ISSUE
14
June 2020

Friends of Earlham Cemetery

In this issue:

Contribute:

This newsletter is sent out four times a year, in **March, June, September and December.** If you would like to submit an article, photo or sighting to the newsletter, the deadline is a month before an issue is released.

Please send all submissions to **alysia.schuetzle@gmail.com**, with photos at 300 dpi where possible.

You are receiving this newsletter as part of your membership of the Friends of Earlham Cemetery Group. If you wish to cancel your membership, please contact **friendsofearlhamcemetery@yahoo.co.uk**

Hello!

Welcome to issue fourteen of the newsletter for the *Friends of Earlham Cemetery.*

I'm taking over from Sandy, who did a wonderful job putting together the previous thirteen issues. Thank you for all your hard work!

It has been fantastic to get a sneak peek of the articles and wonderful photography included in this issue. I particularly enjoyed Vanna's introduction to spiders on page two, which I'm sure will have all of us spider hunting!

I expect for many of us in this group, and for many outside of it, that the cemetery has been a unique source of comfort during the difficult recent times. It is a wonderful break from the worry, the news, and missing loved ones to step into a place like Earlham Cemetery and see that life is still busy happening all around us. Birds are still nesting, bees are still industriously gathering nectar, and a huge variety of plants are thriving.

Things might seem tough at the moment, but being in nature can remind us that even on darker days, shoots still spring through the earth, fledgelings still take their first clumsy flap and fall, and insects continue to turn from egg to larvae to magical winged things. There are always fascinating plants, creatures and history to discover, or a calming walk to be had, and hopefully the articles in this newsletter inspire you to have a wander and see what you can find.

It would be great to hear if Earlham Cemetery has helped you during lockdown, or what you've discovered whilst out walking. All submissions are welcome! Please send editorial and images to **alysia.schuetzle@gmail.com**.

All the best,

Alysia

Sallow flowers in early spring.

Surveying the Sallows

Vanna Bartlett

This spring I decided to carry out a full survey of insects visiting the sallow blossom in the Cemetery.

Unfortunately this was curtailed by the advent of lockdown, but I was able to make a few observations during March when the flowers were first opening. I have combined these records with those from previous years to give an overview of what you can expect to find foraging around sallows in the cemetery.

Sallow is the name given to certain species of willow, notably Goat *(Salix caprea)* and Grey *(Salix cinerea)* which have short, erect catkins. Male and female flowers are borne on separate trees with the male ones being the classic well-known pussy willow catkins. Depending on the year, they can come into flower from as early as late February, but

A small, straggly sallow - ideal height for looking for insects on the flowers!

March is probably the best month here in Norfolk. A good-sized tree can have flowers open over several weeks, lasting into April. This early blossoming makes them an important source of nectar and pollen for all sorts of insects. Plenty of flies are attracted to the flowers as well as bumble and solitary bees and also butterflies.

The fluffy yellow catkins are the male flowers, chock full of pollen. The female flowers are green and a bit spiky looking, although soft to the touch. The male flowers attract lots of female and worker bees as they collect the protein-rich pollen to rear their young on. Male bees visit for the sugary nectar that gives them energy to fly around searching for a mate (female bees also drink nectar for energy). Most other insects will be after nectar too. The less showy female flowers also produce nectar in order to attract insects that have previously visited male flowers so hopefully have some pollen to transfer and fertilise the plant. I've always seen more insects on the male flowers than the females.

Because of the bonanza of insects, sallows will attract various birds including Blue and Great Tits and warblers like Chiffchaffs. An old country name for Great Tit was in fact 'bee-biter' from their habit of picking off bumblebees, often from around willows or other spring flowering trees like Blackthorn.

Classic pussy-willow catkins at various stages of opening.

Surveying the Sallows

Vanna Bartlett

Bees

Bumblebees are regularly seen at sallow blossom, the queens feeding up on nectar when they first emerge from winter hibernation and then the first worker bumblebees collecting pollen to take back to the nest.

Honey bees also exploit sallows. on a warm, windless spring day a stand of sallows will positively hum with busy bee activity as dozens of them collect pollen to take back to their hive. The real stars of the sallows, however, are the solitary bees.

Male Andrena bimaculata

Female Andrena bimaculata

The worker honeybee (Apis mellifera) is clinging onto a leaf with her mandibles while she shuffles pollen off her underside with her middle legs onto the pollen collecting areas on her hind legs.

