FRIENDS OF
EARLHAM CEMETERY

The newsletter for Friends of Earlham Cemetery Issue 8

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 18th June 2017 (2pm)
Midsummer

Saturday 22nd July 2017 (2pm)
Big Butterfly Count.

Sunday 13th August 2017 (2pm
High Summer.

Sunday 24th September 2017 (2pm)
Trees.

Sunday 22nd October 2017 (2pm)
Fungi.

Sunday 19th November 2017 (2pm)
Fungi.

Sunday 10th December 2017 (2pm)
Introduction to Lichens followed by drinks in Fat Cat.

Layout design and editorial by Thea Nicholls

As Sandy has been busy with work (a good thing) I have had the job of helping to put the newsletter together. Whether this is also a good thing remains to be seen! In any event, if it's not up to the usual standard it's my fault and normal service will hopefully be resumed for the next issue.

Spring and summer see the emergence of plenty of insects so it is perhaps fitting that we have a few articles about them in this newsletter. Stuart Paston, who is responsible for so many of the records of insects in the cemetery, writes about wildlife recording while Jeremy Bartlett has produced a guide to some of the bees found in there and Vanna Bartlett goes looking for butterflies.

The cemetery is an excellent place for insect hunting - especially if you are a swift. Now these amazing summer migrants are back they can often be seen whirling about above the trees hawking for the invertebrates that make up aerial plankton. Listen out for their distinctive screaming call and then look up and watch the acrobatics performed by a bird whose life is spent mainly on the wing. The swifts can sometimes be joined by house martins - another summer migrant but one that is sadly becoming rarer. They make a gentle chattering that has been described by Simon Barnes, the sports journalist and natural history writer, as a farting sound. I'm not sure I agree with him on that but there is a certain rasping quality to their call. House martins are not quite as acrobatic as swifts but their twists and turns through the air are somehow more balletic.

Now the trees are in leaf it is harder to see the birds in them but at this time of year it doesn't matter as the birdsong more than makes up for it. Our May walk concentrated on birdsong. Unfortunately the weather was a bit dull which meant the birds weren't singing as much but in the end we were able to identify more than a dozen birds by their songs starting with a couple of robins and finishing with a lovely serenade by a blackcap. However, it doesn't really matter whether you can identify birds by their songs or not; it is just lovely to listen to them as you stroll around the cemetery looking at the flowers and insects and marvelling at the amount of life in there. It can be a wonderful stress-reliever.

Have a great summer, Thea

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

A History of Trees in Earlham Cemetery part 2 - by *Jeremy Bartlett*

Jeremy Bartlett has been looking through Council minute books in Norfolk Record Office to find information about the trees in the Cemetery. This, the second part of his findings, brings the story up to date.

The 1983 Tree Survey

In early 1983 Norwich City Council was becoming concerned about the age and poor health of many of the trees in Earlham Cemetery. At least 70 trees were considered to be dangerous and in need of felling and the work was put out to tender. One of the companies tendering for the work listed the trees that needed to be removed: one Elm (Section 1), 53 Birch, 15 Robinia, 18 Poplars (plus seven more Poplars to have dead wood removed).

Snowdrop tree © Jeremy Bartlett

The same year, a survey was made of the trees in Earlham and Rosary Cemeteries by the Director of Amenities at Norwich City Council. The resulting 83 page report listed 3060 individual trees in both cemeteries, a total area of 41 hectares (101 acres). The trees were described as “a uniquely diverse collection which contains some excellent specimens”. The sheer number of trees came as a bit of a shock: in 1982 it had been thought that there were around 2000 trees in both cemeteries, a massive underestimate.

There were 70 tree species and 3060 individual trees and 2591 of these individuals were in Earlham Cemetery. Of these, 957 were classed as over-mature, 1345 were mature, 153 were small to mature and just 136 were young trees. The report estimated that in another 75 years, just 224 of 2836 trees in both cemeteries would be left, of just twenty different species.

The report mentioned some major features of the Cemetery, including Birch and purple (Pisardii) Plum trees planted in the 1920s and 1930s and a row of 36 Lombardy Poplars along the boundary with Bowthorpe Road, which were declining rapidly. The Lime trees on the boundary of the Cemetery by Dereham Road and Bowthorpe Road had been over-pruned, but screened off nearby housing, making the Cemetery appear to extend further than it actually did.

The report was a wake-up call for the City Council. It concluded that there had never been a long-term management plan for the trees, the majority of which were even-aged and over-mature and would die over a relatively short period of time. There was no replanting programme and little maintenance was being done. It recommended that £13,500 should be spent on additional tree maintenance and planting in 1984 – 85. The work would be done in two phases: Phase I in 1983 – 87 and Phase II in 1988 – 92.

In January 1984 the tender for felling 76 trees, grinding the stumps and pruning others was won by Firecrest Forestry Co. Ltd., based in Diss (£2,855).

The strong gales of Friday 16 October 1987 left a trail of destruction, including in Earlham Cemetery. Over 100 trees, many of them fine specimens, were uprooted in Earlham and Rosary Cemeteries. Huge branches were ripped off trees and the tops of some trees were sheared off. The Parks Committee minutes note with dismay that the year’s tree surgery programme had ended and most of its work had been destroyed. An additional £2,500 had to be added to estimates for tree work and the Committee decided it was in favour, in principle, of launching a Tree Planting Appeal for the two cemeteries, though I can find no evidence that such an appeal was launched.

Silver birches in spring © Jeremy Bartlett

Frustratingly, the Parks Committee minutes don’t give any more information about the tree planting that took place after the 1983 Report. However, there is plenty of evidence in Earlham Cemetery that tree planting did take place on a large scale.

Tulip tree © Jeremy Bartlett

Many tree species that now have several specimens in the Cemetery must have been planted in the mid to late 1980s, judging by their age and the fact that they didn't appear in the 1983 list. Examples of theses from the list of trees on the Friends of Earlham Cemetery website[1] include:

- Maidenhair Tree, Ginkgo biloba
- Hop Hornbeam, Ostrya carpinifolia
- Tulip Tree, Liriodendron tulipifera
- Persian Ironwood, Parrotia persica
- Small-leaved Lime, Tilia cordata
- Turkish Hazel, Corylus colurna
- Black Walnut, Juglans nigra
- Sweet Chestnut, Castanea sativa.

Some of these have been planted as specimen trees (Maidenhair Tree, Hop Hornbeam, Tulip Tree and Persian Ironwood), while others form attractive avenues (Black Walnut, Sweet Chestnut and Turkish Hazel).

Small-leaved Limes are particularly plentiful towards the Dereham Road gateway into the Cemetery, on the slopes leading down towards the Old Military Plot and Helena Road, in an area that almost feels like woodland.

The report mentions three groups of Poplars bordering the stretch of Bowthorpe Road west of Farrow Road, which were "over-mature and full of dead wood". These were probably the Cemetery's six Wild Black Poplars, *Populus nigra* ssp. *betulifolia*, although neither the subspecies nor significance of the trees is listed in the report. This rare native is normally a tree of river valleys but the six trees (in three groups of two) were planted on sand in one of the highest and driest parts of the Cemetery. The trees may be cuttings from a tree that grew on the north side of Chapelfield (now Chapelfield Gardens), which was six feet in diameter when felled in 1932.[2]

At time of writing only two of the trees remain. With the permission of Norwich City Council Friends of Earlham Cemetery took cuttings from the trees in March 2014[3] and in 2016. Of the first batch of rooted cuttings, nine were planted out at Marston Marshes at the end of February 2016 and a tenth was planted at Tyrrel's Wood, near Long Stratton

Gingko tree (right) coming into leaf © Jeremy Bartlett

A table of the trees in the cemetery listed in the 1983 report is below.

