The Doncaster Naturalist

Volume 2 Number 5 February 2016

Doncaster Naturalists' Society

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Editorial

This edition of The Doncaster Naturalist is dedicated to the memory of Dorothy Bramley. Dorothy was a member of the 'Nats' from 1977 to her death in January 2015, and she was the first editor of this publication, producing 10 issues between 1982 and 1989. After this the society concentrated on producing site and species survey reports which Dorothy also edited and illustrated. Details of her life are described in Colin and Louise's obituary on the following pages.

It is fitting that we open this issue with two of her beautiful illustrations, which are so influenced by her abilities as a very competent botanist. This one shows her comparison of two buttercup species from Potteric Carr.

Dorothy left her extensive botanical book collection to the Nats who will use any proceeds from this in their work of conserving, documenting and educating people about the wildlife of the Doncaster region, work which Dorothy so ably carried out over many years.

Dorothy Margaret Bramley: March 1921 – 17 January 2015

A Bradford lass, Dorothy was educated at the celebrated Salt's Grammar School for girls, Saltaire, subsequently becoming a graduate of the celebrated Leeds College of Domestic Science. Dorothy's contribution to the war effort was as one of the Government Advisors who demonstrated to women's groups how to cook thriftily and eat healthily during those days of wartime food shortages. Later she worked for the national 'Mass Observation' social research project which for the first time monitored the lives of 'ordinary people', a project referred to as 'an anthropology of ourselves', the archive of which is maintained at Sussex University.

1944 saw Dorothy's marriage to Don Bramley whom she had known since Grammar school days, Don being a star pupil in the boy's department of Salt's Grammar School. In 1945, through Don's work with 'British Nylon Spinners', they moved to Coventry then Pontypool, South Wales, living in the idyllic Usk Valley, and finally moving to Doncaster in September 1955, Don joining the research and development staff of ICI Fibres. In Doncaster Dorothy worked as a Domestic Science teacher initially in Rossington, then at Oswin Avenue, Balby and finally Balby Woodfield School where she become Deputy Head.

After early retirement in 1971 Don volunteered his services to Doncaster Museum as an amateur geologist. This brought the Bramleys in contact with the Museum Natural History staff, the Doncaster Naturalists' Society and the YNU. That year the YNU was seeking a new Administrative Officer and with trepidation Don tentatively took on the post, which in reality became a double act between Don and Dorothy. This commitment shaped life in the Bramley household for the next 27 years. Dorothy became a devoted supporter of the YNU, attending Executive and field meetings in fog, snow and shine, sickness and health for over three decades. Indeed Dorothy became one of the most regular attenders at YNU general field meetings. She was a keen supporter of the YNU Flowering Plants Section and the YNU History Section, hosting a meeting of the latter group at her home at 29 Cantley Lane allowing members to examine her botanical

literature, botanical illustrations and of course Don's extensive geology/lapidary collection.

In 1971 the Bramleys and their neighbours in the Cantley Lane area, together with supporters of Potteric Carr (Low Ellers) Yorkshire Wildlife Trust Nature Reserve were caught up in the campaign to defeat the routing of the proposed M18, which was initially designed to go through the hearts of Sandall Beat Wood and Low Ellers Nature Reserves as well as through the Bramley household!! This action forged a lasting link with the YWT and Dorothy became a staunch supporter of the Potteric Carr volunteers producing a booklet on the Botany of the Nature Reserve which ran to several editions.

In 1977 Don and Dorothy joined the Doncaster Naturalists' Society, Dorothy becoming an expert botanist and with Ian McDonald, Pip Seccombe and Peter Skidmore created what was to become the heyday of botanical recording in Doncaster. As a keen botanist she gave regular illustrated talks both to the society and other local community groups.

The Doncaster Naturalist Journal: Positive encouragement from the likes of Peter Skidmore and from outside the society by such inspirational young bloods as Brian Eversham and Martin Moss, there was a move for the society to produce its own journal as an outlet for the burgeoning natural history recording and research projects that members were involved with. A publications fund was raised and copy for the first issue was assembled. Back in 1982 the Doncaster Naturalists' Society produced the first of its very successful and useful little journal *The Doncaster Naturalist*.

Don Bramley who was President at the time (in fact from 1980-85) wrote the following in the forward to the first edition "Articles may be short, long, tentative or intense – do not hesitate to submit your observations. We already have an encouraging list of articles from our members from which our Temporary Editor has assembled our first copy". By November 1989 Dorothy (the … ahem! … Temporary Editor) had edited some 76 papers in a creditable 10 issues which completed Volume 1. From then on the Society's published output took the form of periodic Site Survey Reports. These included surveys of Castle Hills (1990), Wadworth Wood (1993) and Austerfield Quarry (1995). Not only did Dorothy edit these, she provided numerous illustrations, mainly botanical line drawing studies. In addition to illustrating the entire plants, many included separated details of component parts and other minutiae.

Dorothy edited ***A Survey of Castle Hills*** in 1990 and provided illustrations of Cuckoo Pint (*Arum maculatum*), Green Helebore (*Helleborus viridis*) and Adders-tongue Fern (*Ophioglossum vulgatum*). For John Pearson's Plant Gall report Dorothy provided illustrations of the Knopper Gall (*Andricus quercus calicis*), Marble Gall (*Andricus kollari*), *Rondaniola bursaria* on ground Ivy, *Cystophora sonchi* on Sowthistle, *Pontania viminalis* on Osia and *Diplolepis rosarun* on rose leaf. For Colin Wall's Bryology report were

meticulous illustrations of *Fisidens bryoides*, *Eurinchium praelongum*, *Funaria hygrometrica* and *Hypnum cupressiforme*. For George Mitchell's Fungus list were the Ink Cap (*Coprinus atramentarius*), Jew's Ear (*Auriailaria auricular-judae*), the bracket (*Sterium hirsutum*) and the deceiver (*Laccaria laccata*). And surprisingly a non botanical subject Andrew Godfrey's Diptera report got illustrations of the Calliophorid 'Bluebottle' (*Calliophora vomitoria*), the Empid 'Dance Fly' (*Empis tesselata*) and the Tachiniid (*Gymnocheta viridis*).

A Survey of Wadworth Wood, Doncaster 1991-1992. Published in 1993. Edited by Dorothy and for the Bryology report by Colin Wall Dorothy she provided illustrations of the thalloid liverworts *Conocephalum conicum*, *Pelia epiphylla* and the leafy liverwort *Lophocolea bidentata* . Other articles she wrote and illustrated here were on Wild Service Tree (*Sorbus torminalis*) and Spurge Laurel (*Daphne laureola*) for which Wadworth Wood is a major local site.

A Survey of Austerfield Quarry 1993-1994 Published 1995. Dorothy adorned the Habitats papers by Tom Higginbottom with an illustration of Shepherd's Cress (*Teesdalia nudicaulis*), and for Ian Mcdonald's survey of flowering plants provided illustrations of Evening Primrose (*Oenothera biennis*), Ox-eye Daisy (*Leucanthemum vulgare*), Dog Rose (*Rosa canina*) and Tansy (*Tanacetum vulgare*). For Rob Taylor's Mycology report she provided illustrations of the Brown Roll Rim (*Paxillus involutus*) and the puffball (*Lycoperdon perlatum*) both from King's Wood and finally as an end-piece provided a study of White Bryony (*Bryonia dioica*) which was such a feature of the local hedges.

Doncaster's Living Churchyards Published 1999. Dorothy produced illustrations of Yorkshire Fog (*Holcus lanatus*), Quaking Grass (*Briza medi*a), Perennial Ryegrass (*Lolium perenne*), Sterile Brome (*Bromus sterilis*) and Wall Barley (*Hordeum murinum*); Hart's Tongue Fern (*Phyllitis scolopendrium*), Common Spleenwort (*Asplenium trichomanes*), Wall Rue (*Asplenium ruta-muraria*) and Male Fern (*Dryopteris filx-mas*); Meadow Buttercup (*Ranunculus acris*), Creeping Buttercup (*Ranunculus repens*) and Bulbous Buttercup (*Ranunculus bulbosus*) and Cowslip (*Primula veris*).

Dorothy served as DNS President from 1990-1992 and on 11th March 2000, along with committee members and all surviving past presidents (Peter Skidmore, Helen Kirk, Colin Howes, Tom Higginbottom and Pip Seccombe), planted two Wild Service (or Chequer) Trees beside Doncaster Museum thereby putting the 'Chequer' back into Chequer Road!

On 29 May 2002, in recognition of her long and substantial contribution to the running and life of the Doncaster Society, Dorothy was presented with a framed certificate conferring on her Honorary Life Membership of the DNS.

She was a regular attender at University extramural botanical illustration courses run by

Valerie Oxley. From this she joined the Three Counties Botanical Illustration group in Retford, exhibiting annually at Retford Library and then started her own botanical illustration group which regularly exhibited at Bawtry Library. She joined Valerie and a group of north of England botanical illustrators to produce plates for *'Wild Flowers of the Peak District'* by Patrick Harding and Valerie Oxley (2000). Here, Dorothy contributed colour illustrations of Pyramidal Orchid *Anacamptis pyramidalis* and Bee Orchid *Ophrys apifera*. Elsewhwere her illustrations of Wild Service tree (*Sorbus torminalis*) have appeared in the *YNU Bulletin* (2000) 34: 1-8 and the Tree Lupin (*Lupinus arboreus*) in the *YNU Bulletin* (2005) 44: 22-27. And in 2011 the splendid *South Yorkshire Plant Atlas* by Wilmore, Lunn and Rodwell was adorned by a full page frontispiece of a collection of wild flowers drawn and painted by Dorothy.

