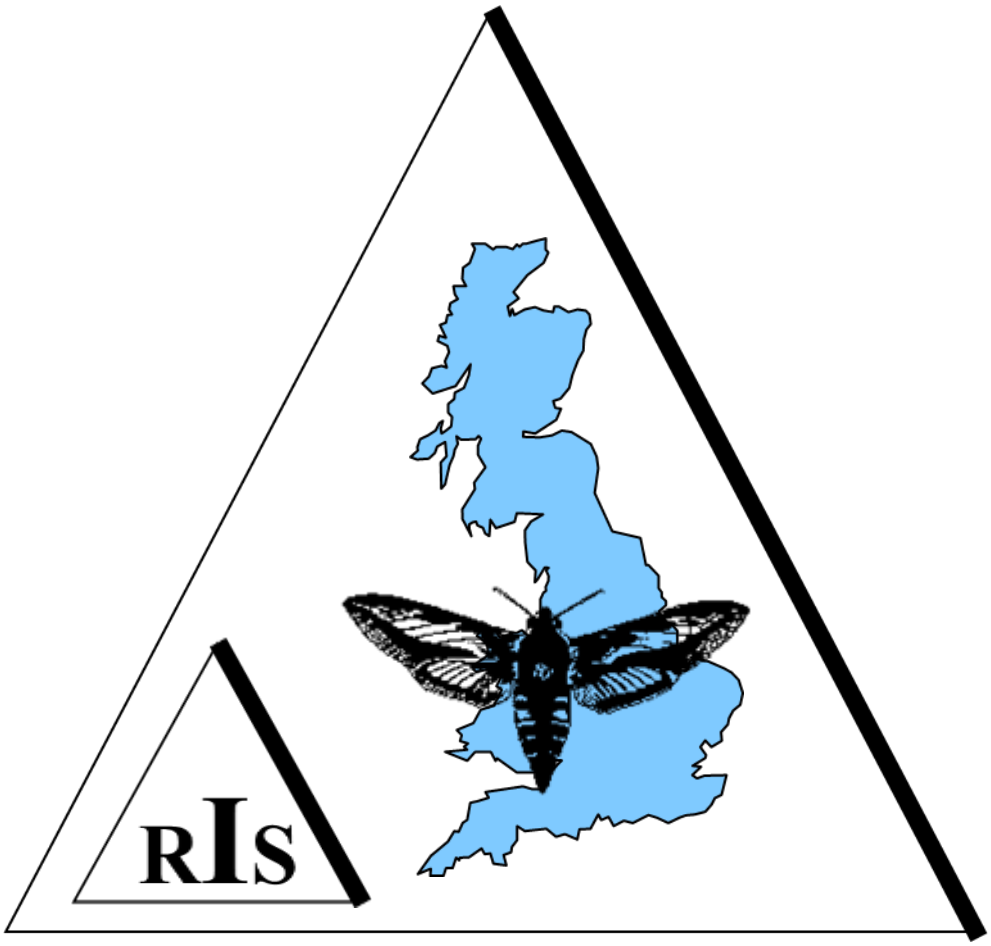
LIGHT-TRAP NEWSLETTER



2011

Traps operating in 2010

Traps operating in 2011

LIGHT-TRAP NEWSLETTER No. 36. DECEMBER 2011

Phil Gould, Jason Chapman, Lynda Alderson, Sue Parker and Syd Wright

Very best wishes for a Happy Christmas and a Merry New Year!

THIS YEAR IN THE LIGHT-TRAP NETWORK

Phil Gould*, *Light-trap Co-ordinator

After a bitterly cold and unpleasant end to 2010 it appeared that many moths were desperate to start flying, as shown by the numbers that appeared in the marginally milder weather of January and February. The quantities weren't enormous but were certainly up on the last couple of years and, after a knock-back from a brief cold spell, only increased further once the temperatures increased through March. A few traps, such as that at Tavistock (Devon), caught especially high numbers, particularly of *Orthosia cruda* (Small Quaker), with 1,200 by 11th April. Given that our traps are designed to only catch small numbers, just imagine how many must have been flying around in the vicinity of the trap!