Jeremy Bartlett

Species	English name	Total	Young	Small-Medium	Mature	Over-mature
Abies cephalonica	Grecian Fir	1	0	0	1	0
Acer campestre	Field Maple	6	2	4	0	0
Acer pseudoplatanus	Sycamore	41	2	8	29	2
Acer saccharinum	Silver Maple	20	14	6	0	0
Aesculus x carnea	Red Horse Chestnut	15	0	0	2	13
Aesculus hippocastanum	Horse Chestnut	60	5	0	48	7
Ailanthus altissima	Tree of Heaven	6	1	0	2	3
Amelanchier laevis	Snowy Mespil	1	0	0	0	1
Betula pendula	Common Birch	313	28	49	35	201
Betula pendula 'Youngii'	Weeping Birch	2	0	2	0	0
Catalpa bignonoides	Indian Bean Tree	3	1	2	0	0
Cedrus atlantica 'Glauca'	Blue Cedar	2	0	2	0	0
Cedrus deodara	Deodar Cedar	3	0	0	1	2
Cedrus libani	Cedar of Lebanon	3	0	0	3	0
Chamaecyparis lawsoniana	Lawson Cypress	189	2	7	106	74
Chamaecyparis pisifera	Sawara Cypress	30	0	0	12	18
Crataegus x lavallei	Hybrid Cockspur Thorn	9	9	0	0	0
Crataegus monogyna	Hawthorn	22	2	2	5	13
Crataegus oxycantha	Midland Hawthorn	28	0	0	0	28
Crataegus x prunifolia	Broad-leaved Cockspur Thorn	3	3	0	0	0
Fagus sylvatica	Common Beech	36	10	1	21	4
Fagus sylvatica 'Pendula'	Weeping Beech	1	0	0	1	0
Fagus sylvatica'Purpurea'	Copper Beech	25	2	4	14	5
Fraxinus excelsior	Common Ash	3	1	0	1	1
Fraxinus excelsior 'Pendula'	Weeping Ash	1	0	0	0	1
Ilex aquifoilum	Common Holly	101	6	6	87	2
Ilex aquifoilum 'Variegata'	Variegated Holly	1	0	0	1	0
Juglans regia	Common Walnut	1	0	0	1	0
Juniperus communis	Juniper	9	0	8	1	0
Laburnum anagyroides	Laburnum	44	0	0	4	40
Larix decidua	European Larch	6	0	0	6	0
Larix x eurolepis	Hybrid Larch	9	0	9	0	0
Malus floribunda	Japanese Crab	9	0	0	9	0
Malus 'Profusion'	Flowering Crab	2	2	0	0	0
Malus cv.	Flowering Crab	3	2	0	1	0
Malus cv.	Apple (fruiting cv.)	1	0	0	1	0
Picea abies	Norway Spruce	1	0	0	1	0
Pinus contorta var. contorta	Shore Pine	2	0	2	0	0
Pinus nigra var. nigra	Austrian Pine	21	0	0	21	0
Pinus sylvestris	Scots Pine	227	0	1	220	6
Pittosporum tenuifolium	Pittosporum	1	0	0	1	0
Platanus x hispanica	London Plane	24	0	0	20	4
Populus canescens	Grey Poplar	9	0	3	6	0
Populus x canadensis	Hybrid Black Poplar	1	0	0	1	0

Species	English name	Total	Young	Small-Medium	Mature	Over-mature
Populus nigra	Black Poplar	28	0	0	0	28
Populus nigra 'Italica'	Lombardy Poplar	43	0	1	6	36
Prunus avium	Gean	3	0	2	1	0
Prunus cerasifera 'Pissardii'	Purple-leaved Plum	144	0	0	51	93
Prunus dulcis	Almond	9	9	0	0	0
Prunus 'Kanzan'	Japanese Cherry	26	0	0	26	0
Prunus subhirtella 'Autumnalis'	Autumn Cherry	3	0	3	0	0
Prunus cv.	Cherry (fruiting cv.)	1	0	1	0	0
Prunus cv.	Flowering Cherry	41	1	0	1	39
Quercus cerris	Turkey Oak	10	0	4	6	0
Quercus x hispanica 'Lucombeana'	Lucombe Oak	1	0	0	1	0
Quercus ilex	Holm Oak	10	0	0	7	3
Quercus robur	English Oak	22	7	5	8	2
Quercus rubra	Red Oak	5	5	0	0	0
Robinia pseudoacacia	False Acacia	9	0	2	3	4
Robinia pseudoacacia 'Inermis'	Mop-head Acacia	3	0	0	0	3
Sequoiadendron giganteum	Wellingtonia	4	0	0	2	2
Sorbus aria	Whitebeam	17	11	6	0	0
Sorbus aucuparia	Rowan	14	0	1	5	8
Sorbus intermedia	Swedish Whitebeam	15	1	0	13	1
Sorbus cv.	Mountain Ash Type	3	3	0	0	0
Taxus baccata	Yew	80	0	2	77	1
Taxus baccata 'Fastigiata'	Irish Yew	79	0	2	64	13
Taxus baccata 'Fastigiata' cv.	Variegated Yew	3	0	0	3	0
Thuja plicata	Western Red Cedar	162	1	7	123	31
Thuja orientalis	Chinese Arbor-vitae	13	0	0	7	6
Thujopsis dolabrata	Thujopsis	1	0	1	0	0
Tilia x europaea *Tilia platyphyllos*	Common and Large-leaved Lime	544	6	0	279	259
Ulmus x hollandica	Dutch Elm	3	0			3
TOTALS		**2591**	**136**	**153**	**1345**	**957**

1 http://www.friendsofearlhamcemetery.co.uk/Trees_of_Earlham_Cemetery.pdf

2 E. V. Rogers, "The native black poplar (Populus nigra subspecies betulifolia) in Norfolk", Transactions of the NNNS, Vol. 29 Part 5, July 1993

3 http://www.jeremybartlett.co.uk/2014/11/27/friends-of-earlham-cemetery-black-poplar-project/

Reflections on Wildlife Recording in the Cemetery - by *Stuart Paston*

I've recently been looking back through my wildlife diaries in order to assemble data on particular insect groups. Inevitably Earlham Cemetery, my local patch, features predominantly – there must be several hundred entries! A lot of these focus on the area near the Dereham Road gate which is the nearest point of entry for me. Aside from this convenience, it lies in a hollow and this and its wooded nature marks it out as an excellent area for insects and therefore an enjoyable and productive place in which to spend time recording.

Many of my diary entries serve to remind me of forgotten visits when little of special note was seen. Others feature highlights such as the Sunday morning in June 2008 when I discovered a tree bumblebee *Bombus hypnorum* visiting bramble blossom beside a path west of the cemetery office - a new record for Norfolk at the time but now widespread and one of our most common UK bumblebees. Or another Sunday morning in 2004 when I encountered a female yellowlegged clearwing moth flying around an oak stump not far from the roadway leading up from Earlham Road. Then there was the day in February 2008 when I was privileged to see a fox climbing a poplar tree near the Dereham Road entrance.

Tree bumblebee Bombus hypnorum © Thea Nicholls

As my recording has mainly focussed on insects over the years I use grid references as a matter of necessity when submitting data to relevant schemes and bodies. These are also used in my diary notes and, through long familiarity, they immediately conjure up the section of the cemetery and specific locations where observations were made. Initially, for several years, I concentrated research on the "wilder" parts of the cemetery and never gave any thought whatsoever to visiting the well maintained, formal Memorial Garden. I eventually discovered what I had been missing as the northern perimeter of the garden with its shrubbery backing onto woodland is a hotspot for insects especially in early spring for butterflies, bees and hoverflies which can be found in numbers basking or visiting flowers such as erica. And the pond which occurs here is much more than a nice water feature stocked with fish as it's a breeding site

Silver washed fritillary Argynnis paphia © Thea Nicholls

for damselflies and dragonflies whilst duckweed supports the small china-mark moth and a tiny ephydrid fly *Hydrellia albilabris* which can be numerous (once you get your eye in!) in December. Another occurring moth of interest is *Prochoreutis myllerana* which is dependant on skullcap, an easily overlooked component of the varied water side flora.

Constant wildlife recording at one site is extremely important in allowing long term changes in the flora and fauna to be documented and there have certainly been some marked changes in the cemetery during my period of research since the latter part of the last century. A substantial toll of mature trees has occurred owing to storm wind damage and fungal disease, the latter claiming some significant specimens of holm oak, whitebeam and

Hoverfly © Thea Nicholls

quite recently the only bee-bee tree *Tetradium daniellii* in the cemetery. Hoverflies are my speciality and one presumed resident species recorded in the middle part of the noughties has disappeared over the course of the last decade although on the positive side there have been recent newcomers. I have memories of the wall brown butterfly occurring in the mid nineties but it has long since gone and is now a scarce species in Norfolk away from the coast but last year silver washed fritillary was added to the site list. There is always something exciting around the corner as my diary notes remind me.

Stuart Paston.

