

# NEURO NEWS

*The Newsletter of the British Isles Neuropterida Recording Scheme*



Number 1 (New Series)

Spring/Summer 2014

## WELCOME

Welcome to the post-diapause newsletter of the **British Isles Lacewings and Allied Orders Recording Scheme**, which covers the groups Neuroptera, Raphidioptera and Megaloptera as well as the only distantly related Mecoptera. As with all of the other taxonomic recording schemes this present venture is aimed primarily, though not exclusively, at the amateur community of entomologists in the British Isles.

## AIMS AND OBJECTIVES

Our primary objective is:

- to record the distribution of Neuroptera, Raphidioptera, Megaloptera and Mecoptera throughout the entire of the British Isles from Shetland to Scilly and including the whole of Ireland (and the Channel Islands) and to publish results using, as a basis, the 10 x 10 kilometre map squares of the Ordnance Survey's National Grid.

In addition, we encourage and support:

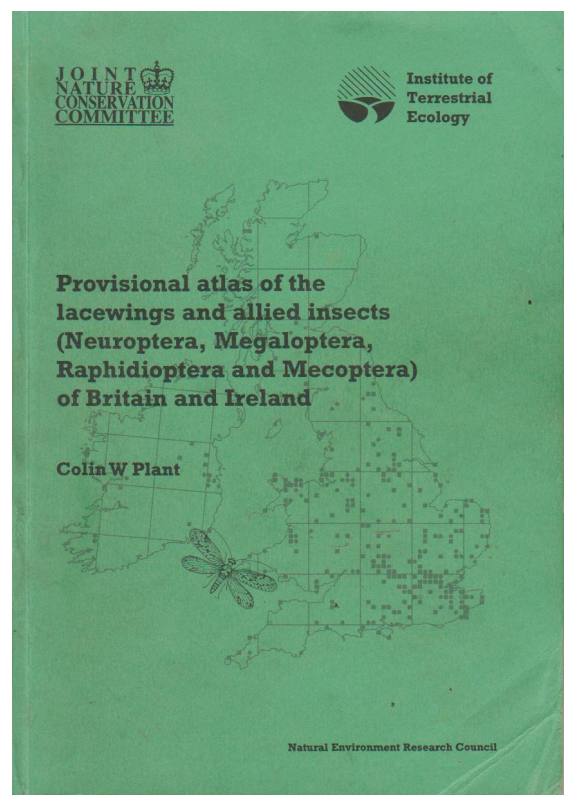
- research into the phenology, voltinism and other aspects of the biology, ecology, taxonomy and all other matters relating to the Neuropterida and Mecoptera;
- the publication of results;
- the development and enhancement of the existing high level of cooperation between both professional and amateur members of the world neuropterological community.

## A LITTLE BACKGROUND HISTORY

Many of you will have been involved, in some way or another, in the lacewing recording scheme that operated throughout the 1980s and which culminated in the production of the "provisional atlas" (Plant, 1994). In those days I had the luxury of hiding behind a desk in a museum and my time in running the recording scheme was justifiably included in my work program.

Regrettably, the production of the atlas in 1994 was incorrectly viewed by some as marking the end of the recording scheme and the inflow of records slowed considerably. The situation was made worse by huge cuts to local authority funding which

eventually led to my natural sciences department closing and my job being made redundant. The last issue of the first series of *Neuro News* appeared in 2001; since then, the recording scheme has more or less been in a state of diapause.



Our first provisional distribution atlas, published in 1994.

The resurrection of the scheme was always in the back of my mind. Over the past ten or so years little time has been available, although records have continued to flow inwards, albeit very few, and be entered into the database. My grand plan had been to retire this past winter and thus find time to get the recording scheme back on track; regrettably, retirement has been put on hold (recessions and insufficient savings don't go well together), but I have nevertheless decided to get the scheme up and running again and see how things progress.

This has been made possible by a number of factors, not least amongst which has been the offer of help from Steve Brooks and Ben Price at the Natural History Museum in London and from Helen Roy and her colleagues at the Biological

Records Centre in Wallingford, Oxfordshire (to which area they relocated following the closure of the Monks Wood site). Articles contributed by both the Natural History Museum in London and the Biological Records Centre in Oxfordshire are presented in this newsletter.

### HELP WANTED – IF YOU ARE INTERESTED

We are very keen to hear from anyone else who may want to help. We especially need high quality images of all of the British Isles species of Neuropterida and Mecoptera (as eggs, larvae and adults) for uploading to the “scratchpad” site (see details below). For this same Internet resource we also need people willing to write/re-write/edit the species accounts. Of course, if anyone wants to volunteer to edit THIS newsletter I would be delighted as it would allow me to concentrate on the database and on checking people’s specimens.

### THE NATIONAL DATABASE

The computerised database of British Isles Neuropterida & Mecoptera records, formerly kept on the computer at BRC Monks Wood, has now been transferred to my personal computer where it is stored in MapMate format. Back in the [g]olden days, records cards had to be completed by field workers (you) and then posted to me. They were then checked before sending by post or courier to Monks Wood (the old HQ of the Biological Records Centre), where the data was laboriously punched in to a giant computer. A huge stack of dot-matrix print-out was then generated and returned to me for checking – a thankless task – before data was finally entered. If I needed information from the database, the process was equally labour-intensive and time-consuming. BRC staff were and continue to be very helpful and efficient, but it is a simple fact that having the database here streamlines both the data entry and data request processes significantly so that, overall, recording is more efficient. On an annual basis, the updated database is copied to BRC for their own use and to create a permanent back-up.

There were some inevitable transfer glitches, but these are slowly being discovered and sorted. An excellent way of doing this has been to share individual county data-sets with county lacewing recorders where these exist. The way this has worked so far has been that the county recorder first sent me all of his/her lacewing data, which I then added, where necessary, to the national database. I then specifically verified and validated ALL the data for that same county and finally returned a complete dataset to them. Now that we both had the same data set, they next told me if any of the records were unacceptable from their own perspective and in particular made minor corrections on the basis of their better local knowledge (e.g., the spelling of recorders’ name, errors of grid references etc). Corrections were then made to both databases and from then onwards they

aim to send me new data received (if any) at the end of each year. In return, I send back to them any data from their county that has come directly to me. **If other counties want to engage in this exercise, do please contact me.**

### DATA CATCH-UP 2000 TO 2013

The national data set comprises 22,147 records at the end of April 2014. This compares with 14,094 records used to compile the provisional atlas in 1994. Unfortunately, a high proportion of the additional 8,053 post-atlas records are “catch-ups” – data that relate to the years before atlas publication. The number of records made since publication is much lower and the number made since the start of year 2000 is a depressingly small 1,192 – which equates to a mere 85 records per year! A total of 43 people have sent me records since the start of year 2000.

