.

Much of what I've learnt from rearing moths was unexpected. The rarity of a species seems to have little relation to the difficulty of rearing it in captivity. Some very scarce and local moths like Portland Ribbon Wave, Dark Bordered Beauty and Lunar Yellow Underwing are a doddle. But Bordered White, whose caterpillar is the abundant

forestry pest known as Pine Looper, defeated my first two attempts to rear it. True Lover's Knot was far from straightforward, but Cousin German was easy. Admittedly, Grey Scalloped Bar caterpillars were extremely choosy about the heather they would eat and also prone to die for no apparent reason, as befits a widespread but never numerous moth. Curiously, Sword-grass seems quite easy to rear in Scotland but succumbs to disease when reared in England, where it has been declining for many years. Maybe it faces different pathogens there? I suspect unseen bacteria and viruses have more effect on the distribution and numbers of our moths than we yet realise, and that not everything is down to climate and habitat.

Another eye-opener gained from rearing was the varying palatability of individual trees and bushes, particularly willows, but also birch, oak and even pine. Caterpillars thrive on the foliage of some trees, but refuse to eat - or suddenly die - when offered apparently identical sprigs from one nearby. Over the years I've learnt which individual trees to use at my site and which to avoid. Presumably the type or strength of defensive chemicals in the foliage varies.

Next there is the annoying habit of overwintering more than once as a pupa. This is particularly prevalent in Scotland and can be very frustrating. Species notorious for doing it include Rannoch Sprawler, Scarce Prominent, Miller and Yellow Horned. Once I found a young Brindled Beauty caterpillar that grew large and produced a female pupa, much to my delight. I've seen numerous males of this species over the years, but never a female. Though fully winged, she is said not to fly. So I eagerly looked forward to the spring, but to my disappointment the moth did not emerge. Drat - I'd have to wait another whole year! But again no moth emerged when that spring came round. Finally, after overwintering three times, the pupa produced the long-awaited female. (Maybe she'd been putting on her make-up?) Other common species whose females I've only seen by rearing them include March Moth, Pale Brindled Beauty, Mottled Umber and, surprisingly, Nut-tree Tussock.

Thankfully, I haven't begun to run out of new species just yet. There are still some very common moths on my own patch whose caterpillars I have never seen. They include internal feeders like Small Dotted Buff and Small Wainscot, which will surely be tricky to find or to breed, plus geometers such as Green Carpet, July Belle and May Highflyer. I'm also fortunate to receive exciting packages in the post from time to time, containing species I have no chance of finding in my own area. Thus Arran Carpet larvae from South Uist eggs are presently on a shelf in our utility room, awaiting the spring growth of bilberry. In the shed, young Pine-tree Lappets from an Aigas female are curled up in damp sphagnum, unaffected by the recent severe frosts. Those may be a long haul - they seem to have a two-year life cycle in the Highlands. Three tiny Scotch Annulet caterpillars from Findhorn are still nibbling heather. So far, so good - but it's only January. There's a long way to go and many potential dangers to overcome. Mine is a hobby that requires patience, but repays it many times over, given the bit of luck we all need.

Scottish Macro-moth list 2011

Roy Leverton has revised the Scottish macro-moth list which now contains a total of 553 species, though this includes species that are long extinct in Scotland, as well as rare migrants and adventives. A further 23 species are considered possible but unproven.

The list can be accessed on Highland Branch website in spreadsheet format (.xls file). The list is arranged in checklist number order, under the headings:

Common name | Checklist no | Scientific name | UK status | Scottish status (provisional)

To access the list and read Roy's introduction, please visit:

<http://www.highland-butterflies.org.uk/species/index.html>



L-R: Roy Leverton, Tony Mainwood and Dr Tom Prescott, taken at a moth identification workshop led by Roy and Dr Mark Young.

Lifetime Achievement in Lepidoptera Conservation

We were delighted with the news last Autumn that Roy Leverton had been chosen as the 2010 winner of the Marsh Award for Lifetime Achievement in Lepidoptera Conservation.

Roy is County Moth Recorder for Banffshire (VC94), part of which overlaps with Highland Branch. All of us who have contacted Roy with identification queries will know how patient, encouraging and prompt he is in his responses. We are also very privileged to receive his regular contributions (including superb images) to the branch website, and of course his articles for our newsletter.

