



The days are short and cold now, but while our insect-life lies low over winter, we can look back over the past year, sort our photos and look forward to spring. 'Thank you' to all of you who have been sharing your discoveries with us here in the newsletter. Do let me know if you have any ideas or suggestions for future issues. I shall look forward to hearing from you. *Best wishes for the coming year.* Glynis Harris (editor)

FROM THE PRESIDENT ...

WELCOME TO THE WINTER EDITION OF OUR NEWSLETTER

As I write this we would, in normal years, be reporting on the DaNES annual Insect Show. Sadly, this year, it has been interrupted once again by the Covid-19 situation. As I am sure you are aware, the problem is not solely restrictions on the day of the show itself but restrictions during the preparations too. Covid-19 is still with us, but we hope to be back on track for next year's show.

Out in the field it has been an interesting year. In this issue of the newsletter we see the question "Where have all our butterflies gone?" but it's worth noting that the diversity of species may well be increasing in Derbyshire and Nottinghamshire. I have mentioned the Purple Emperor previously, but there have also been other species expanding their range, either naturally, e.g. Silver-washed Fritillary and Dark Green Fritillary, or by probable re-introductions e.g. Marbled White. Harrison and Sterling in the Butterflies of Derbyshire, published by the society in 1985, note that species lost in the first half of the 20th century include Small Blue, Large Tortoiseshell and Ringlet. The latter, however, has since re-colonised the area in large numbers which provides reason for optimism for other species. Also, in Nottinghamshire, new colonies of Grizzled Skipper are being discovered. This phenomenon is not confined to butterflies; it is notably seen in beetles like the Alder Leaf Beetle. The situation is very dynamic, and the effects of climate change are making it more so. The current situation seems to be one of higher diversity accompanied by lower numbers. The current trend for re-wilding hopefully means species once seen – albeit in low numbers like Small Pearl-bordered Fritillary and Small Blue – may make a return.

Now that winter is here, we can reflect on the past season and collate our thoughts and records – as always please let Dave Budworth have your observations.

Phil Gilbert

Articles in this newsletter contain opinions of the individual authors, and information which may not yet have been officially verified.

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| D | ▪ Meet people who share your interest in entomology | D |
| a | ▪ Take part in meetings, fieldwork, exhibitions, trips and social events | a |
| N | ▪ Report your insect sightings for our database, to help with research and conservation | N |
| E | ▪ Learn more about insects, and share your knowledge with others | E |
| S | ▪ Join in with your news and conversation on our Facebook and Twitter | S |
| | ▪ Enjoy (and contribute to) this newsletter and other DaNES publications | |
| | ▪ Make use of our society's entomology books, photos, microscopes and collecting equipment | |

DaNES NEWS



Latest news updates from your DaNES committee

By Russell Nevin

ANNUAL GENERAL MEETING

Our AGM, postponed since March due to Covid restrictions, was finally held in September at Shipley Country Park Visitor Centre. Attendance was modest and, unfortunately, no members apart from those on the committee were present. Possibly the pandemic has made people wary of any non-essential indoor activity? Please be aware that, as your society, all members are welcome at the AGM. It's your opportunity to meet the committee, ask questions and maybe even volunteer to help! Next year's AGM will be held on Tuesday 8th March 2022, at Shipley Country Park Visitor Centre.

COMMITTEE MEETINGS

Only one committee meeting has taken place since the last newsletter. In order to reduce unnecessary travel during the winter months (and reduce our carbon footprint!), we have decided to hold the meetings via Zoom videoconferencing during this period. Not all committee members are able to work with Zoom, but at the same time some are reluctant to attend physical meetings (at least until Covid levels are significantly reduced). Physical meetings will resume in March.

JOURNALS

At the AGM I volunteered to become journal editor for 2020 and beyond. A number of members have submitted reports/papers for publication in the next journal, or offered to do so. This is your society - if you too have something to offer (maybe a report on an area of local interest or a particular species) do let me know. My contact details are on the back page. Please note - journal reports generally record a synopsis of information collected over a period of time, and typically comprise several pages (or more) of text, with accompanying photos, maps and charts. Shorter accounts, especially of current or recent insect activity, are featured in the newsletter. Dave Budworth will continue with his work on the 2013-2018 summary journal, which is now well underway.

RECORDS

Please ensure all your 2020 insect records have been sent to Dave Budworth. Also, to speed up processing, send butterfly and beetle records to Phil Gilbert, and bee records to Kieron Huston as well. With climate change and threats due to insensitive development, it is all the more important we have a robust database of local insect distribution to help safeguard our local fauna.

DaNES EVENTS

As there will be no further DaNES events this year, it is important we focus on getting back to a full programme for 2022. We are looking to arrange some form of social event with a talk in the New Year, and would welcome suggestions for venues for field meetings for next year.

MEMBERSHIP CHANGES

Since the last newsletter, we are pleased to have welcomed another new member.

EDITOR'S NOTE

To change from email to printed newsletters or vice versa - contact Dave Budworth dbud01@aol.com or 01283 215188

DIARY DATES



There are no field-trips or events currently planned over the winter but

check our website for DaNES updates
<http://www.danes-insects.org.uk/>

**and remember
... in January ...**

Winterwatch on BBC2 – dates not yet released
Big Garden Birdwatch – January 28th - 30th

ACTION FOR INSECTS CAMPAIGN – UPDATE

By Ben Driver - Senior Conservation Officer, Nottinghamshire Wildlife Trust

The Wildlife Trusts' Action for Insects campaign <https://www.wildlifetrusts.org/action-for-insects> seeks to reverse the devastating declines in insects by cutting pesticide use and restoring insect friendly habitat right across the country, from the smallest corners of a town centre to vast swathes of farmland and countryside. Over the past 2 years The Wildlife Trusts have had some amazing successes, including our initial report, Insect Declines & Why They Matter, reaching up to 30 million people, and over 100,000 people signing a petition calling on Government to end the use of neonicotinoids.

