

NEWSLETTER 60

January 2019

Full set of Backswimmers in one trough



Notonecta maculata
14.0 - 16.0 mm



Notonecta obliqua
14.0 - 16.0 mm



Notonecta viridis
13.0 - 15.0 mm



Notonecta glauca
14.0 - 16.0 mm

Photos: Tony Cook

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In October 2018 all four British species of *Notonecta* (backswimming water boatmen or backswimmers) were found in net samples taken from a grassland water trough (SP77879369), a short distance from a disused railway embankment between Slawston and Medbourne in south Leicestershire. The trough was a shallow brick and concrete construction, about 4.0 m x 1.7 m, fed by a spring, with some floating algae (*Cladophora* sp.), a water depth of about 20 cm and a fine sediment covering the bottom. Although it may not be unusual to find all four species together in more complex habitats it must be fairly rare to find them in such a simple habitat. At the time of sampling nearly all of the field ponds in the area were dry following the hot summer, so it may be that they packed together in a habitat of last resort and were not all permanent inhabitants. *Notonecta maculata* is a species often associated with concrete or brick sided pools, reservoirs, etc. and has been shown to feed most effectively in simple habitats (Giller & McNeill, 1981). It is the only species that is likely to breed in a water

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The editor will be happy to receive articles, short notes and photos (in focus please!) about insects or other invertebrates in Leicestershire and Rutland, also news of members' activities further afield. Photos to be sent separately please at high resolution. Unless otherwise credited, photos are by the author of the article.

Next Copy Deadline: 5 Sep 2019

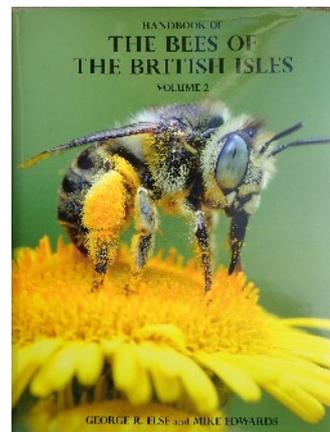
Editorial

I am running out of space to lay out articles - so I will simply thank all the contributors for their efforts and wish readers a Happy New Year.

Steve Woodward

Bee Handbook - worth the wait?

Handbook of The Bees of the British Isles was published in late 2018, in two volumes. The authors are George R. Else and Mike Edwards, publisher The Ray Society ISBN 978-0-903874-51-9, £130 from NHBS. Before Steven Falk's *Field Guide* appeared in 2015, no bee identification guide (other than Bumbles) had been published for more than a century! Accurate identification then required the use of draft keys, originating from George Else and circulated by BWARS. The *Handbook* had been in preparation for so many years that some bee enthusiasts began to doubt whether it would ever materialise - well, it has and they will not be disappointed. Identification, description, biology and distribution of all 270 British species are covered. Each substantial volume is a little larger than A4 and the combined length is 775 pages. The binding, paper and print quality are superb, as we have come to expect from the Ray Society. The *Handbook* is profusely illustrated with very clear photographs of all species. Steven Falk has contributed a detailed line drawing of a typical bee from each genus. In the keys, many of the couplets have line drawings or photos alongside, often with the critical features annotated on the photos. I know from personal experience how difficult it is to photograph shiny, black bees so I am very impressed with the results here. All the images are provided on a DVD for viewing greater detail.



It is too early to evaluate the published keys, but having worked with the drafts I know what to expect - hard work! The good illustrations will certainly make them easier to use and the detailed description of each species should confirm that the keys have given the right answer. The only defect I have noticed is the lack of an index. Worth the wait? - yes!

Steve Woodward

cont'd from p. 1.

trough. *Notonecta glauca* is widely distributed but appears to survive best in more complex habitats where it can use vegetation to perch some way below the water surface. *N. obliqua* is less common than *N. glauca* with a preference for habitats of intermediate complexity (Giller & McNeill *op. cit.*) and often occurs in upland peat pools as well as lowland non-acidic habitats. *N. viridis* is tolerant of greater salinity than the other species of *Notonecta* and occurs in brackish coastal habitats as well as non-saline ponds and lakes inland, but not usually in water troughs.

