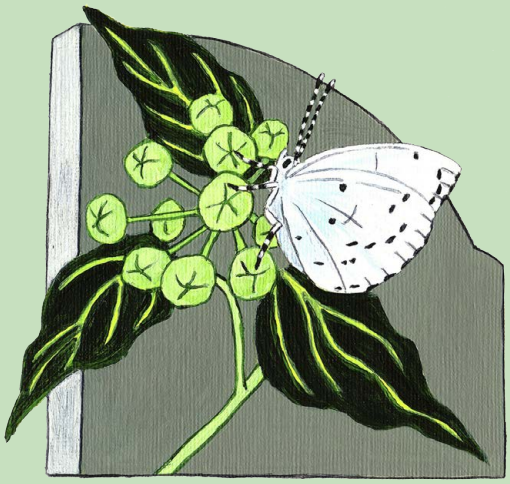


FRIENDS OF
EARLHAM CEMETERY

The newsletter for Friends of Earlham Cemetery Issue 5

Contents

All walks start by the cemetery office and gates at the Earlham Road entrance. Indoor meetings are held in the small room at the Belvedere Centre. The following dates have been arranged:

Sunday 10 April (2pm)
Sunday 15 May (9am)
Saturday 11 June (2pm)
Saturday 23 July (2pm)
Sunday 14 August (2pm)
Sunday 11 September (2pm)

The header image "Hornet" by © Sandra Lockwood
Logo design © Vanna Bartlett.
Layout design and editorial by Sandra Lockwood.

I hope everyone had a good break over winter and started the new year reasonably sober. Apologies for the lack of a second newsletter in 2015 I'm afraid family health problems and work took priority.

Friends of Earlham Cemetery's first meeting of the year on January 3rd saw a few brave members conduct the Botanical Society of Britain and Ireland New Year's plant hunt. It was a disgustingly wet day even for winter but there were a surprisingly good number of flowering plants to add credence to climate change. Ian will be sending off the information to the BSBI for analysis

This autumn and winter have shown themselves to be particularly wet. I can vouch for that as I come from Yorkshire and get on-the-spot updates from my family i.e. everyone up north is suffering from flooding problems. My sympathies go out to them. We will have to see in the next few months how it affects our various animal and plant populations and to see if they can weather the storm - literally. However, it's not all doom and gloom especially for Norfolk as we live in the driest county in Britain, although there have been times recently when one began to wonder whether that was still the case!

The cemetery species list carries on growing, check out Stuart's article on "The return of the lost hoverfly" and Ian's piece on the various wild flowers he's found. Their passion and dedication is an inspiration. Vannas article on vespers (not the scooter) should make everyone look at wasps in a different way and Jeremy and Jane's articles also make for interesting reading. A big thank you, as always, to all the members who have contributed articles to this time.

I hope 2016 progresses into a good year for increasing the cemetery species lists and wildlife watching regardless of the weather and that everyone manages to get out and enjoy at least one of the cemetery walks.

Sandy

Please send all submissions for inclusion in the next newsletter to sj.lockwood@ntlworld.com. Please supply photographs as 300dpi jpegs if possible.

New Insects in the Cemetery - *Stuart Paston*

Additions to the cemetery insect lists, 2015

Hoverflies

Rhingia campestris

On 24th April I found a male of this species visiting bluebell and primrose flowers in the area alongside the Dereham Road entrance track. I was alerted to its possible presence in the cemetery by an observation of a male visiting bluebell flowers in nearby Sycamore Crescent Wood earlier on the same day.

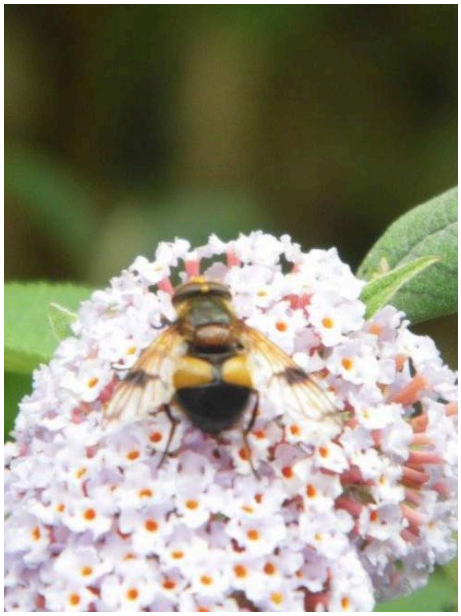
The long snout characteristic of this genus allows *Rhingia campestris* to visit flowers with deep tubes such as bluebell, bugle and red campion.

Although this is a very distinctive species it is quite possible that one or two individuals could escape detection amid a large expanse of bluebells such as occur in the cemetery so there is a likelihood it has been present on occasions in the past but overlooked. The larvae usually develop in cow dung but the species occurs in areas where there are no cattle and the larvae can develop in silage and probably use other types of dung.

The only other British Rhingia species, *rostrata*, is a far more local hoverfly in the UK but has been found for the first time in Norfolk this year at Swanton Novers Great Wood. It is more closely associated with woodland than *campestris*.

Volucella inflata

On 23rd July James Emerson found and photographed a male species of *Volucella inflata* on buddleia alongside the road junction near South Lodge. A case of being in the right place at the right time for James to add the fifth Volucella to the cemetery list. Prior to 2012 this would have been a very significant find as it was rarely recorded in Norfolk but since then *inflata* has markedly increased its range. Sites where it has previously been recorded to date are Acle, Ashwellthorpe, Beeston, Holy Country Park, North Creake, Sheringham



Volucella inflata *on Buddleia.© James Emerson*

Park, Stoke Holy Cross, Strumpshaw (where it is known to breed), Swanton Novers, Taverham and Weybourne.

The larvae develop in sap runs; other hoverflies with this association have been recorded in the cemetery so it is possible that *inflata* could breed here too.

Other flies

Gymnocheta viridis

On 15th April I found a male of this Tachinid fly on a sycamore trunk at the northern edge of the war graves lawn near Dereham Road.

Tachinidae is a family of bristly parasitic flies. The larvae of most species attack larvae of butterflies and moths, predominantly the latter, but some species specialise in parasitizing other insects such as beetles, bugs and sawfly larvae.

In the case of *viridis* there are European host records for species of Noctuid moths that are stem borers in grasses or sedges. It resembles a large “greenbottle” and can often be found resting on sunlit trunks in spring. It has undoubtedly been overlooked in the past.

Moths

Psychoides filicivora

On 24th May, during one of our monthly walks, James Emerson photographed and subsequently identified an adult of this small moth on male fern in the Memorial Garden. Conditions during the afternoon walk were not conducive to much insect activity with spells of rain, heavy

Psychoides filicivora © *James Emerson*

at times so it was testament to his sharp eye and persistence that a new cemetery record materialised from an unpromising day. The larvae also feed on soft shield-fern and harts-tongue and it may have been introduced into the UK from abroad on imported ferns.

Stuart Paston

See our website’s resources page for the lists of hoverflies, other flies and moths recorded in the cemetery.