Dorothy became deeply involved with family history studies, being one of the founding members and for a time, President of the Doncaster Family History Society. This brought her in contact with the staff of local history Libraries and Archives not only in Doncaster but across Yorkshire, particularly in the Bradford and Yorkshire Dales areas.

Dorothy was a keen needlewoman becoming one of the legendary 'Doncaster Broderers'. Avant-garde examples of her framed embroidery were always on show on the walls of the Bramley household. She was an enthusiastic member of a local ladies choir and in her teaching days was keen on sport, excelling at tennis and badminton.

In March 2011 the Doncaster Naturalists' Society held a reception at Doncaster Museum to celebrate Dorothy's 90th birthday. This was attended and eulogies given by friends and representatives from the numerous organisations Dorothy had supported over the years.

Dorothy's personal library of botany books was gifted to the Doncaster Naturalists' Society in December 2014 and is housed at Doncaster Museum and Art Gallery.

In her latter years, Dorothy resided at Rockhouse Residential Care Home near Tickhill. She died on 17 January 2015 following a short illness, aged 93.

Colin Howes and Louise Hill

High winds and tree damage in the Doncaster region during the winter storms of 2013-14

Colin Howes and Tim Prosser

Introduction and background

From early November 2013 to late March 2014 Britain was battered by a remarkable succession of over a dozen low pressure systems, one producing a UK record low barometric pressure of 936.8 millibars recorded in Stornoway. Normally such phenomena track to the north of mainland Britain and are a familiar feature on shipping forecasts particularly for sea areas off north west Scotland (Rockall, Bailey, Hebrides and Fair Isle), the Faeroes and Southeast Iceland. During the winter of 2013-14, the jet stream in of the upper atmosphere which influences the direction and intensity of North Atlantic low pressure systems, shifted south of its usual route, effectively driving the sequence of amplified depressions directly at mainland Britain. The frequency and intensity of these systems was unusual.

The succession of gale and storm force winds became regular features in weather bulletins and national news broadcasts and we became familiar with the term 'severe gale' and on occasions, 'violent storm' and 'hurricane' even in our domestic weather reports. Though the destructive brunt of most of this weather was felt by Wales and the south western and south coast counties, damaging winds periodically affected the South Yorkshire region.

A spell of very turbulent weather over 4 and 5 January 2014 resulted in widespread disruption but this time the strongest winds were across northern and eastern England, regularly gusting at 50 to 60 knots (58 to 69 mph), with the highest winds across the top of the Pennines. High Bradfield (above Sheffield) recorded a gust of 81 knots (93 mph) and winds gusted at up to 97 knots (112 mph) on Great Dun Fell, Cumbria. In that case, low-lying Doncaster was relatively unaffected, wind speeds at Robin Hood Airport only gusting to a relatively modest 48 mph.

A wind event on 15 January 2014 was singled out for special mention by the *Doncaster Free Press* website which reported that "Doncaster ground to a halt as gale-force winds battered the borough causing traffic mayhem and forcing police to shut down parts of the town centre because of flying debris. Doncaster Council received reports of damage to 25 buildings. Police moved quickly to cordon off several areas of the town centre, including Baxter Gate, Clock Corner, Market Place, High Street and Priory Place due to debris falling from roofs and unsafe buildings. Scores of market stalls were also badly damaged by the winds". It was claimed that "the 75mph winds felled more than 240 trees locally, leaving Doncaster's road system struggling to cope with the chaos." *Free Press* readers posted photographs of trees down in Wheatley, Armthorpe, and a branch torn from a tree in the central reservation in Avenue Road, off Thorne Road. This event

interestingly demonstrated the extremely narrow focus of such wind storms since the weather station at Robin Hood Airport down the road in Finningley only recorded a modest 13.6 mph maximum wind speed with no associated violent gusts! This left the impression that Doncaster centre may have experienced the concentrated energy of a tornado.

The Doncaster Free Press Website also reported that wind caused havoc in Doncaster during the evening of 12 February 2014. Problems commenced at **5.45pm** when two trees brought down overhead power lines stranding scores of rail passengers just outside Doncaster on the East Coast Service from Leeds. At **6.20pm** in Goodison Boulevard, Cantley a man was trapped in his car by a fallen tree and had to be released by tree surgeons. At around **7.30pm** another tree fell on a car in Apy Hill Lane, Tickhill. Doncaster Council reported that Moorhouse Lane, near Hooton Pagnell, and Blyth Gate Lane and Apy Hill Lane, Tickhill, were all closed because of fallen trees and in all around 40 trees were reported to have been blown down by the powerful winds. At around **7pm** a lorry was blown over near the Doncaster Services on the M180 and the A1(M) by Doncaster was closed due to an overturned lorry. Duke Street in Doncaster town centre was closed when windows of the former TJ Hughes store were blown out. The gales also ripped off the metal shutters of The Colonnades Centre; West Street was closed because of falling masonry and Arksey Primary School was closed due to roof damage caused by overnight winds. Power engineers were called to secure a detached electrical cable in Somersby Avenue, Sprotbrough, fire crews attended three incidents and gave advice on many more and South Yorkshire Police were called to 200 wind related incidents.

With the unusual severity of these events it seemed opportune to observe and record the effects on local trees and woodland habitats with a view to monitoring their natural history and habitat changing implications. The risk of wind-throw to a tree is related to its size (height and diameter), the 'sail area' presented by its crown, the anchorage provided by its roots and its exposure to the wind. The resulting damage, though popularly lamented, is quickly cleared away by public authorities or land managers, yet if left can be a significant factor in opening up canopies and introducing woodland succession, thus developing an ecologically diverse mosaic of woodland habitats.

Survey methods

On 12, 14 and 16 March 2014 one of us (CAH) made visits to Potteric Carr Nature Reserve (SE5900), the Lakeside Park (SE5901) and Leisure Dome (SE5902) areas where 48 of the recently wind damaged (windthrown or decapitated) trees were examined. Where access permitted, trunk girths were measured in inches at 5ft from the base. Standing at the trees base and using a compass (with a view finder with a magnifying lens and notch and lid with a sight wire), the direction of fall was calculated to within 5 degrees.

For detailed information on wind speed and gust frequencies, meteorological data from

the period November 2013 to March 2014, which had been monitored at nearby Robin Hood Airport, Finningley (SK6698) was collated via the website: http://www.wunderground.com/history/airport/EGCN/2014/07/12/DailyHistory.html.

Results - Local Meteorological Data

Figure 1 shows the periodicity of events producing wind speeds in excess of 30 mph from 1 November 2013 to 31 March 2014. Thirty six such events were monitored during this period with winds gusting from 32.3 mph to 66.4 mph. 141 major gusts were monitored with numbers of major gusts per event ranging from 1 to 12.

