

Soldierflies and Allies Recording Scheme

Newsletter 4, spring 2017 *

Edited by Martin C. Harvey
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The Anthracite Bee-fly Anthrax anthrax has been confirmed in Britain for the first time - see page 2. Photo by Rob Mills.

Welcome to the fourth Soldierflies and Allies Recording Scheme newsletter. Following circulation with the Dipterists Forum Bulletin it will be available online via the recording scheme website.

Last year was an exciting one, with a new species confirmed in Britain and another rediscovered after a gap of 26 years (see page 2). More news of some of our rarer species is given on pages 4, 6 and 9.

The recording scheme is not just about rarities though! The life histories of many of the species are still poorly known, and it is good to have information on breeding substrates for the Twin-spot Centurion (page 7) and how to find the larvae of the Least Water-snipefly (page 10). And 2016 saw the first ever "Bee-fly Watch", which was successful in drawing in new records and new recorders – I can't wait to see how 2017 compares.

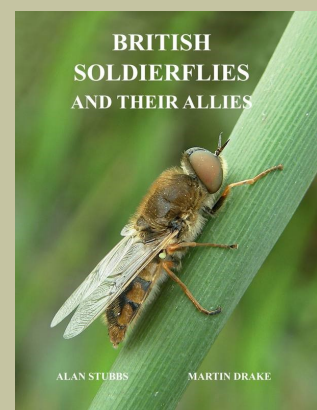
Updates on various other recording scheme activities is on page 8, including information on where your records go and how they are used. Thanks to everyone who has contributed records, photos and articles. Have a great season in 2017!

Martin Harvey

British soldierflies and their allies, by Alan Stubbs and Martin Drake

British Soldierflies and their Allies by Alan Stubbs and Martin Drake is back in print as an enlarged second edition. The book includes all the families covered by the Recording Scheme. The additional sixteen pages of the new edition arise mainly from incorporating many observations on the biology and distribution of the flies that have been made and published during the last twelve years. There are also a few minor corrections to the keys here and there, and a more substantial improvement to the keys to Tabanidae (horseflies).

The price to members of Dipterists Forum or BENHS is £20 (£36 for non-members). Orders via the BENHS website: www.benhs.org.uk/publications/british-soldierflies-and-their-allies-second-edition



* Note that when first published in March 2017 the photo of a Villa bee-fly on page 6 was mis-labelled by the editor as Villa venusta – apologies, it has now been corrected to Villa modesta

A new bee-fly for Britain

A highlight of 2016 was a report from Rob Mills in Cambridgeshire of an unusual-looking fly. Rob circulated a photo of this fly on Twitter (see photo on page 1), and with help from Steven Falk and others it was soon identified as the bee-fly *Anthrax anthrax* (subsequently confirmed from the photo by David Gibbs). This fly is a parasitoid of hole-nesting solitary bees, and sure enough Rob had found it investigating the 'bee hotel' in his garden.



Two of the unconfirmed British specimens from 1929–1930. Photographed by Ray Morris at the Leicestershire Collections Resources Centre.

There are specimens of *Anthrax anthrax* from 1929–1930 that are labelled as being from Leicestershire, but the provenance of these has always been doubted and the fly is not on the British list. Full details of the Cambridgeshire discovery have been submitted for publication in Dipterists Digest, in which we propose the English name “Anthracite Bee-fly” as an appropriate name to reflect the dark colour of the fly and the derivation of the name “*Anthrax*” from the Greek for “coal”.

This fly has been spreading on the continent and is now a frequent visitor to garden bee hotels in the Netherlands. It is too early to say whether it has bred in Britain, but if it does manage to establish itself it could well become a familiar sight. One to watch out for!

For further photos and information on the spread of this species in the Netherlands see this article by John Smit: www.naturetoday.com/intl/nl/nature-reports/message/?msg=18653

Robberfly reappears

One of the most enigmatic species on the British list is the Devon Red-legged Robberfly *Neomochtherus pallipes*. The first record was made on the south Devon coast by Mike Edwards in 1990, and until last summer that remained the only British record. A second British sighting of any sort would have been a welcome surprise, but in summer 2016 the extraordinary discovery was made of an apparently thriving colony in Shropshire, some 180 miles north of, and 26 years after, the original record. Congratulations to Nigel Jones for the original discovery, which was fully documented during subsequent visits by Nigel and colleagues including Malcolm Smart.