With the gloriously warm weather continuing into April, many species started appearing unseasonably early, such as a *Chloroclystis v-ata* (V-pug) at Rutland Water on 1st April, the *Asthena albulata* (Small White Wave) and *Pheosia gnoma* (Lesser Swallow Prominent) from Trebullett (Cornwall) on 8th and 10th April, respectively, and the *Petrophora chlorosata* (Brown Silver-lines) that started appearing at Clachan (Argyll) from 18th April, which is particularly early for a northern site.

Orthosia cruda

Chloroclystis v-ata

Asthena albulata

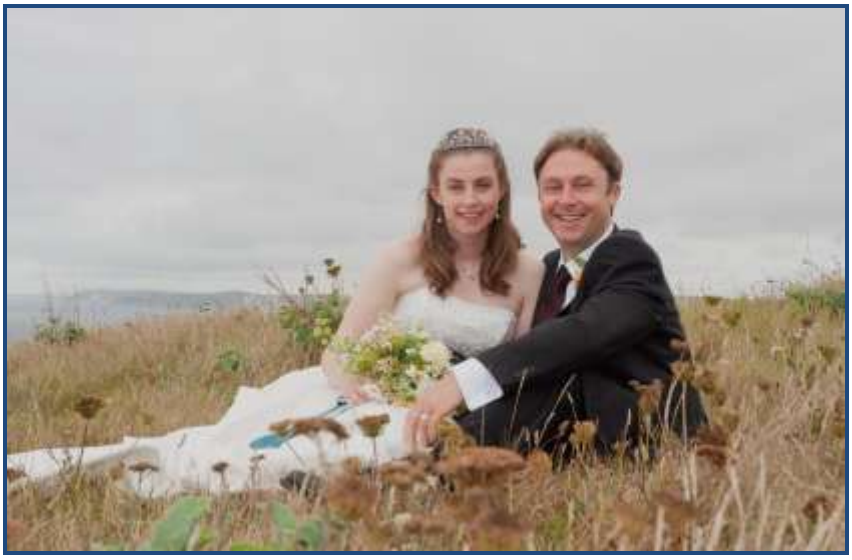
Pheosia gnoma

Petrophora chlorosata

After this early summer that led to drought conditions by the end of May, we moved into June and more spring-like weather appeared. The cooler and wetter conditions reduced the numbers of moths flying, allowing for me to catch up with myself a bit. These conditions continued throughout most of July but thankfully things cheered up a bit by the end of the month and continued into early August.

I was particularly grateful for this, not because it gave me more work to do but because Rebecca and I got married in August. Having chosen the 13th century St. Aldhelm's Chapel, standing exposed on the cliff-tops of Purbeck in Dorset, it was

pretty important that it wasn't a miserable day! Thankfully the weather behaved very well and everyone had a great day, with a hog roast and barn dance carrying the festivities late into the night.



St. Aldhelm's Head, Dorset

The rest of August reverted to below-par conditions for what was supposed to be the summer and this continued into what became an above average autumn, with November ending up as one of the warmest and driest on record. This meant that many late summer species continued flying for much longer than usual, so many in fact that I wouldn't wish to list them all here. However, a couple of particularly noteworthy specimens would be the single *Diarsia mendica* (Ingrailed Clay) that turned up at Corfe Castle (Dorset) on 28th October and the specimen of *Idaea dimidiata* (Single-dotted Wave) caught at Castle Eden Dene (Durham) on 3rd November, both being species that usually only fly until August.

Diarsia mendica

Idaea dimidiata

And now for some less than cheerful news. As some of you will know, the Insect Survey is soon to come under a different funding regime called the National Capability Award. Unfortunately, the money coming our way will not cover the current costs of the Survey and thus the number of staff will have to be reduced. So, people whose names will be familiar to many of you will soon be leaving the Survey: Sue Parker who, amongst many other tasks, has diligently supplied every site with their annual moth records for several decades, and Syd Wright, who has spent huge amounts of his time travelling the country to install or maintain the light traps have both chosen early retirement. And Mike Hall, who has frequently accompanied Syd, particularly in the maintenance of the suction traps, will be taking voluntary redundancy.