Return of the "Lost Hoverfly" - *Stuart Paston*

On 4th June last year, after an absence of sightings in the cemetery since 2004, I found a male of the attractive hoverfly *Leucozona lucorum* hovering over cow parsley in an area flanking Bowthorpe Road not far from the Dereham Road gate.

Quite why it disappeared for such a length of time is hard to determine but I'd thought it to be likely to be habitat deterioration owing to loss of floral diversity.

On the other hand it may have been a population crash caused by weather conditions impacting on larval and puparia survival. It disappeared from my garden at the same time although I had no proof it was breeding.

Whatever the cause, it is clearly significant that it has now reappeared in the same small area where it had previously occurred with regularity – it has never been observed elsewhere in the cemetery. I think aspect must be a major reason for its preference for this area rather than any link to a particular floral source. It is one of my favourite hoverflies so it's good to see it back.

It was also noticed in nearby Woodlands Park this year.

Stuart Paston

Our Royal Mail First Day Cover

On 18th August 2015 the Royal Mail produced a First Day Cover featuring a set of stamps with pictures of rare British bees:

The different stamps in the set are listed as follows:

First Class – the great yellow bumble bee

Second Class – the scabious bee

£1.00 – the northern colletes bee

£1.33 – the bilberry bumble bee

£1.52 – the large mason bee

£2.25 – the potter flower bee.

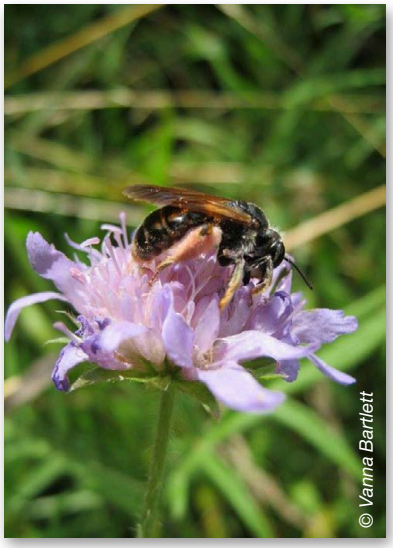
The scabious bee (a.k.a. scabious mining bee, *Andrena hattorfiana*) occurs in Earlham Cemetery, so Ian Senior came up with the idea of producing a special First Day Cover to raise funds for our group.

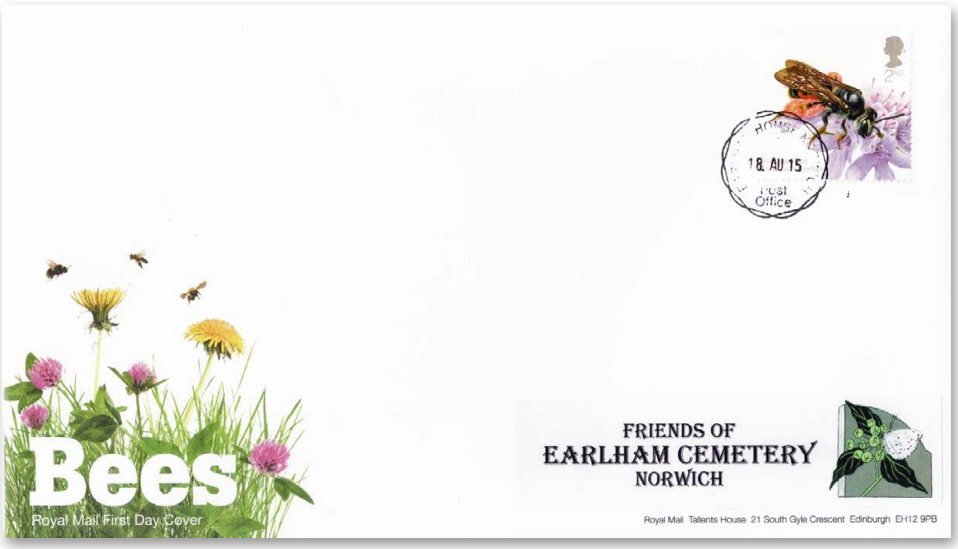
We have produced just four First Day Covers with just the scabious bee stamp, postmarked at Earlham House Post Office on 18th August 2015 and labelled with the Friends of Earlham Cemetery logo.

These are now for sale as fund raising items, with priority going to Friends of Earlham Cemetery members. The suggested minimum donation is £5.

Contact me at friendsofearlhamcemetery@yahoo.co.uk if you'd like to buy one.

Jeremy Bartlett.





Scabious bee *Andrena hattorfiana* and our first day cover with the second class stamp and our logo

Grey Squirrels - Friend or Foe? - *Jane Bouttell*

Grey squirrel foraging.© Jane Bouttell

I'm watching Patch, the squirrel - my rogue neighbour from the cemetery. I call him 'Patch' because of a white mark on his forehead. He has come in search of nuts, seeds and fat balls put out for the small birds. I marvel at his boldness and persistence. He has wrecked several feeders, trying to get at the treats inside.

Half the fun of watching him is seeing how he will cope with my latest ruse. I've tried hanging food from the washing line: he simply swung along upside-down, going hand over hand to the dangling coconut. I've hung feeders from lengths of fishing line. He didn't like it at all so he just took a flying leap from the nearby shrubs. Food placed inside a cage made of two hanging baskets seems a better solution. His little limbs can't reach but the resident robins and tits hop in and out with alacrity while he looks on enviously.

Possible squirrel damage to nestbox.© Jane Bouttell

It's not that I dislike grey squirrels but he's quite podgy and clearly doesn't need help to survive. These animals are great little opportunists and have, in some parts, become tame enough to hand feed while squirrel haters object indignantly. They drive out the reds. They ring bark young trees. They eat birds' eggs from out of the nests. They're just tree rats, aren't they?

Most of us know that grey squirrels were brought here from America between the 18th and 19th centuries and that they escaped or were released into the wild where they have thrived. Many of us now know that they carry a virus which is fatal to the reds but to which they are immune. As to the 'rat' designation, yes, they are rodents and so are related. The word 'rodent' means 'gnawer.' Their front teeth are constantly growing throughout their lives and so have to be kept in trim. Like rats, they will use any hard material for this purpose - even lead flashing, (as Thea can attest).

It's true that they will eat eggs and nestlings. Many a bird box has been attacked - some say by crows or woodpeckers but it's just as likely to have been a squirrel. I've seen the evidence, myself - in the cemetery. I've also seen untidy collections of twigs wedged into branches at the western end. Crows nests or winter dreys? They could equally well be either. Both species are not above forcefully taking over each others' constructions and adapting them for their own purposes.

Some say grey squirrel numbers should be kept down. And indeed, they are prolific breeders - two litters a year of two or three kits. These will be born in a nursery drey, usually in a sought after hollow in a tree where they are hidden and protected, although not from all threats. Some female squirrels have resorted to cannibalising each other's young when protein is in short supply.

Other threats to the species include cats, dogs, foxes (greys will spend more time on the ground than reds) and possibly buzzards.