As is immediately evident from his report on page 23, Roy's records are meticulous and are proof of the enormous work he has done in this hitherto under-recorded corner of north east Scotland.

Congratulations, Roy, for a richly deserved award.

Bill Slater
Web volunteer

Moth publications Dr Zoë Randall

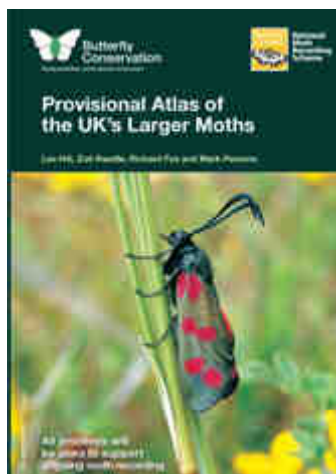
Provisional Atlas of the UK's Larger Moths: Reprint

The Provisional Atlas of the UK's Larger Moths has been selling like hotcakes! So much so that the initial print run has sold out and we can no longer fulfil any orders at the special discount rate of £12.50. We are absolutely amazed by the response to this publication and have ordered a reprint. Copies will be available in the next couple of weeks and can be ordered at the normal recommended retail price of £20 (plus £5.00 P&P) (the return to normal price is necessary in order to cover additional printing costs). Please do not make any further orders using the £12.50 special offer form that was sent out with E-moth. Orders for the reprint copies can be made by cheque to Butterfly Conservation Head Office or via <http://www.butterfly-conservation.org/product/5146/mothatlas.html>.

Guide to selected difficult species

The *British and Irish moths: an illustrated guide to selected difficult species (covering the use of genitalia characters and other features)* has been produced by the Moths Count project with funding from the Heritage Lottery Fund, John Spedan Lewis Foundation and others. The Guide is softback and spiral bound for ease of use. It runs to 91 pages and contains over 130 colour illustrations. Written by moth experts Martin Townsend, Jon Clifton and Brian Goodey, the aim of the Guide is to make available information on the identification of difficult macro-moths, beyond what is currently available in the field guides. 72 larger moth species (plus their subspecies and forms) are included. This Guide provides the next step for those wishing to make a definitive determinations of difficult moths such as ear moths, dark/grey daggers, copper underwings and the November Moth group. As such, much of the Guide is focussed on genitalia characteristics, although there are discussions of other characteristics such as wing markings.

Copies of the Guide are available from Butterfly Conservation (http://www.butterfly-conservation.org/product/5209/difficult_species_guide.html or 01929 400209) and from specialist retailers. The recommended retail price is £20, but it is available at a special initial offer price of £15 plus £2 post and packaging to UK addresses. All proceeds received by Butterfly Conservation will be used towards ongoing moth recording.



Butterfly publications

Copies of the **Atlas of Butterflies in Highland and Moray**, published in 2008, are still available.

In fact we've reduced the price for members to only £2 +£1 p&p!

To order copies, please get in touch with:

Tony Mainwood
13 Ben Bhraggie Drive
Golspie
Sutherland, KW10 6SX.

E-mail: tony.mainwood@btinternet.com,
Tel: 01408 633247.

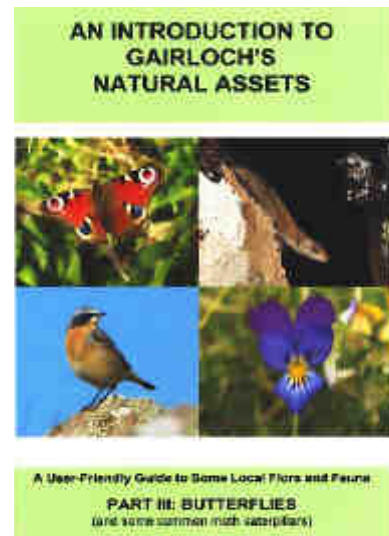


An Introduction to Gairloch's Natural Assets, Part III: Butterflies is especially recommended for visitors to the area, as it describes several walking routes and the butterflies that may be seen there in season.

The booklet on Butterflies is part of a series which includes wildflowers and spring and summer birds, all of which can be purchased at local outlets including the tourist office.