Reference

Giller P.S & McNeill S. (1981) Predation Strategies, Resource Partitioning and Habitat Selection in *Notonecta* (Hemiptera/Heteroptera). *Journal of Animal Ecology* Vol. 50, No 3: 789-808.

Tony Cook & Frank Clark

Winter active bumblebees at Freeman's Common

On Saturday, 29 December 2018, I briefly joined the VC 55 botanists on their 2018/2019 New Year Plant Hunt <https://bsbi.org/new-year-plant-hunt> at Freeman's Common Industrial Park in Leicester.



Buff-tailed Bumblebee worker *Bombus terrestris* on Honeysuckle *Lonicera purpurei*.
Photo: Jerry Clough.

While it is always of interest to record which wild plants are in flower at this time of year in an urban situation, I was more interested to keep watch for any winter-flowering shrubs and the potential for winter-active bumblebees. As luck would have it, on the frontage of one industrial building close to the corner of Freeman's Common Road and Putney Road West/Commercial Square (SK5802), a large Winter Honeysuckle shrub *Lonicera purpurei* was found, covered with lots of delicate lemon-scented white flowers. Several Buff-tailed Bumblebee workers *Bombus terrestris* were actively foraging and had full yellow pollen loads (see photo by Jerry Clough). There must be an active bumble nest somewhere in the neighbourhood. To observe such activity as this in Leicester made my day!

Maggie Frankum

Identification of *Cheilosia* hoverflies

Prior to 2000 all records of these two hoverfly species were regarded as being of *C. albitarsis*. Doczkal (2000) then described a "sibling" species which was named *C. ranunculi*. The basis of the separation is only reliable for the males with differentiation of females remaining a problem. As is often the case with flies, the surest way of recognising a species is by examination of the genitalia but while this approach works for the males it does not for the females.

Segment 5 of the front and mid tarsi of males of both species is black in contrast to the other paler segments but the distinguishing feature is its shape. In *C. albitarsis* this has parallel sides whereas in *C. ranunculi* the sides of the segment taper towards the claws. The difference is clearly illustrated in Ball & Morris (2013) p167.

As of the end of 2018 the hoverfly database holds 150+ records for these two species with no clear distinction of how the identification was achieved. Accordingly the veracity of the records has to be challenged because of the need for careful examination. For VC55 records, all records of both species prior to 2001 will be regarded as the aggregate *C. albitarsis/ranunculi*. Records dated from 2001 onwards will be regarded as an aggregate unless the recorder has indicated how they have differentiated the species. NatureSpot has already adopted this approach. I have already received confirmation by one recorder (Brian Wetton) that his *C. ranunculi* records are based on the examination of the tarsi in males and, accordingly, his records have been included in the database under this name.

It would be useful if recorders could indicate whether male genitalia were examined or whether male front tarsal segment 5 shape was used when identifying otherwise the record will be of the aggregate.

References

- Ball, S. & Morris, R. 2013. *Britain's Hoverflies: an introduction to the hoverflies of Britain*. WildGuides, Princeton University Press.
- Doczkal, D. (2000). Description of *Cheilosia ranunculi* spec. nov. from Europe, a sibling species of *C. albitarsis* Meigen (Diptera, Syrphidae). *Volucella*, 5, 63-78.

Ray Morris

Hunt for the hoverfly *Neoascia obliqua* in 2019



Fig. 1. *Neoascia obliqua*.
Photo: Steven Falk ex flickr.



Fig. 2. *Neoascia obliqua*
on Butterbur.
Photo: Paul Ruddoch.