And it is with great sadness that I, too, have chosen to take voluntary redundancy. Well, I say "chosen" but I didn't feel like I had much of a choice in the matter – it was either stay and resent the changes being made to the job that I came to Rothamsted for, or leave and hope that something just as rewarding will come my way. I have thoroughly enjoyed my decade at the helm of the Light-trap Network and, even though I have not met many of our trap operators or identifiers, I feel that I have become friends with them all … and this has been borne out by the messages of support that I have received from many people. Unfortunately the funding reduction means the loss of someone solely dedicated to the operations of the Light-trap Network but I am sure that everything will still function effectively.

On a brighter note I am very pleased to be able to say that we shouldn't end up losing any of the light-traps as a result of the funding changes. It had originally been proposed that we might have to lose about half of them, retaining just those being identified by volunteers. Thankfully, as a result of a plea for help from me, most of our volunteer identifiers have offered to take on extra sites and now there are only a handful of traps left without an identifier. It is now hoped that it might be possible to contract these out to an external identifier, thus retaining the full network. This has helped me feel less concerned about jumping ship – my sincere thanks to all of those who took on some extra work.

Important notices:

- All operators of sites with a new identifier have now been contacted with details of where to start sending their catches. If you're an operator that's not heard from me, then please continue sending your catches to Rothamsted until a contractor is found, at which point you'll receive all the information you require.

- All expenses claims and requests for supplies will continue in the same way, please just contact Chris Shortall instead:

  chris.shortall@rothamsted.ac.uk or **01582 763133** ext. **2466**

- There will no longer be a technician solely dedicated to the light traps. Everyone's first point of call should be Chris Shortall and he'll forward your query to someone in Rothamsted's maintenance department. It may still be possible for someone to visit a site if essential but it is hoped that most problems can be solved by posting replacement parts.

- In relation to the above – it may be necessary to ask all operators to perform a degree of trap maintenance themselves. This will only be basic work, such as cleaning the glass and painting the woodwork. Once the practicalities of this have been determined, further information will be distributed and it is hoped that there will even be a short YouTube video to help everyone!

- In the immediate future it should still be possible for Rothamsted's data entry section to deal with the record sheets that our identifiers are familiar with. However, it is likely that this is a service that the Insect Survey will be asked to pay for directly in the future and this won't be affordable. So, in conjunction with our smart new database, the aim is to provide a set of online data sheets from which the data will be absorbed in the database automatically. We will endeavour to make these as similar to the current sheets as possible. Of course, for those who don't fancy using the new system or who aren't online, record sheets can be supplied as usual.

Migrants

The autumn of 2011 will be widely regarded by many as one of the best ever for migrants. However, as befits the nature of the Rothamsted light-traps (i.e. only catching small and representative samples), not many sites have recorded much in the way of migrants this year. One of the most commented upon influxes of the year was that of *Trigonophora flammea* (Flame Brocade) but the only one of our traps to catch any was that on Jersey, where the species is resident – although more were recorded than usual.


Trigonophora flammea


Mythimna vitellina


Mythimna unipuncta

Jersey was also the only site to trap *Mythimna vitellina* (The Delicate) and *Mythimna unipuncta* (White-speck), with only two specimens of each; and it turned up one of only two *Orthonama obstipata* (The Gem) records, with the other caught at Corfe Castle.


Rhodometra sacraria


Orthonama obstipata


Agrotis ipsilon

Last year *Rhodometra sacraria* (The Vestal) appeared in really good numbers but this year there have only been five – one each from Beinn Eighe II (Highlands) and Kirkwhelpington in Northumberland (a first for the site, which pleased Joyce Keating, who identifies her own catches); two from Kielder IV, also in Northumberland; and the last was caught on Jersey.