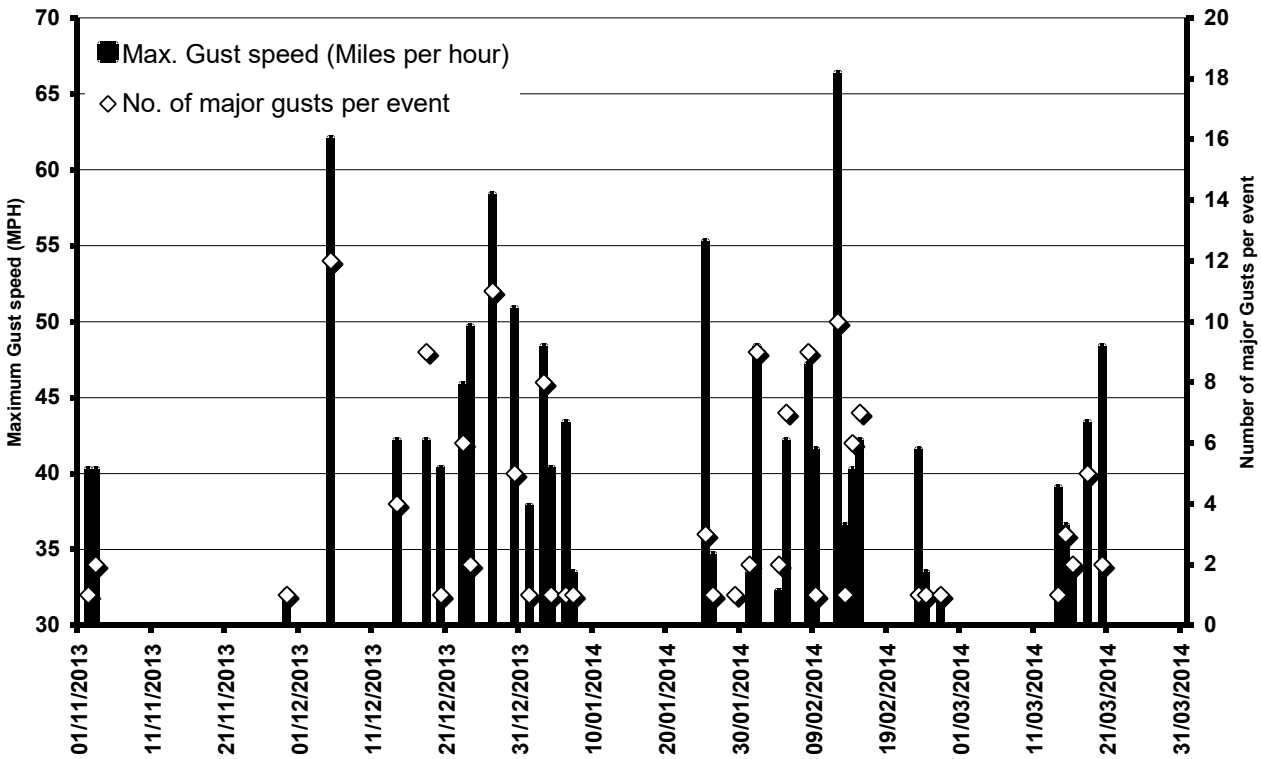


Figure 1: Pattern of Gales and Storms monitored at Robin Hood Airport, Finningley showing the frequency and velocity of gusts in excess of 30 mph and the numbers of major gusts per event 1 November 2013 to 31 March 2014.

When did the damage take place?

In order to determine the likely dates when the wind-throw took place, wind strengths as recorded at nearby Robin Hood Airport were given a nomenclature in accordance with the Beaufort Wind Scale (see table 1), which describes and classifies the effects of winds of known speeds. Only Storm force, Violent Storm force and stronger gusts are likely to uproot trees and cause widespread structural damage. Figure 2 quantifies the relative numbers of Beaufort wind speeds of force 7 and above recorded during this winter period, revealing that there had been 11 Near gales, 15 Gales, 6 Strong gales, 3 Storms and one Violent storm.

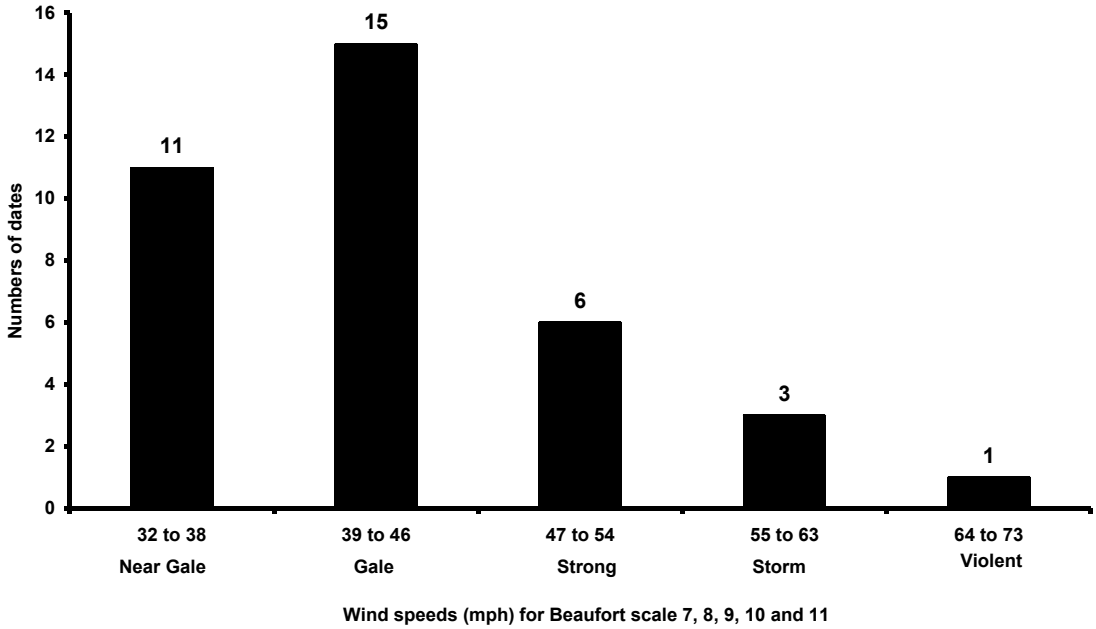


Figure 2: Numbers of occasions (dates) when Beaufort wind speeds of 7 and above were recorded during winter 2013/14 at Robin Hood Airport.

Table 1. Beaufort Wind Scale descriptions and the numbers of dates when winds of force 7 and above were experienced during winter 2013-14.

Force	Mph	Name	Conditions on land	No. of events
7	32-38	Near gale	Whole trees in motion. Inconvenience in walking.	11
8	39-46	Gale	Difficult to walk against wind. Twigs and small branches blown off trees.	15
9	47-54	Strong gale	Minor structural damage may occur (shingles blown off roofs).	6
10	55-63	Storm	Trees uprooted. Structural damage likely.	3
11	64-73	Violent storm	Widespread damage to structures.	1

Thus the required wind speeds of above 55 mph only occurred on four dates. The dates, gust strengths and number of recorded gusts per event are presented in Table 2 which shows that the observed tree damage could have taken place during any of these dates.

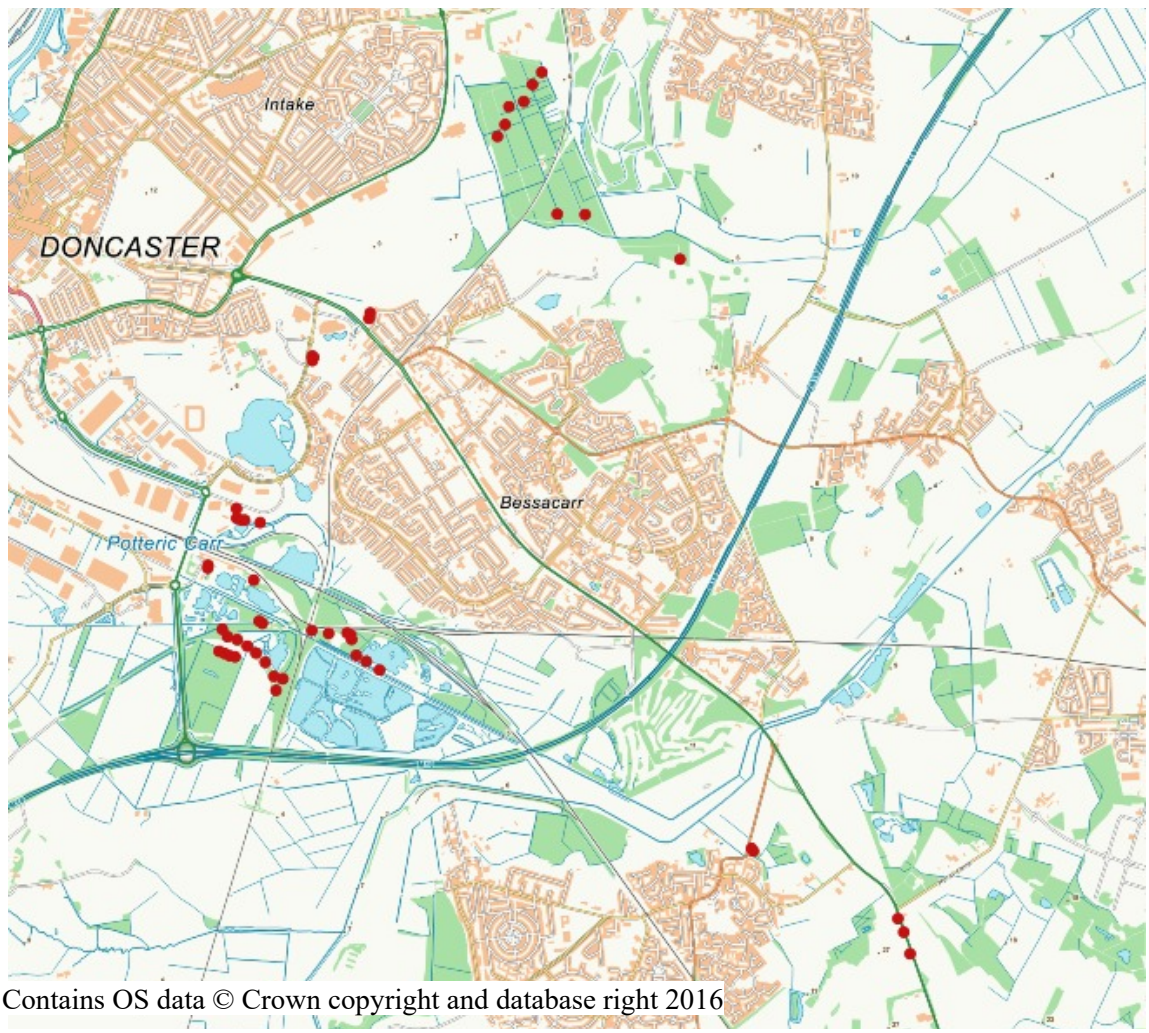
Table 2: Dates of the most violent winds which may have caused the windthrow events during the Winter of 2013-14.