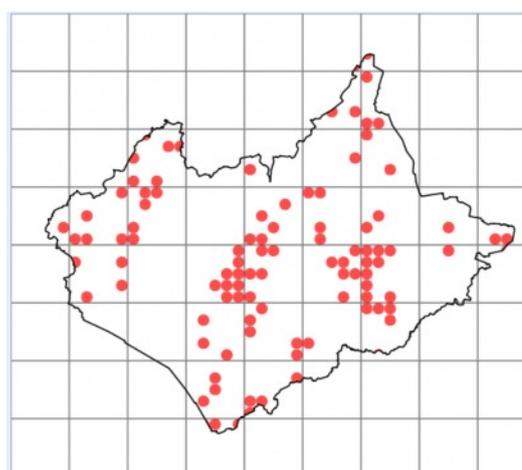


Fig. 3. Butterbur (*Petasites hybridus*) in VC55: post 1999 tetrad records. Courtesy of BSBI and its recorders, 2019.

The *Neoascia* genus (Diptera: Syrphidae) is unusual in having a waisted body as well as being quite small for hoverflies and so may be overlooked or mistaken for a small hymenopteran. The latest national checklist of the Diptera (September 2018, *Dipterists Forum*) lists six species of *Neoascia* all of which have been found in VC55. The commonest is *N. podagrica* with the others having far fewer records (Table 1). The taxa are not overly difficult to key out although in the case of *N. obliqua* this is much simpler because the banding on abdomen segment 2 is not a horizontal line but appears as an inverted V (= Λ) hence the name *obliqua* (Fig. 1).

Species	VC55 records	Comments
<i>Neoascia geniculata</i>	2	Melton Mowbray (1990) and Ulverscroft (1992) both by Neil Frankum
<i>Neoascia interrupta</i>	6	Melton Mowbray (1990) and Ulverscroft (1992) both by Neil Frankum
<i>Neoascia meticulosa</i>	21	Scattered but widespread (1936 to 2016)
<i>Neoascia obliqua</i>	2	Melton Mowbray (2015, Paul Ruddoch) and Ulverscroft (2016 Alan Cann)
<i>Neoascia podagrica</i>	132	Widespread (1902 to 2017)
<i>Neoascia tenur</i>	29	Scattered but widespread (1989 to 2017)

Table. 1. *Neoascia* records to the end of 2017. Source: LRERC & NatureSpot

The first time I heard of this distinctive little fly was when Paul Ruddoch reported large numbers on flowering Butterbur (*Petasites hybridus*) at Rhubarb Island (R. Wreake, SK739184), Melton Mowbray first on 24 April 2015 and subsequently on five dates in May 2015 (identity confirmed by Steven Falk) and let me have a couple of specimens to look at. A further record came when Alan Cann noted it at Ulverscroft (SK495131) on 14 May 2016. The fly is on the wing from spring to late summer but can be overlooked quite easily – the NBN (accessed 31 December 2018) holds only 102 sparsely distributed records. However, as it is usually associated with Butterbur the insect can be quite numerous when the plant is in flower (Fig. 2).

Butterbur is not a rare plant in VC55, having 172 widely distributed records (Fig. 3) and is common through Britain.

The plan for 2019 is to examine flowering Butterbur in the spring (March to May) to record the presence of the fly. If you wish to help in this endeavour and need an indication where to find the plant in your patch, then please contact me and I will forward the details kindly made available by Geoffrey Hall (BSBI County Recorder for Vascular Plants).

Ray Morris

Addendum

In the last *LES Newsletter* (59, p11) I drew attention to the first British record of *Podocera soniae* taken by Andy Godfrey at Buddon Wood in 2012. What I failed to notice in his Acknowledgements, was a reference to a previous record of *Podocera delicata* from Holwell Mouth that he had found on 1 September 2001. Both species are not only firsts for VC55 but are the currently the only records of the Stenomicroidae (they are small and difficult!). Indeed a check of the NBN Atlas (3 January 2019) shows that *P. soniae* remains to be added to their list.

Ray Morris

“May contain horse” - springtails and DNA

What we see depends mainly on what we look for.

John Lubbock, 1st Baron Avebury.