Nationally The Wildlife Trusts are now working with the Pesticide Action Network UK (PAN) to persuade Local Authorities to cut pesticide use, with a pilot project for six Trusts to explore different ways of influencing Local Authority activities. Although Notts isn't one of the pilot areas, we are closely following the project and will take local action where appropriate. For instance, we are supporting the Wild-NG project, set up in the Carrington-Sherwood area of the city. This project has been highlighting the importance of wild flowers on pavements and has been lobbying the council to limit pesticide use <https://www.wild-ng.uk/news/poisonfreepavements>.



Wild.NG PROJECT

By Lorna Griffiths - City Nature Recovery Officer

In May 2021 we saw the launch of wild.NG, a local initiative in the Sherwood, Carrington, and Basford areas of Nottingham to empower residents to become engaged with nature in the community and build connections to help tackle some of the main issues related to biodiversity loss.

Local artists Trish and Nick, both of whom are passionate about nature and the environment, were the instigators of wild.NG who, through local connections, encouraged other likeminded individuals, including several Nottinghamshire Wildlife Trust staff members and trustees, to help drive the enterprise forward.

One of wild.NG's key campaigns is their #poisonfreepavements project which aims to educate residents about the impacts of kerbside spraying using herbicides as well as campaigning for Nottingham City Council to stop routinely spraying residential and community streets.

Over the summer wild.NG held several family-orientated 'wildflower pavement graffiti' events, which entailed touring the streets of Carrington to identify the various wild flowers found growing along the kerbsides and labelling them with chalk, to highlight the number and variety of species present in the neighbourhood.

The pavement graffiti events were very popular and quickly drew the attention of the media, which helped to capture a wider audience and encourage scores of residents to register their streets as 'wild streets', increasing the network of campaigners and local wildlife champions. Nottingham City Council and several local councillors also became aware of the movement and contacted wild.NG to enter into talks concerning the future use of Glyphosate in the project area.

Nottingham City have now agreed to pilot nominated streets to be poison free next year, with the involvement of local people and community support in the wild.NG area.



I've been light-trapping now for 42 years, running a 125 watt M.V. and, during the first 20 of those years, doing field-trips also, with a generator and a portable 125 watt trap. I quickly realised the value of a weaker wattage, so on those field-trips I also set up two 6 watt actinic box traps powered by lightweight motorbike batteries.

Retirement came, we downsized to a smaller house and, with near neighbours, elected not to run a powerful moth light, using a 16 watt mains powered actinic instead. Results were ok, but a few years ago longtime member Graham Finch introduced me to Wemlites: simple plug-in bulbs that don't need a choke. I rapidly installed one in the lantern light on my garden shed, and also purchased a small box trap with another Wemlite mounted on it. Both were 20 watt bulbs. I've written before about great catches with these lights, but I've now had my best season yet since using these low wattage lights.

My current system is to use my box trap whenever the weather looks good, switching off the shed light, but with the shed light left on for all the other nights. I now have 365 days a year coverage. The following is what happened in 2021.

January gave me the odd seasonal regulars like the Early Moth, but **February** the 15th was a special day as I found a Grey Shoulder Knot sitting on the shed door. Not a rare moth in the scheme of things, but a first for me. In my field-trip days I made winter visits to Sherwood Forest, Charnwood Forest, and Salcey Forest, but failed to catch it. In **March** I had more seasonal regulars, the best of them being a Double-striped Pug, and an overwintered Red Green Carpet: the first one I'd ever taken in spring. **April** brought more regulars, the only one of note being a Least Black Arches. At this time I had still not yet used my box trap, all the moths being found sitting on my shed front or the adjacent garage brickwork. I put the trap out a few times in **May**, and had a very early Privet Hawk on the 19th along with a Puss Moth. A little later I had a Yellow-barred Brindle and several White-spotted Pugs, plus all the usuals.

June brought a good run of notable moths. On the 1st I had a Toadflax Brocade (first brood), a moth I now take regularly. Prior to a couple of years ago I'd only ever found it as larvae, on Dungeness Beach in Kent. On the 3rd I had another Privet Hawk along with two Sycamore Moths, and on the 6th a Small Ranunculus, a species I've only recently started taking - and yet another moth that I get two broods of. The 7th gave a Small Elephant Hawk, a moth I never find commonly. The 8th produced Slender and Foxglove Pugs, and the 9th a Varied Coronet. The 11th gave a Marbled Coronet as well as an Orange Footman, and the 16th a Coronet Moth. All three Coronets came sporadically until the end of July. June 17th then brought another Privet Hawk, and the 23rd a White-line Dart. A Hayworth's Pug on the 24th was a surprise: I've only ever found it as larvae some twenty years prior, at Ticknall Lime Quarries. The 27th gave another surprise - a Sloe Pug. I've beaten the larvae from blackthorn blossom in four different counties over the years but I've never taken it in a trap; not this time either, as I found it sitting on the shed. I had another the same way in July. The month was completed with a Toadflax Pug and a Straw Dot.

July came in with a bang, the 1st of the month producing a Bird's Wing and a Blackneck, both of which are far from common. On the 2nd I had another Toadflax Brocade and another Small Ranunculus. The 4th delivered yet another Privet Hawk and a Scarce Footman, the 5th the first of twenty-odd Old Lady Moths taken throughout the summer, my best ever season for this moth. The 13th gave another Blackneck, and the 16th a Plain Wave. Over the next three days a Cream Wave, a Dwarf Cream Wave, and a Dusky Sallow turned up. I also had a first of the season, a Marbled Beauty, and I went on to take some two hundred or more over the summer. Many of them were found on the shed or garage, sometimes 20 or 30 at a time. I have a friend at Willington who also runs a 20 watt Wemlite, and strangely he didn't catch any at all. July the 21st gave me another new species, a Square-spot Dart, and the month was finished off with a White-line Dart and a Buff Footman.

August gave yet another new moth, the Butterbur, mid-month, and around the same time a Dark Spinach, Yellow-barred Brindle, and a Maiden's Blush. Later in the month I had four Toadflax Brocade and two Small Ranunculus, all second brood. The end of the month brought the first of six Red Underwings plus an Oak Nycteline.