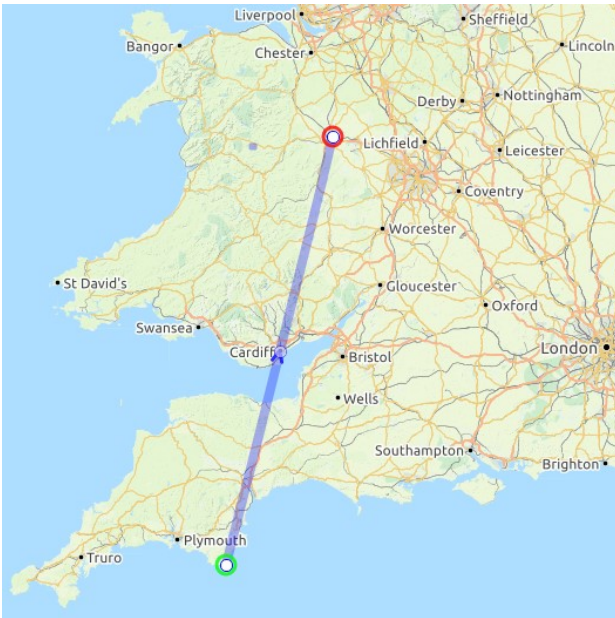
The rediscovered *Neomochtherus pallipes* by Nigel Jones.

In habitat terms the Devon and Shropshire sites are not so different, as in both places the fly seems to be associated with warm grassland on sheltered slopes that are broken up with exposed rocks and boulders. Full details will be published in Dipterists Digest.

If it can turn up in Devon and Shropshire where might it be found next? If you know of any similar-looking habitat it would be well worth a closer look at the robberflies next summer.

- Go to Nigel Jones' Flickr pages for some superb photos of this robberfly and its Shropshire habitat: www.flickr.com/photos/insectman/albums/72157669976768311/with/28069174311/

The 2016 Shropshire discovery is some 180 miles north of the 1990 Devon record.



Nigel Jones says he was "feeling pretty darned chuffed", as well he should! (Photo by Malcolm Smart.)



Update: Soldierflies, their Allies and Conopidae of Surrey

The *Haematopota grandis* female referred to on page 5 of this newsletter appeared in time for the species to be included in note form in the Surrey Wildlife Trust publication ***Soldierflies, their Allies and Conopidae of Surrey*** (2015) by David W. Baldock and Jeremy P. Early. That took the total of species recorded in the vice-county to 104. Another was added in 2016 when Mike Edwards took a Downland Villa (*Villa cingulata*) at Box Hill (see page 9). In recent years this bee-fly had been recorded several times at Bushy Park, just over the county boundary with Middlesex.

Other notable Surrey records in 2016 were led by a female Tree Snipefly (*Chrysopilus laetus*), which landed on an oak stump in Jeremy Early's garden early in July. She appeared to have been egg-laying somewhere nearby – the habitat fits the profile with the garden backing on to old woodland containing beech and poplar. This was the seventh record for the vice-county and the most southerly following one at Mickleham 8km away in 2013 (the latter was from a survey not placed in the public domain until this year).

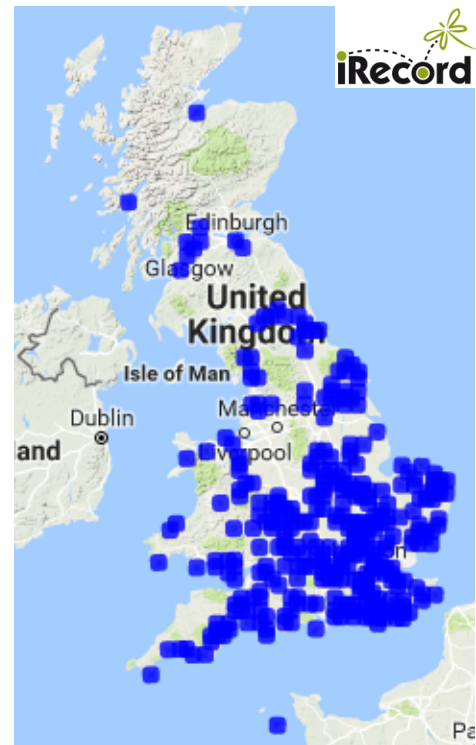


Tree Snipefly by Jeremy Early.