The website www.wildaboutgairloch.com contains information about a festival taking place in the area from June 23rd to 27th, "to showcase the BEST of wild nature at the heart of Scotland's largest National Scenic Area..... Wester Ross, in the North West Highlands of Scotland".

The full programme of events will be published on the website soon.



Barbara Ballinger

We were all saddened to hear of the passing away of Barbara Ballinger on October 27th, 2010.

Barbara was very active in the field of natural history, being both BSBI Plant Recorder and Moth Recorder for VC106, East Ross-shire, roles which she performed jointly with her husband Brian. They were also very active in practical nature conservation through their ownership and management of woodland near Tain and in Caithness. Barbara will be much missed and our sympathies go out to Brian and their family.

Jimmy McKellar

Derek C Hulme

Sadly I have to report that Derek Hulme died on the 4th February 2011. Derek lived in Muir of Ord and was widely known for his interest in wildlife and pioneering wildlife trips in the Highlands. His passions were ornithology, micro-moths and butterflies, and it would be remiss of me not to mention one of his most striking records, that of the Munloch Holly Blue, recorded on the 4th July 1966 at Craigiehowe. This remains the only Highland record of this species.



Derek served on our Highland Branch committee for most of my years as chairman and offered many good suggestions for field trip destinations. He knew all the best places to go for interesting walks and was a regular attendee on many of them. In my early days as “leader” Derek would offer gentle guidance as to where to go next and would unassumingly take control, for which I was very grateful. His other great interest was music and he was the author of a book on the work of Shostakovich.

We will greatly miss Derek and his knowledge of butterflies and moths in the Highlands. Our sympathy is extended to his widow Helen and his family.

Jimmy McKellar

Wider Countryside Butterfly Survey (WCBS) 2011

This year Dr Zoë Randle, Butterfly Conservation Surveys Officer, has taken over the Co-ordination of the Wider Countryside Butterfly Survey (WCBS) and writes,

“We are delighted to inform you that we have decided to continue the Wider Countryside Butterfly Survey (WCBS) again in 2011. Once again this will be a collaborative project with BTO and CEH.

We would like to thank everyone who took part last year and especially the WCBS Champions who helped promote the survey within the Branches.

The survey had another successful year with nearly 700 squares sampled. We hope you will continue to survey the same squares in the same way as last year. Our priority is to re-survey these squares for at least the next 2 years so that we can determine trends in the wider countryside and see whether they differ from transect trends.

We also welcome new participants either to help re-survey old squares, or to survey new ones for the first time. New surveyors will be allocated randomly selected 1-km squares in their Branch area. The squares need to be surveyed in July and August by two visits at least ten days apart.

Anyone interested in taking part in the WCBS in the Highlands and Islands in the coming season should contact Tom Prescott, email tprescott@butterfly-conservation.org for further information”.

WCBS squares to be surveyed in 2011:

Moray, Highland, Western Isles and Northern Isles

Square	Location	Square	Location
HU3635	Hamnavoe, Shetland	NH2191	Ullapool
HU5140	North Mid Yell, Shetland	NH2283	SW Loch Broom. Nr Ullapool
NA9924	Mealasta, west coast Lewis	NH2603	N of Loch Garry
NC1520	North of Suilven, Lochinver	NH3003	Invergarry (north)
ND2490	The Berry, Hoy, Orkney	NH9619	Boat of Garten
ND2496	Withigill, Hoy, Orkney	NJ1534	Tomore, nr Advie
NG3534	Portnalong, Loch Harriport, Skye	NJ4953	NE Keith
NG4234	Roineval, NE Drynoch, Loch Harport, Skye	NM5753	Drimin
NG8901	Sguir a choire Bheite, Knoydart	NM7367	South end Loch Sheil, Sunart
NG9611	Glen Shiel - south	NM8297	Knoydart
NG9834	Attadale E of Loch Carron	NN0785	end of Glen Loy
NH1796	Rhidorroch, E of Ullapool	NN2787	between Glen Roy & Loch Lochy
		NN5796	Glen Markie Spey Dam

Which moth species are pollinating Lesser Butterfly Orchid in Scotland?

Andy Scobie, Cairngorms Rare Plants Project

Lesser Butterfly Orchid (*Platanthera bifolia*) is a nationally scarce orchid found in rough grassland, heathland and woodland edge habitats. Although widespread in the UK, the species has recently undergone a significant national decline. Scotland is the UK stronghold for the species, where it has a distinct North and West bias in its distribution. Lesser Butterfly Orchid has been identified as a conservation priority in Scotland's Species Action Framework and is one of the four species being targeted by the Cairngorms Rare Plants Project.