So, before we get too bogged down with new projects, **please let me have all of your British Isles Neuropterida records from 1<sup>st</sup> January 2000 to 31<sup>st</sup> December 2013 as soon as possible.** My task will be to add these to the database and so automatically update the distribution maps. Since the database is now under my direct control, updates will be instant and this newsletter can occasionally carry distribution maps for individual species.

Unfortunately, I am not currently able to work out how to get MapMate to create a coverage map (a map showing all records received) so this will have to wait until the next newsletter, which with luck will also present updates to identification keys.

### HOW TO SUBMIT RECORDS

**If you have an existing County Lacewing Recorder who is actively accepting records, do please send records in to the system via that person.**

**If you are a county lacewing recorder** it is clear that in return for me asking people to send records to you first there is an expectation that you will send records on to me at the end of each year. I may name and shame those who persistently do not comply!

If you have data stored in MapMate and want to send me a “SYNC” file **you must contact me first.** To ensure that you do, I am not giving out my cuk here. The reason I want to chat first is that sync-ed data cannot subsequently be edited by me (it is flagged by your cuk as being “owned” by you) and so I must be confident in your abilities before I accept data this way.

A better way, for me at least, is to send me your data in MS Excel format. For me to import data from Excel into the database, the columns must end up being in the following order, from left to right

and so it helps me a lot if you can adopt this format:

Taxon : Site : GridRef : VC : Recorder: Determiner :  
Date : Quantity : Method : Sex : Stage : Status :  
Comments

These 13 columns are compulsory, but may be left blank if the data are absent. **If you don't understand this, please talk to me first.** I fully expect teething troubles, but let's strive to get things right from the start and with luck and a tail wind we should flow smoothly into the future.

**IF YOU ARE AN INDIVIDUAL** and cannot, or choose not, to send data via a county recorder for whatever reason, I will be pleased to receive the data direct. I can accept these records in any format, including paper, the old recording cards, by e-mail, in Excel spreadsheets or whatever. If you want to send a MapMate sync file then, as with the country recorders, you need to ask me first.

At the end of each year I will copy the data received direct to county recorders where these exist.

### SPECIMENS FOR IDENTIFICATION

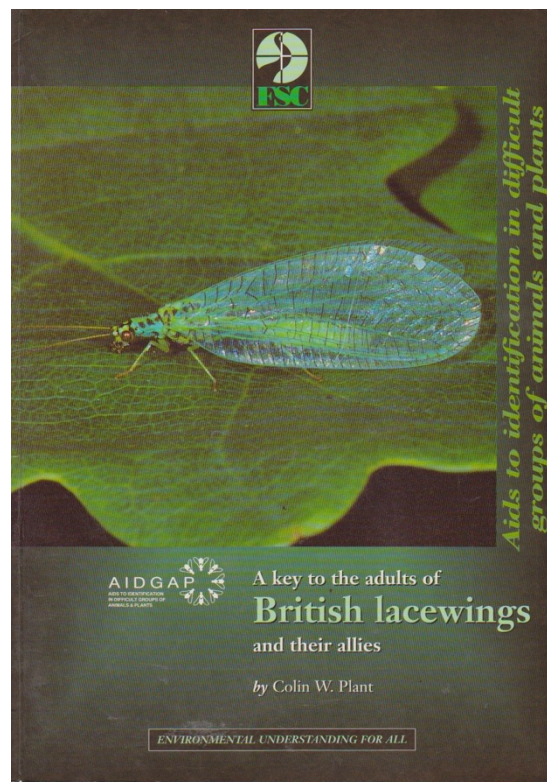
On the basis of past experience, many records will be from casual encounters by moth recorders or others whose main interest is not the Neuropterida (incredibly, yes, there are such people!). I am pleased to continue receiving material for naming. However – a couple of rules. First, I will only name specimens that are accompanied by adequate data (as a minimum a place name, a grid reference, the capture date and the name of the collector). Secondly, if you want the material back you must (a) say so and (b) include some return postage. The former has bearing on whether I am gentle or destructive in my approach to identification; the latter is a matter of simple courtesy and economics. If there is no request for return and/or no postage the material will be either destroyed or incorporated into either my own or the Natural History Museum collection – depending upon what it is and what condition it is in.

### RIS TRAP MATERIAL

This newsletter is also being sent to all of the trap operators and sample identifiers across the Rothamsted Insect Survey Light Trap Network. If you prefer not to get future issues, just e-mail me and say so (see last page). In the past I have examined lacewing material from many RIS traps and for others the material has been named by other people. I will address this matter in the next newsletter, but for the time being please note that if you are prepared to send the material to me I am still prepared to name it – BUT without time limit. You can either sort the lacewings yourself or you can send the entire left-over material (in the original boxes) after the moths have been removed.

### IDENTIFICATION GUIDES

The most up to date work for British material remains the AIDGAP key, which, I understand, is still available from the Field Studies Council at Preston Montford, near Shrewsbury ([www.field-studies-council.org](http://www.field-studies-council.org)).



Inevitably, there are some additional species to consider; updates to the keys will, hopefully, be provided in the next newsletter and incorporated into an online resource in future.

### ADDITIONS TO AND DELETIONS FROM THE CHECKLIST SINCE THE "ATLAS"

For the benefit of those who do not have regular access to the entomological literature, the following is a summary of changes since the publication of the provisional distribution atlas (Plant, 1994). MapMate users should not worry, as all of these changes are already included in the software.

#### Coniopterygidae

*Helicoconis hirtinervis* Tjeder, 1960– was added to the British list from Sutherland, Scotland by Pryce (2011). It has since been found elsewhere and may be widespread in Scotland in association with Heather (*Calluna*) – most probably on the ground beneath the plants. All records to date are to the north of the Great Glen.

*Helicoconis lutea* (Wallengren, 1871) – was mentioned in the 1994 "Atlas" but the records (from Durham in 1915) were regarded as erroneous. These specimens have since been examined and are in fact whitefly (Hemiptera). There are no British Isles records of *H. lutea*.



### Myrmeleontidae

*Myrmeleon formicarius* Linnaeus, 1767 – was added to the British list by Cook *et al.* (2013), on the basis of an adult in a light trap on the Isle of Wight – presumably an immigrant example. It is a species that could become established on the south coast in sandy areas.