Spodoptera exigua


Helicoverpa armigera


Peridroma saucia

As with last year, counts of *Nomophila noctuella* (Rush Veneer) were very low, as were those for *Plutella xylostella* (Diamondback Moth). *Phlyctaenia perlucidalis* was only recorded in any number where it is resident, at places such as Shifford (Oxfordshire), Rutland Water, Loddington (Leicestershire) and Writtle (Essex). *Udea ferrugalis* (Rusty Dot Pearl) appeared in greater numbers this year and was recorded from many of our sites.

Nomophila noctuella

Plutella xylostella

Phlyctaenia perlucidalis

Udea ferrugalis

Other 2011 specimens of note

Platyperigea kadenii (Clancy's Rustic). London Zoo, 29th August. First recorded in the UK in 2002 the species is now considered resident in parts of Kent and other south coast counties. Trapped previously at our Channel Island sites, this is the first record from any of our mainland traps.

Belated specimens of note from 2010

Perizoma didymata (Twin-spot Carpet). Rowardennan, 14th October. This species usually flies from June until August, so this individual was on the wing two months later than normal.

Traps lost and gained in 2011

As mentioned above, the threat of massive trap loss has been staved-off by our dedicated army of volunteer identifiers. However, that hasn't prevented the loss of a few sites; this has brought the network down to 87 sites, which is thankfully still a very healthy coverage.

The funding changes happening at Rothamsted mean that we'll still be unable to take on any new sites in the near future, so we hope that these remaining sites will last for a long time to come. Having said that, it may still be possible to add a new site if it can be identified by a volunteer and fits stringent criteria such as filling a large gap in the network, monitoring an unusual habitat or definitely being a site that will last for many years.

Despite the news above, we did still manage to squeeze in one new site this year. The trap at a Natural England site near Wheldrake in Yorkshire is being operated by Julian Small and he is also identifying the catches. So far this has been in conjunction with me, as I have checked his identifications as we've gone though the year. However, he's done a great job, with very few mistakes, so I'm confident that he'll manage perfectly well once I'm gone.

It may not be a new site but the return of the Kirkwhelpington trap was a very welcome indeed. I reported in last year's newsletter that Joyce Keating, the operator and identifier, was going to move home. However, circumstances changed, which meant that the trap was reinstalled and we are all very happy to have Joyce back on board, and she's even decided to identify catches from an extra site too.

One trap has changed its location this year, that at the Centre for Ecology and Hydrology at Wallingford, Oxfordshire. Marc Botham organised the move and will continue to operate the trap and identify the catches and we thank him for this help, especially when he's also offered to take on the identification from a couple of extra sites.

The first of the sites to be lost this year was that at Wykeham near Scarborough in Yorkshire. This trap was one of our longest-running sites, having been installed in 1972, therefore it was a great loss to the network. However, the huge amount of consistent data that it has added to the database over the years will remain extremely valuable. In recent years it had been operated by Trish Jackson and we thank her for her hard work and for the efforts she made to try and prevent its closure.

The trap at the Crop Technology Unit at Compton Park in Wolverhampton (Staffordshire) started running in 1980, so it was a real shame to hear that it would have to stop this year. Building works often mean the relocation of a trap but unfortunately on this occasion it was decided that the trap would have to go. Again, the dataset from the site will be of great use for many years to come. We are grateful to Rob Hooton for operating the trap, and to Godfrey Blunt for identifying the catches.

Hamsterly was another site that started in 1980 and, other than a short gap in operations a few years ago, ran consistently until its closure this year. The operator Alan Coates had also identified the catches, and I know that he was very sad to lose his trap. Regrettably poor health prompted a house move and we wish Alan and his wife Jean all the very best in their new home.

Also lost this year was a site in operation since 2001, that at Askham Bryan College in York. Our old nemesis building works meant that the suction-trap at the site was going to have to be moved but, thanks to the cutbacks at Rothamsted, it was deemed more sensible just to take it away. Unfortunately, the light-trap was always run in conjunction with the suction trap, so that was lost too. Mike Elliot was the operator of both traps, so many thanks to him for all of his hard work.

The Heathrow trap was installed in 2004 and ran quite well until late last year when, due to building works (again!) it had to be shut down. It had been hoped that this would just be temporary but as this year ticked by it became clear that it would not become operational again and the trap was removed last month. I'm sure the operator, James Webster, will be pleased not to have to deal with it any more, as just getting to the trap meant stopping the car to unlock and re-lock four sets of gates – the joys of Heathrow's security!