September brought another new moth, the Mullein Wave on the 3rd, as well as a Small Ranunculus, and the 17th, still another first, a Northern Deep Brown Dart. During this month and on into October I had a good number of second brood Spruce Carpet, about a dozen. I usually only see this moth in odd ones. Also, a brief reminder - many of these captures were found on the shed or garage with only the lantern light running - no trap. That includes the larger moths such as the Privet and other hawks, the Old Lady, the Red Underwing, and several of the rarer moths mentioned earlier.

October brought the Red-green Carpet, a moth I never saw until I used Wemlites. I had a total of 6 between October the 8th and November the 1st. Another favourite of mine, the Juniper Carpet, appears at this time and I ended up with 17 of these from October the 9th to November 1st. Only 6 were in the trap, all the others were found sat on the shed or garage. In previous seasons they haven't appeared before October the 18th or 19th. This time I had three earlier ones - October the 9th, 10th and 12th - all found on the front of the house to a modern up down light; no ultraviolet at all. No wonder I never caught them at my old address; a 125 watt M.V. sitting in the middle of a lawn with no adjacent wall or tree trunk to settle on, and a light source I now know to be far too powerful.

This had been a great season, using only low power lights, but there was a huge extra bonus - I caught a moth I didn't even know existed. It went like this - On August the 4th I opened the box trap and saw a moth sitting there that I felt sure I'd seen in Barry Goater's British Pyralid Moths. Before I could box it it flew off, but I had it fixed in my mind; sure enough there it was in Barry's book: *Diaphania Hyalinata*, the Melonworm Moth. A check on the internet revealed it had never been taken in the British Isles so I rang David Budworth to tell him the story. He urged caution, telling me about the Box Tree Moth, which was very similar and had recently been occurring in both this and adjacent counties. I looked it up (internet again) and it was very similar, but with no specimen it was always going to be a case of 'what if'. Then on September the 20th I caught another one, and yes, it was the Box Tree Moth, *Cydalima Perspectalis*. Four days later I had another, the dark form, a lovely sable colour, and two days after that yet another, a freshly emerged white form. So, August the 4th, one moth, then 3 in late September; are they double-brooded? ... Whatever, it capped a great season, and one I'll remember for a long time.

A FAMILY THING!

By Kevin Brown

Delight at finding my first
Blue Underwing



On the morning of 6th September I checked my moth box and found little of interest, but as I walked away I noticed a *Catocala* moth on the fence. Alas it was a Red not a Blue Underwing. “Close but no cigar” I wrote on my Facebook post. And the following weekend a friend visited Spurn and tagged me in a photo of a Clifden Nonpareil which had been trapped there the night before his visit.

Then, in the early hours of the following morning, when I was checking round my moth box again, I heard something thumping around inside it. I thought it was a group of Large Yellow Underwings, and left it a few minutes before checking. When eventually I did look inside I saw a large grey moth and, for a split second, thought it was a late Poplar Hawkmoth. Then I saw the blue, and that is the same colour the air turned as I realised my childhood wish to see a Clifden Nonpareil. And there was another twist in the tale when I received a photo from my cousin, who was working nights at Etches Park, Derby and asking me to identify a moth – “Easy” I replied “it is a Clifden Nonpareil”!

A SPECIAL FIND

By Bill Grange

This photograph is of a Wasp Nest Beetle, *Metoecus paradoxus*, photographed in my garden in Allestree, Derby, on 3rd October of this year. It was crawling along the ground in front of my plastic greenhouse.

It is a very special find indeed, as this beetle, with its fascinating life-history, is rarely seen due to its life-style, although it is probably quite widespread. This is, in fact, only the second time in my life I have seen it, though Felicity Jackson found a specimen in her garden, also in Allestree, in 2020.



The first time I encountered *M. paradoxus* was when a young teenager, around 1960. I was fishing along the former Wollaton Canal (now filled in), in Nottingham, when a chap was cycling along it, handing out pieces of wasp nest, containing wasp larvae, to the anglers, to be used as bait. The piece I obtained contained a specimen of this beetle, which I took home and identified from my copy of Linssen's 'Beetles of the British Isles'.

This species has a fascinating life-history which was not worked out until the 19th century. The adult lays eggs on dead wood, in the hope that a social wasp (*Vespula sp.*) will visit to harvest wood fibre for its nest. If one does, a beetle larva climbs onto the back of the wasp and is transported to its nest. It then seeks out a wasp larva and slowly devours it, then pupates, to emerge in late summer to autumn as an adult beetle.

INSECTS IN THE NEWS

STINK BUG COULD THREATEN OUR CROPS

A Brown Marmorated Stink Bug, from Asia, has recently been found in the UK, as it has on several previous occasions. It is thought to have arrived with imported goods or luggage. There is no evidence of it breeding here, but climate change could change this, which would be a serious threat to our crops. Invasive species are constantly monitored by a scheme that's funded by Defra. <https://www.bbc.co.uk/news/science-environment-58809987>

BIRDS CAN RECOGNISE PLANTS THAT HOST POISONOUS INSECTS – NEW RESEARCH

The University of Bristol has recently discovered that birds don't just learn the colours of dangerous insects, they also learn the appearance of the plants that they live on. They have compared birds' reactions to both poisonous and non-poisonous caterpillars, when on their usual food-plants, and when moved onto different types of vegetation. <https://www.bristol.ac.uk/news/2021/october/birds-avoid-plants-that-host-toxic-insects.html>

TRAILCAM - TRIED AND TESTED!

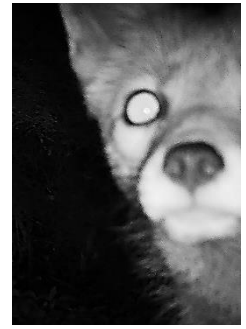
By Glynis Harris

Earlier this year I bought myself a trailcam, and have been so thrilled with it that I'm keen to encourage others of you to get one too, even if (like mine) your garden is very small. It's not a device for studying insects, of course, but many of you will also have a wider interest in wildlife, so here is my pitch ...