### Hemerobiidae

*Sympherobius klapaleki* Zeleny, 1963– was added to the British list from Berkshire by Whittington (1998) and has since also been found in Hertfordshire and Essex.

### Chrysopidae

*Chrysoperla lucasina* (Lacroix, 1912) was resurrected as a *bona* species by Henry, Brooks, Johnson & Duelli (1996).

*Chrysoperla pallida* Henry, Brooks, Duelli & Johnson, 2002 was described as a new species by Henry, Brooks, Duelli & Johnson (2002).

These two are segregates of *Chrysoperla carnea*, which has long been regarded as a complex of species. Note that a recently published French key to species of *Chrysoperla* by Canard & Thierry (2013) uses different names for the species and so may cause confusion.

*Cunctochrysa bellifontensis* – is widely regarded as a form of *C. albolineata* and not as a full species.

*Nineta inpunctata* (Reuter, 1894) – was added to the British list from Essex by Plant (1996). However, a subsequent report was erroneous and there remains only the one British Isles record.

*Nineta pallida* (Schneider, 1846) – was added to the British list from Buckinghamshire by Harvey & Plant (2007) and is now reported from three localities in Buckinghamshire and Suffolk. Probably immigrant, it is associated with *Picea* and *Abies* upon which it is worth searching for overwintered eggs in the early spring (see Canard, Wilton & Plant, 2014).

*Peyerimhoffina gracilis* (Schneider, 1851)– was added to the British list from Berkshire by Donato *et al.* (2001). It has since been found rather more widely in the south-east, mostly in the late autumn. It is possibly overlooked on the assumption that, because of the late date, “it must be *carnea*”.

An updated checklist of British Isles Neuropterida (and Mecoptera) appears at the end of this newsletter.

### COUNTY LACEWING RECORDER LIST

I would like to compile a list of British and Irish county lacewing recorders for the next newsletter – if this is you, please let me have your name, postal address, e-mail address and the names/numbers of the vice-counties that you cover. If you have a photo of yourself I would like to include it – it will

hopefully serve to render us all a little less anonymous to those sending in their records.

### ACCESS TO NEUROPTERIDA DATA FOR GREAT BRITAIN AND IRELAND

Data is regarded as freely available to anyone with a valid reason for wanting it (e.g., county recorders, research students etc). Data will always be provided free of charge, but if I have to engage in a lot of work to get it to you I may send a bill for my time. Commercial enquirers (such as on behalf of developers or their consultants) can also have the data for free, but will always need to pay a fee for my time; commercial customers will be held in breach of copyright if they do not declare their financial interest at the outset and then subsequently use the data or pass it to a third party.

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Well – that’s me done. If you managed to read this far – well done and thank you! There now follows some contributions from other people; it goes without saying that I welcome more contributions for the next newsletter.

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Recording Scheme Coordinator

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### THE BORDERED BROWN LACEWING AT ITS LAST REMAINING UK SITE

Arthur’s Seat, a hill rising to 250 metres in the City of Edinburgh, is thought to be the last remaining site that may still provide a home for *Megalomus hirtus* in the UK. The Bordered Brown Lacewing, as it has been dubbed, has not been reported here however since 1982, meaning that its continued British status is currently in question, with an urgent need to search the site and re-find it.

Working as a volunteer for Buglife – The Invertebrate Conservation Trust, in Scotland, I am proposing to carry out a project this year to search for and study *Megalomus hirtus*. Whilst this will be concentrated at Arthur’s Seat, it is hoped that I will also be able to examine the small number of other sites in the national database for which there are old Scottish records.

There appears to be rather little available information concerning the ecology of *M. hirtus*. Previous observations at old records sites in the UK and throughout Europe suggest that there is an association with Wood Sage (*Teucrium scorodonia*).



*Megalomus hirtus*. Photograph © Peter Duelli, 1992, originally published in Wachmann & Saure (1997).

Although the association is still partially unclear, it is thought that *M. hirtus* might feed upon aphids and/or the larvae of other insects that use *T. scorodonia* as their food plant. Part of my project will involve studying this relationship in more detail, primarily by surveying for and identifying potential prey species found within Wood Sage vegetation.

If *M. hirtus* is still extant in the UK, I hope to produce a habitat management plan for Arthur's Seat and for other potentially suitable sites that I visit, to aid in the long-term conservation of the species in the UK.

I would be very grateful and pleased to hear from neuropterologists that may have previous experience studying *Megalomus hirtus*, whether it be information on the species' autecology or advice on the best methods of how to find it ... anything would be appreciated.

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### NEUROPTERA GOINGS-ON AT THE NATURAL HISTORY MUSEUM, LONDON

Natural history collections have played a critical role in the development of society in general and biology in particular and this was especially evident in the 18<sup>th</sup> and 19<sup>th</sup> centuries as naturalists developed collections. The way that we interpret the understanding reached by those pioneers is based, in part, on being able to examine for ourselves the specimens that they collected and bequeathed to museums. As a result, natural history collections are one of the most fundamentally

important institutions in science, where voucher specimens are housed in perpetuity. These specimens represent an audit of the world, a permanent record of biological and geological diversity, embodying the research of generations. Furthermore they represent an opportunity for millions of members of the public to interact with and learn about the natural world.

The Natural History Museum (NHM) in London originates from the collection of Sir Hans Sloane, an 18<sup>th</sup> century Naturalist, Doctor, past President of the Royal Society and incidentally the inventor of Milk Chocolate! Sir Hans Sloane bequeathed his substantial collection to the nation “for the inspection of the learned and benefit of the public”, on condition that it was purchased from his estate for the sum of £20,000 (equivalent to £2.5 million today). The money was raised in one of the earliest state lotteries, funding the purchase of Sloane's collection and Montagu House in Bloomsbury to house the collection. The British Museum opened its doors in January 1759 and entry was by written application with a maximum of one-hour visit per department; thankfully the collections have become much easier to visit.

When the collections began to outgrow their space in the 1850s, then superintendent Richard Owen, who incidentally coined the term Dinosaur from Dinosauria (meaning terrible lizard), forced the issue of a need for space and a separate museum solely for natural history. The British Museum (Natural History) sited in the purpose-built Waterhouse building in South Kensington (Figure 1), opened in April 1881 and received 40,000 visitors in the first two weeks.