The flowering period extends from mid-June to early July when a tall spike of striking white flowers is produced. The flowers have a long spur, containing a large quantity of nectar, and become strongly scented around dusk. Night-flying moths are the likely pollinators of these flowers but the particular moth species that pollinate the orchid in Scotland have yet to be identified. However, the availability of such information is vital to the development of successful future conservation action for the species.

In orchids, pollen is packaged into units called pollinia and each one is connected to a small sticky pad at its base. In Lesser Butterfly Orchid the two pollinia lie parallel to each other at the mouth of the spur. When a moth visits the flower, and inserts its proboscis into the spur, the pollinia are attached to the base of the proboscis by the sticky pads. As the moth moves from flower to flower, probing for nectar, it carries with it pollinia from the previous flower. After a short period of time, the pollinia rotate to face forwards enabling them to come into contact with the stigma of the next flower visited by the moth and hence pollination can take place. This intricate pollination mechanism provides a clue as to the identity of the pollinator species of the orchid because the pollinia attached to the base of the proboscis are visible upon close inspection.

In order to find out which moth species are pollinating Lesser Butterfly Orchid in Scotland, and whether this varies between sites, we are looking for volunteers to run moth traps at Lesser Butterfly Orchid populations in different parts of Scotland, examining the catch for the presence of orchid pollinia. Thanks to recent national surveys, as part of Species Action Framework research, data are available on the location and size of Lesser Butterfly Orchid sites in Scotland so volunteers can be easily paired-up with a local orchid population.

Flowering population sizes range from just one or two flowering spikes to several thousand and traps set at larger flowering populations stand the best chance of catching moths carrying orchid pollinia. The distribution map shows the 10 km squares containing Lesser Butterfly Orchid records submitted for the national survey in 2006 and 2007. The map is colour coded to indicate flowering population sizes: small <50 flowering spikes (light blue), medium 50 to 150 flowering spikes (mid-blue), and large 150+ flowering spikes (dark blue).

If you are situated within range of, or are willing to travel to, a medium or large Lesser Butterfly Orchid population and would like to help with this exciting national survey by running a trap at the orchid population on a few nights during the weeks of the 20th & 27th June, please contact Andy Scobie (Cairngorms Rare Plants Project) for further information, e-mail: a.scobie@abdn.ac.uk or tel: 01479 810477.

It is also possible to carry out the same exercise in areas of Greater Butterfly Orchid if there are no suitable populations of Lesser Butterfly Orchid near you and Andy will provide details of suitable sites. If you are able to help please get in touch with Andy who will give you further details including an identification sheet to help you identify and distinguish between the two species.

Your butterfly records

David Barbour, Butterfly Recorder for Highland and Moray is always keen to receive records of butterflies. If you have records from 2010 that you haven't sent in yet they are still very welcome.

There are still many areas of the maps with very few records so if you would like to target some of these under recorded parts of the region David would be pleased to point you in the right direction. It may be possible to help with a contribution towards travelling expenses.

David can be contacted by phone on 01340 871850 or by e-mail at dbfis@btinternet.com.

Contact details for the Butterfly Recorders for the Western Isles and Northern Isles, and also County Moth Recorders, can be found on the following pages.



Comma survey to be launched

This year Butterfly Conservation Scotland is planning a Comma postcard and on-line survey. This will primarily target central Scotland where it is now colonising, but it doesn't matter if the cards go further afield. The on-line survey will go live after April 1st.

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Email: bandj@culag.plus.com, Tel: 01599
555341.

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DG7 3SU.

Email: mackay@entomology.freeserve.co.uk,
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Butterfly Conservation

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Highland Branch Field Trips 2011

Sat 2nd April - Moth trapping trip to target the Rannoch Sprawler near Sluggan, Carrbridge

Meet at 8:00 pm at the gate across the track to Sluggan off Station Road, Carrbridge, Grid Ref NH878216, OS Sheet 36. If you wish, bring moth traps, generators etc. though there should probably be enough. Will go on till midnight or for as long as people are prepared to stay.