I knew I had hedgehogs around my garden, and wanted to see more of their comings and goings, and whether I had any other night-time visitors. A trailcam would be the answer but I knew nothing about them, so I looked for advice online - re specs, reviews, prices etc, - and back in July I bought one, from <https://naturespy.org/>.

And I am so pleased that I did. Firstly there's the excitement of checking the SD card each morning to see what activity there has been overnight. And then, what an eye-opener! What surprises, discoveries and entertainment. I have seen much more than just **what** is there (12 foxes, plus rats, mice, frogs and the expected hedgehogs, squirrels, and local moggies). After viewing images of them daily, over the weeks and months I have discovered so much about their features, behaviour and movements, their routines, how they relate to each other, their reactions, and their encounters with each other, and how these change with the season. And it has enticed me to find out more about some of them – especially the foxes. Some quite special and entertaining moments can be captured too, as you will see below! My trailcam has, to me, been worth every penny and more.

The model I bought is a Browning Recon Force Elite HP4 (£169.99 with 'free' 32GB SD card) which uses 8 AA or rechargeable batteries. I chose it for its good reviews, image quality, fast trigger speed and fast reset between pics. And it is very easy to use. I fix mine to a trellis, low to the ground, and aim it towards a small area just in front, which I have found is a hub of activity. It takes videos (with sound) and time-lapse, but I like setting mine to take stills, at its fastest trigger speed of 0.1sec and shortest delay between pics of 1sec. This captures detailed sequences of movements, and the infra-red light on the cam attracts just sufficient attention for face-on shots!





LITTLE EATON 'WASTELAND'

By Felicity Jackson

Over the past few years I have been exploring an area in Little Eaton, situated between the railway to the west and Little Eaton Canal and Alfreton Road (B6179), to the east. It used to be a refuse tip, but now has been left to grow into a bit of a wildlife haven, mainly grassland and scrub but with a few trees beside the railway.

The 11 hectare site, centred on SK362403, is privately owned, a small area being used for container storage. But a footpath runs north-south through it, linking Abbey Hill (A38) with Outram's Wharf, Little Eaton. There are also side paths which can be explored.

As well as grasses, the area is dominated by hawthorn, rosebay and great willowherb (with other willowherb species) and bramble, with plenty of teasel, nettle, thistle, horseradish, ragwort and a species of St John's wort. Wild rose can be found, and cinquefoil and silverweed, together with ox-eye daisy, buttercup and cranesbill species, vetches, and the occasional bristly ox-tongue.

Part of the northern section is bordered by an ox-bow lake, the remnant of a meander of the Derwent before it was straightened to allow the building of the railway. An ephemeral lake, it mostly dries up in summer, but still attracts plenty of dragonflies! Willows grow at the edge, though most have been cut down and shredded. Beyond that on one side are storage lagoons and a solar farm, but a strip of disturbed ground, covered by grasses and great willowherb, thistles, burdock, bramble, dock and nettle, continues beside the path to Outram's Wharf.

Rabbits graze the grass. I have heard robins, mistle thrush, chiffchaff and whitethroat there. But my main interest has been in the insect fauna.

In the last couple of years I have spotted: -

- Butterflies, including many Ringlets, some Meadow Brown and Gatekeepers, Small Skippers, Comma, Small Tortoiseshell, Red Admiral, Common Blue, Small Copper, Large, Small and Green-veined White, and several Peacocks feeding on thistles in the northern section (which forms part of a butterfly transect organised by the Little Eaton Canal Group).
- A Ruby Tiger moth caterpillar (the only moth representative so far!).
- Damselflies, Common Darter dragonflies and a Broad-bodied Chaser
- Green, Hairy, and Blue Shieldbugs, Dock Bugs, and the little leafhopper *Evacanthus interruptus*
- Various hoverflies including the distinctive *Xanthogramma pedissequum*
- Seven-spot Ladybirds, and the fat-thigh beetle *Oedemera nobilis*
- Sawflies, as yet unidentified
- Buff-tailed and Tree Bumblebees.
- Orthoptera: Lesser Marsh Grasshoppers, a Field Grasshopper, many Roesel's Bush-crickets especially in the northern section, Long-winged Coneheads and some Speckled Bush-crickets. Nearly all of these were heard using a bat detector.
- Fungi have included shaggy ink cap and a spectacular display of sulphur tuft growing on the willow chippings.



Broad-bodied Chaser

No remarkable species so far, but it is an area perhaps worthy of further investigation. However, as it is in private hands, there is always the possibility it will be 'developed'. It should be appreciated while it's there!

DaNES SOCIAL MEDIA

LOG ON AND JOIN IN

It's a great way to get involved with the society and communicate with other members.

FACEBOOK <https://www.facebook.com/DaNESinsects> Manager: Phil Gilbert - pgilb10221@aol.com

TWITTER https://twitter.com/danes_insects

Manager: Kieron Huston - morelemurs@talktalk.net

INCONSPICUOUS LADYBIRDS

By Sean Browne

I have had a broad interest in insects for many years but, until I bought the Field Guide to the Ladybirds of Britain and Ireland, by Helen Roy and Peter Brown, illustrated by Richard Lewington, I knew next to nothing about the inconspicuous ladybirds. Any guide with Lewington's artwork in is worth having and this is a beautiful book. A friend of mine, Nige, had got a copy and was really keen to find some of the smaller members of the Coccinellidae. I took one look at it and bought a copy straight away.

There are 47 species of ladybirds resident in the British Isles, and these are split into two groups. 27 of them are conspicuous ladybirds, and include the very common 7-spot Ladybird *Coccinella septempunctata* and the Harlequin Ladybird *Harmonia axyridis*, which are familiar to most people. The remaining 20 are the inconspicuous ladybirds, which are aptly named. They range from the minute Horseshoe Ladybird *Clitostethus arcuatus* at 1.2-1.5mm, to the Round-keeled Rhyzobius *Rhyzobius chrysomeloides* at 2.5-3.5mm. The status of two species are classed as "very widespread" for the Red Marsh Ladybird *Coccidula rufa*, and "widespread" for the Point-keeled Rhyzobius *Rhyzobius litura*. One is classed as "extinct", the Two-spotted Nephus *Nephus bisignatus*, and the remaining 17 are classed as "very local".