Today the Natural History Museum is the third most popular museum in the UK, receiving over 5 million visitors a year. Its collections comprise an estimated 80 million natural objects, almost half of which are insect specimens.



Figure 1: The iconic Waterhouse Building in South Kensington, opened in April 1881.

Most of the specimens are housed in the Cocoon of the new Darwin Centre (Figure 2), opened in 2009, where the Botany and Entomology collections are kept under advanced, climate-controlled conditions. Approximately 300 scientists work at the NHM alongside many scientific associates and volunteers and each year they publish more than 500 scientific papers and train over 150 postgraduate students.

The Neuroptera collection comprises 300 drawers of specimens from around the world and represents approximately 2300 species, deposited in the collection over the last 250 years.

A very important part of the collection is the type specimen collection. When species new to science are described for the first time and formally published, the reference specimens (known as type specimens) for the species are usually deposited in a museum for permanent curation. Each type specimen defines the species with which they are associated and is used to compare any other potentially new species. The NHM collection houses the type specimens of approximately 1,000 Neuropteran species, making it one of the largest collections in the world.

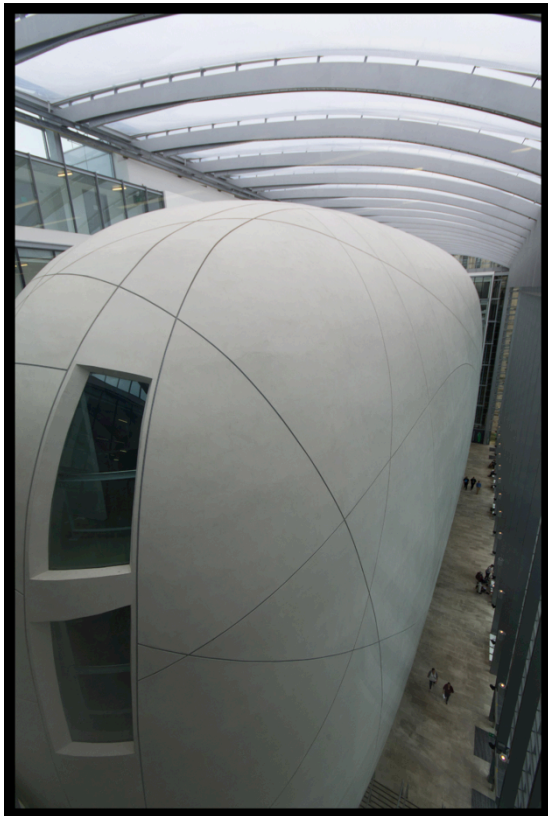


Figure 2: The Cocoon houses almost all of the Insect and Plant collections at the Natural History Museum and includes the Explore Tour, where the public can see some of our research and learn about the scientific process.

Part of the ongoing Neuroptera research at the museum is a project to confirm the identity of the common green lacewing *Chrysoperla carnea* (Stephens, 1836), in collaboration with the University of Connecticut (USA). By analyzing the DNA of the lectotype (a 178 year old specimen, elected as the type) and comparing it to that of the other species in the genus *Chrysoperla* we hope to be able to confirm the identity of the specimen. This is especially important, as there are not many morphological characters to adequately confirm its species designation.

Last year the NHM hosted over 3,500 scientific visitors, resulting in a total of 9,000 “visitor days”

spent on the collection. Alternatively if researchers cannot visit the specimens in the museum these specimens can be sent out on loan and annually the museum staff send up to 50,000 specimens on scientific loan to researchers around the world.

The specimens housed in the museum comprise a wealth of biodiversity information and increasingly that data needs to be accessible online. To this end individual specimens are in the process of being “digitized” through specimen level database capture and by imaging the specimen and associated labels. In the case of type material additional diagnostic features are imaged (Figure 3) to facilitate identification. These images and the associated specimen information such as identity and locality are made available through the museum website (<http://www.nhm.ac.uk/>).



Figure 3: An example of the digitization on-going in the collection: Holotype of *Macronemurus chryseus* Navas 1913.

Natural history collections are not only a heritage, ideally they are growing entities that provide indefinite secure housing of any new reference material and facilitate open access to new biodiversity information. Collaborative expeditions with local institutions to collect new material, particularly from historically under collected regions are crucial. In many cases the regions that we know the least about are under the greatest threat of habitat loss and by learning about the biodiversity in these areas we can help to make them priorities for conservation.

To those recorders who have personal collections please consider adding the NHM to your Will; your collections will be safely housed in perpetuity and made available to the research community. Who knows what new knowledge may come from the specimens that you have collected on your travels! If you are interested in donating your collection please contact Ben for further details ([b.price@nhm.ac.uk](mailto:b.price@nhm.ac.uk)).

In addition to the main collection, the Angela Marmont Centre (AMC) in the Darwin Centre houses a synoptic collection of British insects and plants, including representatives of all British Lacewings. It is a hub for amateur naturalists, enthusiasts and other societies studying British wildlife. The AMC is happy to host individuals and groups who want to see the collections and/or work



in the AMC to hone their ID skills or run workshops. Anyone interested in using the AMC facilities is welcome to contact the Head of the AMC: John Tweddle ([j.tweddle@nhm.ac.uk](mailto:j.tweddle@nhm.ac.uk)).

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**BEN PRICE &  
STEVE BROOKS** (photo)  
Department of Life Sciences  
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### THE LACEWING WEBSITE

For those technically-minded souls we have set up a lacewing website which can be found here: <http://lacewings.myspecies.info/>. The site is based on the freely available Scratchpads system <http://scratchpads.eu/> which allows collaborative website construction for biodiversity information, which is great for organisations such as ourselves!

At the moment the lacewing website is little more than a shell with the taxonomy and bibliography of the species descriptions imported. We plan to import the current national database records soon and add images, species accounts and updated identification guides.

If you have any content you would like to contribute to the site then please send it to Ben to upload or contact Ben to become a site contributor/editor. We are especially keen to upload images of the insects – in all stages of their life history.

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### UPDATE FROM THE BIOLOGICAL RECORDS CENTRE

Throughout 2014 the Biological Records Centre (BRC) will be celebrating 50 years of supporting schemes and societies. There is much about BRC that has remained unchanged. The emphasis is still very much about ensuring the volunteer-led schemes and societies are at core of all BRC activities. However, there have been some notable changes including a number of technological advances which perhaps highlight the most major differences in BRC.