At the end of this year, Rothamsted's participation in the Environmental Change Network (ECN) will come to an end, primarily due to there being a lack of staff able to take on the duties. Disappointingly this also means that the Park Grass trap, in operation since 1990, will shut down. For the last 21 years it has sampled moth populations on the boundary of one of the longest-running experiments in the world, the "classic" grassland study after which the trap is named. Hopefully it will

have provided invaluable data to add to our understanding of grassland management.

Finally, our two newest traps in East Anglia have been collected – Langmere and Heacham, in south and west Norfolk, respectively. It was hoped that both of these sites would run for a long time, but it was not to be. In fact, neither of them ever really got going properly – it is exactly this sort of thing that we will have to be extra careful to avoid in the future when resources are even scarcer.

Trap visits

Syd, as ever, has been very busy with site visits to both suction and light traps. Of course, he's not only been involved with the installation of the new site mentioned above, and the replacement of the Kirkwhelpington trap, but he has also had to journey far and wide to collect the traps that have shut down. On top of this he has continued to upgrade older traps and many more have been re-fitted this year. What the Insect Survey will do without Syd, I do not know, but plans are being made so that it will still be possible to get traps fixed and so that there will be someone available to sort out problems over the phone.

Syd will start his retirement at the end of January, after nearly 35 years of manufacturing and servicing light and suction traps. He tells me that he will not miss all of the organising and driving it has taken to service the traps sites, during which he has criss-crossed the whole country many times. He is looking forward to a more relaxing time, although his son Sam (who has Down's Syndrome), who had left home, is now slightly scuppering those plans by wanting to return for good! He and his family hope to move to somewhere in the south-west towards the end of 2012. Here they hope to be slightly self-sufficient and maybe run a small holiday letting business.

He has asked me to ensure that I thank you all for making his visits so enjoyable over the years. He'll not miss the driving but he will definitely miss all of the great hospitality and kindness shown to him by all of our trap operators. Thank you all for making a very tough job much more bearable.

Finally – Syd apologises to those who receive Insect Survey Christmas cards: he did mean to sign them but they were posted before he got the chance!

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As is often the case, some of you have had to wait a long time for last year's data. I am very sorry about this but the loss of staff in our data entry section has left only one poor soul to deal with the enormous amount of data we send her way. Thus our data, along with that from other departments gets clogged up in a permanent back-log. Unfortunately, there is little I can do but apologise, and assure you that you will not be forgotten - you will receive your annual summaries but they may arrive somewhat later than is ideal. If anyone needs theirs more quickly for any reason, please don't hesitate to get in touch and I'll see what I can do. There is some hope though – our new database is nearly up-and-running and we hope that there will then be something that we can do to speed things up.

Some of you will have received this newsletter by email for the first time. This has saved a lot of paper, and postage. However, if anyone would still prefer to receive their newsletter by the traditional method, or can provide an email address for future use, then please get in touch.

MOTH DIVERSITY

I'm afraid that I can't provide the usual diversity summaries this year, as our new database is still being worked upon. This means that it is not currently possible to dig out the Alpha diversity figures that I would currently use. Hopefully it will be possible to catch up on this in the future.

OPERATING NOTES

Light bulbs: Please ensure you take care when fitting replacements. Bear in mind that they may be more likely to break when held by the "neck". If at all unsure please wear gloves. After last year's problems with some bulbs, where many blew almost immediately, the new batch, despite them being the same make, seem to be doing the job.

These Tungsten filament bulbs are becoming much harder to obtain so we are stockpiling as many as we can. They are still used to ensure continuity with the historical data but we are looking into alternatives. However, this will not happen soon, as equally bright energy saving bulbs with a similar spectrum do not yet exist. Even once a suitable alternative has been identified, we will still need to perform a series of experiments to determine any differences in the data obtained, so that this can be considered in future analysis.