They can be looked for throughout the year - in the summer months when they are active, and during the winter when they enter a state of dormancy in leaf litter and behind bark. They can be found over a wide range of habitats including wet areas, conifers, deciduous trees, coastal dunes, heathland, grasslands and ivy. Because of their very small size they go unnoticed and under-recorded. The best methods for finding them are sweep-netting and tree-beating onto a tray. I use a collapsible photographer's light reflector (see pics below), which is much cheaper than the standard beating tray. I also use it to empty the contents of my sweep-net onto. A hand-lens and microscope are essential for identifying most of them, but they can prove to be extremely difficult to get good pictures of. I have tried and failed with most.



Light reflector closed



Light reflector open

Over the last few weeks we have targeted Budby Heath, Attenborough NR, Ruddington CP, a private estate at Widmerpool, Sutton Bonington, the local golf course and park, and anywhere that ivy grows, including my back garden. The results have been amazing and have made us realise that several of the species are more numerous than stated, they are just not looked for. We did notice that on a lane with lots of ivy, the ladybirds weren't spread out evenly, but concentrated on one or two trees.

This is a summary of what we have found:

Red Marsh Ladybird, *Coccidula rufa*, 1 from Attenborough NR. Widespread in Notts.

Round-keeled Rhyzobius, *Rhyzobius chrysomeloides*, numerous in ivy-covered trees including my garden. Only a handful of previous Notts records.

Point-keeled Rhyzobius, *Rhyzobius litura*, several from Attenborough NR. Numerous Notts records.

Red-headed Rhyzobius, *Rhyzobius lophanthae*, 1 from a leyland cypress hedge, Ruddington CP, 2 from a leyland cypress hedge, Attenborough, 1 from oak, Widmerpool. Several records from South Notts.

Four-spotted Nephus, *Nephus quadrimaculatus*, 3 from the ivy in my back garden, 50+ from ivy-covered trees, Attenborough. There had only been two previous Notts records.

Pine Scymnus, *Scymnus suturalis*, 3 from Budby Heath. Fairly common in Notts.

Angle-spotted Scymnus, *Scymnus frontalis*, 2 from Budby Heath. Several records from Sherwood Forest.

Black Scymnus, *Scymnus nigrinus*, 3 from Budby Heath, the 2nd, 3rd and 4th records for Notts.

Dot Ladybird, *Stethorus pusillus*, 1 from ivy, Attenborough, 1st record for Notts.

(Continued from previous page)



Forestier's Ladybird



Forestier's Ladybird



Red-headed Rhyzobius



Red-headed Rhyzobius

There are still several species to find in Notts, with the potential for finding new county records as the following illustrates - When I sent our records to Trevor Pendleton he told me to be on the lookout for Forestier's Ladybird *Rhyzobius forestieri*, as it had not yet been recorded in Nottinghamshire. It is the most recent ladybird to arrive in Britain. According to the NBN Atlas, there are 112 records with the first from London in 2014. It is slowly moving north and had reached Leicestershire, with a single record from a garden. It is fairly easy to identify as it is larger, at 3-4mm, than the other inconspicuous species, is black and hairy on the upper side and, when viewed from below, the rear segments of the abdomen are orange. The very next day we were beating some ivy-covered trees in Attenborough, when one dropped onto my tray. I knew straight away, just from its size, that it probably was one. I potted it up and looked at the underneath of the abdomen to clinch it, and there were the orange segments. And just a few minutes earlier, a few yards away, Nige had just found the first Notts record of Dot Ladybird *Stethorus pusillus*. To say we were stunned is an understatement. Two days later I found another *Rhyzobius forestieri* at the same site.

BIG BUTTERFLY COUNT RESULTS 2021

Butterfly Conservation has run a Big Butterfly Count annually since 2010, and this year received its greatest number of counts. Despite this its lowest ever number of butterflies were recorded. This year the average number of butterflies per count was **9**, compared with **11** in 2020, and **16** in 2019.

FINAL RESULTS (including moths) 2021 - ABUNDANCE AND % CHANGE SINCE 2020

Small White	252151	-5%	Comma	21320	-32%
Large White	229218	-16%	Speckled Wood	18086	-41%
Meadow Brown	197060	+33%	Six-spot Burnet	15964	+42%
Gatekeeper	133726	-30%	Common Blue	14376	-59%
Red Admiral	75394	-10%	Painted Lady	12180	+44%
Ringlet	63311	+81%	Holly Blue	10018	-58%
Peacock	61668	-63%	Brimstone	7984	-33%
Small Tortoiseshell	38543	-32%	Silver Y	3661	+53%
Marbled White	28704	+213%	Scotch Argus	2326	n/a
Green-veined White	27784	-9%	Jersey Tiger	2034	n/a
Small Copper	22897	-11%	TOTAL	1238405	-14%

Peacock numbers were their lowest since 2012, and the Small Tortoiseshell had its 3rd worst summer in the history of the Big Butterfly Count. Most double-brood species also had their worst year since the annual count began; it is thought that their 1st brood was active early, due to an early warm spring, and that their numbers were then reduced by a very wet May which reduced the numbers in the 2nd brood at the time of the count. Marbled White and Ringlet numbers were higher this year than last, but this is thought to be a misleading result. It is thought that less were recorded during the Big Butterfly Count last year as they were on the wing earlier due to the unusually sunny spring. This then gave a false impression of raised numbers this year, when numbers were actually more normal at the time of the count.

Butterfly Conservation is now launching a new 5 year '**Saving Butterflies and Moths**' strategy, to

- 1 Halve the number of the UK's threatened species of butterflies and moths
- 2 Improve the condition of 100 of the most important landscapes for butterflies and moths
- 3 Transform 100,000 wild spaces in the UK for people, butterflies and moths

To achieve this, Butterfly Conservation will be running a programme of ambitious initiatives that re-focus and co-ordinate conservation efforts and inspire others to get involved.