Bombus pratorum queen. Note the reddish tail and shaggy hair compared to B.terrestris (above)

Many of the *Andrena* species are on the wing early in the year (several are doubled-brooded, with a second generation flying in the summer) and will collect pollen from sallows. Several of these mining bees are known to collect willow pollen almost exclusively, making these trees extremely important to their survival.

Female Andrena nigroaenea with yellow pollen load on her hind legs.

Surveying the Sallows

Vanna Bartlett

Although my visits were cut short at the end of March before the sallow season was over, I was lucky enough to find *Andrena bimaculata* on my last outing. A new species to add to the cemetery list, bringing the total up to 56. These bees are quire variable, with some having reddish patches on the first two segments of the abdomen. The ones I found in the cemetery were dark individuals, so a bit trickier to identify.

Male Andrena bimaculata

Female Andrena bimaculata

Female Andrena minutula, one of the 'mini-miners', collecting pollen on her hind legs to take back to her nest cells.

Above: A freshly emerged female Andrena nitida getting stuck in to reach the nectar at the base of the stamens. The obvious grey patches on the sides of the abdomen are distinctive and give rise to the English name; Grey-patched Mining Bee.

Female Andrena bicolor, one of the earliest mining bees, and relatively small in size.

Left: Female Andrena fulva. The bright, foxy red thorax and abdomen make this species readily identifiable, even when it is high up in a sallow.

Surveying the Sallows

Vanna Bartlett

Butterflies

Sallows are a great place to seek out spring butterflies. In the cemetery, I regularly see Peacocks and Commas visiting them, and have occasionally seen the odd Brimstone as well. After a mild winter, there is always the chance of a Red Admiral too. These species all over-winter as adults and will emerge on the earliest of warm days in spring.

Some years, I have recorded my first butterflies in January or February, but in colder years have had to wait until March and occasionally even April for my first sighting. Emerging so early, these butterflies are reliant on good sources of nectar. As well as sallows, Dandelions are also very important for these spring flying species.

Red Admiral (Vanessa atalanta)

Brimstone (Gonepteyrx rhamni)

Peacock (Aglais io)

Comma (Polygonia c-album)

Female Eristalis tenax. A Honeybee mimic and one of the common species of hoverfly.

Male Eristalis intricaria. Although recorded in the cemetery, this one was photographed by the Little Ouse on the Norfolk border near Brandon.

Hoverflies

Several early species of hoverfly are routinely only seen at sallow blossom, possibly because recorders only look for them at sallow catkins! Some of the *Eristalis* species over-winter as adults, and so can be on the wing very early in the year on warm, sunny days. However, they are at their most abundant in summer when they can be found on the umbels of Hogweed, which is prolific in shadier parts of the cemetery.

Surveying the Sallows

Vanna Bartlett

Criorhina rannunculi is a real spring gem and is often encountered foraging on sallows. It is uncommon in the cemetery, with a few records. I recorded one around Flowering Cherry in 2019. They are large hoverflies, being bumblebee mimics and do actually fly with an audible buzzing drone. They vary in colour with red-tailed and white-tailed forms. They are often high up in sallows, but I luckily found this one at the base of a moss-covered tree, so was able to get a photograph.

Male Parasyrphus punctulatus. Most records for this species are early in the year, with sallow being a favoured nectar source.

Male Syrphus torvus. There are several species in this genus of fairly large, boldly marked hoverflies. S. torvus is distinguished from the others by having hairy eyes, most noticeable in the males.

Other flies

Flies are on the wing on colder days than many other insects and sometimes they are all I find on sallows. Many of them are small and rather undistinguished, so I have yet to identify them (notably the many *Anthomyiidae* species). 'Nicer' specimens turn up through, if you take the time to look for them. ■

Does my bum look big in this? *Can one have a favourite fly? Yes, and this is mine: Bombylius major, the Dark-edged Bee Fly. A spring species that I often find in the garden feeding on Forget-me-not flowers and Primroses, but not averse to supping nectar from sallows either. It is a parasite on solitary bees, so may have been hanging about the pussy willows in the hope of following a bee back to her nest!*

Above: Myopa sp. A nice find for me, although these flies are parasites on bees - so I don't suppose they were pleased when it turned up!

Spotted in the Cemetery

Vanna Bartlett

Spot the ladybird!

The truly tiny *Nephus quadrimaculatus* snuggled between Ivy stems on a grave. An unexpected reward from my spring wandering!

Vanna's spring sorties into the cemetery were not just confined to visiting sallows...