### Indicia and iRecord

BRC has been involved in developing Indicia (<http://www.indicia.org.uk/>). Indicia is, essentially, a toolkit for building on-line recording websites for the capture and storage of biological records. On-line recording using Indicia enables many people to access the same database and this can be hugely beneficial for schemes and societies by making data available to multiple users. Indicia is open access software and so people can profit from developments made through different projects. One system built using Indicia is iRecord (<http://www.brc.ac.uk/irecord/>), which BRC has helped develop. iRecord enables individuals to store and manage their own records while making them available to recording schemes and societies. It also enables data from other Indicia surveys to be made available in one place and provides a behind the scenes system for verification by experts from the schemes and societies.

The UK Ladybird Survey has been using Indicia since 2009 when a specific survey was set up for school children through the BBC Breathing Places campaign “Do one thing for nature”. It provided an extremely effective method of capturing many records through a user friendly on-line system. More recently the UK Ladybird Survey has implemented iRecord for data capture and storage. The verification system provides an excellent mechanism for feedback and managing data quality. Many other schemes and societies are also using iRecord. Verified data from iRecord can be made available via the NBN Gateway, but only under the direction of the relevant scheme/society.

### Websites

BRC has supported a number of schemes and societies in developing websites. Sometimes BRC web developers have built the websites (for example, UK Ladybird Survey, the British Myriapod & Isopod Group (BMIG), Gelechiid Moths Recording Scheme) and in other cases BRC has provided support and expertise to assist volunteers within schemes and societies in building their own website (for example, Bees, Wasps & Ants Recording Society (BWARS) and the British Dragonfly Society (BDS)). BRC implements the widely-used, open-source, content management system called Drupal.

### Analysis and interpretation

BRC has also been developing methods to analyse distribution data collected through the schemes and societies. The incredible contributions that volunteers have made to the collection and collation of wildlife data over centuries is inspiring. The distribution datasets include millions of species observations that provide unprecedented information for analysing change over time. There have been a number of landmark papers using these datasets that have demonstrated the effects of climate change (Hickling et al. 2006), invasion (Roy et al. 2012) and habitat change (Warren et al.,

2001) to name just a few. The analytical methods that have been developed to explore these relatively unsystematic datasets place the UK in an excellent position for understanding biodiversity change.

### Data entry and compilation

Despite all the technological advances in biological recording there are still a number of datasets that exist in paper format. BRC has a rolling programme of data entry to support schemes and societies in digitising such datasets. It is always extremely exciting to see data transferred from paper sources to digital records and ultimately onto the NBN Gateway.

### Atlases and publications

One of the many highlights of working within the BRC is seeing the development of atlases. In recent years there have been a number of new zoology atlases including fleas, woodlice, BWARS, ladybirds and (very soon) dragonflies. Atlases still provide a source of pleasure for many people and provide schemes and societies with a collaborative project to focus their activities; producing paper atlases remains a high priority for BRC. In the coming years we are looking forward to seeing the Centipede Recording Scheme, Orthoptera and Allied Insects and BWARS, to name but a few, publishing their atlases. The Field Studies Council are collaborating with the BRC and the schemes and societies to publish these atlases. Copies can be purchased from the FSC: <http://www.field-studies-council.org/publications/for-environmental-professionals/brc-atlases.aspx>

### Citizen science

Citizen science is a new term, but essentially it is defined as the involvement of volunteers in “real science”. Biological recording is one of the oldest examples and as such it has been informing other citizen science activity in the UK. BRC has recently published a guide and review on citizen science: [http://www.ceh.ac.uk/news/news\\_archive/citizen-science-review-guide\\_2012\\_59.html](http://www.ceh.ac.uk/news/news_archive/citizen-science-review-guide_2012_59.html).

So in summary... BRC works closely with schemes and societies providing support for their biological recording activity. Whether there are paper records to be digitised or on-line recording forms to develop we would be very pleased to assist. If you want to find out more please do contact me.

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## EARLY LACEWING DROPS IN FOR A BREW

I was treated to my first lacewing of the year on 25th March 2014. I was on tea duty in the office kitchen at the Halton Borough Council Depot in Runcorn, Cheshire, when it conveniently landed on the outside of the window, staying for about as long as it takes for our kettle to boil – just long enough for me to grab the camera and take a few shots of it through the glass. Clearly, it is a species of *Wesmaelius*, undoubtedly either *W. subnebulosus* or *W. nervosus*, but impossible to tell which, without a view of the genitalia, which sadly wasn't possible at the time as I had tea bags to deal with! This individual, a fully formed adult in late March, must have emerged from hibernation, which is interesting as, until recently, it was believed that the only species of lacewing to over-winter was the Green Lacewing *Chrysoperla carnea*. Colin Plant tells me that he and Steve Brooks found *W. subnebulosus* hibernating in curled up dead leaves under bushes in a shrubbery in the garden at Buckingham Palace, London, a few years ago, when searching for hibernating *Chrysoperla carnea* agg. material in the same situation, but there do not appear to be any literature references to *Wesmaelius* hibernating in the adult stage.

This Runcorn example obviously woke up and smelled the coffee!

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## ANT-LIONS AT DUNWICH HEATH

A recent visit to Dunwich Heath seemed like a good opportunity to look for the well-known ant-lions *Euroleon nostras* - Dunwich Heath, Suffolk is a large area of lowland coastal heath with SSSI status owned and managed by the National Trust: <http://www.nationaltrust.org.uk/dunwich-heath-and-beach/>. Trust staff were kind enough to direct me to suitable places and ant-lion larvae were soon found within a few hundred metres of the visitor centre. The larval pits were found in areas of dry sand sheltered from rain by overhangs, particularly where banks had been undercut by wind erosion. Trust managers have created a number of large bee-banks which are also intended to provide larval habitats for ant-lions, some of these are fenced off to prevent trampling, and are already well used by diverse aculeate Hymenoptera. An enlarged model of an ant-lion larva is on show at the Heath Barn education centre. The National Trust are to be



commended for featuring ant lions in both conservation, education and marketing.

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## RECENT LACEWING PUBLICATIONS

It is hoped to be able to continue this feature from the first series of Neuro News. Please send pdf files or reprints of your recent publications to Colin ([cpauk1@ntlworld.com](mailto:cpauk1@ntlworld.com)). We will list them in the newsletter and also use them to ensure that the references section of the Scratchpad site is fully up to date, ensuring that your work gets drawn to attention of the widest possible audience.