Readers may remember the scandal in 2013 when Findus Beef Lasagne was revealed to be Findus *Horse* Lasagne (BBC News, 2013). The Food Standards Agency was able to come to this conclusion by DNA barcoding of mitochondrial genes (Hebert, *et al.*, 2003). However, not so fast, because DNA barcoding is not as straightforward as it may seem:



"Distinguishing horse from donkey can be tricky, as the species are closely related, but apparently important, because some cultures eat one, but not the other. The Italians are fond of both. However, as well as the sausage manufacturers, horses (Equus caballus) and donkeys (Equus asinus) can do the mixing themselves, to produce interspecific hybrids – mules and hinnies." (Mun-Keat Looi, 2013)

In Europe, the springtails *Dicyrtomina minuta*, *D. ornata* and *D. saundersi* (Fig. 1) are regarded as separate species, whereas in North America, *D. ornata* and *D. saundersi* are held to be forms of *D. minuta*. However, electrophoretic alloenzyme analysis supports the notion that they are indeed separate species (Fanciulli, *et al.*, 2001). At first sight, this looks like a simple case of Europeans right, Americans wrong - but that is not so. Intergrades lacking or mixing together the morphological features (particularly pigmentation) used to identify these species do occur, and they have fooled me several times. Quite quickly we seem to find ourselves back in a horse/donkey/lasagne scenario, and DNA is not helping us much. Perhaps this is an insight into Victorian entomologist's fascination with aberrations.

In autumn, a supermarket bag full of leaf litter provides hours of entertainment for students of springtails, a welcome relief after the drought of the summer. In one of the many bags of leaf litter I collected in December 2018 I found a small (0.5 mm) globular springtail with unusual markings (Fig. 2). This clearly fitted into the

genus *Sminthurus*, but this is a highly variable group and my new specimen did not resemble any of the species or colour forms I was familiar with. This was my first encounter with *Sminthurus reticulatus*, with 3-4 distinctive dark transverse bands on the dorsum of the abdomen (confirmed by Peter Shaw, UK recorder for Collembola). This is a newly-established species in the UK which is rapidly expanding its range. I am always happy to find a new species for the first time, but then Frans Janssens from the University of Antwerp commented



Fig. 1 (left). three springtails in the genus *Dicyrtomina*.
Fig 2 (above). *Sminthurus reticulatus*.

that he thought this was *Sminthurus aureus* form *reticulatus*, based on the fact that the dorsal stripes are paler than the lateral stripes, whereas in "true" *S. reticulatus*, the lateral and dorsal pattern has the same dark colouration. This seems like a somewhat subjective distinction to me! In this case DNA evidence from mitochondrial cytochrome c oxidase does support *S. reticulatus* as a separate species (Shaw & Benefer, 2015), so I have recorded it as that. It is clear that the entire *Sminthurus* group needs a DNA-based taxonomic revision.

Taxonomy then, is a mess. But before we lump all the blame on the Americans and the Italians, let's also have a go at the Swedes, because surely it was Linnaeus' promotion of the rigid species concept that got us into this mess? Entomologists of the word unite! We have nothing to lose but our chains! I strongly suspect that DNA barcoding is not going to solve all these problems.

Acknowledgement

I'm grateful to Peter Shaw for helpful discussions during the preparation of this article.

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Hebert, P., Cywinska, A., Ball, S. & DeWaard, J. (2003) Biological identifications through DNA barcodes. *Proceedings of The Royal Society of London. Series B: Biological Sciences* **270**: 313–321.

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Alan Cann

Uncommon dung beetle at Slawston

Onthophagus coenobita was recorded, in October 2018, on a disused railway embankment between Slawston and Medbourne in south Leicestershire (SP77809307). Four beetles (two males and two females) were caught in a pitfall baited with fish (mackerel). The trap was set with the intention of obtaining carrion feeders and although *O. coenobita* is known to feed on carrion and fungi as well as dung (Jessop, 1986) we were somewhat surprised to find this species instead of more typical carrion feeders. Nothing much else was sampled except a species of *Cryptophagus* that has yet to be definitely identified. The only recent records of *O. coenobita* are from Loddington where they were found by Graham Finch in 2017 (see Finch, 2017). The most recent previous records were in 1943 (East Norton, D. Tozer) and 1934 (Gumley, K.J.B. Clark).

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Jessop, L. (1986) *Dung Beetles and Chafers*. Royal Ent. Soc.