All sorts of creatures emerge from winter hibernation on warm sunny days so on my way to the willows I check out sheltered spots for early bees and anything else that's up and about, ladybirds in particular. In this way I came across an ivy-covered gravestone that had several tiny ladybirds wandering over it. These diddy beetles, only a couple of millimetres long, are known as inconspicuous ladybirds. As well as being tiny, they tend not to be as brightly coloured as their bigger cousins, and under a hand lens can be seen to be covered in fine hairs.

The ones I found proved to be *Nephus quadrimaculatus*, one of the larger and commoner species. I have revisited it the gravestone several times and found these engaging little beetles again. It is obviously the perfect spot for them and shows just how important ivy is as a habitat for certain species. Not only does it supply a good place to overwinter and shelter from the elements, in the case of *Nephus quadrimaculatus* (and other ladybird species for that matter) it provides their food for they feed on scale insects which can be abundant on Ivy. ■

James Baldry d.1855

Jeremy Bartlett

The writing on the headstone is now quite weathered.
This photograph dates from 1933 and is taken, with permission, from George Plunkett's ***Photographs of old Norwich*** **website.**

Earlham Cemetery opened on opened on 6th March 1856 but the first burial in the Cemetery actually took place in December 1855.

Work on Earlham Cemetery began in 1855, on former farmland. Local builders Messrs Ling and Balls won the tender to build the chapels, lodges and gates and separate contracts were awarded for clearing the land and sowing grass seed, planting and laying out the roadways.

Work continued into the autumn and winter and was still not complete by the end of the year. Delays included storm damage and a wait for a crop of turnips to be dug up and removed. Pressure to work as fast as possible was intense.

Sadly, in December tragedy struck when one of Messrs Ling and Balls' workers, 32 year old James Baldry, fell while erecting scaffolding in one of the chapels. He died on 20th December 1855 of the injuries he had sustained and is buried in Section G, part of the unconsecrated (non-Church of England) part of the Cemetery.

Most of Section G now forms the Garden of Rest for the Crematorium which dates from 1963 – 64, and many headstones have been removed, but James Baldry's grave can still be found just to the west of the main drive by the Crematorium.

Araneus diadematus (the Garden (Cross) Spider), one of our most easily recognised species.

Cemetery Spiders

Vanna Bartlett

Spiders in Earlham Cemetery are very much under-recorded. This is mainly due to the fact that they are incredibly challenging to identify for the beginner. Even the hard-core naturalists in the group who happily key out tiny solitary bees or obscure leafminers baulk at the prospect of naming these eight-legged beasties.

I have long had spider identification guides gathering dust on my bookshelves but I have lately dusted them off and begun to tentatively look at spiders. The difficulty in identification arises from the need to have a mature adult spider to examine. Many is the time I've found a lovely spider only to find, as an immature, it simply cannot be identified to species. With an adult spider you need to examine the external sexual organs. In females this is the epigyne located on the underside of the abdomen and in males the palps (sensory organs that look like boxing gloves). This requires the spider to be confined in a specimen pot and looked at with a hand lens of x10 or greater. With larger species, and practice, this is possible in the field but is much easier if they can be taken home and looked at under a microscope (and then returned to where I found them).

After a couple of years looking at spiders in my garden and Earlham Cemetery (and with lots of help from the Facebook group UK Spiders) I can now at least name the family or even genus of many species that I find. A few are recognisable to species level in the field, like the Garden Spider (*Araneus diadematus*), Nurseryweb Spider (*Pisaura mirabilis*) and the crab spider *Misumena vatia*, all of which can be found in Earlham Cemetery.

We had a fledgling spider list generated from a visit by Pip Colyer, the spider recorder for Norfolk, back in July 2014 and I am gradually adding to it. Quite a few haven't been able to be identified to species yet but I am hopeful that further visits will furnish me with mature specimens that I can confirm to species as my experience and knowledge increases.

A comprehensive list of the species so far recorded can be found on the **website**. The following is a small selection of some of the more easily identifiable highlights to whet your appetite!

Getting a decent view of the (indecent!) underside of a female spider to see her epigye isn't always that straightforward...

A male Asagena phalerata showing off his 'boxing glove' palps. This species foes not occur in the Cemetery as far as I know, but I have seen it in the Brecks.

The beautiful web of an Amaurobius sp. on a conifer tree. These spiders are known as laceweb spiders, for obvious reasons. Their lacey webs are designed to snag insects in a similar way to velcro, rather than having the sticky droplets of an orb web spiders' snare. The spiders are nocturnal, so I haven't been able to see one as the cemetery is locked at night.