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## NEURO NEWS (New Series)

### PUBLISHED BY

**BRITISH ISLES LACEWINGS AND ALLIED  
ORDERS RECORDING SCHEME**

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<http://lacewings.myspecies.info/newsletter>

### CONTRIBUTIONS FOR THIS NEWSLETTER

Contributions are positively welcomed by the Editor, there is no length limit and we especially like colour photos. In fact we invite photos for the sake of ... well ... photos! Images of the various lacewing species will find favour, especially if correctly named, as these will help beginners to learn to recognise the species. Authors should, ideally, also send a photo of themselves as in the examples in this newsletter.

## CHECKLIST OF THE BRITISH ISLES NEUROPTERIDA AND MECOPTERA

**Table 1: Summary of the number of species recorded as at April 2014**

Order	England (E)	Wales (W)	Scotland (S)	Ireland (I)	British Isles
Raphidioptera	4	3	1	0	4
Megaloptera	3	3	3	1	3
Neuroptera	66	47	40	25	70
Mecoptera	4	4	4	1	4
<b>Total</b>	<b>77</b>	<b>57</b>	<b>48</b>	<b>27</b>	<b>81</b>

**Table 2: Summary of distribution, plant associations and record summary statistics**

Key: E = England; I = Ireland; W = Wales; WB = Welsh border area; S = Scotland; SB = Scottish border area

Taxon	Distribution	Associations	First Record	Last Record	Number of Records
<b>RAPHIDIOPTERA</b>					
<b>Raphidiidae (4 species)</b>					
<i>Subilla confinis</i> (Stephens, 1836)	E	unknown host tree	1912	2013	39
<i>Atlantoraphidia maculicollis</i> (Stephens, 1836)	E, W, S	<i>Pinus, Larix</i>	1864	2011	130
<i>Phaeostigma notata</i> (Fabricius, 1781)	E, W	deciduous <i>Quercus</i>	1867	2013	134
<i>Xanthostigma xanthostigma</i> (Schummel, 1832)	E, W	deciduous trees	1899	2012	191
<b>MEGALOPTERA</b>					
<b>Sialidae (3 species)</b>					
<i>Sialis lutaria</i> (Linnaeus, 1758)	E, W, S	slow & static water	1873	2008	879
<i>Sialis fuliginosa</i> Pictet, 1836	E, W, S	fast water	1862	1988	140
<i>Sialis nigripes</i> Pictet, 1865	E, W, S, I	running water	1867	2002	30
<b>NEUROPTERA</b>					
<b>Coniopterygidae (12 species)</b>					
<i>Conwentzia psociformis</i> (Curtis, 1834)	E, W, S, I	deciduous trees	1862	2009	234
<i>Conwentzia pineticola</i> Enderlein, 1905	E, S	pinus	1936	2011	59
<i>Coniopteryx tineiformis</i> Curtis, 1834	E, W, S, I	deciduous trees	1879	2010	136
<i>Coniopteryx borealis</i> Tjeder, 1930	E, W, S, I*	deciduous trees	1881	2010	112
<i>Coniopteryx pygmaea</i> Enderlein, 1906	E, W, S	deciduous trees	1873	1998	35
<i>Coniopteryx esbenpeterseni</i> Tjeder, 1930	E, WB	deciduous trees	1878	2011	37
<i>Coniopteryx lentiae</i> Aspöck & Aspöck, 1964	E	deciduous trees	1895	1992	12
<i>Semidalis aleyrodiformis</i> (Stephens, 1836)	E, WB, SB	deciduous trees	1878	2010	88
<i>Semidalis pseudouncinata</i> Meinander, 1963	E	Cupressaceae, Juniperaceae	1989	1999	15
<i>Parasemidalis fuscipennis</i> (Reuter, 1894)	E	unknown - possibly pines ( <i>Pinus</i> )	1922	1998	62
<i>Helicoconis hirtinervis</i> Tjeder, 1960	S	Heather ( <i>Calluna vulgaris</i> )	1992	2011	3

Taxon	Distribution	Associations	First Record	Last Record	Number of Records
<i>Aleuropteryx juniperi</i> Ohm, 1968	E	Native Juniper ( <i>Juniperus communis</i> )	1966	1969	3
<b>Osmylidae (1 species)</b>					
<i>Osmylus fulvicephalus</i> (Scopoli, 1763)	E, W, S, I	mosses in splash zone of fast water	1862	2006	292
<b>Sisyridae (3 species)</b>					
<i>Sisyra fuscata</i> (Fabricius, 1793)	E, W, S, I	inquiline in freshwater sponges	1862	2012	361
<i>Sisyra dalii</i> McLachlan, 1866	E, W	inquiline in freshwater sponges	1866	2011	39
<i>Sisyra terminalis</i> Curtis, 1854	E, W	inquiline in freshwater sponges	1862	2006	32
<b>Myrmeleontidae (2 species)</b>					
<i>Euroleon nostras</i> (Fourcroy, 1785)	E	sand dunes	1931	2012	31
<i>Myrmeleon formicarius</i> Linnaeus, 1767	E	sand dunes	2013	2013	1
<b>Hemerobiidae (31 species)</b>					
<i>Psectra diptera</i> (Burmeister, 1839)	E, W, S	unknown	1843	2005	96
<i>Micromus variegatus</i> (Fabricius, 1793)	E, W, S, I	specialist predator of root aphids	1890	2011	736
<i>Micromus angulatus</i> (Stephens, 1836)	E, W, I	specialist predator of root aphids	1830	2010	105
<i>Micromus paganus</i> (Linnaeus, 1767)	E, W, S, I	specialist predator of root aphids	1890	2012	747
<i>Hemerobius humulinus</i> Linnaeus, 1758	E, W, S, I	Deciduous trees & bushes	1895	2012	1033
<i>Hemerobius perelegans</i> Stephens, 1836	E, S	Birch ( <i>Betula</i> ) in upland habitats	1865	1991	24
<i>Hemerobius simulans</i> Walker, 1853	E, W, S, I	<i>Larix, Picea</i> perhaps others?	1894	2011	186
<i>Hemerobius stigma</i> Stephens, 1836	E, W, S, I	pinus ( <i>Pinus</i> )	1882	2011	547
<i>Hemerobius atrifrons</i> McLachlan, 1868	E, W, S	<i>Larix decidua</i>	1881	2000	80
<i>Hemerobius pini</i> Stephens, 1836	E, W, S, I	pinus ( <i>Pinus</i> )	1888	1998	135
<i>Hemerobius contumax</i> Tjeder, 1932	E	Unknown	1869	1994	6
<i>Hemerobius fenestratus</i> Tjeder, 1932	E	pinus ( <i>Pinus</i> )	1986	1992	2
<i>Hemerobius nitidulus</i> Fabricius, 1777	E, W, S, I	pinus ( <i>Pinus</i> )	1893	2011	231
<i>Hemerobius micans</i> Olivier, 1792	E, W, S, I	deciduous <i>Quercus</i>	1888	2011	968
<i>Hemerobius lutescens</i> Fabricius, 1793	E, W, S, I	Deciduous trees & bushes	1895	2012	1009
<i>Hemerobius marginatus</i> Stephens, 1836	E, W, S, I	Deciduous trees & bushes	1881	2012	339
<i>Wesmaelius malladai</i> (Navás, 1925)	S	Unknown	1913	2011	18
<i>Wesmaelius mortoni</i> (McLachlan, 1899)	S	? pinus ( <i>Pinus</i> )	1898	1982	2
<i>Wesmaelius ravus</i> (Withycombe, 1923)	E	Scots Pine ( <i>Pinus sylvestris</i> )	1922	1991	9
<i>Wesmaelius balticus</i> (Tjeder, 1931)	E, W, S	Stable dunes with Marram ( <i>Ammophila</i> ) - coastal	1830	1990	18
<i>Wesmaelius nervosus</i> (Fabricius, 1793)	E, W, S, I	Deciduous trees & bushes	1884	2012	723
<i>Wesmaelius subnebulosus</i> (Stephens, 1836)	E, W, S, I	Deciduous trees & bushes	1879	2011	934
<i>Wesmaelius concinnus</i> (Stephens, 1836)	E, W, S	? Restricted to <i>Pinus sylvestris</i>	1871	1998	125
<i>Wesmaelius quadrifasciatus</i> (Reuter, 1894)	E, W, S	<i>Larix decidua</i>	1873	1998	110
<i>Symphorobius elegans</i> (Stephens, 1836)	E, WB	Deciduous trees & bushes	1856	2003	117