Bees in Earlham Cemetery - by *Jeremy Bartlett*

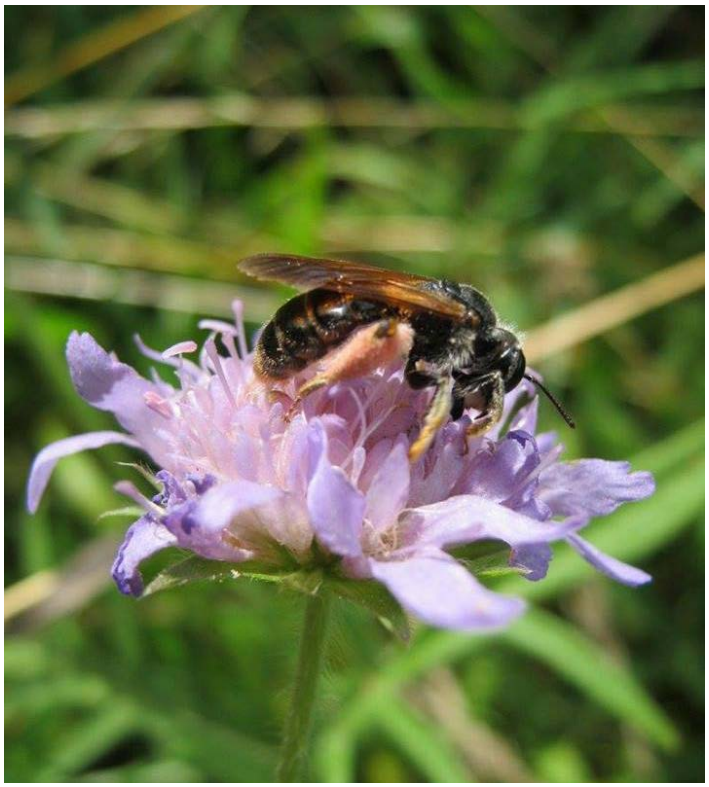
We now have 17 lists of plants, fungi and wildlife on the Resources page of our website, the most recent being a list of Bees in Earlham Cemetery. Like the other lists, this is very much a work in progress. However, the fine weather and early start to this spring (see Vanna's article "A Spring Stroll") have given us a chance to look at and identify several new species for the Cemetery.

Honeybees and bumblebees are finding greater recognition as pollinators but there are also many species of solitary bee, which are often overlooked but play a significant role in pollinating flowers. In total, there are over 270 species of bee in the British Isles and Norfolk has over 190 of these.

Bees are not the easiest group of insects to identify, but identification has been made much easier by the publication of the Field Guide to the Bees of Great Britain and Ireland by Falk & Lewington (Bloomsbury 2015). There are also some great resources on the internet, including the BWARS (Bees, Wasps and Ants Recording Society) website (http://www.bwars.com/), and a Norfolk & Norwich Naturalists' Society (NNNS) online guide to Norfolk's Bumblebees. A guide to Norfolk's bees, The Bees of Norfolk, by Nick Owens, will be published in May 2017.

Here is just a small selection of the bees that can be found in Earlham Cemetery.

Andrena hattorfiana, Large Scabious Mining Bee



The Large Scabious Mining Bee is one of Earlham Cemetery's rarest insects and is listed in the Red Data Book list "A review of the scarce and threatened bees, wasps and ants of Great Britain", S. Falk (1991).

The bee occurs in small numbers in July and August in the Cemetery, and also in at least one nearby garden with field scabious. The females collect pollen from field scabious flowers and (as in the photograph) this gives the bee very distinct pollen baskets.

The Large Scabious Mining Bee nests singly or in small aggregations both in open sites and hidden amongst low vegetation, but we have not yet located the nest site(s).

Within Norfolk the Large Scabious Mining Bee only occurs in Breckland and at a couple of other recently discovered sites near the North Norfolk coast.

Andrena bicolor, Gwynne's Mining Bee

In contrast to the Large Scabious Mining Bee, Gwynne's Mining Bee is one of our commonest mining bees. It has two generations in a year, which fly from March to early June and mid June to late August, though the summer generation occurs in smaller numbers. Gwynne's Mining Bee is very adaptable and visits a wide range of flowers, including primroses and lesser celandine in spring and brambles and white bryony in summer.

The photo shows a female in spring on a daisy flower. The male is smaller and darker. With females just 6 – 8mm long (males are 6 – 7.5mm long), Gwynne's Mining Bee is much smaller than the Large Scabious Mining Bee, whose females are our biggest mining bees, at 11 – 12mm long (males are 10.5mm). The smallest species of Andrena bees in Britain are known as mini-miners, and are just 4 – 5 mm long.

Bombus terrestris, Buff-tailed Bumblebee

The Buff-tailed Bumblebee is one of our commonest bumblebees and like other bumblebees it is able to warm up quickly even on quite cold spring days. Queen bumblebees (such as the one in the photograph, feeding on flowering currant) hibernate over winter and emerge in early spring. They build a nest underground, usually in an old mouse nest and the nest can eventually house over 500 individuals.

Bombus vestalis - Vestal cuckoo bumblebee

Like the Hairy-footed flower bee, the Buff-tailed bumblebee has a cuckoo species, in this case the Vestal cuckoo bumblebee, *Bombus vestalis* (pictured above on red dead-nettle).

The female Vestal Cuckoo Bumblebee enters the nest of the Buff-tailed Bumblebee and kills the queen, laying her own eggs to be reared by the Buff-tailed Bumblebee workers. Like their hosts, mated female cuckoo bees hibernate through the winter and emerge in the spring slightly later.

Bombus hypnorum, Tree Bumblebee

The Tree Bumblebee, *Bombus hypnorum*, has been present in the British Isles for less than twenty years but it had been expanding its range in continental Europe and it was no surprise when it was sighted in Wiltshire in 2001.

Since then, new sightings have been mapped and it has spread northwards very rapidly and reached Scotland in 2013. The first Norwich record was made by Stuart Paston in Earlham Cemetery in 2008.

Tree bumblebees usually nest off the ground and can use bird nestboxes and gaps under the eaves of houses. Like other bumblebees, they are quite placid and can nest near human habitation without being a nuisance.

Colonies are smaller than those of the Buff-tailed Bumblebee, reaching about 150 individuals.

Nomada goodeniana - Gooden's Nomad Bee

The nomad bees have bright wasp-like stripes and the casual observer may not realise that they are bees. Gooden's Nomad Bee, *Nomada goodeniana* (photographed on green alkanet), flies from April to June and feeds on nectar. Like the Common Mourning Bee it is a cuckoo species: the female lays eggs in the nest of an Andrena mining bee and its larva will eat the host's pollen store.

Nomad bees have fairly specific hosts. Gooden's Nomad Bee's hosts include the wonderfully named Chocolate Mining Bee, *Andrena scotica*, which Ian Senior photographed in Earlham Cemetery in 2016. Another host is the Buffish Mining Bee, *Andrena nigroaenea*, which occurs in our back garden, but at the time of writing we have not yet recorded it in Earlham Cemetery.

Anthophora plumipes, Hairy-Footed Flower Bee

The Hairy-footed Flower Bee is a common species and a familiar sight in spring. It has a loud buzz. It is often abundant in Earlham Cemetery and can be found in gardens, especially if they contain two of its favourite flowers - lungwort and primrose. it is also very partial to wallflowers.

Males and females are easy to tell apart. Males emerge a week or two earlier in spring and are brown haired with extensive cream coloured markings on the face and long hairs on the mid tarsi, while females are all black with orange hairs on the hind tibia.

Females will normally be found feeding at flowers but a male will patrol a particular patch of flowers until he finds a female. He will then hover for a while darting to the female and attempting to mate, often biffing her into the air in the process.

Unlike bumblebees and the honey bee, the Hairy-footed Flower Bee does not form colonies but it usually nests gregariously in coastal cliffs, sand pits, soft mortar joints and cob walls.

Melecta albifrons, Common Mourning Bee

It is rather appropriate that the common mourning bee is found in the cemetery.

The Common Mourning Bee flies in spring and is a cuckoo bee of the Hairy-footed Flower Bee, *Anthophora plumipes*. The female feeds on flowers, including dandelions and spring blossom but does not collect pollen to feed her young. Instead, she looks for a female flower bee and follows her to her nest. Here the Mourning Bee will lay an egg in the pollen supply that the flower bee has gathered.