Soldierflies, their Allies and Conopidae of Surrey is hard backed with 208 pages and 32 colour plates. It is available for £18 plus £3 p&p from Surrey Wildlife Trust at www.surreywildlifegifts.org.uk or by phoning 01483 795440/795488.

Bee-fly Watch 2016

The Dark-edged Bee-fly, *Bombylius major*, is the most familiar of all the species covered by the recording scheme among the general public. In spring 2016 I decided to experiment with promoting a 'bee-fly watch' project to get more people looking out for this attractive fly, and to send in more records. This was done on a fairly ad hoc basis - there was no major campaign, no funding, no special tools other than what is freely available online. But a combination of a small amount of publicity on Twitter and Facebook, plus the use of iRecord to collate the records and provide feedback to recorders, proved to be very effective.



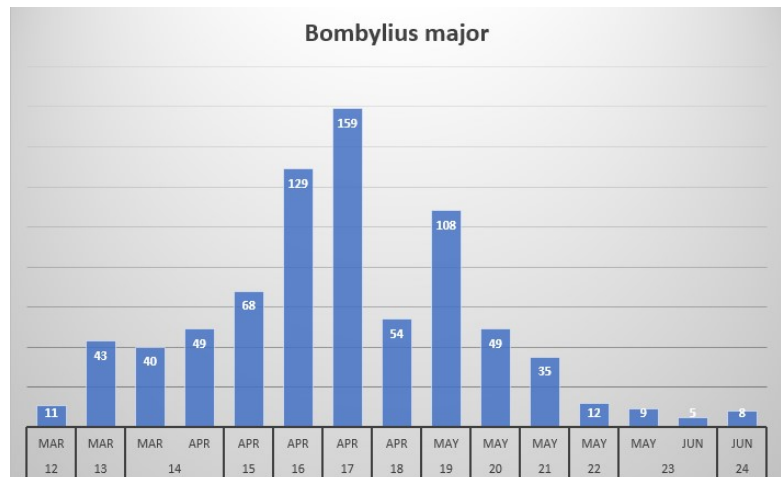
Records received during 2016 for *Bombylius major* (above) and *Bombylius discolor* (left).

Before 2016 the recording scheme database held 4,166 records of *Bombylius major*, and the total number of records on the NBN Gateway was not much more. Bee-fly Watch 2016 produced an additional 779 records - nearly 20% of the total number of records for all time! In addition, 32 records of the scarcer Dotted Bee-fly *Bombylius discolor* were contributed, many from its south-west strongholds. Around 370 people contributed records, with a special mention for top recorder Nigel Cottle with 40 records.

In 2016 the first sighting of Dark-edged Bee-fly was reported on 13 March – will we beat that in 2017? April was the peak month for records, although cold spells reduced sightings from time to time. I was delighted to see a primary school in Kent pick up on the interest in bee-flies, and record Dark-edged Bee-fly from their school grounds. Pupils went on to do project work on the species, and were pleased to see their dot appear on the iRecord maps. They even sent me some of their illustrations of the fly!

Bee-fly Watch 2016 was good fun, produced lots of records, and didn't require too much time to organise, so there is every reason to run it again in 2017. Watch the recording scheme website for news in March and join in if you can.

Dark-edged Bee-fly illustrated by Loose Primary School (left); records per month in 2016 (right).