Dreys or nests? © Jane Bouttell

Personally, I'd prefer to keep at least a few just for the pleasure of observing their behaviour. Tantalisingly little is known about what they get up to in the tops of the trees but I have regularly seen them in the cemetery, sitting quietly in the highest branches of an old ash tree on a winter's morning, surprisingly in the company of crows, magpies and pigeons. Have they all called a truce while they digest their breakfasts or are they soaking up the warmth of the rising sun?

I was puzzled by the numerous pock marks under some trees in the cemetery, particularly the conifers. These turned out to be burial sites for pine cones against a rainy

Grey squirrel in lime tree © Sandy lockwood

Squirrel cache © Jane Bouttell

(or a snowy) day in winter. Greys do not hibernate as deeply as reds and so need regular sustenance. In respect of this habit, they are important factors in woodland maintenance since they often forget where the caches are, resulting in new tree growth.

Other problems can be mitigated if not overcome. Predation of ground nesting birds can be discouraged by planting or retaining dense ground cover and shrubbery. Young trees can be protected by plastic squirrel guards. Bird feeders may be squirrel proofed in the ways suggested above.

And if they do get through, sit back and enjoy the show. I once saw a squirrel, having winkled a fat ball from its tubular holder, sitting on top of the rose arch to enjoy its prize - sadly not for long. The squirrel dropped it, whereupon a fox darted out from the shrubbery to eat the fat ball on the spot. He, however, did not retain the morsel. An observant magpie hopped onto the ground and began vigorously pecking at the fox's back legs until it hastily retreated, leaving the magpie as sole victor. Like them or loathe them, squirrels, and other wildlife, are a great source of entertainment.

Jane Bouttell

A Thousand Years of Burials - *Jeremy Bartlett*

St. Giles Church © Jeremy Bartlett

Norwich is known for its large number of pre-reformation churches and the city has more than London, York and Bristol combined. In mediaeval times there were fifty-seven parish churches within Norwich's city walls [1], as well as several more in the hamlets outside, such as St. Mary's at Earlham and St. Bartholomew's at Heigham.

Today thirty-two of these churches survive in the city centre [2], although many are no longer used for worship and one, St. Benedict's, survives as just a tower following a wartime air raid in 1942 [3] .

The churchyards of these churches were used as burial grounds for around a thousand years. Dead bodies decompose but the level of soil in churchyards gradually rises as more and more bodies are buried there until there is no space left for burials.

This problem occurred in many British cities, and became more serious as urban populations grew rapidly during the nineteenth century and infectious diseases such as smallpox and cholera added to the numbers of dead.

In 1843 Edwin Chadwick estimated that London's graveyards contained up to 11,000 buried bodies per acre [4]. In contrast, a modern cemetery will contain no more than 750 – 1,000 graves per acre [5].

In Norwich, as early as 1671 the diarist John Evelyn noticed that most churchyards were running out of space for burials. They "*were filled up with earth or rather the congestion of dead bodies one upon another, for want of earth etc., to the very top of the walls, and many above the walls, so as the Churches seemed to be built in pits*" [6].

Bodies were crammed in on top of each other and eventually had to be buried very close to the surface. When William Lee, a government health inspector, visited Norwich in May 1850 he noted that the graveyards were full and scattered with fragments of bones [7].

Lee also observed that the city's water supply was "*bad in quality and bad in everything that should constitute a water supply*". Five of Norwich's ten parish pumps were situated next to churchyards [7] and the old pump at St. John Maddermarket is actually at the bottom of the churchyard wall. Norwich's first public analyst examined water from this pump and described it as "*almost pure essence of churchyard*". The water had a bright sparkling quality, reportedly due to its high levels of nitrates from decaying bodies [8].

Today, if you stand at the bottom of St. John Maddermarket churchyard you will see that the pump is still there and that the level of the churchyard is still much higher than the road. (In contrast, St. Peter Mancroft churchyard is lower than the church, because in the 1880s churchyard soil was removed and spread on the consecrated sections of Earlham Cemetery [9].)

Public Health legislation was needed urgently and a series of Acts were passed from the late 1840s onwards to try to prevent diseases, starting with the "Towns Improvement Clauses Act" in 1847 and 1848's "Nuisances Removal and Diseases Prevention Act".

But something had to be done about burials too.

In July 1852 a burial act was passed for London, "*An Act to amend the Laws concerning the Burial of the Dead in the Metropolis*" [10]. This was followed by "*An Act to amend the Laws concerning the Burial of the Dead in England beyond the Limits of the Metropolis, and to amend the Act concerning the Burial of the Dead in the Metropolis*", in August 1853 [11].

The 1853 Burial Act incorporated many of the provisions of the 1852 Burial Act but applied them to England outside London. Key points included granting the powers to set up local burial boards and for these boards to borrow money, provide burial grounds, lay them out and charge fees for burial plots. The boards had to hold monthly meetings and to keep a record of their minutes as well as sets of accounts. It is thanks to these latter provisions that we have a full record of the minutes of the Norwich Burial Board, in a series of ledgers that are now in the Norfolk Record Office.

Contracts valued over £100, such as those for laying out the cemetery grounds, had to be advertised by tender in local newspapers. This means that a modern researcher can look these up in newspaper archives.

There were no powers for the compulsory purchase of land for cemetery use and land could not be used for burial if it was nearer than 200 yards of any dwelling house, unless the owner, lessee and occupier of the house had given written permission. The 1855 Burial Act "*An Act further to amend the Laws concerning the Burial of the Dead in England*" [12], passed in August 1855, reduced this distance to 100 yards.

St. Peter Mancroft © Jeremy Bartlett

Since compulsory purchase couldn't be used, burial boards were reliant on local landowners offering land for sale. The 100 yards rule also meant that not all sites that were offered were suitable. This led to the rejection of a couple of potential sites for a cemetery in Norwich.

The 1855 Act also made it lawful for burial boards to let any land that they owned that was not currently required for burials, provided it had not been consecrated. The board would need to give six months' notice to tenants when the land was needed for burials. When Earlham Cemetery was first opened, 23 acres were used for burials and the remaining 11 acres were leased out for agricultural use [9].

The 1853 Burial Act stated that it was not lawful to bury the dead in any church, chapel, churchyard or burial place where an *Order in Council for the Discontinuance of Burials* had been received.

In April 1854 the Mayor of Norwich received such an order from the Home Secretary, stating that all burials in Norwich churchyards should be discontinued from 1st February 1855.

In August 1854 Norwich Town Council formally petitioned the Secretary of State for powers to provide burial grounds and this led to an "*Order in Council vesting powers in Norwich City Council for providing burial places in the city and county of Norwich under the Burial Act*", dated 14th November 1854 [13].

A Norwich Burial Board was set up to oversee the setting up and running of new cemeteries in Norwich and had its first meeting in July 1854 [9]. This led to the creation of Earlham Cemetery, which opened in 1856. The rest, as the saying goes, is history [14]

1. Noel Spencer & Arnold Kent (revised by Alec Court), “The Old Churches of Norwich”, Jarrold Publishing, 1990.

2. The Norwich Historic Churches Trust website, http://www.norwich-churches.org/churches/churches.shtm, has details of all these churches. Churches outside the city centre are listed on Simon Knott’s Norfolk Churches website, http://www.norfolkchurches.co.uk/mainpage.htm.