Details can be seen at:

<https://butterfly-conservation.org/sites/default/files/2021-10/Butterfly-Conservation-Strategy%20Brochure.pdf>

WHERE HAVE ALL OUR BUTTERFLIES GONE? (Part 3)

By Dr David Glynne Fox

This is the final part of my 3-part article, and is based on almost seventy years of personal observations in the wild, primarily in and around my home county of Nottinghamshire, although these results sadly also apply to much of the UK. Parts 1 and 2 of the article were published in the previous 2 issues of the newsletter.

Around the woods and meadows surrounding Mapperley Plains, when I was growing up there in the 1950s, there were a great many species ... Large numbers of bright orange-red Weevil Beetles (*Apion frumentarium*), feeding on broad-leaved dock (*Rumex obtusifolius*), were a very common sight. The bushes and hedgerows provided multiple nest sites for linnets (*Linaria cannabina*), a small finch, which was very common here in the 1950's. They are now a rare site in Nottinghamshire. Bullfinches (*Pyrrhula pyrrhula*), one of the UK's prettiest birds, built their nests of twigs in the hedges, along with song thrushes (*Turdus philomelos*) which are indeed a very rare site today. Two or three small ponds contained Great Diving Beetles (*Dytiscus marginalis*), and many amphibians including great crested newts (*Triturus cristatus*) and smooth newts (*Lissotriton vulgaris*), to mention a few. All these ponds have been filled in now and houses built on top of them. If it wasn't for garden ponds, most of our amphibians would be on the verge of extinction if not actually already extinct.

A couple of years ago, I went back to photograph this lovely site and was horrified and deeply saddened to discover that nothing was left of it. Absolutely nothing. There wasn't so much as a blade of grass in sight. Areas of long grass were once widespread but it seems, in our tidy world of today, many of these have disappeared, along with the Ghost Moth that used to frequent these sites. Many are the times I watched the ghostly white males hovering to and fro above the long grass, waiting for a beige coloured female to turn up. It is a great many years since I have been able to watch this awesome sight. The whole area had been completely built over with houses as far as the distant horizon. I simply could not believe it. Nobody living there today could even begin to imagine what it looked like just fifty odd years ago. True, the houses had gardens attached, but virtually every garden was composed of non-native plants, which are almost useless for our butterflies and moths. Many of our television garden presenters are forever telling us to plant such nectar-producing plants as buddleia (*Buddleia davidii*) or the ice plant (*Sedum spectabile*), but these are only of use to the adult butterflies, they do not feed the larvae, so the adult butterflies are never going to remain in our gardens for very long. The trouble is most people do not relish nettles, dandelions and docks in their gardens. These are treated as weeds and are soon removed. Instead, they go to the local garden centres and fill their gardens with foreign plants, many of which are hybrids and not therefore straight natural species. Therefore, the whole of the aforementioned area is basically a desert, a wasteland, as far as our native flora and fauna is concerned. And this is just one area, with the same happening all over the country.

Another area which, fortunately, has not suffered quite the same fate, is Cotgrave Forest in the south-east corner of Nottinghamshire. Originally, when I was a boy, this was a large area of commercially planted pines and was owned by the Forestry Commission. In my childhood, this was a good site for the Green Hairstreak butterfly (*Callophrys rubi*), the Pearl-bordered Fritillary (*Boloria euphrosyne*), the Small Pearl-bordered Fritillary (*Boloria selene*) and the Dark Green Fritillary (*Speyeria aglaja*). However, the forest back then was managed for pine trees, not butterflies, and so the dog violets (*Viola riviniana*) that the fritillaries fed upon, eventually became shaded out as the trees grew larger, to the detriment of the butterflies. Most species disappeared but a recent trip proved something of a revelation. The land had been sold off by the Forestry Commission and individual plots came into private ownership. Today it is comprised of mostly deciduous woodland and the Green Hairstreaks and Dark Green Fritillaries have returned, albeit in small numbers. However, there appears to be some rewilding going on here. Somebody is releasing species that have never occurred here. Now, I am all for rewilding if the chosen areas are still suitable, but I do have grave reservations when new species are released that were never present. I have seen Marbled White butterflies (*Melanargia galathea*) here, as well as Silver-washed Fritillaries (*Argynnis paphia*) and Brown Hairstreaks (*Thecla betulae*). I have even heard that the magnificent Purple Emperor (*Apatura iris*) has also been released here. I understand that these releases are the work of a private individual and I can see the logic behind it, especially with the destruction of so many sites. But rewilding can create havoc with biological recording, and should be co-ordinated. Otherwise, unofficial rewilding attempts can be a double-edged sword.

Ghost Moth



Green Hairstreak



Dark Green Fritillary



Small Pearl-bordered Fritillary



(Continued from previous page)

However, it is not all bad news. Some species in my area today were never there in my childhood. The Comma butterfly (*Polygonia c-album*) being one. This species is now found all over the county. The Hedge Brown or Gatekeeper (*Pyronia tithonus*), the Speckled Wood (*Parage aegeria*), the Ringlet (*Aphantopus hyperantus*), and the Holly Blue (*Celastrina argiolus*) are now found commonly throughout the county. As global warming continues, we can no doubt expect more southern species to venture northwards, but more northern species are equally likely to perish. Additionally, most of our superb nature reserves are basically islands in a sea of houses and farmland with no corridors enabling species to move in and out of the area. And we all know how vulnerable islands can be to extinctions. So not only do we need to protect our existing reserves, but we also need to ensure that these reserves are equipped with the necessary corridors, otherwise, given time and opportunity, existing species on reserves will eventually change and become different species from the norm. This means that, eventually, specimens from one site will no longer be interchangeable with others on different sites that were once the same species. This perhaps wouldn't be so bad if it was not for the fact that all of this will be man-made. Yet again!

So, to sum up the title of this article, where have all our butterflies gone? They have been literally bulldozed to almost oblivion! One thing is for sure, Maxwell Knight was not wrong when he wrote his Frightened Face of Nature all those years ago!