Long-horned Cleg in Surrey

by Jeremy Early

The Long-horned Cleg (*Haematopota grandis*) has never been common in Britain and almost 30 years ago it was designated 'Rare' in the Red Data Book. Records have been sporadic since then, with most coming from East Suffolk, North Essex, South Essex, South Hampshire, West Gloucestershire and Carmarthenshire. There are none further north than Norfolk and North Wales and the only records any distance from the coast were at Pamber Forest in North Hampshire in 1961, which is no longer accepted as valid, and at Balcombe in West Sussex. The latter, as *H. longicornis*, was referred to by Newman in *The Entomologist* in 1869 and is in the Hope Collection at the University of Oxford without any details apart from the name.



Long-horned Cleg by Jeremy Early.

A female which appeared in the gazebo in my garden in Reigate on 7 September 2015, nearly 50km from the nearest coast southwards, can thus be regarded as the first confirmed record from a non-coastal vice-county. The first aspect which struck me was the size of the horsefly. There is little livestock locally but there are numerous horses used for recreation, plus roe deer, and *H. pluvialis* is relatively common. The female in the gazebo was almost half as big again as *H. pluvialis*, measuring 13mm. The long, straight antennae with grey dusting indicated it must be either *H. grandis* or *H. italica* – the latter has not been recorded in Britain but is present in France, The Netherlands and Denmark. Grey sub-lateral spots on tergites 2-6 confirmed the specimen as *H. grandis*.

In the modern era the closest previous records to Surrey were from Pagham Harbour in West Sussex in the early 1990s, a distance of around 80km. Much older and somewhat nearer records from the North Kent marshes are presumed not relevant given that the sites have been heavily developed. The lack of records inland is almost certainly a result of *H. grandis* being at the edge of its range in Britain. Together with *H. bigoti* it is one of only two species among the British tabanids classified by Olsufjev (1977, 1980) as belonging in the Mediterranean sub-region fauna group; all the others are in the Boreal-Eurasian sub-region fauna group. The species is rare in Denmark and regarded as extinct in Sweden, with no records from Norway or Finland.

In the southern part of the range, including Turkey and Morocco, there is no particular link with coastal habitats. Research by Ganeva and Ivanov (2015) in the Central Balkan Mountains in Bulgaria showed 48 specimens of *H. grandis* taken in 2010-2011 in a village at an elevation of 540 metres, 200km from the coast. By comparison, there were 30 specimens of *H. pluvialis* in the village and none of the regionally much scarcer *H. italica* and *H. longeantennata*.

Conceivably the predicted warmer climatic conditions through this century may enable what is a handsome species to expand its range in Britain.

Soldierflies and allies in Lancashire and Cheshire

by Phil Brighton

North-west England is at the edge of the range for many of the southern species in this group, so perhaps it is inevitable that records of many species are very sporadic. But 2016 does seem to have been a rather poor year: the only *Stratiomys* soldierfly reported so far has been a single *potamida*, and I have seen none myself. The only *Oxycera* I saw was *rara* and I did not find *Oplodontha viridula*. Nor have there been any reports of *Bombylius major* from the spring – although its range extends well into Scotland, it always seems to have been very local in this region.

On the plus side, I found the yellow-legged robberfly *Dioctria linearis* by sweeping in its characteristic woodland habitat at Etherow Country Park (SJ9791) in the Peak District foothills on 15 August. This is only the third or fourth Cheshire record, and it has not been recorded in Lancashire according to NBN, so this seems to be on the limit of its known range. Equally notable is another robberfly, probably *Machimus cingulatus*, which I swept from barely vegetated flat sandy ground at Freshfield Dune Heath, a Lancashire Wildlife Trust site just inland of the Formby dune system. The dark front femora with orange apices did at first seem indicative of the Irish Robberfly *M. cowini*. I have carefully studied Malcolm's Smart's 2005 paper (available on the Recording Scheme website) to arrive at my identification, but hope to get a final decision when I can show Malcolm the specimen. A postero-dorsal orange stripe is just visible on the front femora if viewed from the right angle, and the hairs under the abdomen strongly point to *cingulatus* when compared with Malcolm's photos.