Cemetery Spiders

Vanna Bartlett

But first, a little introduction to spiders. Like insects, spiders are arthropods and are characterised by having a hard external skeleton, a segmented body and jointed feet or limbs. They are in a different class though, the Arachnida (which also includes harvestmen, mites and ticks and scorpions and pseudoscorpions) which are distinguished from insects by having a body that is divided into two segments (comprising the cephalothorax and abdomen) rather than three and having four pairs of legs instead of three. Arachnids also have simple eyes compared to the compound eyes of insects and do not undergo metamorphosis. The true spiders are in the order Araneae. Most British spiders have eight eyes but a few have only six.

A Philodromus sp with legs extended and abdomen raised ready to balloon off away from the prying camera lens, the strand of silk just visible leaving the spinnerets.

Spiders are unique in having spinnerets from where they extrude silk from their silk glands. They use their silk most obviously for making webs (although several species don't make webs), wrapping up prey, making protective sacs for their eggs and also for dispersing or migrating, known as ballooning. This is usually done by the smaller spiders, especially money spiders but also the juveniles of various species. The spider climbs to the top of a grass stem, straightens its legs as though standing on tip-toe and raises its abdomen. It then spins out a strand of silk which is caught by the breeze and lifts the spider up into the air.

Nursery Webs

Some spiders take surprising care of their young. The wolf spiders (Lycosidae) carry their egg sacs around with them, attached to their spinnerets, and also transport the newly hatched spiderlings. Several species sit guard over their egg sac until they die, some actually becoming the first meal of their offspring – the ultimate sacrifice.

Pisaura mirabilis is known as the Nursery Web Spider. They are very common in the cemetery and can be found at almost any time of year. Immatures bask openly on low vegetation in spring sunshine but quickly hide away as you approach. Females can sometimes be found carrying their pale white egg sacks around with them, held carefully in their jaws (chelicerae) or later sitting guard on top of their nursery web, waiting for the spiderlings to hatch.

Above: A female Pisaura mirabilis sitting guard over her newly hatched spiderlings.

Right: Pisaura mirabilis in a typical pose, basking on a leaf.

Cemetery Spiders

Vanna Bartlett

Crab Spiders

Rather than spinning a web, the crab spiders (Thomisidae) sit about on flowers (or other vegetation) waiting in ambush. When an insect lands on a flower to get pollen or nectar, the spider grabs them with its strong, spiney front legs and quickly sinks in its fangs to paralyse them with venom. Then simply sits and suck the life out of it!

Female Misumena vatia female with red 'go-faster' stripes.

Female Misumena vatia lurking on a bramble flower.

Misumena vatia is a very distinctive crab spider, the female especially so and easily recognised although they have two colour forms – yellow and white. In fact they are able to change colour to better fit in with their surroundings, although this can take several days. Mature females often have red stripes along the sides of the abdomen. The males are very different to the females but are still easy to identify.

Another crab spider that is readily identifiable, even in its immature stages, is *Diaea dorsata*.

Sometimes called the Green Crab Spider, this species is usually found on the foliage of trees, typically evergreens but also on oak and other deciduous trees where it is perfectly camouflaged.

Above: Diaea dorsata immature
Left: Diaea dorsata male

Cemetery Spiders

Vanna Bartlett

Above: A juvenile Araniella sp with the larva of a parasitic wasp attached to the front of its abdomen. This larva is an ectoparasite, remaining on the outside of its host, firmly latched on and gradually sucking the life out of it.

Orb Weavers

The family Araneidae are the orb-web spiders who construct elaborate webs in which to snare their prey and whose presence is therefore often quite conspicuous. They include the well-known Garden Spider (*Araneus diadematus*) pictured at the beginning of this article and some quite colourful species like the Cucumber Spiders (*Araniella* sp) and Araneus marmoreus as well as some extremely well camouflaged species like *Gibbaranea gibbosa*, one of my favourite species.

Araniella cucurbitina adult male on Buddleia.

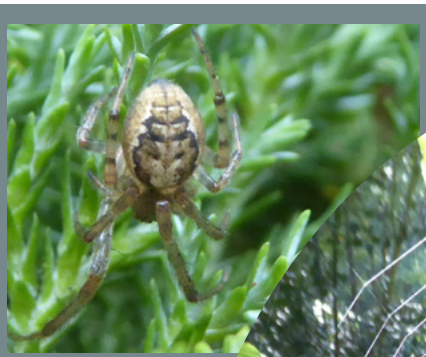
Above: Araneus marmoreus female.