When the Mourning Bee's egg hatches the larva feeds up on the food supply intended for the flower bee's larva, then it pupates and emerges next year from the nest instead of its host.

Jeremy Bartlett, April 2017.

Photos by Vanna and Jeremy Bartlett

A Report on the Winter Tree Walk Sunday 11/12/16 - by *Nick Jackson*

A group of 15 or so members and visitors met to have a pre-Christmas walk looking at some of the cemetery's trees which are seen at their leafless best in December. The walk was led by Jeremy Bartlett with knowledgeable contributions from Ian Senior. Turning immediately right after the cemetery office, we found the path lined with some beautiful specimens of the Turkish hazel (*Corylus colurna*) which grows rather taller than the common hazel. The ground beneath was littered with the distinctive spiny, rather alien-looking husks enclosing the nuts in clusters of three or four. Jeremy mentioned that several other examples of this tree have been planted outside Jarrolds on London St. Since this walk I've begun to notice other specimens all over the city, notably on Cecil Rd. just near where I live.

Turkish hazel husk with nut © Nick Jackson

A young tulip tree (*Liriodendron tulipifera*) grows to the side of the path. This tree is a native of Nth America and is so-called because its flowers resemble tulips, though for me the lovely leaves also recall the shape of a tulip. At this time of year the upturned twigs look like candelabra and are sometimes tipped with the complex seedpods.

We next made the passing acquaintance of an English yew (*Taxus baccata*) with its dark evergreen foliage. Mature specimens of yew have been dated to 1,500-2,000 years old and those growing in churchyards almost certainly predate the churches they stand next to. Their pagan significance was alluded to by one of the group and also the fact that the red berry enclosing the seed cone (known as the 'aril') is edible whilst the seed itself is poisonous. I am able to confirm that this is indeed the case, having tried one in the past – very sweet, if rather glutinous. The yew we were looking at is a young specimen but, if undisturbed, will almost certainly see out the millennium. I wonder what the yew tree made of our fleeting, multicoloured presences in that moment of its long, static existence. We were probably much the same to the yew as the flocks of waxwings that descend to feed on its berries. What will the world be like, what will have become of this cemetery, in another thousand years?

We moved on to examine a Persian ironwood (*Parrotia persica*) closely related to the witch hazel genus Hamamelis. It is a native of northern Iran. Mature trees can grow up to 30 or 40 feet but the specimen we looked at is at present a low spreading tree not much more than 10 feet tall with smooth grey limbs. The bark of older trees flakes to reveal patches of different coloured bark. The black buds have now, in the first week of January, opened

Persian ironwood flowers © Nick Jackson

to reveal small crimson flowers. The timber is extremely hard, so much so that it is rarely grown commercially. It is most often grown as an ornamental tree providing splendid autumn foliage.

Avenue of Turkish hazels Corylus colurna © Nick Jackson

Its was interesting to observe how many of the trees presumably planted close to graves as ornamental specimens are now leaning into the tombstones or embracing them like fond friends. Other trees are self seeded or have grown up from the roots of the now dead parent tree like the collection of elm (*Ulmus minor*) saplings all appearing to sprout from the same ravaged tomb. All of

the cemetery's mature elms have succumbed to Dutch elm disease but the saplings can grow to some height before they too become susceptible to the fungus (*Ophiostoma ulmi*) carried to them by elm bark beetles of the genus Scolytus, which burrow beneath the bark. We examined the deeply corrugated bark of these young trees which is extremely cork-like.

We then came upon a hackberry (*Celtis occidentalis*) another Nth American tree that produces edible orange red or dark purple berries. The tree can reach 30 – 50 feet in height but the one we looked at was quite shrub-like, so presumably is a young tree.

Along the path between sections 7 and 8 leading to the east side of the burial chapel, grow a number of sweet chestnuts (*Castanea sativa*). Originally introduced by the Romans for its wood and edible fruit, a sweet chestnut

Beech tree © Nick Jackson

can be identified by its deeply creviced bark which spirals gently round the trunk as it grows. Many prickly pods are scattered beneath them to be plundered by the cemetery's grey squirrel population.

I had to stand back to admire a mature specimen of one of the many lime trees (*Tilia*) although this might have been either common (*Tilia x europea*), small-leaved (*Tilea cordata*) or large leaved lime (*Tilia platyphyllos*). The lime tree's branches turn down then kink upwards. The twigs are decorated with the remains of the leaf-like bracts which support the small round seeds. Lime wood is particularly good for carving since it is quite soft but not fibrous.

The cemetery has many fine beech trees (*Fagus sylvatica*). We came across a particularly large specimen standing on the path that runs parallel to Winter Rd. Its massively buttressed bole forms a strong base to support the smooth grey trunk. Jeremy mentioned that in some years there is more beech mast (the spiny seed pods) than in others and that all trees growing in the same area seem to coordinate their overproduction.

Vanna found a fallen oak leaf with several white blotches on it which, through a hand lens, could be seen to be evidence of oak leaf miners, the larvae of a micromoth. I was able to see the tiny pupae, only a few millimeters long. To me it seems incredible that such a fascinating life history is playing itself out under our noses, unknown unless glimpsed under a magnifying lens. They looked like tiny alien beings, quiescent in their translucent cells until the warmer weather prompts them to emerge.

The evergreen cherry laurel (*Prunus laurocerasus*) shows up beautifully in the winter. Jeremy mentioned that the seeds and leaves contain a high concentration of hydrogen cyanide. I recall that the crushed leaves were often used by amateur entomologists to euthanise specimens in killing jars.

We then repaired to the Fat Cat pub to down a few jars of something less lethal, namely home-brewed ales, whilst mulling over the interests of the walk and the trials of the coming festive period.

I have omitted to mention, because I did not make notes at the time, the evergreen trees: cedars, larches and others, which we looked at, including one with very soft feathery-looking foliage. This will be an incentive to go on future tree-related walks in the cemetery.

Nick Jackson

Beautiful Badman's Posies - by *Jeremy Bartlett*

Red dead-nettles with grape hyacinths © Vanna Bartlett

Spring is the time for the red dead-nettle (*Lamium purpureum*). They are nearly everywhere – in gardens, in cracks in the pavement, on our allotment and in big patches in Earlham Cemetery.

In a mild spring these pretty flowers can start appearing as early as February. After flowering, the plants set seed and die and most have gone by mid summer, although the plant can be found throughout the spring and summer and into autumn. In Earlham Cemetery red dead-nettle usually falls victim to Norse's mowers in late spring, but nonetheless, most manage to set some seed.

To the unenlightened the red dead-nettle (also known as purple dead-nettle, badman, badman's posies, sweet archangel or red archangel) is a just a rampant weed. It is certainly good at seeding and producing more of its kind on newly weeded soil and other bare ground. It can also carry cucumber mosaic virus and potato leaf-roll virus.

A single plant can produce between one and four thousand seeds and evidence of red dead-nettle has been found in Bronze Age deposits, so it probably came to Britain with early agriculture, along with other weeds. It has since spread to North America, where it is listed as an invasive species in some areas.

But red dead-nettle flowers are very popular with bees when few other flowers are about and in spring, a patch of red dead-nettles in Earlham Cemetery is usually being attended by bumblebees and hairy-footed flower bees too (see my 'Bees in Earlham Cemetery' article in this newsletter).

I always let some red dead-nettles flower on my allotment and in the back garden. I find that on my dry, sandy soil they don't cause much trouble as they can be pulled or hoed out very easily and they are never a nuisance. From May onwards a crop of different summer weeds takes over

Hairy Shieldbugs (Dolycoris baccarum) on Red Dead-nettle © Vanna Bartlett

and causes far more trouble: fat hen, lesser bindweed, gallant soldier, sowthistles, to name but a few.

Red dead-nettle is a member of family *Lamiaceae*, which includes sage, mint, thyme and other useful kitchen herbs. It is edible and is a pleasant addition to spring salads – use the leaves and flowering tops. The leaves can also be steamed, perhaps with some butter added at the end of cooking. Other recipes include bacon and deadnettle strata and springtime fritters. I sometimes just nibble some leaves when I'm gardening. Red dead-nettle is also used in herbal medicine for its possible anti-inflammatory and antimicrobial properties, or for treating wounds. All in all, it is a very lovely and useful plant, for humans and wildlife alike.

Jeremy Bartlett.