Taxon	Distribution	Associations	First Record	Last Record	Number of Records
<i>Symphorobius pygmaeus</i> (Rambur, 1842)	E, W	mature deciduous Quercus	1864	2011	85
<i>Symphorobius pellucidus</i> (Walker, 1853)	E, W	mature deciduous Quercus	1918	1998	68
<i>Symphorobius klapaleki</i> Zeleny, 1963	E	unknown	1999	2008	2
<i>Symphorobius fuscescens</i> (Wallengren, 1863)	E, W, S	<i>Pinus sylvestris</i>	1828	2000	65
<i>Megalomus hirtus</i> (Linnaeus, 1761)	S	Wood Sage ( <i>Teucrium scorodonium</i> )	1825	1982	8
<i>Drepanopteryx phalaenoides</i> (Linnaeus, 1758)	E, W, S, I	deciduous trees	1892	1997	72
<b>Chrysopidae (21 species)</b>					
<i>Chrysopa abbreviata</i> Curtis, 1834	E, W, I	Stable dunes with Marram ( <i>Ammophila</i> ) - coastal	1808	1998	43
<i>Chrysopa phyllochroma</i> Wesmael, 1841	E, W	Unknown	1862	1994	17
<i>Chrysopa commata</i> Kis & Ujhelyi, 1965	E, WB	unknown	1867	2012	94
<i>Chrysopa perla</i> (Linnaeus, 1758)	E, W, S	rough vegetation	1893	2012	1061
<i>Chrysopa dorsalis</i> Burmeister, 1839	E, W	pinus	1908	1992	39
<i>Chrysopa pallens</i> (Rambur, 1838)	E, W	unknown	1891	2007	148
<i>Chrysoperla carnea</i> Stephens, 1836 <i>sensu stricto</i>	E	ubiquitous aphid predator in all habitats	1985	2012	133
<i>Chrysoperla lucasina</i> (Lacroix, 1812)	E, S	unknown	1992	2012	95
<i>Chrysoperla pallida</i> Henry, Brooks, Duelli & Johnson, 2002	E	unknown	1995	2013	8
<i>Chrysopidia ciliata</i> (Wesmael, 1841)	E, W, S, I	possibly arboreal	1891	2012	590
<i>Cunctochrysa albolineata</i> (Killington, 1935)	E, W, S, I	possibly arboreal	1883	2012	737
<i>Dichochrysa flavifrons</i> (Brauer, 1850)	E, W, [I]**	possibly arboreal; some examples may be immigrant	1862	2011	433
<i>Dichochrysa prasina</i> (Burmeister, 1839)	E, W & I	possibly arboreal	1845	2012	276
<i>Dichochrysa ventralis</i> (Curtis, 1834)	E, W & S	unknown	1862	2011	375
<i>Nineta flava</i> (Scopoli, 1763)	E, W, S, I	deciduous <i>Quercus</i>	1890	2012	470
<i>Nineta inpunctata</i> (Reuter, 1894)	E	Unknown	1989	1989	1
<i>Nineta pallida</i> (Schneider, 1846)	E	probable immigrant. <i>Abies</i> , <i>Picea</i> in Europe	2006	2013	3
<i>Nineta vittata</i> (Wesmael, 1841)	E, W, S, I	Deciduous trees & bushes	1881	2012	471
<i>Peyerimhoffina gracilis</i> (Schneider, 1851)	E	unknown	1999	2010	9
<i>Nothochrysa capitata</i> (Fabricius, 1793)	E, W, S	unknown	1873	2011	172
<i>Nothochrysa fulviceps</i> (Stephens, 1836)	E	?Oak ( <i>Quercus</i> )	1820	2000	14
MECOPTERA					
<b>Boreidae (1 species)</b>					
<i>Boreus hyemalis</i> (Linnaeus, 1767)	E, W, S	Mosses on ground or other level surfaces	1867	2011	150
<b>Panorpidae (3 species)</b>					
<i>Panorpa cognata</i> Rambur, 1842	E, W, S	predatory in rough vegetation / edge habitats	1895	2012	83
<i>Panorpa communis</i> Linnaeus, 1758	E, W, S	predatory in rough vegetation / edge habitats	1892	2012	633
<i>Panorpa germanica</i> Linnaeus, 1758	E, W, S, I	predatory in rough vegetation / edge habitats	1891	2012	885

\**Contiopteryx borealis* was added to the Irish fauna in 2002 and is probably overlooked. \*\**Dichochrysa flavifrons* is recorded in Ireland as a single example only, in 1937