3. The Norwich Historic Churches Trust website – St. Benedict’s church: http://www.norwich-churches.org/St%20Benedicts/home.shtm

4. Edwin Chadwick, “Report on the Sanitary Condition of the Labouring Population of Great Britain. A Supplementary Report on the results of a Special Inquiry into The Practice of Internment in Towns”. (1843), p. 135.

5. Public Health & Victorian Cemetery Reform - http://thechirurgeonsapprentice.com/2014/06/17/public-health-victorian-cemetery-reform/.

6. John Evelyn, “The Diary of John Evelyn” p335. Routledge, 1996.
Available online in Google Books at https://books.google.co.uk/books?id=Ih1BtTxFBpAC&lpg=PA335&ots=Bs0fTNuMN0&dq=John%20Evelyn%20in%20October%201871&pg=PA335#v=onepage&q=John%20Evelyn%20in%20October%201871&f=false

7. Frank Meeres, “The Story of Norwich” p187. Phillimore & Co. Ltd, 2011.

8. Rosary Cemetery – Norwich HEART: http://www.heritagecity.org/research-centre/social-innovation/rosary-cemetery.htm.

9. Norwich Burial Board Minutes, N/TC 5... (1854 - 1929), Norfolk Record Office.

10. http://www.legislation.gov.uk/ukpga/Vict/15-16/85

11. http://www.legislation.gov.uk/ukpga/Vict/16-17/134

12. http://www.legislation.gov.uk/ukpga/Vict/18-19/128

13. Order in Council vesting powers in Norwich City Council for providing burial places in the city and county of Norwich under the Burial Act. 14th November 1854. N/TC 48/2, Norfolk Record Office.

14. See “A Short History of Earlham Cemetery, Norwich” on the Friends of Earlham Cemetery website at http://www.friendsofearlhamcemetery.co.uk/A_Short_History_of_Earlham_Cemetery.pdf.

Vespers - by *Vanna Bartlett*

Common wasp © Vanna Bartlett

Introduction

Vespidae is the family name of insects that comprise the social, potter and mason wasps and there are around 30 species in Britain.

Of the social wasps there are 9 species commonly recorded, all but one of which can be found in Norfolk. However, in Earlham Cemetery you will only definitely come across the common wasp (*Vespula vulgaris*) and tree wasp (*Dolichovespula sylvestris*) but it is worth checking for the German wasp (*Vespula germanica*) as it is equally common. In the past I have seen the occasional hornet (*Vespa crabro*) as well but not very often. As they tend to nest in tree cavities and use rotten wood for the pulp to construct their nests, I don't think there is much suitable habitat for them. This is a common problem for invertebrates that rely on decaying wood for food or shelter as we live in an increasingly tidy world where old trees are cut down before they can start rotting and collapsing. One of the greatest tragedies of the 1987 gales was that so much felled timber was cleared away that could have been left to create new habitats.

The life of the social wasps is very like that of the bumble bees and honey bees, which belong to the same order, the *Hymenoptera* which also includes ants and is the largest order of insects in Britain with getting on for 8000 species.

Life cycle

In spring the queen wasp emerges from hibernation and builds the foundations of the nest, a small papery globe about the size of a golf ball, patiently made from chewed up wood mixed with saliva to form a pulp which is then layered up like papier mache. Small cells are constructed inside and a single egg is laid in each one. The queen feeds the larvae on regurgitated insects that she herself has caught and eaten.

Once the first few larvae have grown and then emerged as female worker wasps they take over the construction and enlargement of the nest along with the provisioning of food in the form of insects for the growing larvae while the queen spends her time egg laying. Like honeybees, the wasp's nest is made up of combs of six-sided cells but whereas the bee's combs are made in vertical sections, those of the wasp are in horizontal layers with the open ends of the cells at the bottom.

The queen 'glues' an egg into each cell and when the larva hatches it relies on wedging itself against the walls of its cell to stay in place while it is fed by the female worker wasps. Hanging upside down in its cell provides some housekeeping problems for the colony as the developing larva has nowhere to excrete its waste products. It gets round this by retaining the waste in its intestine, finally expelling it when it sheds its last larval skin before metamorphosing into an adult wasp which, upon emerging, cuts its way out of the top of the cell. As the cells

are reused with further eggs being laid in them, the waste matter still needs to be removed but the wasps don't bother doing it. Instead, they allow a hoverfly to come into the nest and lay eggs and the resulting larva actually eat the waste matter left over in the empty cells.

In the case of the common wasp this service is carried out by the hoverfly *Volucella inanis* and in the German wasp *Volucella pellucens*. In late summer some of the female workers lay unfertilised eggs that hatch and develop into male wasps. These are often seen on flowers, especially umbellifers where they can easily be recognised by their considerably longer antennae (they also have seven visible abdominal segments as opposed to six in the females and they don't possess a sting). The male wasps mate with the new queens and as autumn progresses the workers, original queen and the males die off, leaving the new queens to survive the winter to start new colonies in the spring.

Hoverfly Volucella inanis © *Jeremy Bartlett*

Nests

The nest of the tree wasp is invariably constructed, as you would expect, hanging suspended from the branch of a tree where its beautifully crafted construction can be fully appreciated. The common and German wasps usually build underground in old mouse nests but also sometimes hanging from a rafter in a roof space, porch or outbuilding.

Wasp nest casing © Jeremy Bartlett

With a free hanging nest it is quite simple for the wasps to add to the structure and enlarge it to accommodate the growing colony. In the case of a subterranean nest, once the original void has been filled the wasps have to excavate the hole before adding layers to the nest. As soil is removed to enlarge the hole, larger stones will drop to the floor of the hole and will be removed if possible - studies of such nests have shown that an individual wasp can carry small stones up to four times their weight. As well as adding new material to the nest, the workers will rearrange its internal structure by chewing up bits of it and reusing the material.

If a nest is damaged it is surprising how quickly repairs can be carried out. In one documented case, a Norwegian wasp nest about the size of a cricket ball was removed from a gooseberry bush and relocated to another site and hung on the branch of a pear tree. In moving the nest, most of the active workers had been driven off and all that remained were some newly emerged workers and the queen. In its new position, the nest could only be aligned so that the entrance hole was on the side rather than the bottom and the three combs inside were also on their side as could be seen through a rent in the cover of the nest. Overnight, the wasps not only repaired the tear but also sealed up the original entrance and created a new one at the base of the nest. Within a few days they had further secured the nest to its new branch and substantially altered and extended the covering roof and peering inside the new opening it was possible to see that the lowermost comb had been re-orientated into a horizontal position. When the nest was abandoned at the end of autumn it was carefully cut open to reveal that the other two original combs had also been repositioned.

Predators and prey

By far and away the wasp's biggest predator is mankind. In spring emergent queens are readily squashed to prevent them starting a colony. The elaborate and highly visible nests of tree wasps if found in the garden are destroyed and any embryonic nests found hanging in outhouses or roof spaces are likewise removed. All this because, unlike bees that very rarely sting, the wasps have a reputation for sting first ask questions later. Unfortunately this is often true but I would like to offer some defence.