The colourful Araneus marmoreus. This species occurs in two different colour forms; this one is var. pyramidatus.

The beautifully camouflaged Gibbaranea gibbosa.

Gibbaranea gibbosa

Below: Web of Zygiella sp. The 'missing sector' is obvious in the top right where the signal line is just visible, running out to the spider's retreat.



Above: Zygiella sp. These are known as Missing-sector Orb-weavers from their distinctive webs (right). Zygiella x-notata is a very common species found around houses and gardens (synanthropic).

Cemetery Spiders

Vanna Bartlett

Small is beautiful

There are lots of very small spiders out there. Everyone will be familiar with 'money spiders', the tiny black critters that end up in your hair or clothes on hot summer days when the air is full of strands of silk as these tiny aeronauts make their way in the world on fine strands of silk, carried off in the lightest of breezes.

But, there are lots of other mini species out there too. Many of these are in the Theridiidae order which does also include some large species, notably *Steatoda* or False Widows and *Enoplognatha* or Candy-striped Spiders. Most are far too small for me to be able to identify them, but one in particular gives itself away by producing a distinctive egg sac which I invariably find when I'm hunting for galls on the underside of oak leaves in late summer. This is *Paidiscura pallens.*

Paidiscura pallens, dwarfed by her spiky Sputnik-like egg sac on the underside of an oak leaf.

Inset: The delightful, and easily over-looked, Paidiscura pallens.

Clockwise from left: Enoplognatha sp - one of the larger, more obvious members of the Theridiidae; Anelosimus vittatus - small but distinctive; Theridion varians - one of several, very small species.

Cemetery Spiders

Vanna Bartlett

Jumpers

The Salticidae are known as jumping spiders and include some of my absolute favourite species. Rather than building a web, these little spiders actively seek out their prey and can be found on gravestones, trees and flowers, generally in warm sunny weather when there are plenty of flies and other insects about for them to prey upon. Jumpers are pretty distinctive, having short, stout powerful legs and large prominent eyes. They have exceptional eyesight and jump onto their prey to capture it.

Salticus scenicus, the well-known Zebra Spider, with fly prey on a gravestone. The large eyes of Salticus scenicus give it the ability to accurately pounce on its victims.

Heliophanus spiders are sometimes called sun-jumpers. They can be found sitting on flowers in sunshine, disappearing down into the vegetation when it is cloudy. I was delighted to find one in the cemetery and even more pleased when a couple turned up in the garden. Unfortunately, they were all juveniles so I cannot say for certain which species they were, only narrowing it down to either *H. cupreus* or *H. flavipes.*

Heliophanus sp.

Juvenile Heliophanus sp on Ragwort.

Cemetery Spiders

Vanna Bartlett

Pirates

As has been seen, not all spiders build webs; many hunt down their prey, while others sit and wait for it to come to them. A small family of spiders have taken a different tack altogether. These are known as pirate spiders and are in the family Mimetidae, although the German name of Spinnenfresser (spider eaters) is perhaps more appropriate, for these little dears invade the webs of other spiders and eat their occupants.

There are four species in Britain, all in the genus Ero. Although small, they are very distinctive with raised bumps or tubercles on their abdomens. Two species have four tubercles while the others have only two. They carefully enter another spider's web and pluck at the silken strands, pretending to be prey themselves or even a potential mate. When the web's occupier comes to investigate the 'pirate' quickly bites it, injecting venom to paralyse it and then sucks out its vital fluids, usually through a hole made in one of its legs. Ero spiders are easily overlooked but their distinctive egg sac often gives away their presence.

An Ero egg sac hanging suspended from its silken strand, tucked into the corner of the carving on a gravestone.

Sub-adult male Ero aphana, on Ivy bush. Inside: photographed down a microscope.

With over 650 species on the British list, I have barely scratched the surface when it comes to recording spiders in the cemetery. Many species are rare or have a very restricted distribution but there are obviously a lot more to discover in the cemetery!

Lastly, one to look out for – *Nigma walckenaeria*. These beautiful little spiders (known by their fans as green goblins!) have recently been found in Norfolk. I discovered them along the cycle path at Sweet Briar marshes. They are generally found on evergreen bushes, Laurel being particularly favoured but I found mine on ivy. They female sits under a 'tent' of silk spun across the centre of a leaf. It is this distinctive web that usually gives away the presence of the spider. Hopefully they will find their way to the cemetery soon. ■

Nigma walckenaeria female