The only previous records of *M. cingulatus* in Cheshire and South Lancashire are from the Wirral, once in the 19th century and twice between 1965 and 1995, and one by the National Trust at Formby in 2009, so either of the species seems equally likely. It is also worth noting that NBN has 49 records of the dune robberfly *Philonicus albiceps* from this locality dating from 1920 through to 2009, so the *Machimus* species could well be a recent arrival.

Followers of the UK Hoverflies Facebook group will be well aware of the great boost to recording from digital photographs posted there and checked by Roger Morris and his team. The potential for observant people who are not diptera specialists to add notable records is becoming noticeable for the soldierflies



Villa modesta by Tony Conway [with apologies from the editor, who mislabelled this photo as *V. venusta* when the newsletter was originally circulated]

and allies as well. A bee-fly from the genus *Villa* was photographed by Tony Conway at Seaforth nature reserve near the Liverpool docks on 14 August. While this photograph in itself does not allow determination to species, the confinement of *V. cingulata* and *V. venusta* to specific habitats in small areas of southern England means that this can be safely recorded as *V. modesta*. There have been half-or-dozen or so other records on the South Lancashire dune systems.

The final excitement of the year was also made possible by digital photography. On the eastern side of the region, the Woodland Trust has recently acquired a large tract of land from Bolton Council: the Smithills estate extends from the north-west fringe of the town up to the blanket bog at nearly

1,500 feet on Winter Hill, covering a range of agricultural, scrub and grassland habitats in between and traversed by extensive wooded cloughs.

I missed an initial Bioblitz in May but visited the Trust office in the Tudor Smithills Hall to discuss plans for Diptera recording with Russ Hedley. He had a spreadsheet with about a dozen diptera records from the



Rhagio notatus by Colin Rowan.

Bioblitz and one leapt out at me – *Rhagio notatus*. I knew from my ongoing work on the soldierflies and allies records for Lancashire and Cheshire that this had been recorded only once before, by Harry Britten on the Wirral in 1950, so this would have been a definite “probably not” had not the Greater Manchester Local Records Centre produced the photograph (left) by the original observer, Colin Rowan. Having not seen the species myself, I was somewhat uncertain about the wing markings, but the dark front femora have been confirmed as good evidence by Martin Drake and Martin Harvey. In England this fly is largely confined to upland areas of the North and seems to be very local and I take this find as a good omen for further visits to the area as a contrast to my usual lowland haunts.

Many thanks to all the organisations and individuals who have helped make these discoveries possible, and many others outside the scope of this brief article.

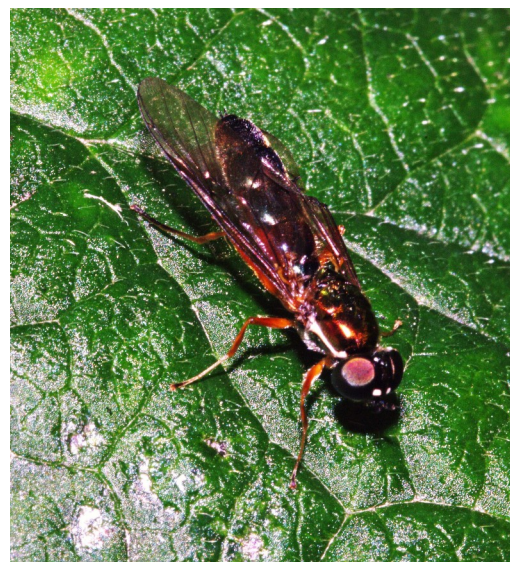
***Sargus bipunctatus* female found in horse dung**

by Anthony Taylor and David Iliff (davidiliff@talk21.com)

On 4 October 2009 the Gloucestershire Invertebrate Group (GIG) held a field meeting at Strawberry Banks (SO910033), near Oakridge, Gloucestershire. This Gloucester Wildlife Trust Reserve is a west-facing oolitic limestone herb-rich grassland site with blackthorn, hawthorn and hazel scrub and some ash, holly and oak. Along the bottom of the banks is a stream with some marsh development. The site is grazed by ponies.

During the course of the meeting Tony Taylor, the Gloucestershire Naturalists Society (GNS) recorder of Aculeate Hymenoptera, found a stratiomyid within some of the horse dung, and passed it to David Iliff who determined it as a very fresh (though apparently not teneral) female Twin-spot Centurion *Sargus bipunctatus*.