Further information from: Mike Taylor, Tel: 01479 831060, Mobile: 07757 607287, Email: mst.taylor@btinternet.com

Sat 28th May - Pearl-bordered Fritillary survey, in conjunction with Forestry Commission Scotland in the Garve and Loch Achilty area.

The aim of the day is to help establish the current location and size of the local PBF population. This will be useful to prioritise future management in order to enhance a sustainable meta-population. Meet at 10.30am at the FCS building at Contin Grid Ref NH453568 OS Sheet 26. Heading west out of Contin turn right at the FCS signs saying Torrachilty Forest, follow round the tarmac road and where it starts to open out again the new wooden FCS building is on the left. Tom Prescott will give an introduction to PBF surveying before groups spread out to their allocated survey sites. Tea and coffee provided but please bring a packed lunch. FCS are kindly providing refreshments at the end of the day!

Further details from Tom: Tel: 01540 661469, Mobile: 07979 785665, Email: tprescott@butterfly-conservation.org

Wed 1st June - Polmaily to check for Pearl-bordered Fritillary and Dingy Skipper.

A trip to see how last year's habitat management exercise has fared and to search for the two species it was designed to help. Meet at 10.30 at the end of the forest track into Polmaily - c2 miles west of Drumnadrochit on the A831 towards Cannich. Grid Ref NH484304, OS Sheet 26. Duration up to 4 hours.

Leader Mark Wynn:- Tel 01463 729977

Sat 4th June - Narrow-bordered Bee Hawk-moth survey at Bogbuie Wood, Black Isle, in conjunction with Forestry Commission Scotland

Meet at 10.30am at the FC car park at the east end of Culbokie, Grid Ref NH611597, OS sheet 26. We will then share cars up to the wood as there is limited parking. Duration 4 hours plus. 14 Bee Hawks were seen in the wood last year and Dingy Skipper is also present and will be on the wing.

If suitable breeding habitat is found during the survey then a return trip in July will be organised to look for larvae, please check web site or contact Margaret Currie and Andy Scott for details, Tel 01349 877223.

Sat 4th June at Ariundle National Nature Reserve in a hunt for Chequered Skipper among other species.

Meet at 10.00 am at the Ariundle NNR car park which is along the track that branches right from the unclassified road leading north from Strontian. Grid Ref NM828634, OS sheet 40. Duration will probably be 3 to 4 hours but will rather depend on the weather. A Forestry Commission Environment Ranger will show us round. There should also be a good variety of other butterflies and day flying moths.

For further details please contact Pete Moore:- Tel 01479 872261, mobile 07866 578079, e-mail theconfused@btinternet.com .

Sat 11th June - Craigellachie NNR, Aviemore, for Pearl-bordered Fritillary and Green Hairstreak etc.

There is no parking at the reserve, so meet at 10.30am at the car park at McDonalds Resort, grid ref, NH893123, OS sheet 36. To get there, drive south through Aviemore, then turn right just past the Cairngorm Hotel.

At the T-junction turn left, follow the road past the Aviemore Inn on your right then take the road on the right into the car park and park in the 1st couple of rows on the right. Duration 3 - 4 hours. Details about the reserve can be seen at <http://www.snh.org/publications/on-line/designatedareas/nnr/craigellachie/craigellachie.asp>.

The path we will be taking is steep and rough in places, so please wear suitable boots/shoes.

For further details or a map to go with the directions please contact Audrey Turner:- Tel 07784000263, e-mail unicorn64@btinternet.com .

Thur 23rd June - Flowerdale, Gairloch for moths and butterflies as part of Gairloch Wildlife Week

Meet at 10.30 at the car park on the upper side of the A832 at Gairloch Pier, Charleston, Grid Ref NG810751 OS Sheet 19 Duration about 3 hours.

Leader Tony Mainwood:- Tel 01408 633247, email tony.mainwood@btinternet.com

Fri 24th and Sat 25th June - Pine-tree Lappet survey Kiltarlity/Black Isle

Further work to determine the current status of Pine-tree Lappet in pine plantations in the area. Again the focus will be on looking for new sites rather than confirming its presence at currently known sites. Meet at 8.30pm at the Brockies Lodge Hotel, Kiltarlity (Grid Ref NH514418 OS Sheet 26). Depending on the number of people/traps/generators etc, we will split into groups and set traps in the locality. Please bring along any traps you have. To help us coordinate the survey effectively please can you let us know if you plan to come along. If you are unable to attend but keen to help look for this moth during its flight period (latter half of June into early July) then please also get in touch to arrange access permissions etc to trapping sites.