This article is adapted from a post I wrote for my 'LET IT GROW' blog in April 2012: http://www.jeremybartlett.co.uk/.

A Spring Stroll - by *Vanna Bartlett*

The first butterfly of the year is always eagerly awaited in our household, it doesn't matter what it is or where it's seen but it is especially pleasing when the first is encountered in our own back garden. January and February gave us a peacock each but as they were found hibernating in our woodpile I didn't count them. The first free flying beauty was seen on the 7th March, a lovely red admiral sitting on the summerhouse, a favourite sunning spot. On the following day I recorded my second species, again in the garden. This time it was a comma, sunning on the summerhouse once again. The following week added brimstone (male and female), small tortoiseshell and peacock to the garden list.

Peacock Aglais io © Vanna Bartlett

I had been reliably told that a speckled wood had been seen in Earlham Cemetery that same day so I set out after lunch to stroll around the gravestones and see what I could spot. As I headed up the drive from Earlham Road, a bright yellow male brimstone bowled along in front of the old Catholic chapel and I hurried to catch it up. Turning the corner I was in time to see it disappearing rapidly behind some dark evergreen yews. The sound of chainsawing a little way off persuaded me to turn away towards the back of South Lodge into the cool dappled shade of the beeches where I hoped to see speckled wood. (Several trees came down during Storm Doris at the end of February and the workmen from Norse have been busy cutting up and removing them ever since.)

As I rounded the corner, a flash of burnished gold caught my eye and there was a comma sitting on the frondy leaf of cow parsley. It was a little more raggedy of wing than it should be, with one of its hind wing 'tails' missing. I tracked round the woody path at the back of Earlham Road, the grass becoming lush and almost hiding the plentiful primroses. Darting back and forth low over the vegetation were numerous buffy-brown bees – *Anthrophora plumipes*, the hairy-footed flower bee. They are one of our earliest bees to be on the wing and are very distinctive, with a loud buzz that often heralds their presence before you see them. The ones I saw were all males and were quartering low over the vegetation in search of newly emerged females, which are entirely black except for an orange-red pollen brush on the hind legs. I did see one female but she disappeared rapidly with a male in hot pursuit!

No luck with speckled woods so I headed out into the sunshine, encountering several more commas basking variously on gravestones, fallen trees, bramble leaves and dead plant stems. I also spotted a couple more brimstones but they refused to settle and I soon gave up chasing them round the bushes and instead returned to the commas. Often they would fly up before I had seen them but they would circle back and glide in lazily to take up position again, often in the same place they had just vacated, especially if I moved back slightly so as not to disturb them. Considering that these fragile looking butterflies had spent the winter holed up in a shed, woodpile or deep amongst ivy leaves they were, for the most part, in amazingly pristine condition as if they were newly emerged from a chrysalis.

In fact all our earliest butterflies have spent the winter in hibernation. They emerge on warm sunny days and can be on the wing even in January and February in the right conditions. Peacocks and small tortoiseshells are often to be found basking on bare soil while the comma seems to prefer to perch on a leaf or stem whereas the brimstone is invariably encountered as it flashes past you in fast flight. They all need to feed when they come out of hibernation so an early source of nectar is vital. One of the best is the humble dandelion. I well remember a walk years ago over Marston Marshes where the rough grass to the side of the riverside path was sprinkled with the yellow splashes of myriad dandelions and it seemed like every other one had its own small tortoiseshell avidly probing for nectar. The dandelions may well still be profuse but the same cannot

Small tortoiseshell Aglais urticae © Vanna Bartlett

be said for the tortoiseshells. They used to be one of my first butterflies of the year (along with the peacock) but they have declined alarmingly in recent years. Various theories for the declines in butterfly numbers have been put forward and it is very likely that it is a number of factors rather than one in particular. Loss of habitat is an obvious problem and so is climate change. Although long hot summers can see more butterflies on the wing, the accompanying drought

conditions can cause food plants to shrivel or simply not contain enough nourishment for the full development of the larvae. Many butterflies are parasitized by various wasps or flies and mild winters allow greater numbers of these parasites to survive into the spring to attack more butterflies. Ironically it is these same mild winters that has allowed the red admiral to survive and make it onto the list of first butterfly to be seen in recent years.

Comma Polygonia c-album © Vanna Bartlett

In the cemetery one of the best sources of nectar are the various cultivated heathers found in the memorial gardens, so I headed over there. Sure enough I soon spotted a comma on the first heather I came to. The next had two almost side by side and a third a mere few inches away, all busily sucking up nectar through their long delicate proboscises. Within a couple of minutes I had counted twelve individual commas as well as a handful of bumblebees. I left the gardens for a more open area of the cemetery and soon found a peacock butterfly basking on one of the grassy paths, shortly followed by a couple of small tortoiseshells. Again, these were all in pristine condition, looking newly minted as it were. The tortoiseshells were quite flighty and didn't allow me to approach very closely but I did manage to sketch one none the less. The peacock was far less confiding and shot off faster than the brimstones I had been following earlier.

All told, I had seen at least two dozen commas, three small tortoiseshells, a couple of peacocks and had five sightings of male brimstone (as they are constantly on the move and fly rapidly you never know if you're seeing the same one several times). Not bad for an hour or so's stroll and one of the greatest numbers of commas I've ever seen in a day, certainly in recent years. It will be interesting to see how their numbers do over the year.

I had one last port of call to make on the way out, a small goat willow ('pussy willow') that was just coming out a few days ago and I knew would be looking lovely by now. Goat willows or sallows as they are also known are another very important early source of nectar and pollen, attracting commas and peacocks as well as bumblebees and honeybees. They are also very important for early flying moths who will visit the flowers after dark. I walked up the grassy path in anticipation of what I might see... only to find a pile of freshly cut logs, some startlingly white cut stumps jutting out of the ground like sawn bones and a single, sad sorry branch of soft silvered pussy willow discarded on the ground. I now knew exactly what the Norsemen had been chainsawing. Not tidying up the storm damage after all but cutting down a beautiful little tree just as it was coming into its prime as an important part of the cemetery eco system. It's not the first time that a visit to the cemetery has ended on a rather sad note and I dare say it won't be the last.

Brimstone gomepteryx rhamni © Vanna Bartlett

That our fragile butterflies survive at all is something of a miracle considering the environmental pressures that are upon them without the added degradations of mankind. I will continue to delight in them whenever and wherever I find them and do my bit by planting nectar rich flowers in my garden, growing suitable larval plants, providing areas for hibernation and encouraging the dandelions in the lawn.

Vanna Bartlett.

The Body in the Chalk Pit - by *Jeremy Bartlett*

In 1861 workmen in Mr. Bassett's chalk pit in Norwich found a woman's body.

There was no evidence of foul play, for this was clearly a burial. The body lay in an unsoldered lead coffin and probably Roman, from the third or fourth century AD. Remains of a second skeleton lay nearby.

The English journalist and antiquarian John Wodderspoon (1806 – 1862) went to look at the corpse. He wrote in a letter to his friend T. Barton on 10th December 1861 that he had seen the body and that "the teeth, some of which I brought away, [were] very beautiful"[1]. Later, two bronze torques and a Roman coin were found near the same spot.[2]

The site was known as Stone Hills and was just south of Dereham Road and only a few hundred yards from the northern boundary of Earlham Cemetery. The chalk pit is now a car park at the Norwich Community Hospital and the site is at the northeast corner of the hospital grounds, between Woodlands Park and Merton Road.

In Roman times the dead were buried in cemeteries outside towns, often grouped along the roads leading from them.[3] Dereham Road follows the course of a Roman road known as the Holmestreet Way, which ran from east to west across what is now the city of Norwich, fording the River Wensum by a ford at Bishop Bridge and continuing on a causeway across marshy land where Norwich Cathedral now stands, then along the alignment of St. Benedict's Street.

Jeremy Bartlett.

[1] Brian Ayers, "English Heritage Book of Norwich", Batsford/English Heritage (1994).