Killing fluids: All questions of health and safety are taken very seriously. Every site is provided with Nitrile gloves, pipettes and safety glasses, all of which should be used in the handling of killing fluids.

We now only provide 500ml bottles of Ethyl Acetate or Tetrachloroethylene (Perchlor) – both of these are more volatile than the old chemical, Tetrachloroethane, particularly in warmer weather. So, much as we provide guidelines on how much to use, sometimes dosage will need to be determined by the operator, depending on local weather conditions. Please remember to top up the jars every day and be sure to keep an eye on the state of the catches – if they are very dusty or tatty, or there are still live insects, then please add some extra each night, and then remember to reduce the quantity when the weather cools again. If possible, changing the jar as late in the day as possible would also help.

For further information on exposure tests, or COSHH regulations, please contact our safety officer: **cliff.brookes@rothamsted.ac.uk** or **01582 763133 ext. 2666**.

CONTACTING US

All correspondence should be made to Chris Shortall, at:
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HERTS.
AL5 2JQ.
E-mail: **chris.shortall@rothamsted.ac.uk**
Phone: **01582 763133 ext. 2466**

Please remember to contact Chris for new safety equipment, replacement bulbs, or fresh supplies of killing fluid well before your stocks run too low.

PUBLICATIONS

Rothamsted data is often used for a variety of purposes, both scientific and conservation related. Below is a list of recent publications that have made use of our data. Reprints of these papers are available upon request.

Gould, P.J.L. (2010) Important records from the Rothamsted Estate, Harpenden, Hertfordshire (VC 20) in 2009. *The Entomologist's Record and Journal of Variation*. **122**. 254-256.

Gould, P.J.L. (2010) Second record of the Clay Fan-foot *Paracolax tristalis* Fabr. (Lep.: Noctuidae) for Dorset, VC 9. *The Entomologist's Record and Journal of Variation*. **122**. 276-277.

Gould, P.J.L. (2010) The Small Ranunculus *Hecatera dysodea* (D. & S.) (Lep.: Noctuidae) in Rothamsted Insect Survey light traps. *The Entomologist's Record and Journal of Variation*. **122**. 277-278.

Gould, P.J.L. (2011) Important Lepidoptera records from the Rothamsted Insect Survey light-trap at Starcross, Devon (VC 3) in 2009. *The Entomologist's Record and Journal of Variation*. **123**. 12.

Gould, P.J.L. (2011) The Vapourer *Orgyia antiqua* L. (Lep.: Lymantriidae), on the Channel Islands. *The Entomologist's Record and Journal of Variation*. **123**. 50-51.

Gould, P.J.L. (2011) *Acleris abietana* (Hb.) (Lep.: Tortricidae) new to the Roxburghshire (VC 80) county list. *The Entomologist's Record and Journal of Variation*. **123**. 241.

Gould, P.J.L. (2011) *Oegoconia quadripuncta* (Haworth) (Lep.: Autostichidae) new to the Denbighshire (VC 50) county list. *The Entomologist's Record and Journal of Variation*. **123**. 293.

Sims, I. (2011) Shining a light on Farmland Biodiversity. *Synthesis* – Syngenta's in-house newsletter. Autumn. 5

Van't Hof, A.E., Edmonds, N., Dalícová, M., Marec, F. & Saccheri, I. (2011) Industrial Melanism in British Peppered Moths has a Singular and Recent Mutational Origin. *Science*. **332**: 20th May. 958-960.

Wilson, M., Bensusan, K., Perez, C. & Torres, J.L. (2011) First records of the exotic leafhopper *Sophonia orientalis* (Matsumura, 1912) (Hemiptera: Auchenorrhyncha: Cicadellidae) for the Iberian Peninsula and mainland Europe. *Boletín de la Sociedad Entomológica Aragonesa* (S.E.A.). **48**: 30th June. 435-436.

Woiwod, I. (2010) Thirty-five year moth population trends in a Bedfordshire garden. *Bedfordshire Naturalist*. **65**: part 1. 83-98.

If our data is used in publications by any of our operators or identifiers, please acknowledge Rothamsted Research and remember to send us a copy so that we can keep our records up-to-date.

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