Date	Maximum Gust strength	Beaufort Scale	Number of severe gusts
05 Dec 2013	62.1	Storm	12
27 Dec 2013	58.4	Storm	11
25 Jan 2014	55.3	Storm	3
12 Feb 2014	66.4	Violent Storm	10

The combination of maximum gust strength and the numbers of associated significant gusts suggests that the events of 5 December and 12 February were most likely to have been the most damaging.

Location of Damaged Trees

Figure 3 below shows the locations (red spots) of the concentrations of freshly damaged specimens examined at Potteric Carr Nature Reserve (SE5900), the Lakeside Park



(SE5901) and Leisure Dome (SE5902).Others wind-thrown trees, all young shrub-willows, were observed but not examined across Balby Woodfield/Carr (SE5800). Extensive runs of dead and brittle young hedgerow elms were laid flat in an easterly direction along the western side of elevated areas of the A638 Bawtry road between the Hurst Lane traffic lights and Mount Pleasant (SK6398; 6397), this phenomenon was also noticed along the eastern side of the B6463 Sheep Bridge Road (SK6298) Rossington. Tim and Louise also encountered wind-damaged trees in a swath across Sandall Beat (SE6103) (see Figure 3).

Tree Damage

Table 3 shows the angles of fall (to within 5 degrees) and the numbers of trees within these Categories.

Compass Direction of tree fall	**Number of Trees** in each 5^{o} category
0	3
5	1
15	5
20	1
35	2
40	4
45	5
50	3
55	2
60	3
70	1
75	4
90	4
105	5
125	1
325	1
330	1
360	3

To gain a visual impression of the prevailing direction of windthrown, snapped or split trees, data have been grouped in 30 degree segments (Table 2) and illustrated in Figure 4.

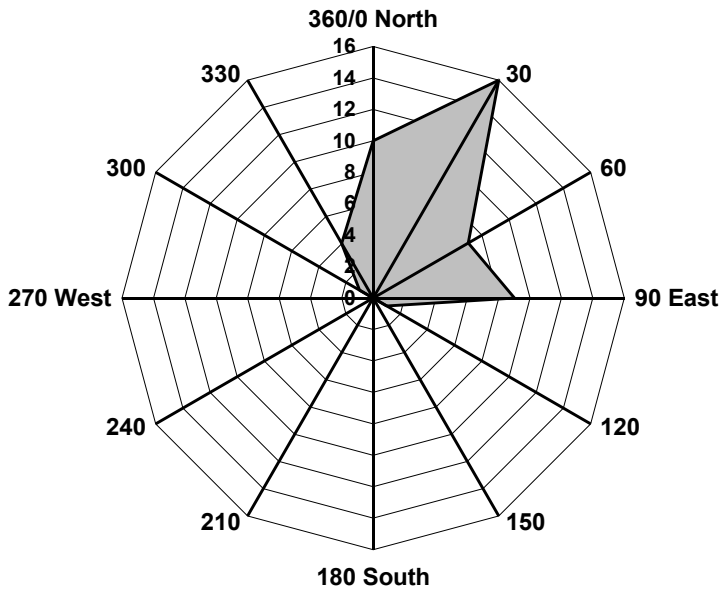


Figure 4: Prevailing compass directions of 48 wind-damaged trees.

Species. The 48 wind-damaged trees were 26 Silver Birch *Betula pendula* (55%), 16 Grey Poplar *Populus x canescens* (33%), 2 White Poplar *Populus alba* (4%), 2 Common Oak *Quercus robur* (4%), 1 Ash *Fraxinus excelsior* (2%) and 1 Grey Willow *Salix cinerea* (2%).

Girth/Age categories. Trunk girth measured at 5ft (chest height if they'd still been standing) ranged from 10 inches to 42 inches with a mean girth of 21.7 inches. The girth distribution, shown in Figure 5 indicates the very young age range of the affected tree population. Though substantially larger/older trees occurred within the landscape, notably in remnants of 18th/19th century hedgerow boundaries and in the old woodland of Corbett Wood and Black Carr Field, apart from shedding minor branches, these venerable specimens seem not to have sustained noticeable damage.

Nature of Damage.
Of the 48 damaged trees 37 (77%) had been pushed over, most (31) revealing a root plate or a root ball (2) though four were simply flattened to the ground with none of the rooting system exposed. Seven (15%) had snapped off part way up the main trunk and in four (8%) cases the trunk had split.

Trees that were pushed over had a mean girth of 21.1 inches (range 12 to 41 inches, n=37) and were demonstrably shallow rooted.

Trees where the trunks snapped were slightly larger in stature with a mean girth of 22.3 inches (range 12 to 42 inches, n=7) and those that split had an even greater mean girth of 26.8 inches (range 21 to 36 inches, n=4). In theses cases the root structures were

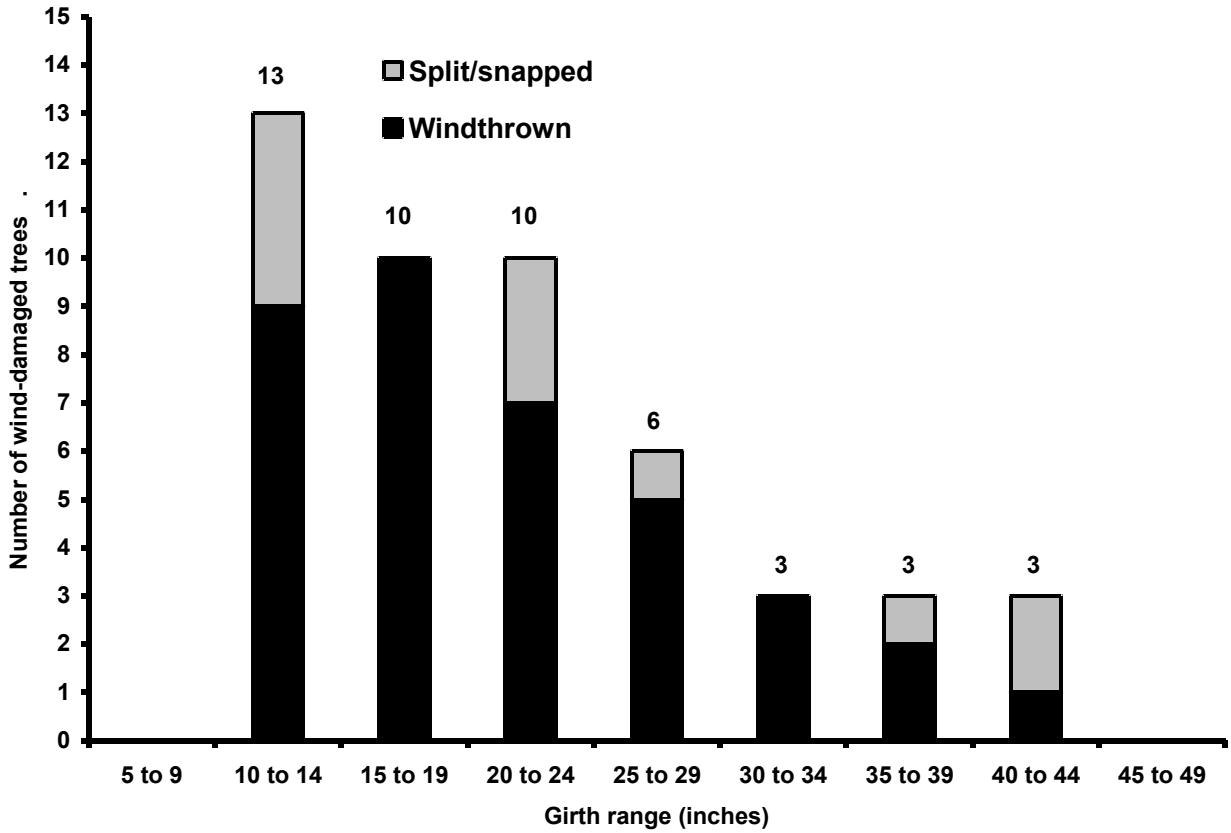


Figure 5: Girth range and frequency of 48 sampled wind-damaged trees

secure and held fast, thus the force of the wind pressing against the 'sail area' even of the leafless canopies was sufficient to overwhelm the flexibility of the trunk. It would have been reasonable to expect the point at which the trunks snapped to equate with points of weakness due to the architecture of the branching structure or the location of some form of damage, a woodpecker hole or rot hole perhaps, but this was only evident in two of the 'splitters' which failed at the point of a substantial rot hole. It seemed as though the failure of the trunk generally equated with the limits of its engineering strength through being over-flexed.

The height at which the trunks snapped ranged from 2ft to 20ft. The two at 20ft were both White Poplars, standard trees in a tall planted hedgerow. These specimens had the greatest girths (42 inches) in the sample, the breaks occurring above the hedgerow height where the tree crowns were unprotected by adjacent shrubs. [TP observed that in these two adjacent trees, the removed boughs had been dispersed in several directions and at several meters distant, suggesting a localised tornado effect].

