



# Friends of the Roman Road and Fleam Dyke

February 2016

## Newsletter 49

### Wild Candytuft on Fleam Dyke,

by Monica Frisch

In 2014, on 7<sup>th</sup> June, several patches of *Iberis amara* (Wild Candytuft) were found on Fleam Dyke, south of Cambridge. This was the first time the plant had been reported from Fleam Dyke, indeed the first record for the 10 km square (TL55). There was no question about the identification. Two patches were found by Steve Hartley, and with him were Alan Leslie, the County Recorder for the Botanical Society of Britain and Ireland, David Barden, another very experienced botanist who had compiled lists of plants growing on Fleam Dyke, and Monica Frisch [another very experienced botanist. JN] who found the third patch.



At this reduction, Monica's photograph, cannot show clearly the details which prove this to be *Iberis amara*, Wild Candytuft.

However, the stems are obviously longer, and if you look closely you can perhaps see that many leaves are deeply toothed. The flowers, which can be mauve, have two lower petals much longer than the upper pair.

This plant is enjoying life on the Fleam Dyke. When I was shown Wild Candytuft on Pegsdon Hills, they were surviving in miniature, almost flat on a sheep-grazed turf.

The botany of Cambridgeshire is well-documented, thanks to the work of Gigi Crompton who compiled an invaluable catalogue of historical species records dating back to 1538, available online at <http://www.cambridgeshireflora.com>. This lists recent records (since 1979) in the Royston area (Ashwell, Morden Grange, Therfield Heath) but no records at all for Fleam Dyke and only one nearby, from a hundred years earlier, when Shrubbs in 1879 recorded it as "plentiful in Cherryhinton fields". As the BSBI County Recorder, Alan is very familiar with the flora of Cambridgeshire and Steve has done a lot of survey work for the Wildlife Trust and knows Fleam Dyke well, as does David who had compiled the species list for the Friends of the Roman Road and Fleam Dyke website. But none of them knew of any records for Wild Candytuft from the area. In June 2014 three patches were found, one on a slope near the junipers, in exactly the sort of habitat where it grows at Pegsdon Hills near Hitchin in Bedfordshire, exactly the right habitat for the plant. Steve found more plants nearby in an area where the ground had been disturbed, while Monica located another patch among another clump of junipers. The species was still there this year and had spread to other areas, including near the entrance by the A11.

How did the plant get there? Could it be from long dormant seed that has just come to light? Various references refer to the seed being long-lived. Emorsgate Seeds' website says "*as the seed can remain viable in the soil for many years it can reappear following disturbance*". In this instance this seems unlikely as there has been plenty of disturbance previously. Also there are no historical records for this distinctive plant in this area – and the records of Cambridgeshire's flora have been well-studied and well-documented.

Is it really plausible that the seed has blown in from the Royston/Ashwell area – about 20 kilometres (12 miles) as the crow flies (or the wind blows) – and found three patches of suitable habitat at the same time? Steve reports that he has studied plants in seed this year and that the winged pods seem to stay attached to the plant, and the ripe seed is shed from them. He says the seed has no obvious transport mechanism, leaving only the possibility of transport in soil stuck to animal feet etc.; unlikely given the distance from the Royston area.

It is possible that it came in on the feet of someone who'd been in the areas where it grows near Royston. The Wildlife Trust and conservation volunteers do work both at the sites near Royston and on Fleam Dyke, though their vehicles do not have access to the Dyke itself.

Or is it more likely that someone has sown the seed? It is readily available from wildflower seed suppliers such as Emorsgate Seeds, and their website provides information on suitable habitat saying "*It is usually found in bare patches of south facing chalk grassland, particularly in rabbit scrapes, but can also be found in quarries, wasteland and as an arable weed*".

Alan Leslie's conclusion, reporting on the find in *Nature in Cambridgeshire*, no. 57, was that "it seems most likely that this is an unfortunate deliberate introduction".