If a wasp nest is disturbed, damaged or destroyed then obviously wasps are going to defend it and sting anyone in the vicinity. A lot of wasp stings occur in late summer and this is when the wasps start feasting on sweet sticky fruits which when over-ripe start fermenting, resulting in tipsy wasps.

People are regularly outside at this time of year having picnics and barbecues or sitting outside pubs where wasps are attracted to the dregs of alcoholic and sugary drinks. This close proximity to drunken wasps that get swatted out of the way leads to aggression on both sides that doesn't tend to end well for either party. I've found sharing cream teas in the sun is best achieved by leaving a bit of jam on a plate and putting it to one side, preferably onto an empty nearby table...

For all the bother that wasps can cause (especially to those who are allergic to them) I still champion them because, like a lot of unlikely insects, they are very important pollinators and with the massive documented decline in bees we need all our pollinators.

Another seemingly little-known aspect of the wasp is its role as chief pest controller. Anyone who grows their own fruit and veg will be well aware of the overwhelming number of caterpillars that regularly chomp their way through your best brassica crops. But they seem completely unaware of the huge number of said caterpillars and other pest insects that wasps will catch and kill and feed to their expanding colony.

A wasp colony near the allotment garden is better than any arsenal of insecticides which indiscriminately take out the goodies like ladybirds and lacewings as well as the perceived baddies.

We hopefully get to live many summers, most of them wasp sting free whereas the poor old wasps only get one so maybe we should forgive them and let them have their moment in the sun.

Spiders will eat quite a number of wasps – often a queen will seek a shed to hibernate in only to be caught in a silken snare, immobilised and wrapped up to be feasted on later...

A very interesting predator is the wasp nest beetle (*Metoecus paradoxus*). It is seldom encountered, is local in distribution (ie restricted) and is probably declining. It is an odd looking beetle, the only one of its family to occur in Britain, it has feathery antennae and slender, pointed wing cases which gives it the appearance more of a fly than a beetle. Its main host is the common wasp. It lays its eggs on wood close to the wasp nest and these hatch into tiny larvae which hitch a ride on a wasp to get into the nest. Once inside, the beetle larva finds a cell with an almost fully developed wasp larva, attaches itself to the back of the larva's head and proceeds to feed until it is almost ten times its original size.

The beetle larva moults then continues feeding, this time from the underside of the still living wasp larva. It moults a second time and finishes off the wasp larva before pupating and then emerging as a beetle. All this takes place in about a week

Hornet Vespa crabro © *Vanna Bartlett*

Identification

All wasps pretty much look the same but they can be separated by close examination of specific features. Firstly those in the genus *Dolichovespula* are distinguished from the genus *Vespula* by having yellow on the front of the basal segment (known as the scape) of the antenna. Then the face patterns of each species differ sufficiently to allow identification, although some species do show variation and thoracic and abdominal markings should also be taken into account.

Of the three species you might encounter in the cemetery, the tree wasp is the only *Dolichovespula* so it will have yellow at the base of its antennae. It also has a small single dot in the centre of its face. The common and German wasps are both *Vespula* so have completely black antennae. The common's face is marked in the centre by a thick black vertical line that broadens into an anchor shape – I personally think it looks like the nose guard on a Norman helmet. In contrast, the German's face is noticeably more yellow with a large black central dot, almost squarish in shape, with two tiny dots below and slightly to the side.

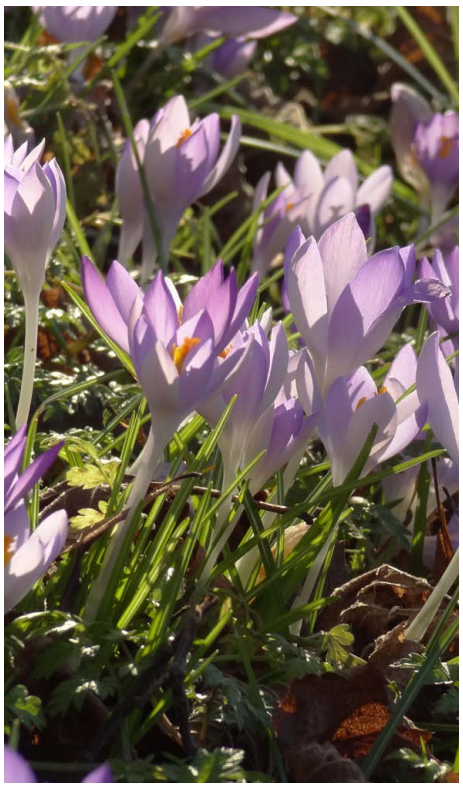
The hornet (genus *Vespa*) is the one species that can readily be identified because of its sheer size (almost twice that of the other wasps) and also its colour – brown and yellow-orange rather than crisp black and yellow. Having said that, the hoverfly *Volucella zonaria* is a superb hornet mimic and is seen in the cemetery in most years and is probably much more likely to be encountered. Although they are fearsome looking beasts, hornets very seldom sting people, they have to really be severely provoked into doing so. Even when a nest has been damaged they are often more intent in securing and repairing it than in seeking retribution.

To discover the other wasp species that can be found in Britain and to learn more about them visit the Bees, Wasps & Ants Recording Society website and its species gallery and downloadable information sheets.

Vanna Bartlett

Wild Flowers in the Main Cemetery - *Ian Senior*

We often say that mowing is a menace for a number of reasons from removing pollen and nectar sources for insects, especially bumble bees, to looking an unsightly mess after the longer grass has been cut. It also means that nutrients are returned to the soil which then encourages rough grasses to take over from the more delicate, fine leaved species that we should be encouraging. However, there is another reason that the mower is a problem, it helps to hide what species are growing in the cemetery. In some ways this can be considered a 'good thing', especially if the species are rare but able to cope with constant mowing. However, it also makes our task in understanding how much biodiversity is present in the cemetery much more of a challenge. Last year mowing commenced quite early in the season with the first cut occurring in early to mid-April. Another cut commenced in early June.



Crocuses © Ian Senior

Even though the mowers were active, last spring was very interesting on the wild flower front. The season started with the spring bulbs from January through to mid-May with our usual succession of snowdrops to bluebells. Most bulbs seemed to flower well but where the Spanish bluebells were mown down in their prime last year, numbers have been greatly reduced. The area originally containing these plants has in the space of a single year become over run with cow parsley, making it hard to spot bluebells though its dense canopy. It's possible that the few remaining bulbs in this area will disappear altogether due to competition with the taller species. This may have a more positive affect though, as the few remaining English bluebells in the locality will not have as much chance to outcross with their hybrid and Spanish cousins, helping to retain our important but small English population. We looked at the different types of bluebell in the cemetery and how to tell them apart on our May walk.

Several new species of plant were discovered in the main cemetery during May along with other species that seem to have become a little more numerous. These new finds and unusual species were displayed to all who attended the May walk. The first of these was rosy garlic (*Allium roseum*). This species has become naturalised in the south of the country. It's now been discovered in three localities in the cemetery, all in the main section. If you break off a small leaf piece it smells strongly of garlic. The flowers themselves are arranged in a typical allium umbel and consist of a number of individual rosy coloured flowers. Over the last few years this species has certainly increased in number at its main cemetery site. As usual though the plants were mown down shortly after flowering.