SURGE OF INTEREST IN MOTHS IN 2020

By Andy Large



Black Arches



Leopard Moth



Coxcomb Prominent



Large Elephant Hawkmoth

I recently read an article on the BBC website (<https://www.bbc.co.uk/news/science-environment-57742701>) written by the BBC environment correspondent Helen Briggs. Apparently, due to lockdowns and restrictions of movements, there has been a marked increase in people's interest in butterflies and moths. In 2020 this led to a rise in the reporting of rare species of moths: overall, sightings were up by about 33%; many UK counties recorded new species.

The National Moth Recording Scheme data shows that, not only did the incidence of moth reporting increase, there was also an increase in the sales of moth traps. In Yorkshire, records rose by 25% whilst in Cheshire, 7 new county species were identified and several more were recorded in Cornwall. 2020 was also a record year for scarce migrant moths being recorded, such as the Crimson Speckled, the Scarbank Gem and the Slender Burnished Brass.

Coincidentally, for the first time in 4 years since moving house, I ran my moth trap for some weeks. Previously, I had used a mercury vapour lamp as our neighbours were not too close and we had a large garden, so the bright light did not affect them at night. However, this year I changed the light source to a black UV bulb. Although, I think it is not as effective as a MV lamp, it is more neighbour-friendly (the houses are closer together and gardens much smaller) and I did record and photograph some interesting moths.

I am far from an expert in moth identification, but with the help of a good field guide and "Google Search" I was able to identify most of the larger species. A regular feature of the day was to empty the trap, photograph the moths and then sit with a coffee and a book to identify those that were unfamiliar to me. A few of the pictures are shown above.

I was also able to send digital images to friends with small children, who were fascinated to look at the shapes, colours and patterns of the moths. They can't wait for me to set it up again next year.

A NEW MOTH TRAP

By Iain McGowan

This year, I decided to buy the NHBS moth trap - I am a complete beginner with moths and the kit was simple to use and not too expensive. I was joined by my daughter, Ellie, in setting up the moth trap for a few nights trapping throughout the year in our garden. Whilst we haven't caught the huge numbers I've seen elsewhere on social media, we did succeed in attracting a few lovely moths. These included a Privet Hawkmoth, Burnished Brass, a few Coronets and, my favourite, a Peppered Moth.

We'll certainly be out more next year, seeing what else we can find!



Privet Hawkmoth



Light Emerald



Buff Tip



Coronet



Peppered Moth



Burnished Brass



Spruce Carpet

BOOK REVIEW

By Bryan Barnacle

MUCH ADO ABOUT NOTHING By James Lowen - Published by Bloomsbury Wildlife, 2021 (384 pages)

I was first drawn to this book by the catchy title, but what a find! At a time when the dumbing down of the English language is rife, the text here is delightfully readable even by a self-confessed pedant like myself. It even has adverbs (sic!), almost as they fall into general disuse, and whilst slovenly marketing specialists come up with slogans such as Shop Local (Majestic Wine), Think Positive (City of Liverpool) and Eat Healthy (local radio).

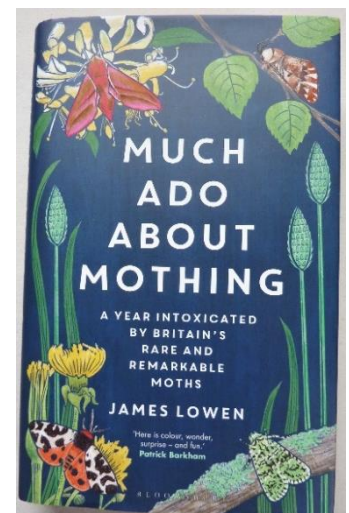
This book oozes enthusiasm for moths which, with their wide variety of colours and shapes, allows the author to exercise a range of elegant and imaginative descriptions. On catching a Marsh Carpet *Perizoma sagittata*, he notes that "The moth is glorious – a gentle curved piece of fudge through which run two rich veins of liquorice, each dusted with sugar". And of Barberry Carpet *Pareulype berberata*, "It is smartly patterned, with wavy stripes of cocoa, espresso and cappuccino, whilst the rear half of the wings bears paler tones, as if a child got bored midway through colouring it in".

The moths featured are to be found in the author's Norwich garden, where his young daughter is a huge moth enthusiast, and the riches of the nearby Norfolk Broads and East Anglian coastline. In addition, however, there are many quests to seek rarer moths further afield, including an epic trip to Scotland to successfully observe three day-flying Burnet species. On many of these journeys, he is accompanied by Derbyshire born Will Soar (aka Wingman Will) who now lives in the same area.

There is much humour as we wander into the world of "moth-ticking" and the ethics of "fridge-ticks". But also an overlaying concern about carbon footprint and the possible effect on moths of excess light and disturbance through too regular trapping at the same site.

The book maps the calendar year, which makes sense since each species has its own season. It is both hugely entertaining and informative, making it a suitable read for both seasoned moth-ers and those just beginning to take an interest.

I enjoyed it immensely.



DISEASES SPREAD BY MOSQUITOES

By Paul Chapman

Mosquito-borne diseases in humans

A number of years ago when I was chatting to my niece, who is a nurse in the Philippines, she was telling me that amongst her most frequent patients were those with dengue fever, a virus spread by mosquitoes. It is a growing problem in urban areas in warmer countries. That led to the idea for this review of the major mosquito-borne diseases in humans. These diseases include malaria, dengue, yellow fever and zika, and they are transmitted by the bites of infected female mosquitoes. Most of these can make people very ill and one of these, malaria, is still a major cause of mortality in children. For most of these there is no vaccine and no specific medical treatment once infected, so the main preventative method is to control the mosquito and avoid being bitten. Three mosquito genera are disease vectors.

Diseases spread by *Aedes aegypti*

This mosquito originated in Africa, but is now found in tropical, subtropical and temperate regions worldwide.