Interestingly, Wild Candytuft has this year (2015) been found for the first time on the old railway line at Hayley Wood, about 30 km to the west. But here it is more likely to have come in on Wildlife Trust vehicles as they work both at Morden Grange and other sites where Wild Candytuft grows and at Hayley Wood, parking their vehicles on the old railway. There it is doing well on the clinker of the old railway track.

Monica Frisch, November 2015



## **Excursion to Pampisford Arboretum, 18<sup>th</sup> September 2015**

Mrs Killander proposed this visit in order to help us raise funds for our conservation work. When Elfrida and I talked to her, we discussed a simple picnic tea with perhaps a small marquee and an electrical connection. Elfrida was going to bring an urn, tea pots, cups and saucers and cakes, of course. What we arrived to find was a large white marquee on the lawn, with tables and chairs for 50, white table cloths, flowers on the tables and little shrubs in plant pots all round the edge beside the guy ropes: decus et tutamen.



It was a tea worthy of Downton Abbey, set against a far more beautiful background of deep green cedars and varieties of cypresses in contrasting shades of gold and green. If you look closely, you can see Anna Snowden and Elfrida Heath preparing the tea for everyone with the help of Nick Beale and Claire Scott, who took these photographs and many more. Almost everyone else had gone to see the chalk quarry and what is left of the Brent Ditch, which runs from Pampisford to Abington. I was sitting off stage, bottom right, enjoying the view, the sunshine and the prospect of a rather nice chocolate cake.

About thirty five members of the Friends of the Roman Road and Fleam Dyke visited the garden and arboretum of Pampisford Hall, the home of Mrs Arabella Killander. This was an exceptional opportunity to see one of the last of the famous tree gardens designed by Robert Marnock during the 19th century. Winding paths under the shade of tall conifers have gone out of fashion along with the tight clothes of the era, and many of his gardens have been extensively altered to bring in the sun, and open areas for more energetic activities. Conifers went out of fashion, except for shelter belts. However, Mrs Killander showed us the surprising range of colour, and the fascinating variety of forms that exist in this plant group. Although conifers are her chief passion, she has also planted areas of deciduous trees which demonstrate the wide variety of species within a genus such as beech, oak and lime, which many of us think we can recognise easily.

The arboretum is not open to the general public so we were extremely lucky to be offered this chance to see it. However, Anglesey Abbey has a fine collection of conifers in the areas around the entrance. Not all of the trees are labelled (garden enthusiasts can be extraordinarily light fingered!) but if you ask at the desk they will make you a photo copy of the plan, and you can wander round with your head in the air, trying identify the different pine trees by the number of needles per cluster, the way the scales lie on a cypress frond, or the way the branches droop sadly as they do in Brewer's Weeping Spruce.

Mrs Killander believes in planting new trees fairly close together, which is not standard practice, but they seem to do well. Also, she likes to plant each species in threes, as was done in the eighteenth century. "If one or two die, you still have the third one." She enjoys planting interesting species which are not supposed to do well on chalk, and then watching them thrive. Her conclusion is simple: "Trees like growing together".



Thirty five of us, shrunk to near invisibility by the size of these great trees.  
Photos: Claire Scott



To the west of the house, there is this sunk lawn with flower beds, and a walled garden. The garden flowers were over, but the 'unimproved' lawns were full of small wild flowers: a perfect chalk grassland sward.

## FLEAM DYKE AND ROMAN ROAD

### Butterfly Transect Data 2015

by Roger Lemon

On Fleam Dyke, data were obtained for all 26 weeks of the season and on the Roman Road, 25 weeks. A total of 24 species were recorded on each site. This season was the ninth year in which regular transect walks were made. In 2012 we recorded the lowest totals to date, continuing a steady decline in numbers from the peak year of 2009, while 2013 produced large increases in total butterfly numbers. 2014 was a mixed year with the Roman Road showing a slight increase over 2013 but Fleam Dyke showing a significant fall due to a reduction in the numbers of Chalkhill Blues. This year, the Roman Road showed a slight drop in total numbers but on Fleam Dyke there was an increase, reflecting an excellent season for this species.