Rooting Substrates

High water table: Since the Doncaster Carrs constitute a large wetland/floodplain region originally of fens, marshes and bogs, trees rooting into substrates with this high water table are generally only able to produce shallowly penetrating root structures. This was particularly evident with the oak growing in loamy silt adjacent to the 'teardrop' flood-balancing lake south off Carolina Way, and the birches growing in peaty soil between

Black Carr Field and Piper Marsh on Potteric Carr.

Railway ballast: The network of redundant railway embankments and sidings across the carrs have left a legacy of rapidly colonised but unstable mineral ash and ballast. Although rapidly colonised by birches, as a growing substrate this material evidently had a low engineering stability against the levering effect of the trunk and canopy acting like a sail.

Sandy soil: Though many of the wind-thrown trees would be disparagingly regarded by professional arboriculturists as wild self-sets, one populaton of Grey Poplars in an exposed plantation adjacent to the Gliwice Way dual carriageway, was part of the Landscaping of the Leisure Dome car park. This was demonstrably vulnerable to wind-throw by being exposed, on the light sandy soil of the old Doncaster Common heathland. Further, it had been raised into a mound for aesthetic reasons and consequently riddled with rabbit burrows thus further compromising root plate stability.

The value of exposed root plates

Up-ended root plates create exposed, vertical and in this case generally south-westerly facing bare earth habitats (see figure 4). In heavily vegetated and leaf litter-covered woodland, hedgerow or grassland situations, the provision of this habitat feature, provides tunnelling/nesting opportunities for a range of invertebrates, notably Aculeate hymenoptera including bumble bees and mining bees. The colonisation and ecological value of upended root plates, albeit an ephemeral feature, should be recognised by conservation managers. The phenomenon also justifies further investigation.

Sedges at Old Moor

Nora Boyle

Having developed an interest in Sedges over the past two years, I made several visits to Old Moor RSPB Nature Reserve in the late spring and early summer of 2015. My intention was to identify the species present in a small area of study which starts from the visitors' centre and includes the circular walk round the ponds.

Sedges, which belong to the family Cyperaceae, are wind pollinated monocotyledons with reduced flowers, stems that are often triangular in cross section and leaves which arise in three ranks; the most obvious sedges having leaves which appear to be the shape of a W in cross section.

On the first visit, in late April, I found that the leaves of Pendulous Sedge *Carex pendula* were in evidence in multiple spots but no flowers as yet. In various places around the pond areas there were sedges in flower with glaucous leaves of varying height which I

believe to be Glaucous Sedge, *Carex flacca,* with the lower female flower having a stalk but at this stage not yet pendant. This is one of three sedges with glaucous (blue-green) leaves. However, it isn't the most glaucous; its leaves being two tone and more blue below. This appearance is due to a waxy protection against drying out. In the photograph, on the right, you can see the male terminal spikelet with pollen bearing stamens and two lower female spikelets showing the, almost white, stigmas.

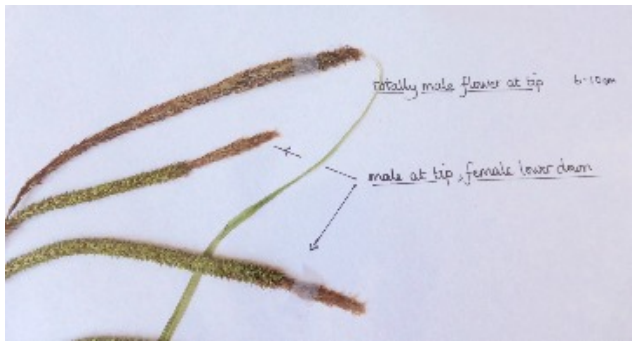
On my second visit on May 11, a fortnight after the first, Pendulous Sedge was in full flower, the stamens on the terminal male flowers clearly in evidence, as were the stigmas hanging out of the female flowers. Both of these sedges are true sedges belonging to the genus *Carex* where, with one exception, the flowers are monoecious i.e. bearing male and female on the same plant.

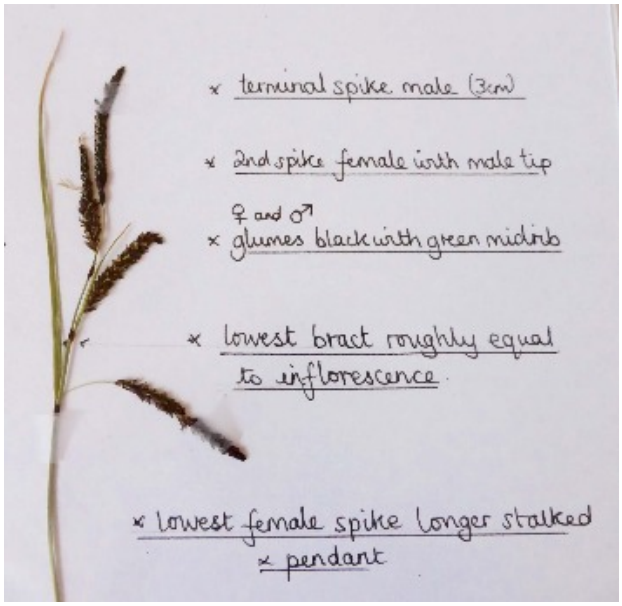
A third *Carex* species, Lesser Pond Sedge *Carex acutiformis* (seen right) was also in flower, in particular in one area near the platform on the opposite side of the main path to that which leads to the Bittern hide. This sedge was growing to a height of around a metre. (One easy way to differentiate between Lesser and Greater Pond Sedge is to look at the ligules. Lesser Pond Sedge has pointed ligules and Greater Pond Sedge has blunt ones.)

Close by you could also see the remains of Galingale (*Cyperus longus),* whose presence I noted last year. *Carex flacca* appeared in greater numbers in several areas mainly near the paths. In various spots, a sedge with bright green very sedge-like leaves was starting to develop but had no flowers as such. Later I was to discover that this is Wood Club-rush.

My next visit wasn't until June 9th when I found that Pendulous Sedge flowers were now at the stage where the male ones had shed their pollen so appeared much more slender as only the glumes remained (the male flower consisting of nothing but glumes and 3 stamens) while the female flowers were showing swollen utricles, indicating that pollination had taken place and the fruit was developing. They were in evidence in several areas, mainly closer to the formal garden. Some of the flowers closer to the tip of the

stem were female below and male at the tip as shown here, at the top of the next on the left.



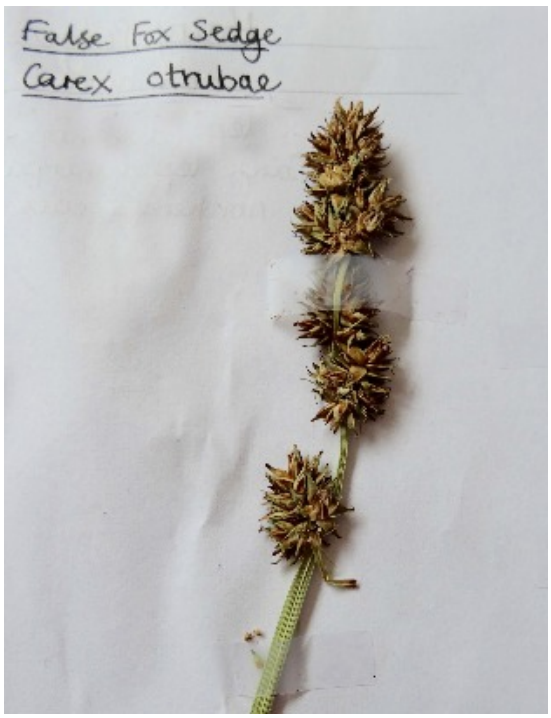


Glaucous Sedge was again in evidence over most of the reserve and by this time, as with Pendulous sedge, the male flowers were reduced to thin brown spikes and the swollen utricles could easily be seen by eye. As with Pendulous Sedge, Glaucous Sedge also has female flowers with a male tip. The lowest female spikes were now more obviously pendant with the lowest bract roughly the same length as the inflorescence (see photo on right, above).

By two of the bridges, mainly in the water, Common Spike-rush *Eleocharis palustris* (left) was appearing but still in small numbers. This is one of the spike-rushes which all have single terminal spikelets consisting of bisexual flowers and leaves which, with the exception of Dwarf Spike-rush, are reduced to bladeless sheaths at the base of the stem. This photograph, taken in late June, clearly shows the terminal spikelets in flower.

As I reached the last bridge before turning back towards the centre, I could see the large flower heads of another group of sedges with long bright green, keeled leaves. This was Wood Club-rush *Scirpus sylvaticus* (above), a sedge with an umbel like inflorescence, trigonous stems and typical w-shaped leaves.

Opposite the path which leads to the Bittern Hide is a platform, around which was Lesser Pond Sedge, as already observed on the last visit but now Galingale (right) was in flower; the involucral bracts below the flower being longer than the inflorescence.



The final sedge I could find at this time was False Fox Sedge *Carex otrubae* (left), which appeared to be present only in one spot near to the picnic table opposite to the trail leading to the Bittern hide. This species hybridises with more than one other species including True Fox Sedge.

The last sedge to flower in any numbers was Common Spike-rush. (*Eleocharis palustris*). This photograph, taken in late June, clearly shows the terminal spikelets in flower.