- Dengue fever: a virus. Distributed across all tropical countries. Up to 50-100 million infections occur annually in over 100 countries, putting almost half of the world's population at risk. There is a vaccine but it's of limited use as it is of use for persons who have already been infected.
- Yellow fever: a virus. Endemic in tropical areas of Africa and Central and South America. There is an extremely effective vaccine which gives life-long immunity.
- Chikungunya: a virus. Mostly occurs in Africa, Asia and the Indian subcontinent. Deaths from this virus are rare.
- Zika: a virus. Outbreaks occur in Africa, the Americas, Asia and the Pacific. Symptoms for adults are mild but, for women, infection during pregnancy can cause infants to be born with congenital malformations.
- Rift Valley fever: a virus. Primarily affects livestock (cows, sheep, goats, and camels). The majority of human infections result from contact with the blood or organs of infected animals but can also be caused by infected mosquito bites.

Disease spread by *Anopheles*

This mosquito is distributed almost worldwide with about 460 species.

- Malaria: caused by a protozoan parasite (5 species of *Plasmodium*, but most of the infections are spread by *P. falciparum* and *P. vivax*). Widespread in tropical and subtropical regions. An estimated 229 million cases worldwide and an estimated 409,000 deaths in 2019 with children under 5 years being the most vulnerable group. Prevention is by taking anti-malarial drugs. The long term outlook might be good with a number of tropical and subtropical countries declaring malaria eradicated, and there is also now a vaccine which started being distributed in 3 African countries in 2019.

Diseases spread by *Culex*

Culex comprises over 20 subgenera that include over 1,000 species. These occur worldwide except for the extreme northern parts of the temperate zone.

- Japanese encephalitis: a virus. Endemic in South-East Asia and Western Pacific regions. There is an effective vaccine.
- West Nile fever: a virus. Affects humans, horses and some other mammals. Found in Africa, Europe, the Middle East, North America and West Asia. Vaccines are available for use in horses but not yet available for people.

Disease spread by all 3 mosquitoes: *Aedes aegypti*, *Anopheles* and *Culex*

- Lymphatic filariasis: caused by a nematode parasite (roundworm) of the family Filariodidea. Commonly known as elephantiasis. An estimated 51 million people were infected in 2018. Treatment is by chemotherapy, and eradication is possible since the disease has no known animal reservoir.

Mosquito control - a self-sustaining method

The bacteria *Wolbachia* naturally infect many arthropods and some nematodes and it was discovered that, when *Aedes aegypti* mosquitoes carry *Wolbachia*, the bacteria compete with the viruses listed above, make it harder for the viruses to reproduce and consequently the mosquitoes are much less likely to spread them to humans. The World Mosquito Program breed *Wolbachia*-carrying mosquitoes and release them into areas affected by these diseases. Field trials started in Australia in 2011, and there have been releases in several other countries.

References <https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases>
https://en.wikipedia.org/wiki/Mosquito-borne_disease
<https://www.worldmosquitoprogram.org/en/learn/mosquito-borne-diseases>

**CALLICERA AURATA :
A REMARKABLE HOVERFLY FIND ON THORNHILL CARRS**

By Rob Foster



Callicera aurata on devil's-bit scabious
Photo R Foster



Abia sericea: the Scabious Sawfly
Photo R Foster



Callicera rufa: the Furry Pine Hoverfly
Photo J Leach

The cornflower-like, blue flowers of devil's-bit scabious can be relied upon to attract insects in late summer when most other flowers are over. The floriferous banks of the new Derbyshire Wildlife Trust site of Thornhill Carrs, near Ladybower Reservoir, have been covered by them this year. I have therefore been scouring them, particularly hoping to find the rare Scabious Sawfly. I felt there was a good chance of finding it there since I had seen it in nearby Yorkshire Bridge Wood on the opposite side of the River Derwent in previous years. It is a beautiful, golden, bee-like sawfly, and I was delighted when I had spotted what I was convinced was one; even more so when I managed to capture it.

Close inspection of the netted fly, however, quickly showed that, although it looked similar, it was not a sawfly at all but in fact a hoverfly - though a curious one that I had never seen before. The insect had weird spindle-shaped antennae with white-pointed tips. It was reminiscent of the Furry Pine Hoverfly, *Callicera rufa*, a largely Scottish hoverfly, remarkably bred from larvae found in artificial rot-hole lagoons cut in conifer stumps in the Longshaw Estate a few years before. Checking through the identification books showed it to be the related hoverfly *Callicera aurata*.

This hoverfly similarly breeds in water-filled cavities in trees but this time in deciduous ones. This Red Data list "Nationally Scarce" species was equally unexpected. It is rarely found; like other *Callicera* species, it probably spends much of its time in the tops of trees. Though widespread, its distribution is largely southern. Its appearance is unpredictable "a garden in south-east London and a shop window in Worthing being just as typical as the countryside". A check through the distribution maps on the Hoverfly Recording Scheme website showed it was not (as I had hoped) the first record for Derbyshire, but was one of very few (SK17, 2018; SK37, 1979)!!! There was the comment that it seems to have become [nationally] more frequent and widespread since 2000. So, it's one worth keeping an eye open for!

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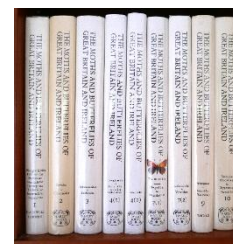
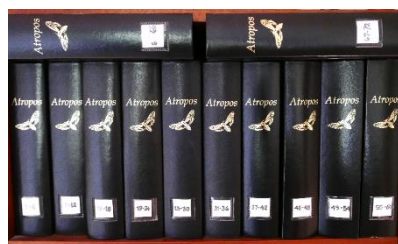
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A BLAST FROM THE PAST

SHIPLEY SUMMER SHOW 2018

In the dark days of winter, what better than having a look back at one of our past summer events ... Here we are at Shipley Country Park 3 years ago, on Sunday 22nd July 2018. It was our annual summer show, an event many of us look forward to. For those who don't know, this involves setting up a small exhibition in the Visitor Centre, with plenty of live insects, and running a guided butterfly hunt in the nearby meadow.

See who you can spot!



Photos G Harris

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