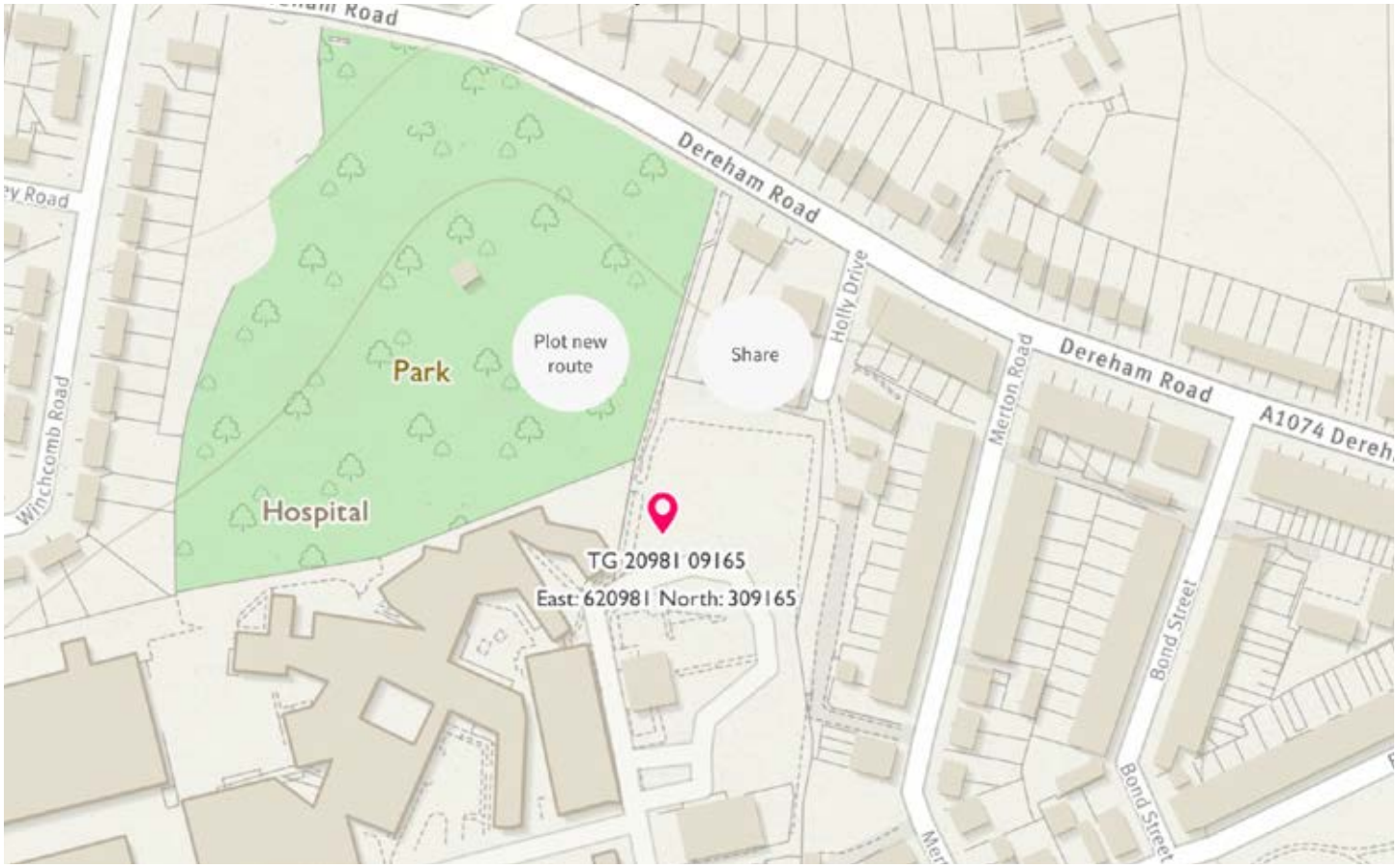
[2] Walter Rye, "History Of The Parish Of Heigham In The City Of Norwich", Roberts & Co, Ten Bell Lane, Norwich (1917). Produced as a web version by Paul Welbank, July 1998. - http://www.welbank.net/norwich/hist.html#prehist.

Rye says: "Whether the lead coffin and the two bronze torques, which were found at Mr. Bassett's chalk pit, on Stone Hills, formerly called Heigham Heath, in December, 1861, are Roman or 'Roman-Saxon', others must decide.

The late Mr. Fitch described them in the Transactions of the Norfolk and Norwich Archaeological Society, vi., p. 213, which illustrates the torques. He subsequently found a brass coin of Faustina the elder (who died A.D. 141) near the same spot (id. vi., P. 386)."

Faustina The Elder was the wife of Emperor Antoninus Pius (Roman Emperor AD 138 to 161). When she died Antoninus had coins made with her portrait on them.

[3] www.kentarchaeology.org.uk/Research/02/ODAG/01/02.htm



Map showing where body was found

Pipistrelle bats (*Pipistrellus sp*) in the cemetery - by *Sandy Lockwood*

Common pipistrelle Pipistrellus pipistrellus in flight, photo by © Barracuda 1983, via Wikimedia commons licence

When we first moved into our house we were pleased to discover we had a bat roost in our loft. At that time the apex of our roof had a small opening facing into the cemetery. It was only after living there for a few years, however, that we had our first close encounter with our elusive housemates. We had often seen bats flying around in the cemetery at dusk. Small groups of two or three would be seen flying high along the grass pathways along the side of the house before heading off towards the tree canopy nearby. Being an old rented house owned by a private landlord it hadn't had a great deal of repair or renovation so there hadn't been any disturbance in the roof space. We had no central heating at that time and the house was heated by two open fires - one in the front room and the other in the dinning room.

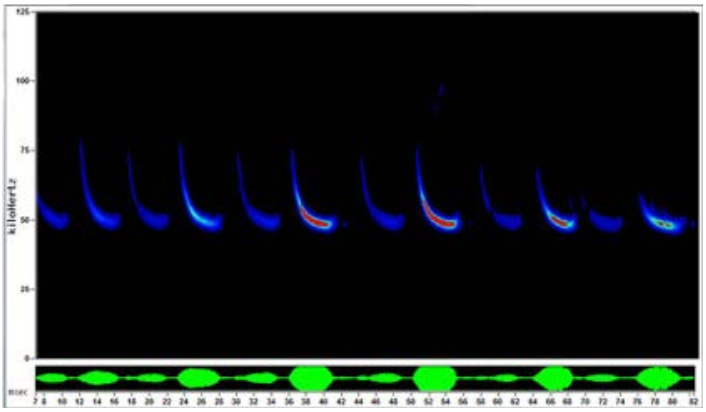
In summer we often sat in the front room with the door propped open so the cats could wander in and out as they wanted. We often had visitors such as bees and moths flying in as well only to be collected, studied and put outside again. It was on a warm early-summer evening that our cat suddenly took a great deal of interest in the ash in our grate. The fire in the front room hadn't been cleaned out for some days so when I went over to investigate and saw something small and black. I was expecting a disgruntled bumblebee but what I found was a baby bat. The small bat was promptly scooped up from the ash and cleaned up as best we could. Not knowing a great deal about bats and their behaviour at the time our first concern was to try and get it back to its mother. It was my job to take the young bat, climb into the loft space and try to put it somewhere so it would be discovered by its mother. I do not recommend stumbling around in a loft space, balancing on the beams with a torch in one hand and a small bat in the other. Finally, I found some bat droppings near the chimney and along the roof beam which is where I placed the young bat in the hope that it would be discovered. Seeing no other signs of the bats and not wanting to disturb them we closed the loft hatch. The fires were definitely not going to be lit again that summer.

The following week it happened again only this time an adult ended up flying around the light fitting in the front room. Everyone tells you that bats will not fly into you but I am not convinced. Even with the window and door wide open it wouldn't go out. As bats fly at some speed and not wanting to damage it the tea towel method was introduced (don't ask). With the bat held gently in the tea towel it was taken into the garden and released.

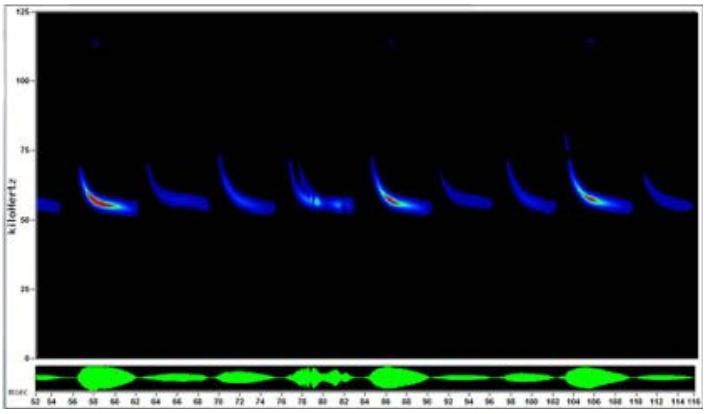
Since then our landlord has made renovations to the property and we no longer have a bat roost. The chimneys that year were inspected by a surveyor and were found to be severely damaged. Smoke had been leaking into the loft space and had started to leak into the bedrooms so the chimneys had to be repaired. After the repair work we still saw signs of bats but over the years they gradually disappeared. By the time the roof was fully renovated the colony had long since gone.