Some observations on reptiles in Doncaster

Louise Hill

Following on from my previous article on the unfortunate fate of the Lizard Orchid in Volume 2 No 4 of The Doncaster Naturalist, I thought that I would report on a more positive lizard news; a thriving population of Common Lizard (*Zootoca vivipara)* in the rather forgotten village of Long Sandall.

Earlier sightings of lizard had been made around the road bridge over the Doncaster to Thorne railway line near the former Pilkington's Glass Works by Rachel Hill, whilst pushing my nephew, Jack, in his pram (Jack is now nearly 11). The main habitat for the lizards was thought to be a south-facing embankment of the bridge and a triangle of rough ground to the east of the bridge at SE60610718, an area that has since been used for storage of railway sleepers. I don't think these records ever made it to the Local Record Centre (LRC) at the time.

There have been more recent lizard sightings in 2014 on piles of demolition rubble on the former 'Poplar Farm' site in Long Sandall by my brother, Andrew. (Photo, A. Hill). The site is over-shadowed by the triple chimneys of the Ardagh (formerly Rockware) Glass factory.

Adult female common lizards have been observed on piles of brick rubble and other demolition debris of White House Farm, Long Sandall, in summer 2015, and my brother and I also caught a glimpse of one basking on logs stored in the garden of one of the cottages opposite Long Sandall Lock. An adult lizard was brought home alive by a cat and deposited on the owner's doormat at the Lock Cottage. The animal was, fortunately, released unharmed but rather 'short' in the tail department. (Photo, A. Hill). Whether it shed its tail tip during the recent feline incident or had lost it during a previous encounter with a predator was not clear. The sightings were all reported to the Doncaster LRC.

The old derelict buildings and their former gardens and grounds are linked to the

nearby railways via a long narrow strip of vegetation along the canal towpath. Re-development of parts of the Poplar House Farm site may take place in the near future but the retention of a strip of reptile habitat alongside the Canal is being proposed now that the presence of the Lizards has been brought to the attention of the Local Planning Authority.

From personal experience, reptiles are of widespread but rather patchy occurrence within the Doncaster area as a whole, with hotspots such as Thorne and Hatfield Moors supporting good populations of adder (*Vipera berus*), grass snake (*Natrix natrix*) and common lizard. Adders can often be seen on the Moors in well-known basking and hibernation spots but their occurrence is restricted across the rest of Doncaster.

Grass snake are by far the most common species to be observed by the casual surveyor. I have, on a couple of occasions, had to extricate grass snakes from the fruit netting around the currant bushes on my allotment. My allotment is beside an oxbow of the Old Don north of Wheatley Hall Road. Large numbers of snakes emerging from winter hibernation also draw the keen photographers to Potteric Carr Nature Reserve, another site known to have a good population of grass snake.

There have been several credible descriptions of adder from the Sprotbrough Gorge area but no conclusive evidence of their occurrence. I have also heard reports of slow worm (*Anguis fragilis)* remains having been found in raptor pellets, also from the Sprotbrough area, although to my knowledge, no live slow worms have been found. These reports led me to arrange for several artificial reptile refugia 'mats' to be placed in Scabba Wood, at that time a still owned by the Morris family. These 'mats' were actually one metre squares of old conveyor-belt material. Six were placed on the edges of the woodland rides on the 17th April 2012, with the assistance of John Scott of Doncaster Naturalists' Society. (Photo, L Hill).

Sadly, Mrs Morris died not long after our visit to the woodland and Scabba Wood was subsequently sold. Small sections of the woodland have since been sold on to different individuals. It has not been possible to make any inspections of the refugia and whether they are still in place is not known. For the record, they were at the following locations (The edge of each mat was notched with its number in Roman numerals):

1 Old Quarry SE53065 01449
2 Wayleave (western side) SE52956 01506

3 Wetlands Wood (north of ride) SE52792 01855
4 Western Edge SE52095 01522
5 Southern Ride SE52326 01450
6 Southern Loop SE52393 01438.

The occurrence of Common Lizard on sites in Doncaster may have been overlooked. I am familiar with them being on the sandy and heathy habitats around Bawtry Forest, where I have observed them basking, in some numbers, on a wooden stile. (Photo T. Prosser, July 2007). They have also been seen in recent years on limestone rocks on the south-facing slopes of Brockadale Nature Reserve, just to the north of the Doncaster Borough.

The presence of lizard on what might be viewed as a run-of-the mill habitats in Long Sandall might suggest that common lizards are in fact more common that I had previously come to believe. Both the Long Sandall and Bawtry Forest colonies are on sites in close proximity to railway embankments. I wonder how many other overlooked colonies there might be? – particularly alongside the extensive network of passenger and mineral railway lines which cross the Doncaster area.

If you know of any other colonies of Common Lizard, I would be interested to hear of them but please do remember also to send your records to Bob Marsh at the Doncaster Local Records Centre (email: brc@doncaster.gov.uk) as it is important that these records are available to help protect the habitats of these animals.

Stop press!

I visited the site of the Lizard Orchid mentioned in the first paragraph in late January 2016 and was delighted to find that it is still alive and producing fresh leaves. **LH**

Brodsworth Hall Gardens

Tom Higginbottom

The walk from the car park leads to the Front Lawn, past the ancient Cedar of Lebanon, now over 160 years old, to the impressive presence of Brodsworth Hall, built in 1863. The grounds are relatively compact compared to the larger landscapes which are a feature of stately homes like Nostell Priory. But it is not surprising that many people come frequently to Brodsworth to walk around the gardens. On summer days the players on the Croquet Lawn create an image of more peaceful times. There is a soothing green backdrop of the Cedar Beds, formed from a whole series of beautifully sculptured evergreens. The Formal Flower Garden has intricately shaped flower beds preserved from the initial landscaping of the garden in Victorian times. Monkey Puzzle trees tower over the lawn and flower beds. A splendid pergola arch, at its best when draped in yellow Laburnum blossom, leads from the Formal Flower Garden. However, for natural history enthusiasts it is the Wild Flower Area which attracts most attention.

The area is unimproved grassland which is cut late in the year allowing the plants time to seed. Grass species include: Meadow Foxtail (*Alopecurus pratensis*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Tor Grass (*Brachypodium pinnatum*), Quaking Grass (*Briza media*), Cock's-foot (*Dactylis glomerata*), Red Fescue (*Festuca rubra*), Sheep's Fescue (*Festuca ovina*), Yorkshire Fog (*Holcus lanatus*), Smooth-stalked Meadow-grass (*Poa pratensis*) and Rough Stalked Meadow-grass (*Poa trivialis*).

There is a great variety of plants which provide a source of interest. The Glaucous Sedge (*Carex flacca*) and Field Woodrush (*Luzula campestris*) are often visible between the grasses. Careful searching may reveal a spike of Adder's-tongue Fern (*Ophioglossum vugatum*). In spring, Primrose (*Primula vulgaris*), Cowslip (*P. veris*) and Daffodil species lift the spirits with the yellows of spring. In shadier parts, under the mature trees Bluebells

(*Hyacinthoides non-scripta*) offer an appealing contrast. Surprising plants also appear such as white Star-of-Bethlehem (*Ornithogalum angustifolium*), most likely a garden escape, and Ragged Robin (*Lychnis flos-cuculi*), usually a plant of fens or wet meadows.

There are many plants usually associated with limestone grassland. The most dramatic are orchids, with the Bee Orchid (*Ophyrs apifera* - Photo by Joyce Simmons) being more abundant here than in many other local sites. Twenty Bee Orchid spikes were recorded in July. The beautiful distinctive spikes with colourful individual flowers reminiscent of a small bumble bee were present beside the pathway of the wild flower area. It was thought at one time the bee-like shape of the individual flowers encouraged pollination by bees but in this country the Bee Orchid is automatically self-pollinated. Good numbers of the Common Spotted Orchid (*Dactylorhiza fuchsii*) were also discovered, but only a few spikes of Twayblade (*Listera ovata*), perhaps because their green spikes were so difficult to find in the tall grass. There were also a few spikes of Southern Marsh Orchid (*Dactylorhiza pratermissa*). In the 1990s when the DNS were surveying the grounds of Brodsworth Hall a single spike of the Green-winged Orchid (*Anacamptis morio*) was found on the edge of the Croquet Lawn and for a few years it was protected from being mown. This did not continue but it was amazing to find a spike in late April 2012 when the DNS had another visit. Successive days of heavy rain had prevented mowing of the lawn and a single plant was again discovered. It was generally thought that the original spike had been introduced to the garden. Other flowers common in the wild flower area usually regarded as indicators of limestone grassland are: Common Rock-rose (*Helianthemum nummularium*), Rest Harrow (*Ononis repens*), Hoary Plantain (*Plantago media*), Bulbous Buttercup (*Ranunculus bulbosus*), Salad Burnet (*Sanguisorba minor*) and Sanicle (*Sanicula europaea*).