The pile of horse dung was located at the bottom of the steep south-westerly grassland slope. It was reasonably fresh, i.e. it was dry on the surface but not crusty and when opened it ripped apart rather than broke and was of a sticky consistency. The fly was right in the middle of the dung, about 30-40mm from the surface but still 50mm or so from the ground beneath. There was no obvious cell at the fly's location and no pupal remains. The dung only received a cursory inspection on this occasion so it is not known whether any other individuals may have been present or in any other stage of development.



Sargus bipunctatus at Strawberry Banks.

In *British Soldierflies* (2002) Stubbs and Drake state that all four British species of *Sargus* have been reported as breeding in cow dung, but we are not aware of any previous observations of an association of the genus with horse dung.

Recording scheme updates and other news

The main recording scheme database currently contains 9,560 records, with several thousand more awaiting import (mostly from spreadsheets sent in to the scheme in recent years). The preferred route for receiving records is via the online iRecord system, which makes it easy to incorporate data and share it via the National Biodiversity Network, but records via spreadsheet and other routes are very welcome – see: www.brc.ac.uk/soldierflies-and-allies/records



Data use

Data from the recording scheme has been provided to the NBN Gateway, and will be carried over the the new NBN Atlas that is scheduled to replace the Gateway in April 2017. The recording scheme aims to make data widely available for others to use, so that records can be used for conservation and research, and to enable other entomologists to access them. See: www.brc.ac.uk/soldierflies-and-allies/node/48

Recording scheme data has also been supplied direct to a number of project recently, including:

- Buglife’s “Important Invertebrate Areas” project, which aims to map the parts of the UK that support populations of the rarest species across many invertebrate groups. See: www.brc.ac.uk/soldierflies-and-allies/node/46
- The “State of Nature 2016” report: data from the scheme was analysed by scientists at CEH for inclusion in this report, which was led by the RSPB and summarises trends across a wide range of species. The news is not good, with the headline figures from the report pointing out that many species continue to decline. CEH is carrying out further work on species trends which will be published in future. See: ww2.rspb.org.uk/our-work/stateofnature2016/

None of the above would be possible if people didn’t send in their records to the scheme – many thanks to all who contribute, and apologies for those times when I am slow to respond!



Training course

Thanks to British Entomological and Natural History Society for hosting another soldierflies and allies training course last November. This was well attended by enthusiastic dipterists - hopefully it will bear fruit in the form of lots of new records next year! Handouts from the course are now available on the recording scheme website (see below).

Website

There have been a number of recent additions to the website:

- Notes and illustrations to support the Stubbs and Drake identification keys: www.brc.ac.uk/soldierflies-and-allies/ID_notes
- Presentation, checklist and handouts from events and training courses during 2016: www.brc.ac.uk/soldierflies-and-allies/resources_other
- Guide to distinguishing the common Downlooker Snipefly *Rhagio scolopaceus* from the rare Yellow Downlooker Snipefly *Rhagio strigosus*: www.brc.ac.uk/soldierflies-and-allies/downlooker_id
- Malcolm Smart’s 2005 *Dipterists Digest* paper on identifying *Machimus* species is available to download: www.brc.ac.uk/soldierflies-and-allies/node/44

Social media

Don’t forget that you can join in with the debate, chat and identification assistance via Twitter and Facebook (but please add your records to iRecord as well!):

- Twitter: [@SoldierfliesRS](#)
- Facebook: [British Soldierflies and Allies](#)

Thanks to everyone who has helped with identification queries on Facebook, especially Simon Knott, Ian Andrews and Malcolm Smart.

Other snippets

Dipterists Forum commissioned a splendid video on the joys of studying, recording and conserving flies. If you haven't see it yet you are in for a treat: vimeo.com/185680908.

Frank Van de Meutter, Ralf Gyselings and Erika Van den Bergh have published a new paper on horsefly ecology:

- *The occurrence and ecological requirements of the horseflies (Tabanidae) of brackish marshes in Belgium* (Journal of Insect Conservation, 2016, Volume 20, pp 989–997).