All the bats we came across in the house were pipistrelles. In 2015, Thea took part in the Norfolk Bat Survey (http://www.batsurvey.org) to map what bat species are in our area. The survey season runs from mid-April until the end of September. Each participant chooses a 1 km square to survey from a map and signs up to borrow a recorder. Three locations are chosen (ideally at least 200-metres apart) within your tetrad to take readings and the recorder is installed at each location overnight. The recorder picks up the high pitched calls from the bats and this data is sent to the Norfolk Bat Survey for analysis.

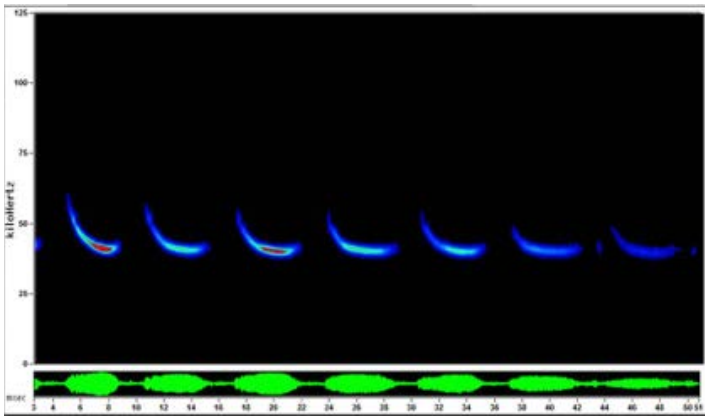
Common pipistrelle Pipistrellus pipistrellus photo by © Mnolf, via Wikimedia commons licence



Common pipistrelle - peak frequency about 45 khz



Soprano pipistrelle - peak frequency about 55 khz



Nathusius' pipistrelle - peak frequency 36-38 khz

The following data recordings show what species and how many of each were recorded at three specified points within our tetrad (TG2108) on three consecutive nights in 2015 (the numbers relate to the number of bat passes rather than the number of bats).

Bat species = insufficient information to assign the recording to a species or bat family - normally where there is too much noise to pull out a reliable signal or limited acoustic information.

Pipistrelle species = the recording belongs to the genus *Pipistrellus*, but species identification is not possible. We made the first recording on the 6th July in our garden next to the cemetery and got the following results:-

2 Bat species

5 Common pipistrelle

1 Pipistrelle species

2 Soprano pipistrelle

The second recording on the 7th July was made in a friend's garden halfway down Sandringham Road. This was the best recording and I believe there may be a colony there as there are a number of large, mature trees at the bottom of his garden.

297 Common pipistrelle

1 Nathusius' pipistrelle

1 Pipistrelle species

111 Soprano pipistrelle

The third reading was in another friend's garden on Connaught Road on the 8th July.

3 Common pipistrelle

1 Nathusius' pipistrelle

6 Soprano pipistrelle

Pipistrelles are Britain's smallest and most common bat and is the bat that people are most likely to see flying around their gardens at night. These tiny bats weigh around 3 to 8 grammes and grow from 3.5cm to 4.5cm in length. The wingspan of the soprano pipistrelle measures just 19cm - 23cm whereas the common pipistrelle's wingspan is slightly larger at approx 20cm-23.5cm in length. If you manage to see the common pipistrelle in daylight their colouring is medium to chocolate brown with dark face patches around their eyes and nose. The soprano's colouring differs by having a slightly pinker area around the face and nose. Both appear to fly with a fast jerky motion as they dodge about catching insects. The Nathusius' pipistrelle bat is still fairly rare in the U.K. although records are increasing. It is a migratory species often recorded here in the autumn although it is known to breed here and remain all year round. It is slightly larger than its cousins with a body length of 4.6cm to 5.5cm and weight of 6g to 16g. It has a wingspan of 22.8cm to 25cm and its colouring is reddish brown with pale belly while its ears, membranes and face are usually very dark.

Up until the 1990s there was thought to be only one native species of pipistrelle. This has since been divided into the common and the soprano pipistrelles using the frequency of their calls. You can see this on the echolocation images from our survey. Pipistrelles produce sound above the range of most human hearing apart from social calls which may be heard by some people whose hearing is good. These calls are measured in kiloHertz (kHz). Common pipistrelle calls range from clicks at about 70kHz to flatter, peak intensity calls that sound like wet slaps at the 45kHz range. The calls of the soprano pipistrelle are similar but their clicks are registered at 80kHz while peak intensity is at 55kHz. The Nathusius' pipistrelle has an echolocation call of 20kHz to 40kHz with peak intensity at about 38kHz- a much lower peak rate than the common or soprano pipistrelle. Its social calls fall between 20khz and 30khz which means they can often be heard by some children and adults.

Breeding Pipistrelles mate in autumn and the females can store the sperm for up to five months before ovulating and becoming pregnant. This means they can fit their breeding cycles around their winter hibernation cycles as females then become pregnant the following spring.

Common and soprano pipistrelle maternity colonies are formed around May to June and females give birth to a single young in late June or July. The young cling to their mothers and are fed solely on a diet of milk. After three or four weeks they are able to fly and at six weeks old they can forage for themselves. Nathusius' pipistrelles form maternity colonies that can grow to up to 350 bats making them much larger than either the common and soprano pipistrelle colonies and they may also temporarily move location.

Newborn common pipistrelle Pipistrellus pipistrellus photo by © Mnolf, via Wikimedia commons licence

Common and soprano pipistrelle males roost singly or in small groups through the summer months, however, Nathusius' pipistrelle males usually roost alone. During the main mating period from July to September individuals begin to defend territories as mating roosts. The males make frequent flights called 'song flights' around their roosts to attract females.

During the same period Nathusius' pipistrelle males set up roosts near the maternity roost site. They then spend long parts of each night using their roosts to sing social calls from. These are thought to attract females for mating.

Sopranon pipistrelle Pipistrellus pygmaeus photo by © Evgeniy Yakhontov, via Wikimedia commons licence

Habitat.

Common, soprano and Nathusius' pipistrelles hunt in a wide range of habitats comprising of woodland, hedgegrows, grassland, urban and suburban gardens and agricultural land. Both Nathusius' and soprano pipistrelles will also hunt in wetland habitats including around lakes and along rivers. At about 20 minutes after sunset they emerge from their roosts to begin hawking 2-10 metres above the ground. All pipistrelle bats catch and eat their prey on the wing.

Summer roosts for both common and soprano pipistrelles are often found in crevices around the outside of buildings under roof felt and tiles, behind soffit boards, under wooden eaves and in cavity walls. Newer buildings are used just as much as old. The common pipistrelle will also roost in tree holes and will use bat boxes - particularly in winter.

The average summer colony size of common pipistrelles is usually between 30 and 75 individuals and a colony this small could easily fit into a space no bigger than a common house brick. Common pipistrelles are also more likely to move between summer roost sites. In comparison, the summer colony of soprano pipistrelles can grow to 200 bats and they can often be found sharing a roost with Nathusius' pipistrelles.

Nathusii pipistrelle bat Pipistrellus nathusii photo by © Mnolf, via Wikimedia commons licenceWikimedia commons licence

The Nathusius' pipistrelle differs from our native pipistrelles as the majority of its roosting sites are located near large freshwater lakes. It hunts near rivers, canals, water-logged areas as well as woodland edges and open rides. As we had recordings of Nathusius' pipistrelles by the cemetery it could be the open grass pathways which encourage it to this area even though the nearest large body of water is Waterworks Road sewage farm.

Distribution

The common pipistrelle has the widest distribution covering the majority of the UK and extending further north than the soprano pipistrelle. Soprano pipistrelles are also found across the U.K. with the exception of the northernmost parts of Scotland.