Early in the year carpets of Snowdrops (*Galanthus nivalis*) and Winter Aconite (*Eranthis hyemalis*) cover the formal part of the garden. In the wildflower area from spring to autumn there is an ever changing succession of flowers. The Lesser Celandine (*Ranunculus ficaria*) and Cuckoo Flower (*Cardamine pratensis*) make early appearances. It is not long before Ox-eye Daisy (*Leucanthemum vulgare*), Bulbous Buttercup (*R. Bulbosus*), Meadow Buttercup (*R. acris*), Pignut (*Conopodium majus*) and Yarrow (*Achilea millefolium*) are common throughout the grassland. June may be the best time to follow the pathways at the edge of the wildflower area. Low growing plants like Birdsfoot Trefoil (*Lotus corniculatus*), Heath Bedstraw, (*Galium saxatile*), Tormentil (*Potentilla erecta*), Creeping Cinquefoil (*P. repens*) and Common Milkwort (*Polygala vulgaris*) are often

visible near the pathways. A little later, as the vigour of the grasses declines, Clustered Bellflower (*Campanula glomerata*), Harebell (*C. rotundifolia*), Devil's-bit Scabious (*Succisa pratensis*) and Wild Thyme (*Thymus polytrichus*) provide other colourful shades. Towards the end of summer the edges of grassland leading back to the hall are bordered with the pale lilac of Autumn Crocus (*Crocus nudiflorus*).

In other parts of the garden plants like Agrimony (*Agrimonia eupatoria*), Great Mullein (*Verbascum thapsus*) and Dark Mullein (*V. nigrum*) can be found in open areas between shrubs and trees. In the borders there is a constant battle for the gardeners against invasive species like Hairy Bittercress (*Cardamine hirsuta*), Creeping Buttercup (*Ranunculus repens*), Germander Speedwell (*Veronica chamaedrys*), Rosebay Willowherb (*Chamerion angustifolium*) and Common Nettle (*Urtica dioica*). Wild Strawberry (*Fragaria vesca*) is common with occasionally interesting arable weeds such as Scarlet Pimpernel (*Anagallis arvensis*) and Ground Ivy (*Glechoma hederacea*).

In April the butterflies Small Tortoiseshell, Orange Tip, Brimstone and Peacock were recorded in the garden. It is surprising there are so few records of species where the larvae feed on grasses. In June there were records of Meadow Brown and in July Ringlet but surprisingly no records of Gatekeeper. Speckled Wood is the most frequently recorded from June through to early October. The sunny open spaces between the trees and shrubs provide an ideal habitat for this species. From June until early October butterflies like the Comma, Red Admiral and Painted Lady can often be found in the formal herbaceous borders feeding on the nectar of colourful plants such as *Sidalcea candida*, *Monardia* 'Cambridge Scarlet' and *Rudbeckia* species. Five Holly Blues were seen here in late September. A number of bee species are frequently seen on flowers such as the pink *Echinacea purpurea* and *Veronica longiflora* 'Blue Giant'. Honey bees from hives placed at the top of the quarry are common on the flowers throughout garden.

Plant galls were discovered on a variety of hosts. The orange micro-fungi of *Cumminsiella mirabillisima* were common on the leaves of Oregon-grape (*Mahonia aquifolium*). *Puccinia poarum,* another orange fungus, had speckled the large leaves of Coltsfoot (*Tussilago farfara*). Small globular hairy swellings were found on Ground Ivy (*Glechoma hederacea*), caused by the gall wasp *Liposthenes glechomae,* while *Rondaniola bursaria,* a gall midge, had caused the lighthouse gall. Common galls like the small circular pustules caused by the midge *Hartigiola annulipes* were seen on Beech leaves but formed dramatic pink shades on Copper Beech. On buds of Yew a tight cluster of leaves had formed artichoke-like shapes indicating the presence of the midge gall *Taxomyia taxi*. Lime trees in the garden were host to a number of different galls, with many leaves displaying red nail galls caused by the mite *Eriophyes tiliae*. Some leaves were affected by *Didymomia tiliacea*, a midge which causes cone-like swellings with a cylindrical inner gall protruding from the cone. These inner galls fall to the ground leaving an empty cavity. Another midge, *Contarinia tilarum,* had swollen and twisted the leaf stalk on many leaves. Some newly emerged leaves had been twisted and distorted

by the less common midge *Dasineura thomasiana*. A mature Oak in the wildflower area was the host for a whole series of galls caused by different species of gall wasp. On the underside of many leaves were a variety of spangle galls. Common spangle (*Neuroterus quercusbaccarum*), silk button (*N. numismalis*) and smooth spangle (*N. albipes*). It is a pity that no examples were discovered of *Cynips* species such as the cherry gall (*Cynips quercusfolii*). Buds were galled by the Oak marble gall (*Andricus kollari*), the cola-nut gall (*A. lignicolus*) and the artichoke gall (*A. foecundatrix*). Acorns had been galled by the knopper gall (A*. quercuscalicis*) and the less common *A. grossulariae* had formed blunt rectangular spines on the cup of some acorns.

In autumn a whole range of fungi appeared throughout the wild flower area. The remains of tree stumps were colonised by Honey Fungus (*Armillaria mellea*) occasionally joined by the blue-grey of the Oyster Mushroom (*Pleurotus ostreatus*). The Parasol (*Macrolepiota procera*) and small colonies of the Shaggy Ink Cap (*Coprinus comatus*) are frequently seen. The bright colours of Beechwood Sickener (*Russula nobilis*), Orange Waxcap (*Hygrocybe aurantiosplendens*) and Yellow Fieldcap (*Bolbitius titubans*) made them easy to find. There were also a few specimens of Red Cracking Bolete (*Boletus chrysenteron*). While weeding borders beneath the shrubs small colourful fungi were discovered such as the Apricot Club (*Clavulinopsis luteoalba*) and the Meadow Coral (*Clavulinopsis corniculatus*). Common Puffball (*Lycoperdon perlatum*) and Common Earthball (*Scleroderma citrinum)* were also discovered in a similar habitat. A fine specimen of the yellow bracket fungi Chicken-of-the-Woods (*Laetiporus sulphureus*) was a dramatic presence on the trunk of an ancient tree. It was an even greater surprise to discover a large Fly Agaric (*Amanita muscaria*) on the regularly mown lawn near the Cedar of Lebanon.

Brodsworth Hall gardens appeal to so many visitors, especially the colourful Formal Flower Garden, immaculately cared for with different spring and summer displays. In the Herbaceous Border are over fifty different perennials, providing a host of different colours, heights and shapes. There are many different trees with spectacular giants like Cedar of Lebanon and Monkey Puzzle, and exotic species with beautiful blossoms like Foxglove Tree (*Paulownia tomentosa*). The Fern Dell is a large collection of ferns and nearby is the rockery garden with a variety of alpine plants. Throughout the seasons there is so much to fascinate garden and wildlife enthusiasts.

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Owls pellets at Thorpe Marsh – further findings

Mick Townsend

In a previous issue of The Doncaster Naturalist (Vol 2 Number 2, October 2011), I reported on the analysis of Tawny Owl and Long-eared Owl pellets which had been collected at Thorpe Marsh Nature Reserve from 1987 to 2010. This present article extends this work by reporting on recent pellet collections of the same two owl species plus those from Barn Owls. All pellets were collected between 2011 and January 2016, dissected and their contents examined.

From 12 July 2011 onwards wardens collected Barn Owl *Tyto alba* pellets on a frequent basis. They continue to be found up to the present (February 2016) with gaps from July to October 2012 and from June to November 2014. The totals given Include pellets found in the Barn Owl nest box from 21 July 2011 to 3 March 2013. Interestingly, no remains of Bank Voles, House Mice, Harvest Mice or Brown Rats were found in pellets collected between April 2012 and September 2015. The 2011 to 2013 findings are shown in table 3. Pellets of Barn Owl were the only ones found in 2014 and 2015 and these results are shown in tables 4 and 5.

Over the winter of 2011 a Tawny Owl *Strix aluco* was seen on a number of occasions roosting in the scrub between Mother Drain and Cockshaw Fields south. Once it had clearly moved to another location Arthur Hellewell collected 21 pellets and a few pieces of pellets on 1 March 2012. Findings are shown in Table 2.

Pellets of Long-eared Owls *Asio otus* were collected from the southern island of Thorpe Mere on 7 November 2011 and 18 November 2013 by Arthur Hellewell and Mick Townsend and on 1 March 2012 Arthur Hellewell collected 3 owl pellets and a few pieces of pellets in the copse to the south of West Mere. Prey findings are shown in Table 1.

The tables use Mammal Society prey value conversion tables to produce estimates of the total weight of the prey items from the number of prey items which we found.

The article will make two sets of comparisons. Firstly between the three owl species for the years 2011 to 2013 and secondly for Barn Owls, comparing 2011 to 2013 with 2014 and with 2015. I am aware that the lumping of 2011 to 2013 together does not make for a precise comparison but there was some uncertainty within that period as to which year some pellets were deposited and the proportions of prey were similar within those years.

Summary of findings.

The analysis of the pellets reported in tables1-3 show which species of mammals are in the area. Not all are necessarily present on the nature reserve as birds of all three species almost certainly have a hunting range which extends beyond the nature reserve.

However, a large proportion of the prey is likely to be from the reserve.

Mammal Society research shows differences in the prey preference of different species of owls and this is also apparent at Thorpe Marsh. For all three species Field Voles form the bulk of their diet with Wood Mice also significant. Beyond this there are some differences between the three owls' diets.