The first new species that has been discovered is actually a hybrid between two wild flowers from the Geum family. Geums growing commercially have been bred into large, showy plants whereas the wild ones are far more delicate. In the UK we have two native species, the water aven (*Geum rivale*) and the wood aven (*Geum urbanum*). When these grow in close proximity they have the ability to produce hybrid offspring. The hybrid plants (*Geum x intermedia*) have features intermediate between the two parents. The cemetery

*Geum (*Geum x intermedia*) © Ian Senior*

plants have the arching flower stalk characteristic of the water aven rather than the more open structure associated with wood avens. The flowers have the bell shape of the water aven but have yellow petals from the wood avens. Both parents are known to grow in the cemetery. Water avens are growing around the pond, whereas the wood avens like the more enclosed, drier habitat in the woody areas. They can also be seen in more open areas too. The hybrids were growing next to a garden and it's most likely that this is actually the source of the water aven pollen as I understand that the owners do grow water avens there.

*Wavey Bittercress (*Cardamine flexuosa*) © Ian Senior*

The second discovery was found close by the hybrid avens. This second species is the wavy bittercress (*Cardamine flexuosa*). It's a common plant in the UK being distributed from our south coast to the northern reaches of Scotland. It likes moist, shady areas which is exactly where it was growing. The plant is very similar to its relative, hairy bittercress (*Cardamine hirsuta*) a common garden weed around here, but can be distinguished by counting the number of stamens. It has 6 while its relative has just 4. Sadly the mowers had been out by the time of the May walk and nothing remained to show attendees.

Throughout the summer months new and exciting plants were found growing in the cemetery. These new plants have been found on either side of the cemetery. They include:

1. Common centuary (*Centaurium erythraea*)
2. Gorse (*Ulex* spp)
3. Bird's foot (*Ornithopus perpusillus*)
4. Harebell (*Campanula rotundifolia*)
5. Common cudweed (*Filago vulgaris*)
6. Treacle-mustard (*Erysimum cheiranthoides*)
7. Corn spurrey (*Spergula arvensis*)

These plants were found in specialist environments e.g. particularly dry conditions for some or ephemeral areas where soils were recently disturbed bringing the seed back up and letting them germinate again for others.

We also re-found a number of plants not seen for some time. These included:

8. Pignut (*Conopodium majus*)
9. Spring sedge (*Carex caryophyllea*)
10. Subterranean clover (*Trifolium subterraneum*)
11. Hare's foot clover (*Trifolium arvense*)
12. Smooth tare (*Vicia tetrasperma*)

I will go into more detail about both new and re-found plants in a subsequent newsletter.

Norfolk Fungi Group visit

During the middle of May there was a return visit for the Norfolk Fungi Group to look around the cemetery during the spring. They were hoping to find some spring specialist fungi that would be missed during their last visit in November 2013. Just four brave souls, including your author, met up on a Saturday morning in May. We set off into the woody areas to the east of the main gates in the hope of finding a few fungi. The proceeding few weeks had been quite dry and I hadn't noted many fungi on my own travels around the grounds but did know of a few spots. Things were not looking too hopeful!

The contingent of mycologists present had great interest in the tiny fungi found growing on plants, the powdery mildews and rusts that cause plant disease. It was these fungi that we were most likely to encounter and that proved to be the case. At our first port of call, we immediately noted the presence of a powdery mildew (*Erysiphe heraclei*) infesting cow parsley. It has been noted in previous years too. Our first new fungal species of the day was found nearby growing on bluebell leaves. It was the rust Uromyces muscari. It produces an oval lesion up to an inch in diameter. Several plants in the locality were found with this pathogen growing on them. The mature stage of a slime mould (*Lycogala* spp.) was found on some fallen branches but little else of note was present in this first area.

Moving on we noted the artist's bracket (*Ganoderma applanatum*) growing on an old ash tree and nearby discovered our first mushroom of the day. This turned out to be pale brittlestem (*Psathyrella candolleana*). Further small rusts on daisy, bramble and violets were noted adding to our days finds as we moved around the grassy areas.

The most intriguing find was the discovery of *Sorosphaera veronicae* growing on germander speedwell (*Veronica chamaedyrs*). This is a member of the Plasmodiophorida and is a protozoan slime-mould. *S. veronicae* is a gall-forming species and was only re-discovered growing in the UK in 2002 (T.F. Preece 2002). It produces a glabrous, glossy, globular to cylindrical gall c. 18mm long, 9mm wide, pale yellowish to dark green, becoming brown with age. The expertise of Robert Maidstone led to its discovery in a fairly bare, shady, damp area in section F.

Further along we visited a location where I had previously spotted a couple of interesting fungi. One was the hare's foot inkcap (*Coprinus lagopus*) and the other palamino cup (*Peziza repanda*). We then wandered towards the other side of the burial chapel in search of more fungi. Very few were found but we did note last year's birch polypore, candlesnuff fungus and a dried up example of a dog stinkhorn.

Our last area of exploration was to visit a fallen birch tree towards the back of the cemetery near Dereham Road. This gave us a nice new fungus for our list, that of the winter polypore (*Polyporus brumalis*) and rounded off an enjoyable few hours wander around the cemetery.

Ian Senior

The full list of finds is given below

Reference T.F. Preece “An unusual gall-forming fungus *Sorosphaera veronicae* on *veronica* spp. in Britain”. Mycologist, 16, pp 27-28 (2002).