The index for the **Chalkhill Blue** on Fleam Dyke more than doubled, from 1081 in 2014 to 2215 this year, a record number for the site. On the Roman Road, numbers of Chalkhill Blues are much lower but the small population which does exist is increasing gradually, the index rising from 47 in 2014 to 50 this year.

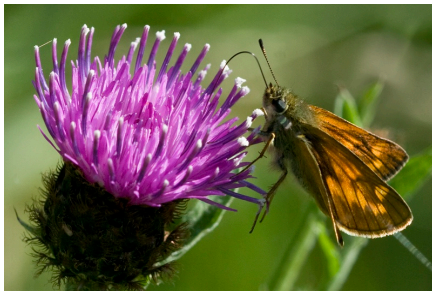
Chalkhill Blue male.

Photo: Jack Harrison



Our second habitat specialist species on Fleam Dyke, the **Green Hairstreak**, had a moderately good season, the index rising from 12 in 2014 to 21 this year.

The **Dark Green Fritillary**, which appeared on Fleam Dyke for the first time in 2010 with one sighting and showed modest increases to an index of 13 in 2013, has not been recorded in transect counts for the last two years.



**Small/Essex Skippers** showed a drop in numbers on Fleam Dyke following a record year in 2014 but there was an increase on the Roman Road. Numbers of the **Large Skipper** [left] were lower than in 2014 on both sites.

Photo: Nick Ballard

Although numbers were slightly down, the **Brimstone** had another good season. On Fleam Dyke, the **Large White** showed an increase relative to the low number recorded in 2014 while on the Roman Road the number was very similar. The **Small White** increased in numbers on Fleam Dyke but showed a slight reduction on the Roman Road. The **Green-veined White** and the **Orange-tip** were down in numbers on both sites. No **Clouded Yellows** were recorded this year.

The **Common Blue** had a very poor year on Fleam Dyke in 2015 and showed some reduction in numbers on the Roman Road. This was after a good recovery in 2013 and 2014 from previous very low numbers. The **Brown Argus** had a very poor year on both sites but the **Holly Blue** showed a good increase in numbers relative to 2014. A single **Small Copper** was recorded on the Roman Road.

It was a mixed year for the vanessids. After an excellent year in 2014, the **Small Tortoiseshell** showed a reduction on both sites but numbers were still above those recorded in 2013. There were fewer **Peacocks** on Fleam Dyke than in 2014 but a significant increase on the Roman Road. The **Comma** occurs in very low numbers but showed an increase on



Fleam Dyke and a reduction on the Roman Road. After a recovery in 2014, the **Red Admiral** decreased in numbers on both sites. Five **Painted Ladies** were recorded on the Roman Road and six on Fleam Dyke. The only year with significant numbers of this migrant species was 2009.

In 2014, the **Ringlet** showed the highest numbers recorded to date but dropped to more typical levels this year. **Meadow Brown** numbers increased on the Roman Road but showed a slight reduction on Fleam Dyke. The **Speckled Wood** was lower in numbers on both sites than in the previous year. The **Gatekeeper** occurred in good numbers with exactly the same index as 2014 on the Roman Road but with a reduction from the very high 2014 level on Fleam Dyke. Although numbers are small, the **Marbled White** was again recorded with indices of 2 on both sites. The **Small Heath** showed a similar number on Fleam Dyke this year but on the Roman Road, where numbers are relatively low, there was a reduction to an index of just 5.



Photos: Jack Harrison

## How long do butterflies live? JN

This one can live up to eleven months. As soon as the temperature rises above 17 degrees, you will see the bright yellow male cruising across the gardens, looking for females. The female Brimstone is a pale greenish yellow, and can appear white in bright sunshine. Look for the pointed upper wing, and the red spot on both upper and lower wings. The females will be looking for their foodplant: Purging Buckthorn, a small tree which does well on chalky soils. The caterpillars feed on the leaves and then spin a triangular hammock in the fork of a twig on the tree, inside which they turn into a green chrysalis which hangs there suspended until July or August. Newly emerged Brimstone butterflies are to be seen on thistles, Greater Knapweed and Burdock, feeding up for the winter, which they will spend hidden in trees or bushes. After mating, the Brimstones live on into the summer. By contrast, the smallest of our butterflies, the Small Blue only survives for two or three weeks.