Leader Tom Prescott: Tel: 01540 661469, Mobile: 07979 785665, Email: tprescott@butterfly-conservation.org

Sun 3rd July Creag Meagaidh for Mountain Ringlet

A trip to find this highly specialised butterfly at one of the prime sites. Meet at 10.00am at the Creag Meagaidh NNR car park grid ref NN483873 OS sheet 34. Tea and introductory talk by SNH staff. The visit will include a look through a moth trap run the previous night. Duration approx 3 hours but will run on if the weather is good and there is a lot to see so bring a packed lunch.

Leader Pete Moore:- Tel 01479 872261, mobile 07866 578079, e-mail theconfused@btinternet.com

Sat 9th July Dundreggan Estate, Invermoriston

A trip to a very special place of ancient birch and juniper woodland with the local enthusiast. A range of butterflies and moths with the possibility of Welsh Clearwing and Goat Moth along with some insects including the rare Strawberry Spider.

Meet at Dundreggan at 10.00am at Grid ref NH333146, OS Sheet 34, 7miles west of Invermoriston on A887. Turn off at a small green sign 'Dundreggan Farm Private Road'. Car Parking is on the right about 100m beyond the cattle grid along this tarmac track. Advisable to bring wellies as well as boots as they might be needed for crossing a burn if there has been much recent rain. Duration ca 6 hours ie till 4.00pm.

Leader Jane Bowman:- Tel 01320 340245.

Tue 12th July Insh Marshes RSPB Reserve for Moths, Northern Brown Argus etc.

A mid-week walk to look for Northern Brown Argus and other butterflies. We'll start off by looking through a moth trap run the previous night. Meet at 09:30am at the RSPB Insh Marshes car-park, 2km out of Kingussie on the B970, past Ruthven Barracks. Grid ref NN776998, OS Sheet 35.

Duration approx 3 hours but will run on if there is a lot to see so bring a packed lunch.

Leader Pete Moore:- Tel 01479 872261, mobile 07866 578079, e-mail theconfused@btinternet.com

Sat 16th July Micro Moth Workshop at Aigas Field Centre with Mark Young and Roy Leverton.

Tea/coffee and biscuits from 10.00am for a 10.30am start. A soup and sandwiches type lunch will be provided and there will be tea/coffee and biscuits in the afternoon with a 4.00pm to 4.30pm finish.

Photographs of micro moths and other tricky species for identification will be welcome and so will any already existing voucher specimens but please do not bring live moths.

The workshop is being funded by Highland Branch and there is no charge.

BOOKING IS ESSENTIAL with Tony Mainwood:- Tel 01408 633247, e-mail tony.mainwood@btinternet.com

Sat 6th Aug Loch Fleet NNR Open Day Moths and butterflies with Grayling one of the specialities.

Meet at 10.00am at the car park at Littleferry, Golspie. Grid Ref NH806955, OS Sheet 21

Duration 1 hour 30 minutes on official programme but can be extended.

Leader Tony Mainwood

Sat 17th Sept Polmaily, near Drumnadrochit. Butterfly work party

Another session of clearing scrub along the track side to benefit Pearl-bordered Fritillary and Dingy Skipper. Please wear old clothes and bring work gloves, secateurs, loppers and bowsaws if you have them. Further handtools will be available.

We will meet at 10.30 at the end of the forest track into Polmaily c2 miles west of Drumnadrochit on the A831 towards Cannich grid ref NH484304 OS Sheet 26.

The plan is to stay till about 16.00 but you can join in or leave whenever you want to. Every little helps so if you only want to come for an hour that will still be very welcome. For more info please contact :

Tom Prescott: Tel: 01540 661469, Mobile: 07979 785665, Email: tprescott@butterfly-conservation.org

Moth Trapping

In addition to the events listed above there will probably be a number of moth trapping events organised through the summer and autumn. They will be announced nearer the time and will be listed on the branch website and sent out by e-mail, to those on the branch e-mail list, as details become available.

Let's hope it is a good year for butterflies and moths!