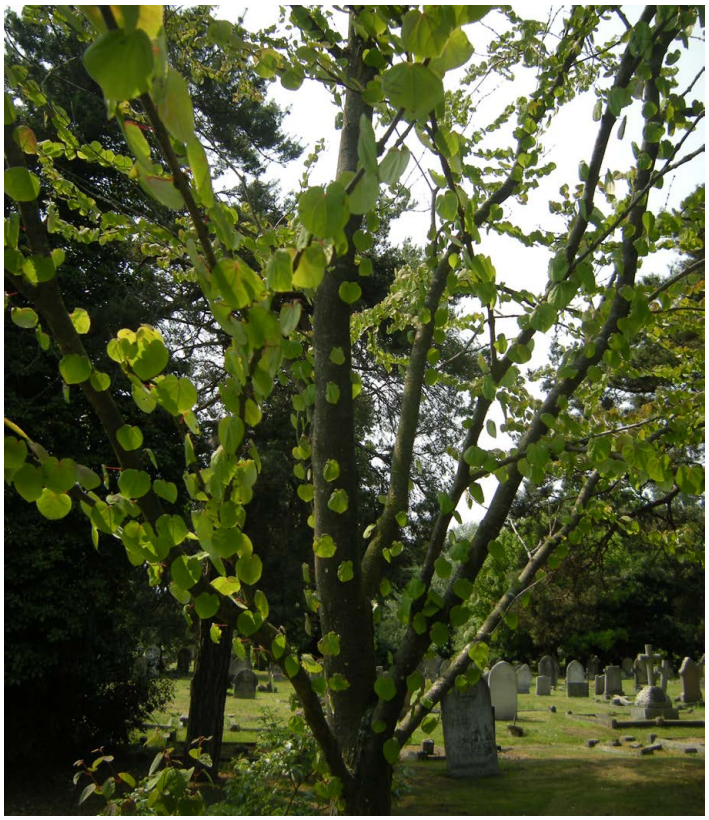
Common Name	Species Name	Notes
Slime mould	*Lycogala* sp	
Bluebell rust	*Uromyces muscari*	
Mildew on cow parsley	*Erysiphe heraclei*	
Artist’s bracket	*Ganoderma applanatum*	on dead horse chestnut
Pale brittlestem	Psathyrella candolleana	in grass
Blackberry rust	*Phragmidium violaceum*	
	Entoloma sp	
Holly speckle	*Trochila ilicina*	
Violet rust	*Puccinia violae*	
Daisy rust	*Puccinia distincta*	
	Sorosphaera veronicae	gall forming fungus on *Veronica chamaedyrs*
Hare’s foot inkcap	*Coprinus lagopus*	on woodchip / debris
Palamino cup	*Peziza repanda*	on woodchip
Groundsel rust	*Puccinia lagenophorae*	
Smokey bracket	*Bjererkandera adusta*	old specimen
Hollyhock rust	*Puccinia malvacearum*	on mallow
Witches butter	*Exidia glandulosa*	old specimen, on *Nothofagus*
White crust on pine		
	Peniophora quercina	resupinate on oak
Birch polypore	*Piptoporus betulinus*	old specimen
Pinecone cap	*Strobilurus tenacellus*	
Dog stinkhorn	*Mutinus caninus*	old specimen
Glistening inkcap	*Coprinus micaceus*	
Candlesnuff fungus	*Xylaria hypoxylon*	old specimen
Winter polypore	*Polyporus brumalis*	
Ash dieback	*Hymenoscyphus fraxineus*	dying young ash

Katsura Tree, *Cercidiphyllum japonicum* - Jeremy Bartlett

A couple of years ago we were putting together "A Short Walk In Earlham Cemetery", an hour's self-guided tour of the older parts of the cemetery, when we discovered a rather odd tree at the southern end of section K, clearly visible from the tarmac drive.

It is a Katsura, *Cercidiphyllum japonicum* and it instantly stands out because its heart-shaped leaves grow out of its branches in opposite pairs. It looks a bit like a Judas tree, *Cercis siliquastrum*, but the Judas tree has alternate, rather than opposite, leaves. Katsura leaves are also serrated, whereas Judas tree leaves are untoothed.

The Katsura forms an elegant, medium-sized deciduous tree. Its flowers are inconspicuous and wind pollinated and produced in early spring and the fruit are small clusters of pods. But you wouldn't grow the tree for these. The leaves are the best feature – with shades of bronze when young and turning yellow, orange and pink in autumn.



Katsura tree, Cercidiphyllum japonicum © *Jeremy Bartlett*

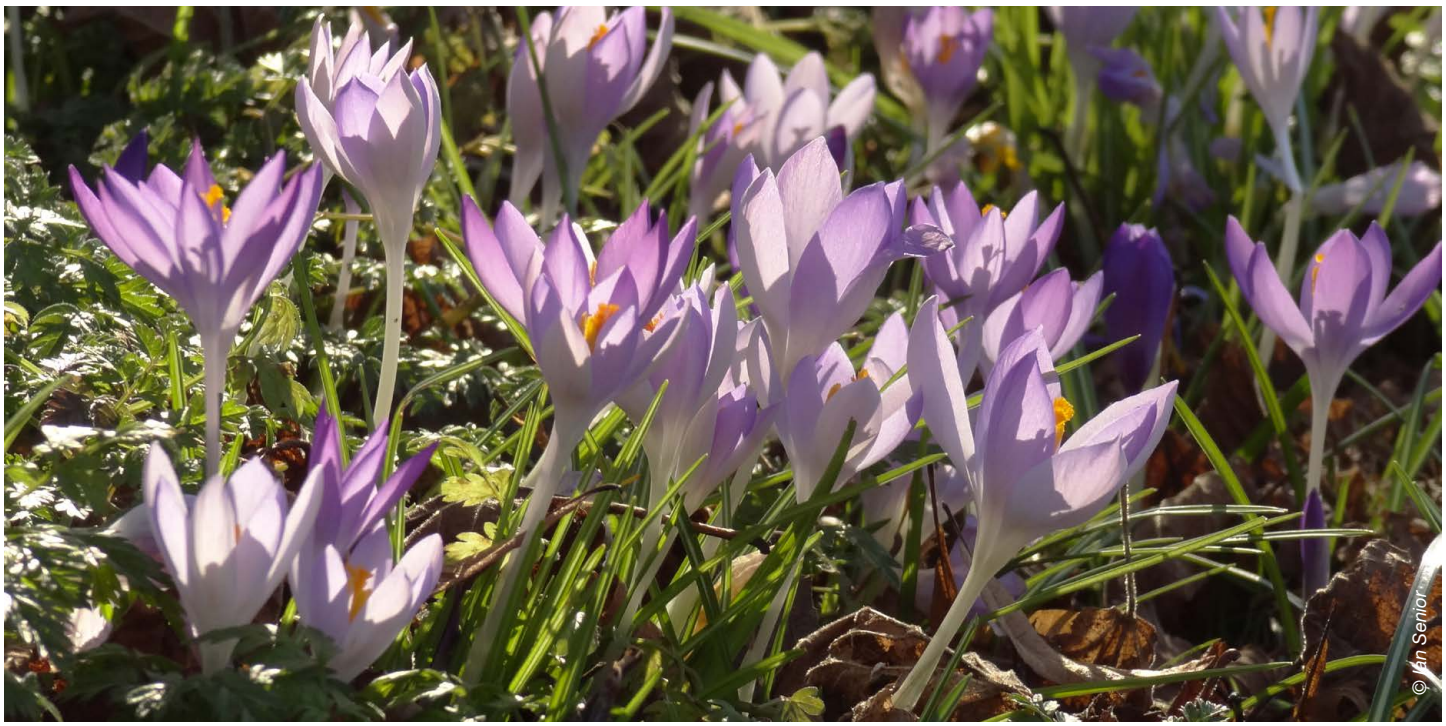
The smell of the leaves in autumn has been compared to burnt sugar or candyfloss, surely a reason to grow this tree or visit somewhere where it grows, for a quick sniff. The green leaves have no smell but in the summer, it is possible to find fallen leaves, but they must be crispy and dry.

Cercidiphyllum japonicum grows in the wild in China and southern Japan and there is also a related species, *C. magnificum*, in Japan. *Cercidiphyllum* means "leaves like Cercis", but the trees are in different families – *Cercis* is a legume (pea family, Fabaceae a.k.a. Leguminosae), whereas *Cercidiphyllum* is in a family of its own, the *Cercidiphyllaceae*.