## Juniper News

In the nineteenth century, there were five communities of *Juniperus communis*, the Northern Juniper in East Anglia, by the mid twentieth century we only have records of junipers on Fleam Dyke. In the thirties, Harry Godwin noted 38 Juniper bushes. By the time Max Walters surveyed the site in 1960, there were only 24. The decline has continued, as the aged bushes die off. In 1977 two moribund bushes were replaced by cuttings grown in the University Botanic Garden of which Dr Walters was the Director. By 1978 there were 11 bushes which benefited from determined efforts to clear scrub around them and protect them with rabbit guards. The tallest and strongest of the surviving 11 Junipers, a male, was snapped in half by a gale in October 2002. One of the small bushes grown in the Botanic Garden and planted in 1977 has also died, so now there are only 9 left. Until 2,001 there were no seedlings but since then quite a lot of little Junipers have appeared under female bushes. Unfortunately, many die early on but there are a few which continue to grow rather slowly.

We hoped the tall juniper pollarded by the gale would regrow from the top, but although new shoots emerged from the top, they died in the following summer. Sharon Hearle, the Green Belt Officer, had successfully grown a plant from cuttings, so when the tall juniper was damaged, she suggested that other people should have a go. I remember various members of the Cambridge Group of the Wildlife Trust taking away small pots of potting-compost and sand, with assorted cuttings. My three little pots sat in a suitable corner for about ten months, after which they joined my compost bin. However, Christine Newell left her 3 pots in a corner for several months longer, and by 2005 she had 3 sturdy little Junipers, which needed a home. Andrew Westward Bate, local historian and a warden of Hildersham Church suggested planting them in the churchyard, as Hildersham was nearest to the place where *Juniperus communis* was recorded by John Ray in 1660. He called it Juniper Hill. It seems likely that this is the small SSS1 called Furze Hill. (Not open to the public.)

The south side of Hildersham churchyard is sheltered, with light sandy soil and plenty of sun. Protected by rabbit guards, the little bushes did wonderfully well. This photograph was taken in 2013. Our Chairman, Edmund Tanner, is 6ft 3ins, and the junipers were more or less at elbow level. They have continued to grow very well, filling the space needed for graves or memorial stones. The bushes will be pruned, and lifted by a tree spade, a machine which can dig out the whole root. One will be replanted further back, nearer the trees in the churchyard and two will go to gardens in the village. Andrew has invited members of the FRRFD and others to take cuttings before the move.



Many of you will have noticed the two triangular plots on either side of the entrance to the Fleam Dyke on the A11. When the road was widened, these plots of land were provided by the Highways Agency in compensation for the loss of a large chunk of the actual Dyke in 1991. Preparations for this contingency had been made well in advance, cuttings had been taken and grown in the Botanic Garden, and 30 small bushes were planted in each of the triangles. The bushes did not do uniformly well, but the survivors, about 15 in total are tall handsome bushes, about half of which are female. Marlein van der Merwe's study of the surviving bushes showed that the original bushes had a wide range of genes, which are represented in the cuttings; but cuttings are clones of the original, and therefore of the same genetic make-up, with no chance of increasing genetic diversity. Of the surviving bushes on the dyke, only 3 are female. On 1<sup>st</sup> November 2011 Christine Newell collected ripe purple seeds and tested them for viability by cutting them open, with the following result.

Juniper 1: young, small female tree, nearest the Bedford Gap.			
19 berries, non-viable 1	viability 94.7 %	very good	
Juniper 2: old, tall female tree, in the middle of the group of bushes			
25 berries, non-viable 24	viability 0.04%	poor	
Juniper 3: old, tall female tree, nearest the A11			
29 berries, non-viable 26	viability 0.10%		

The viable seed were then stored in the refrigerator because they need to experience frost, but in the end no seedlings resulted despite Christine's knowledge and skill.