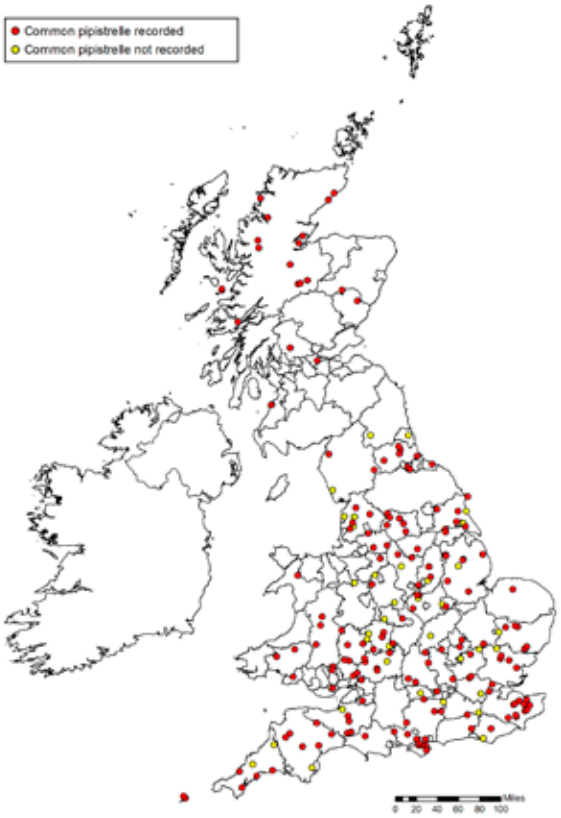
The Nathusius' have been recorded throughout the British Isles but records have been low. It has been recorded as far north as the Shetlands and as far South as Jersey and Guernsey. With increased surveying more records are being gathered. The Nathusius' pipistrelle was first recorded in the Shetlands in 1940. Although at this time it was recorded as a rare vagrant it was subsequently upgraded to a winter visitor. Since 1990 a few small breeding colonies have been found in the U.K. and Northern Ireland. In continental Europe, Nathusius pipistrelles migrate south-west across Europe in the autumn and winter months. It is these individuals that are thought to supplement our summer breeding populations.

Food

Pipistrelles consume approximately 2,000 to 3,000 insects per night. For common and soprano pipistrelles these vary from midges and small flies to mosquitoes associated with water areas. The Nathusius' pipistrelle, meanwhile, will also catch medium-sized prey including caddis flies and other aquatic insects.

Due to modern farming methods and the overuse of pesticides there has been an overall decline in pipistrelle populations. However, in recent surveys the common pipistrelle is starting to show some signs of recovery.

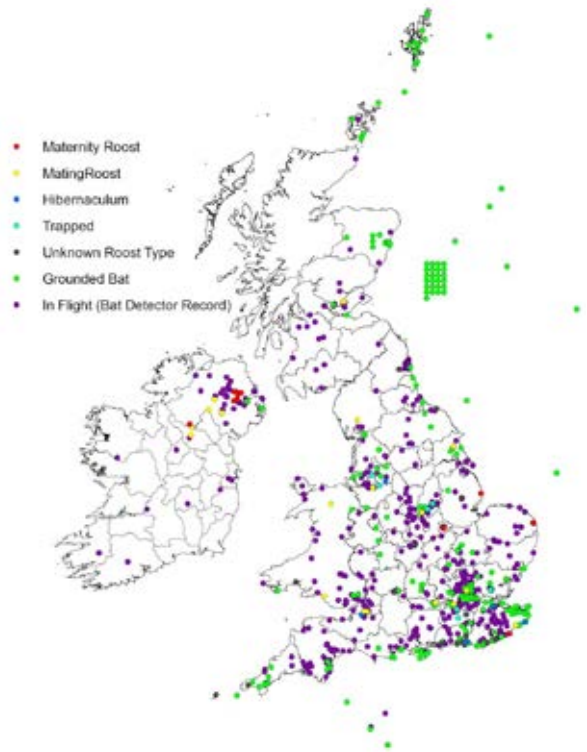
While our survey only recorded pipistrelle bats it is likely that there are other bat species in the cemetery. There certainly used to be noctule bats in there although they haven't been seen for several years now. There may also be brown long-eared bats as well. Only last summer we saw what we believed to be a brown long-eared bat fly out of the cemetery one night. They are common to woodland habitats and, as the cemetery has a large population of mature trees, it is possible this bat occurs here even though it did not appear on our recordings. This year we hope to take part in the survey again - choosing a different period - so we may have further bat species to report at a later date.



The above map sample, taken from the Bat Conservation Trust's website, shows the distribution of Common pipstrelle roost's in 2015. Each spot is in a 10 km square. If pipistrelle bats were recorded as "not present" it does not necessarily mean they were absent from the area, they were just not recorded.

The map on the left is the distribution of Nathusius' pipistrelle for 2015, this survey is ongoing as people can continue to add records via the website www.nathusius.org.uk.

More information can be viewed on the Bat Conservation Trust's website at www.bats.org.uk



Review of the Year 2016-17 - by *Jeremy Bartlett*

These are the main headlines for the year 2016 – 2017:

Membership

We now have 21 members. (Unfortunately this number is down from 36 in 2015 -16).

Membership subscriptions (£5) are due at the AGM – please pay (Jane Bouttell, Treasurer, 116 Stafford Street, Norwich, NR2 3BQ) as soon as possible.

Walks

Our themed monthly walks continue to be well attended and continue to attract new people. The best attended walk was October's fungal foray, held jointly with Norfolk Fungus Study Group (32 people), followed by June's tree walk (19 people). Our December walk was once more followed by Christmas drinks in the "Fat Cat" on Nelson Street.

There was no walk in February 2016 but during the month we had our AGM, drinks in the "Fat Cat" and a tree planting event (see "Projects").

We are still short of walk leaders – volunteers welcome!

Visits

Jeremy showed members of the Barney, Fulmodeston and Thusford Food Production Club around thecemetery on 28th April 2016. We were given a donation of £46 as a result.

We were given £600 by holding four wildlife identification workshops in The Plantation Garden during 2016, including a moth trapping evening. Thanks to Neil Blunt for sourcing the National Lottery funding for this.

In October we had a great coach trip to Brookwood Cemetery in Surrey, with Friends of the Rosary and Friends of Great Yarmouth Cemeteries, organised by Friends of the Rosary. Thanks to Nick Williams and Mark Shopland for arranging this.

Wildlife

The Management Plan for the cemetery was formally implemented in early 2016. Ian, Stuart, Vanna & Jeremy met with Sue Stoner and Chris Eardley in May 2016 to discuss implementation of the Plan.

The Conservation Volunteers (TCV) raked cut hay in several sections of the cemetery in August and September 2016. Unfortunately Norse were unable to take away cut hay in a couple of sections, so cuttings were left in situ in a couple of areas.

We are applying for funding for further hay cutting and clearance in summer 2017.

Group members are continuing to discover new records for insects, fungi and plants, not least flowers and fungi (Ian Senior) and hoverflies (Stuart Paston).

Jeremy gave a talk to Great Yarmouth Naturalists' Society about our work in the cemetery, in November 2016.

Projects

- On 29th February 2016 we planted nine of our rooted native Black Poplar cuttings, taken from the two trees in the Cemetery in early 2014. A tenth rooted cutting was planted in Tyrrel's Wood, near Long Stratton. We took further cuttings in spring 2016, but many did not thrive, so we will take more this year.
- We sowed a trial plot of Yellow Rattle seeds in November 2016.
- Work on a book on the Cemetery, covering its natural history, hasn't moved forward.
- Jeremy is continuing to research the history of the Cemetery and has written several chapters of a book on the subject.

Networking

- We continue to work closely with Norfolk Wildlife Trust and Norwich City Council on the Habitat Management Plan.
- We are developing good relationships with wildlife groups such as Norfolk Fungus Study Group and Great Yarmouth Naturalists' Society, with the Plantation Garden Presrvation Trust and with other "Friends" groups, including Friends of the Rosary, Friends of Great Yarmouth Cemeteries and Friends of Kensal Green Cemetery.
- Our Facebook page now has 241 "Likes" (up from 197 in early 2016).
- Our website has had 12,534 page views and 6,420 unique visitors since its launch in November 2012. Last year we answered about a dozen queries about the Cemetery, via our website.
- Our posters at the main Cemetery gates continue to be very useful and have attracted new attendees for walks and new members.

Jeremy Bartlett,
Secretary
16th January 2017.