Since finding the specimen in the cemetery, Vanna and I have seen the Katsura elsewhere and we have discovered one in the northern part of Chapelfield Gardens in Norwich. The tree thrives near water and there is a large one in Cambridge Botanic Gardens, next to a pond. In late September 2014 its scent carried some distance and for us, now seasoned, Katsura hunters, the smell was instantly recognisable.

Jeremy Bartlett.

The Case of the Disappearing Crocuses... - *Ian Senior*



During the late winter and early spring I've been wandering around the cemetery for some lunchtime exercise. It's been lovely watching the spring slowly appear. The birds beginning to sing, the early flowers push up through the soil and burst into their garish spring colours and life gradually appearing in the trees and bushes around the cemetery. There are areas where one species or other predominates like the snowdrops in the old wood, the celandines near Dereham road, and the profusion of daffodils near to the war graves. Crocuses can also be found in many spots both in woody areas and in more open, grassland areas. There is a fabulous display of crocuses along one of the main drives which if you catch it just right sparkles in the early spring sunshine.

Eaten petals from crocuses © Ian Senior

Looking at the various patches of crocuses in different parts of the cemetery revealed a mysterious common feature. To start with I just assumed that footfall had damaged some of the plants as they do tend to grow along some of the paths in the more woody areas. But as the spring has gone on more patches of similarly damaged plants cropped up elsewhere and in grassland not on the paths. What could be causing this damage? Was someone deliberately picking the flower petals and if so, why? Or could there be another reason for the strange groups of damaged petals lying on the ground? An animal of some kind?

When I go to the cemetery I always take a camera with me just in case I see something worth taking a photo of. As we know the area is full of life from fungi to large mammals, and that's not just the human kind! This is the reason why I've got the photos of the damaged plants. But would I capture the vandal damaging the plants? Was it a bird? There are loads of jays and magpies around so could they be taking a peck or two out of the plants? It didn't look like damage that a bird would make so I discounted that theory. Could the foxes be messing around? Again the evidence suggested something was deliberately choosing the plants and deliberately damaging them. If it was just an odd instance then maybe it was a fox. But with the increasing incidents it seemed more like targeted damage. Could it be a squirrel? If it was I've never heard of them eating plants before. Could it just be the munjac deer eating them as they graze the grass? This seemed highly likely as they like to roam freely around the area and eat lots of plants.

I've also disturbed the grazing deer on several occasions over the late winter and early spring. You can never be

sure what they are up to as they shoot off before you even realise they are close to you. If you do see them first, chances are that you are to far away to get any clue as to what they are eating.

One of the days I saw a squirrel sitting on one of the graves and as I had my trusty camera I quickly took a few snaps. He made a good study as he posed for a short time before he scampered off up a tree.

I didn't think much more about it until several days later when I downloaded my pictures. He looked great perched on the grave ornament. I zoomed in to see him close up and realised that there was something purple sticking out of his mouth. I zoomed in more and saw a crocus flower! All three of my shots had the squirrel eating a crocus. So it was the squirrel that did it. Whether it's just this single individual going round eating crocus flowers or whether they all eat them I'm yet to find out but if you go down to the woods and see a pile of half eaten crocus plants you'll now know who the culprit is.

Case solved.

Ian Senior

The villian filling his face © Ian Senior

Since then, damage to mourners' flowers in Earlham Cemetery has made headlines in the local and national press:

Sweet-toothed squirrels spark funeral flowers warning at Norwich crematorium

Mourners told to choose different flowers to deter hungry squirrels

Mourners being driven nuts: Grieving families warned not to bring sugary flowers to graves of loved ones because sweet-toothed squirrels are eating them

Chrysanthemums and carnations are apparently particularly popular because of their high sugar content.

What Earlham Cemetery Means to Me - *Jeremy Bartlett*

Mid terrace at Helena road © Jeremy Bartlett

I have lived in Norwich for thirty years but it took me several of these to discover Earlham Cemetery.

In the late 1980s and early 1990s Vanna and I did a lot of birdwatching and we bought the Norfolk and Norwich Naturalists' Society's "Norfolk Bird and Mammal Report" every year. Through this, we discovered that both firecrests and hawfinches had been seen in Earlham Cemetery.

Vanna started a new job at the West Norwich Hospital and she started to use the cemetery as a cut-through from Earlham Road to Bowthorpe Road. One morning in 1991 on the way to work she saw a hawfinch and the next morning we were both able to see this elusive species for the first time, perched at the top of an old horse chestnut tree. We never did see the firecrests.

At this time we were looking for a house to buy and we finally chose a mid terrace on Helena Road, backing onto the cemetery. We lived here from 1992 for the next twenty-one years and, from the start, we kept a diary of the wildlife we saw in our garden. Much of this came from the cemetery, from the butterflies, bees and hoverflies that flew into the garden to feed on nectar to the birds that fed in the garden and – before our next door neighbour had five cats – nested in our shrubs and trees. We heard tawny owls and, in the depths of winter, foxes in the throes of passion. Juvenile sparrowhawks learnt to hunt high up over our garden.

In the first few years hedgehogs used to visit, snuffling through the garden at dusk. One fell in our pond and we waited anxiously in the silence, until it managed to climb out and continued to snuffle towards the house. We even found a slow worm on the pavement on Helena Road, presumably from the cemetery.

From our garden and rear windows we had a vista of many different trees. These were a constant joy, especially in spring with fresh new birch and beech leaves, in early summer when the whitebeams were in flower and in autumn when the various leaves turned to shades of gold, orange and red. We were not far from Dereham Road but the dense foliage in summer muffled the noise of any traffic. The only downside of the trees was the shade in the evenings, when the sun left the garden by 6.30pm even in mid-summer.

One year Vanna kept a sketchbook of the flowers and insects she saw in the cemetery, which in the mid 1990s included yellow rattle and the six-spot burnet moth, now sadly absent.

On days when we wanted to experience some greenery we would walk around the cemetery and look at the wildlife, flowers and trees. Even on a cold winter day we could watch the antics of the grey squirrels and frosty, snowy or foggy mornings were a treat, providing a completely different atmosphere and opportunities for photographs.

We have moved a bit further away from the cemetery now but we still visit regularly and, thanks to keen plant, fungi and insect hunters in the Friends of Earlham Cemetery, we are still making new finds.

Selection from Vannas early sketchbook © Jeremy Bartlett

A cold winter morning in the cemetery © Jeremy Bartlett

Late spring comes with mixed emotions as we find new species of plants, only to find them mown down within a few days. Hopefully the implementation of our Habitat Management Plan will help to solve this problem, at least in part.

Although Earlham Cemetery is a working cemetery, it is a very important green space in the heart of built-up Norwich. Unlike the parks, it is quiet and not full of large numbers of children and dogs (however delightful these can sometimes be).

For those of us without a car [1], the cemetery's proximity to our homes provides us with a place to see trees, flowers and wildlife and to experience tranquillity.

That is why I love Earlham Cemetery.

Jeremy Bartlett.

References

1. 33% of households in Norwich have no car or van.
   Source: 2011 Census - Car or van availability, Office of National Statistics.

What does Earlham Cemetery mean to you? How did you first discover the cemetery and what keeps you coming back? Please let us know.