This decline and the possible causes were discussed by Max Walters in "The Natural History of Cambridge, No. 43 2001 and No.44 2002

Genetic research: Van der Merwe, M, Winfield M O, Arnold G M, and Parker, J S, *Molecular Ecology* 9:379 -386



## Thank you very much to a lot of people!

Thank you to all the members who have responded to my reminders to pay subscriptions, and particularly to those members who paid a lot more. It feels like a vote of confidence in what we do, and of course it pays for the work done so skilfully by **Bernard Hunt**.

**Subscriptions are £15 minimum per household, payable on 5<sup>th</sup> April.** Please send cheques or details of electronic payments to Christine Newell, 82 The Lane, Hauxton, CB22 5HP 01223 872681 [christinenewell@btinternet.com](mailto:christinenewell@btinternet.com)

We have also been very fortunate in receiving help in the form of management work done without charge by **Michael Goodie**, the tenant farmer of the land beside the Roman Road at Copley Hill, authorised by **Peter Bennett**, Land Manager for Babraham Farms.

**Julian Bye**, gamekeeper for six farms in this area, has in the past flailed the verge at Copley Hill for us in his own time, and will flail both verges of the Road at Mount Farm in mid-March. **The Cambridge Conservation Volunteers** will come on the 20<sup>th</sup> March to rake off the arisings, The most recent treatment of the clematis has turned out to be a success, despite my gloomy predictions, and we hope, with annual mowing and raking off, to be able to return this section to ordinary grassland with plenty of common insect friendly flowers.

The CCVs have spent 5 Sundays working on the Fleam Dyke or the Roman Road: 15<sup>th</sup> and 19<sup>th</sup> March, 10<sup>th</sup> June (right), 19<sup>th</sup> July and 13<sup>th</sup> December. They work for two to three hours in the morning and a couple of hours in the afternoon, and get through a great deal of essential work. The organisation charges a small fee per person, which covers petrol, tool repair and insurance costs. Groups like this are essential to the management and restoration of wildlife sites. If you know anyone who would like to join them or the Mid-Week Volunteers organised by Iain Webb, please let me know.



The group is often joined by regulars from our own former work parties, which began on 7<sup>th</sup> October, 2001 and continued with 4 or 5 work parties a year until 2014: Mike Albutt, Helen Chubb and Richard Fowling, Christine Newell, Edmund Tanner and David Waterhouse .

## Support from Butterfly Conservation

In 2014 and 2015, the Cambridgeshire and Essex group of Butterfly Conservation has paid for £500 of work in good butterfly areas of the Fleam Dyke. We are very grateful for this financial support, which will continue this year.

Everyone who visited Pampisford **Arboretum** on 18<sup>th</sup> September 2015 will join me in repeating our thanks to **Mrs Killander** for a wonderful afternoon, and in particular for her marvellously expert guided tour of the Arboretum. The event made £500.

And finally, repeated thanks to **Mark Bishop** and **Daniel Szablowski** at **Copy Studio** for their help with another newsletter.



## **Fifteenth Annual General Meeting Wednesday, April 6th, 7.15 for 7.30pm, 2016**

**The Fulbourn Centre, 31 Home End, CB21 5BS  
(off Stonebridge Lane and Recreation Ground)**

**Business meeting with illustrated reports of the work we have done since last April.**

**Interval. Refreshments available in the bar.**

**Professor Tim Sparks**, visiting professor at the Poznań University of Life Sciences and at the University of Liverpool

### **Tales from the Wood**

At Monks Wood Research Station, near Huntingdon, Tim Sparks undertook ecological research from 1961 until 2009. That work included studies on landscape history, hedgerow management, and on the succession of open ground into woodland. In this talk he will present aspects of these studies that may be relevant to the Fleam Dyke and Roman Road. Tim Sparks is also known for his studies in phenology.



All welcome

Members free

Non-members £3

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