The smiling face of Alan Stubbs – one of the stars of the Dipterists Forum video.

This provides valuable information on the habitat associations of a number of species that also occur in the UK.

A high groundwater table and suitable levels of salinity seem to be required for the rarer species.

Unfortunately not open-access, but the summary is at link.springer.com/10.1007/s10841-016-9931-5

Notable records

Just a few highlights from the records submitted in 2016:



Heath Bee-fly by Steven Crellin.

- Heath Bee-fly *Bombylius minor* (Bombyliidae) is now very rare on the southern English coast and it is good to hear from Steven Crellin that it continues to survive on the Isle of Man.
- Downland Villa *Villa cingulata* (Bombyliidae) continues to spread. with two new county records in 2016, both from Mike Edwards: West Sussex (3 July, Heyshott Down SSSI) and Surrey (2 July, Box Hill). Larvae of *Villa* species are thought to be parasitoids of moth caterpillars, but the actual hosts are not known. Graeme Lyons suggests that Dusky Sallow caterpillars are a potential host, as they are abundant on chalk grassland at this the right time of year and are a suitable-sized host. Another possibility would be Flounced Rustic. Collaboration with people who rear moths would be welcome!
- Barred Green Colonel *Odontomyia hydroleon* (Stratiomyidae) was recorded by Ian Andrews at its only known English site in Yorkshire. It is known from just one other site in Wales, so is one of our rarest species, and news of its continued existence in England is most welcome.
- The Pine Black *Zabrachia tenella* (Stratiomyidae) is a small, black soldierfly related to the more familiar *Pachygaster* species. It is associated with pine trees and is probably under-recorded. Pete Boardman reports it from Hertfordshire and Middlesex.
- Black Deerfly *Chrysops sepulchralis* (Tabanidae) was reported from Cumbria via iRecord, when Jody Ferguson of Cumbria Wildlife Trust photographed it at Eycott Hill Nature Reserve on 7 July. This rare fly is mostly known from south-west England, but there have also been recent records from south-west Scotland. At first I thought Jody's record would be the first for Cumbria, but there is apparently an earlier one from the same area in 2014, for which details have not yet reached the recording scheme.



Barred Green Colonel by Ian Andrews.

Sampling spiky snipeflies

The Soldierflies and Allies Recording Scheme doesn't often receive records of fly larvae, so when this photo (right) arrived via iRecord it stood out from the rest.

This rather odd-looking creature is the larva of the Least Water-snipefly, *Atrichops crassipes*. It is a rare species, or at least rarely recorded, but the above is just one of several records made in recent years by John St Pierre in East Sussex. These are the first records I'm aware of for that county since 1983.



Larva of the Least Water-snipefly, by John St Pierre.

John found them during sampling for freshwater invertebrates as part of his work with the Ouse & Adur Rivers Trust. John says:

“The ones we have found are all in the catchment of the Sussex River Ouse. We found one in the main river in 2013, the rest being from tributaries (2013 seemed to be a particularly good year for them). In all cases the substrate was clay/gravel mostly in riffle sections. They were captured using the standard 3 minute kick sample in the BMWP protocol.”

It is excellent to get some new records for this species, and I wonder whether it could be found more widely by others carrying out freshwater sampling – if that's something you're involved with please look out for it!

A photo of the adult fly taken by Rui Andrade can be seen on Flickr at flic.kr/p/zSsXCU

Records welcome!

The recording scheme can only function if people send in their records – please continue to do so if you are a regular recorder, and if you haven't yet sent any in now is a good time to join in! Even if you are just starting off with your first Dark-edged Bee-fly record it all helps build up our knowledge of what these species do.

- Information on recording: www.brc.ac.uk/soldierflies-and-allies/records
- All the scheme records on iRecord: www.brc.ac.uk/irecord/join/soldierflies-and-allies-recording-scheme
- Identification information: www.brc.ac.uk/soldierflies-and-allies/resources

Thanks to the Biological Records Centre for supporting the recording scheme website.