Table 3: Most frequently recorded species (*Chrysoperla carnea* agg. is excluded, but the three segregate species are listed)

Ranking	Species	Records	Ranking	Species	Records
1	<i>Chrysopa perla</i> (Linnaeus, 1758)	1061	41	<i>Psectra diptera</i> (Burmeister, 1839)	96
2	<i>Hemerobius humulinus</i> Linnaeus, 1758	1033	42	<i>Chrysoperla lucasina</i> (Lacroix, 1812)	95
3	<i>Hemerobius lutescens</i> Fabricius, 1793	1009	43	<i>Chrysopa commata</i> Kis & Ujhelyi, 1965	94
4	<i>Hemerobius micans</i> Olivier, 1792	968	44	<i>Semidalis aleyrodiformis</i> (Stephens, 1836)	88
5	<i>Wesmaelius subnebulosus</i> (Stephens, 1836)	934	45	<i>Symphherobius pygmaeus</i> (Rambur, 1842)	85
6	<i>Panorpa germanica</i> Linnaeus, 1758	885	46	<i>Panorpa cognata</i> Rambur, 1842	83
7	<i>Sialis lutaria</i> (Linnaeus, 1758)	879	47	<i>Hemerobius atrifrons</i> McLachlan, 1868	80
8	<i>Micromus paganus</i> (Linnaeus, 1767)	747	48	<i>Drepanopteryx phalaenoides</i> (Linnaeus, 1758)	72
9	<i>Cunctochrysa albolineata</i> (Killington, 1935)	737	49	<i>Symphherobius pellucidus</i> (Walker, 1853)	68
10	<i>Micromus variegatus</i> (Fabricius, 1793)	736	50	<i>Symphherobius fuscescens</i> (Wallengren, 1863)	65
11	<i>Wesmaelius nervosus</i> (Fabricius, 1793)	723	51	<i>Parasemidalis fuscipennis</i> (Reuter, 1894)	62
12	<i>Panorpa communis</i> Linnaeus, 1758	633	52	<i>Conwentzia pineticola</i> Enderlein, 1905	59
13	<i>Chrysopidia ciliata</i> (Wesmael, 1841)	590	53	<i>Chrysopa abbreviata</i> Curtis, 1834	43
14	<i>Hemerobius stigma</i> Stephens, 1836	547	54	<i>Subilla confinis</i> (Stephens, 1836)	39
15	<i>Nineta vittata</i> (Wesmael, 1841)	471	55	<i>Sisyra dalii</i> McLachlan, 1866	39
16	<i>Nineta flava</i> (Scopoli, 1763)	470	56	<i>Chrysopa dorsalis</i> Burmeister, 1839	39
17	<i>Dichochrysa flavifrons</i> (Brauer, 1850)	433	57	<i>Coniopteryx esbenpeterseni</i> Tjeder, 1930	37
18	<i>Dichochrysa ventralis</i> (Curtis, 1834)	375	58	<i>Coniopteryx pygmaea</i> Enderlein, 1906	35
19	<i>Sisyra fuscata</i> (Fabricius, 1793)	361	59	<i>Sisyra terminalis</i> Curtis, 1854	32
20	<i>Hemerobius marginatus</i> Stephens, 1836	339	60	<i>Euroleon nostras</i> (Fourcroy, 1785)	31
21	<i>Osmylus fulvicephalus</i> (Scopoli, 1763)	292	61	<i>Sialis nigripes</i> Pictet, 1865	30
22	<i>Dichochrysa prasina</i> (Burmeister, 1839)	276	62	<i>Hemerobius perelegans</i> Stephens, 1836	24
23	<i>Conwentzia psociformis</i> (Curtis, 1834)	234	63	<i>Wesmaelius malladai</i> (Navás, 1925)	18
24	<i>Hemerobius nitidulus</i> Fabricius, 1777	231	64	<i>Wesmaelius balticus</i> (Tjeder, 1931)	18
25	<i>Xanthostigma xanthostigma</i> (Schummel, 1832)	191	65	<i>Chrysopa phyllochroma</i> Wesmael, 1841	17
26	<i>Hemerobius simulans</i> Walker, 1853	186	66	<i>Semidalis pseudouncinata</i> Meinander, 1963	15
27	<i>Nothochrysa capitata</i> (Fabricius, 1793)	172	67	<i>Nothochrysa fulviceps</i> (Stephens, 1836)	14
28	<i>Boreus hyemalis</i> (Linnaeus, 1767)	150	68	<i>Coniopteryx lentiae</i> Aspöck & Aspöck, 1964	12
29	<i>Chrysopa pallens</i> (Rambur, 1838)	148	69	<i>Peyerimhoffina gracilis</i> (Schneider, 1851)	9
30	<i>Sialis fuliginosa</i> Pictet, 1836	140	70	<i>Wesmaelius ravus</i> (Withycombe, 1923)	9
31	<i>Coniopteryx tineiformis</i> Curtis, 1834	136	71	<i>Megalomus hirtus</i> (Linnaeus, 1761)	8
32	<i>Hemerobius pini</i> Stephens, 1836	135	72	<i>Chrysoperla pallida</i> Henry, Brooks, Duelli & Johnson, 2002	8
33	<i>Phaeostigma notata</i> (Fabricius, 1781)	134	73	<i>Hemerobius contumax</i> Tjeder, 1932	6
34	<i>Chrysoperla carnea</i> Stephens, 1836 <i>sensu stricto</i>	133	74	<i>Helicoconis hirtinervis</i> Tjeder, 1960	3
35	<i>Atlantoraphidia maculicollis</i> (Stephens, 1836)	130	75	<i>Aleuropteryx juniperi</i> Ohm, 1968	3
36	<i>Wesmaelius concinnus</i> (Stephens, 1836)	125	76	<i>Nineta pallida</i> (Schneider, 1846)	3
37	<i>Symphherobius elegans</i> (Stephens, 1836)	117	77	<i>Symphherobius klapaleki</i> Zeleny, 1963	2
38	<i>Coniopteryx borealis</i> Tjeder, 1930	112	78	<i>Hemerobius fenestratus</i> Tjeder, 1932	2
39	<i>Wesmaelius quadrifasciatus</i> (Reuter, 1894)	110	79	<i>Wesmaelius mortoni</i> (McLachlan, 1899)	2
40	<i>Micromus angulatus</i> (Stephens, 1836)	105	80	<i>Myrmeleon formicarius</i> Linnaeus, 1767	1
			81	<i>Nineta inpunctata</i> (Reuter, 1894)	1