Tony Cook & Frank Clark

Stauropoctonus bombycivorus, a parasitoid of the Lobster Moth

I do not often record parasitic wasps due to the difficulty of identification, but on 4 July 2018 the presence of a very large and conspicuous specimen in my moth trap at Sapcote convinced me to make an exception. With a body length of about 20 mm together with bright orange legs and exceptionally long, orange coloured antennae this was definitely an eye-catching species.

I decided to try my luck by posting an enquiry and images onto the Twitter page of Gavin Broad, a recognised expert based at the National History Museum. I quickly received a reply to my enquiry, informing me that this was “*Stauropoctonus bombycivorus*, a rather local parasitoid of Lobster



Onthophagus coenobita (male)
6-9mm

Photo: Tony Cook



Moth (much scarcer than the host)". Gavin also stated that he thought this was the first record of *Stauropoctonus bombycivorus* in Leicestershire and requested details for his national recording scheme.

I have checked with Adrian Russell and there are no confirmed records of Lobster Moth *Stauropus fagi* in VC55, which makes the presence of its parasitoid even more surprising – hopefully it may point to the possibility of the host species being recorded in our area before too long (it is already recorded in Northamptonshire and from Brandon in north Warwickshire, only 15 miles from the VC55 border) – so we live in hope! According to Gavin, however, it is entirely possible that the parasite uses other moth species as hosts, as its life cycle is little studied.

Graham Calow

Looking for help?

The following are willing to act as an initial point of contact for providing advice and information to members.

Arachnids (Mites & Ticks):- Ivan Pedley, 48 Woodlands Drive, Groby, Leicester LE6 0BQ. 0116 287 6886. ivan.pedley@gmail.com

Arachnids (Opiliones, Harvestmen): - Ray Morris, see page 2.

Arachnids (Spiders):- Paul Palmer palmerpjp@gmail.com.

Arachnids (Pseudoscorpions):- Ed Darby 01509 569670 lboro.ecols@ntlworld.com

Biological Recording:- Sue Timms, Leics & Rutland Environmental Records Centre; Room 400, County Hall, Glenfield LE3 8RA. 0116 3054108 Sue.timms@leics.gov.uk

Chilopoda:- Helen Ikin, 237 Forest Road, Woodhouse, Woodhouse Eaves, Leics LE12 8TZ. 01509 890102. helen.canids@btinternet.com

Coleoptera:- Graham Finch, 14 Thorndale, Ibstock, Leics. LE67 6JT: finchgraham1@gmail.com

Collembola: Alan Cann, 17 Overdale Road, Leicester LE2 3YJ. alan.cann@gmail.com Online identification guides: <https://collembolla.blogspot.com/p/identification-guides.html>

Diplopoda:- Helen Ikin (see Chilopoda).

Diptera (Some families):- Ray Morris (see page 2).

Diptera (Nematocera - Mosquitoes, Blackflies & Craneflies):- John Kramer, 31 Ash Tree Road, Oadby, Leicester LE2 5TE. 0116 271 6499. john.kramer@btinternet.com

Hymenoptera (Symphyta - Sawflies):- Dave Nicholls, 69-71 Church Lane, Ratby, LE6 0JF. nicholls.99@btinternet.com

Hymenoptera (Bumblebees):- Maggie Frankum, see page 2.

Hymenoptera (Other aculeates - Bees, Wasps & Ants):- Helen Ikin (see Chilopoda).

Hemiptera:- Dave Budworth, see page 2.

Isopoda (Woodlice):- Helen Ikin (see Chilopoda).

Lepidoptera:- Adrian Russell, 15 St Swithin's Road, Leicester LE5 2GE. 0116 241 5101. Adrian@wainscot.demon.co.uk

Mecoptera, Neuroptera, Plecoptera :- Steve Woodward, see page 2.

Mollusca: - Dave Nicholls (see Hymenoptera (Symphyta)).

Odonata:- Ian Merrill i.merrill@btopenworld.com

Orthoptera:- Helen Ikin, see Chilopoda.

Phthiraptera, Siphonaptera:- Frank Clark, 4 Main Street, Houghton on the Hill, Leicester LE7 9GD. 0116 243 2725. ClrFlea@aol.com

Plant Galls:- Maggie Frankum, see page 2.

Psocoptera:- Helen Ikin, see Chilopoda.

Thysanoptera: - Ivan Pedley, see Arachnids - Mites.

Trichoptera (adults):- Ray Morris, see page 2.

Water beetle and Water bug numbers fall at Priory Water Nature Reserve



Priory Water NR. Photo: Frank Clark

The lakes at Priory Water NR (near Melton Mowbray, SK7118) were sampled for water bugs and water beetles between 2009 and 2010 (see Cook & Clark, 2011 & 2012). A total of 26 species of water bug and 29 species of water beetle were recorded over the two year period among which were two species new to VC55 (*Sigara iactans* & *Rhantus grapii*). The same lakes were sampled again in 2018 to record changes that may have occurred during the intervening period. The techniques used were similar although in 2018 bottle traps were used, in addition netting, throughout the sampling period while in 2009/2010 they were only used for a few months in 2010. As abiotic and biotic conditions and the presence and abundance of species will change from year to year, it is impossible to say with any certainty that changes recorded between two periods (2009-2010 and 2018), with no intervening samples, are part of a long-term trend or the result of random variation. The weather in 2018 during much of the sampling period was exceptionally dry and hot, very different from that in 2009 & 2010, and probably influenced the results of this second survey. The dry summer resulted in a substantial draw-down which made sampling more difficult. We estimated drop in water level between spring and summer was at least 0.5 m.

Survey year	2009	2010	2018
Water beetle species	22	23	19
Water beetle individuals	314	287	121
Water bug species	23	24	16
Water bug individuals	2709	2678	218

For a comparison of results between the two periods each of the two full years covered in the first sampling period, 2009 & 2010 are treated separately and compared to the 2018 results. The species found in 2018 had all been previously recorded.

There have been a number of studies reported recently which have shown dramatic declines in insect numbers

due to a variety of factors which include habitat loss and climate change. The lakes at Priory Water appear to be in a similar state to that in 2009/2010 – but they will have undergone some successional changes in the intervening years as well those possibly due to more widespread factors. Further samples would be required over a number of years to reach any reasonable conclusions.

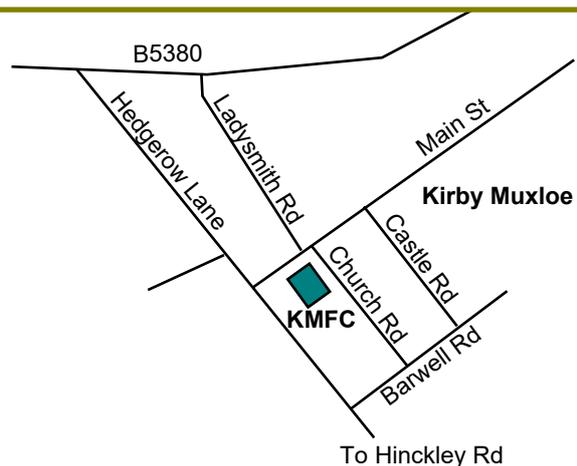
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Cook A. & Clark F. (2012) A study of the water beetles of Priory Water NR, Leicestershire. *LESOPS* 28.

Frank Clark & Tony Cook

Indoor Meetings Programme



Our venue is Kirby Muxloe Free Church, Main Street, Kirby Muxloe LE9 2AN SK517042. The session starts at 7:30, but most members arrive half an hour earlier for a natter, with tea, coffee and biscuits. Visitors are welcome.

Thursday 21 February 2019 – Bees and Wasps. Steve Woodward. Our Newsletter Editor will give us an insight into this complex group of insects. Steve has focused on solitary bees and wasps and with Helen Ikin they have added several new species for VC55.

Thursday 21 March 2019 – Flies - the next adventure playground. Ray Morris, our Chairman, who has taken a keen interest in the Diptera. No doubt his enthusiasm will encourage us to take ‘note’ of these insects.

Anona Finch