Barn Owl pellets have revealed a wider range of prey than those of Tawny Owls and much wider than those of Long-eared Owls. Field Vole and Wood Mouse are the most regular prey but Common Shrews figure more highly than for Tawny Owl. The Long-eared Owls fed almost exclusively on Field Voles and Wood Mice even though the other species were available as shown by the range of prey taken by Barn Owls over the same period.

Throughout the period of 2011 to 2015 Field Voles comprised the main prey species of Barn Owls. Wood Mice and Common Shrews were the other two significant species. However, there were significant differences between the periods of 2011 to 2013, of 2014 and of 2015.

- 2011 to 2013 had nine different species, 2014 had only three but 2015 was back up to seven.
- In 2011 to 2013 Wood Mice and Common Shrews were taken in similar numbers but the heavier Wood Mice comprised just over twice as much by weight.
- However, in 2014 and 2015 the position was reversed with nearly three times as many Common Shrews as Wood Micecaught in 2014 and nearly four times as many in 2015. The total weights were nearly the same in 2014 but in 2015
- Common Shrews accounted for more than 50% more than Wood Mice.
- Pigmy Shrews featured more in 2015 with three times the percentage of the 2011 to 2013 period.

One reason for the paucity of records in 2014 and thus the low number of species may be that there was only one sighting of a Barn Owl. In 2012 and 2015 owls were holding territory and attempted to breed, unsuccessfully, in 2012 (possibly due to the death of one or both adults) but raising three young in 2015. With young to feed it is likely that the owls would need to catch what was available to feed their young hence the increased proportion of shrews.

An investigation of the proportion of prey species in different seasons should be illuminating.

Table 1. Pellet contents of Long-eared Owls collected in 2011, 2012 and 2013 by Arthur Hellewell and Mick Townsend.

Species	Number of prey items	Percentage of prey items	Ave weight per animal g*	Estimated total weight g	Percentage of prey by weight
Field Vole	377	84	21	7917	86
Wood Mouse	71	16	18	1278	14
Common Shrew	1	>1	8	8	>1
Small passerine	1	>1	15	15	>1

Table 2. Pellet contents of Tawny Owl collected on 1-3-2012 by Arthur Hellewell.

Species	Number of prey items	Percentage of prey items	Ave weight per animal g*	Estimated total weight g	Percentage of prey by weight
Bank Vole	1	2	16	16	2
Field Vole	34	65	21	714	71
House Mouse	1	2	12	12	1
Wood Mouse	13	25	18	234	23
Common Shrew	3	6	8	24	2

Table 3. Pellet contents of Barn Owls collected in 2011, 2012 and 2013.

Species	Number of prey items	Percentage of prey items	Ave weight per animal g*	Estimated total weight g	Percentage of prey by weight
Bank Vole	5	0.7	16	80	0.6
Field Vole	425	61.6	21	8925	72.2
House Mouse	2	0.3	12	24	0.2
Wood Mouse	118	17.1	18	2124	17.2
Harvest Mouse	1	0.1	5	5	0.04
Brown Rat	2	0.3	60	120	1.1
Pygmy Shrew	10	1.4	4	40	0.3
Common Shrew	118	17.1	8	944	7.6
Water Shrew	9	1.3	12	108	0.9

Pellets collected by John Bonner, Barry Foster, Arthur Hellewell, Alan Needham, Arnold Oates, Neil Shaw and Mick Townsend.

Table 4. Pellet contents of Barn Owls collected in 2014.

Species	Number of prey items	Percentage of prey items	Ave weight per animal g*	Estimated total weight g	Percentage of prey by weight
Field Vole	20	74	21	420	85
Wood Mouse	2	7	18	36	7
Common Shrew	5	19	8	40	8

Pellets collected by Barry Evans, Barry Foster, Arthur Hellewell, Neil Shaw and Mick Townsend.

Table 5. Pellet contents of Barn Owls collected in 2015.

Species	Number of prey items	Percentage of prey items	Ave weight per animal g*	Estimated total weight g	Percentage of prey by weight
Bank Vole	1	>1	16	16	>1
Field Vole	147	42	21	3087	61
House Mouse	1	>1	12	12	>1
Wood Mouse	40	11	18	720	14
Harvest Mouse	3	1	5	15	>1
Pygmy Shrew	20	6	4	80	2
Common Shrew	139	40	8	1012	22

Pellets collected by Connor Byers, Barry Evans, Barry Foster, Arthur Hellewell, Jamie McEwan, Ken Pearson, Neil Shaw and Mick Townsend.

* As given in The Mammal Society's Prey Value table.

Doncaster roads in the pink! - The spread of Danish Scurvy-grass across our region

Colin Howes and Bob Marsh

The Danish Scurvy-grass *Cochlearia danica*, a salt-tolerant member of the Cruciferae, is a winter-annual of cliff-tops, sand dunes and sea-walls, and on old walls and pavements in coastal towns, generally preferring open ground on well-drained sandy soils or bare rock (Preston, Pearman, & Dines 2002). Its rather unprepossessing name is derived from folklore in the days of sailing ships when sailors chewed these and related plants to avoid developing the dietary deficiency disease scurvy, it being rich in ascorbic acid (vitamin C).

Although naturally occurring in the Yorkshire region, its few pre 1980s records were confined to coastal sites at Hornsea (TA24) where it was first recorded in 1881 (Crackles 1990), Ravenscar (NZ90) where it was noted in 1948 and Bempton Cliffs (TA27) where it was noted in 1947 (Rowntree 1953). On the Lincolnshire coast it was confined to Skegness (TF56) where its first record dated from 1908 (Gibbons 1975).

Since the early 1980s, along with other halophytes (salt-tolerant species) it has spread rapidly along the salt-treated roads of inland Britain and Northern Ireland, but not in southern Ireland where grit is used. Its initial preference for the central reservations of motorways and dual carriageways, where it flourished under the crash barriers, is becoming less obvious and it now occurs on many single-carriageway 'A' and 'B' roads in England and Wales (Preston, Pearman, & Dines 2002). Other halophytic species which have similarly responded to the widespread use of road-salt include Reflexed Salt-marsh Grass *Puccinellia distans* and the Lesser Sea-spurrey *Spergularia marina*.

The recent progress of Danish Scurvy-grass around the UK has been entertainingly monitored in a series of enthusiastic, even competitive, reports to the Botanical Society of the British Isles and published in their journal *BSBI News*.

1989 saw the first evidence from a Yorkshire motorway. This was from the A1(M) in Ordnance Survey 10km grid squares SK59 (Doncaster South) and SE50 (Doncaster North) and up into North Yorkshire in SE37 (Dishforth) (Leach & Rich 1989). By 1990 occurrences were more obviously advancing north along the A1 and A1(M) through Nottinghamshire and up into North Yorkshire with evidence in successive 10km square from SK85 (Newark) through Doncaster (SK 59 & SE50) and up to SE42 (Fairburn) with increasingly discontinuous records up through Durham and Northumberland (Leach 1990).

By 1994 it had reached inland motorways in all Yorkshire vice counties (VC 62, 63, 64 and 65), except for the East Riding VC61 (Leach 1994) and its spread was described as being "unstoppable, rampaging across Britain", with rates of expansion calculated at 10 to

20km per year (Leach 1994), using the motorway network in the same way that Canadian Pondweed *Elodea canadensis* used the canals and Oxford Ragwort *Senecio squalidus* the railways! (Leach 1995).

In the Doncaster region it first began to appear along 'A', 'B' and 'C' roads in the 1990s, appearing near Potteric Carr (SE6000) in 1993, the A638 Bawtry road near the Race Course (SE5902) and the A614 near Austerfield (SK6695) in 1994 and near the M18 junction at Armthorpe (SE6405) in 1996 (Doncaster Museum records).

Across South Yorkshire by 2011 it had been recorded from 51 1km squares though mainly (47 1km squares) through the Doncaster Metropolitan Borough where it was becoming increasingly widespread and locally abundant along verges and bare edges of salt-treated roads where it flowers profusely in springtime, on verges and the central reservations of motorways and dual carriageways (Wilmore, Lunn & Rodwell 2011). The current field survey, undertaken in May 2013, located it in 115 1km squares. Figure 1, generated by B.M. from these and other records held by the DMBC RECORDER database shows a geometrical pattern of colonisation dictated by broadly south to north and east to west road systems:

South/North

A1(M) Warmsworth to Barnsdale Bar.
A60 Tickhill to Wadworth.
B6463 Stripe Road and Sheep Bridge road, Tickhill Spittal to Rossington Bridge.
A638 Bawtry to Doncaster.
A638 Doncaster to Hampole.
A19 Bentley to Askern.
A614 Bawtry to Hatfield Woodhouse.

East/West

M18 Warmsworth to Thorne.
M18 Warmsworth to Micklebring.
M180 Hatfield to Sandtoft.
A18 Hatfield Woodhouse to Sandtoft.
A635 Scawsby to Goldthorpe,
A630 Balby to Conisbrough.
A631 Bawtry to Tickhill and Maltby.
B1396 Cantley Lane, Cantley to Blaxton.

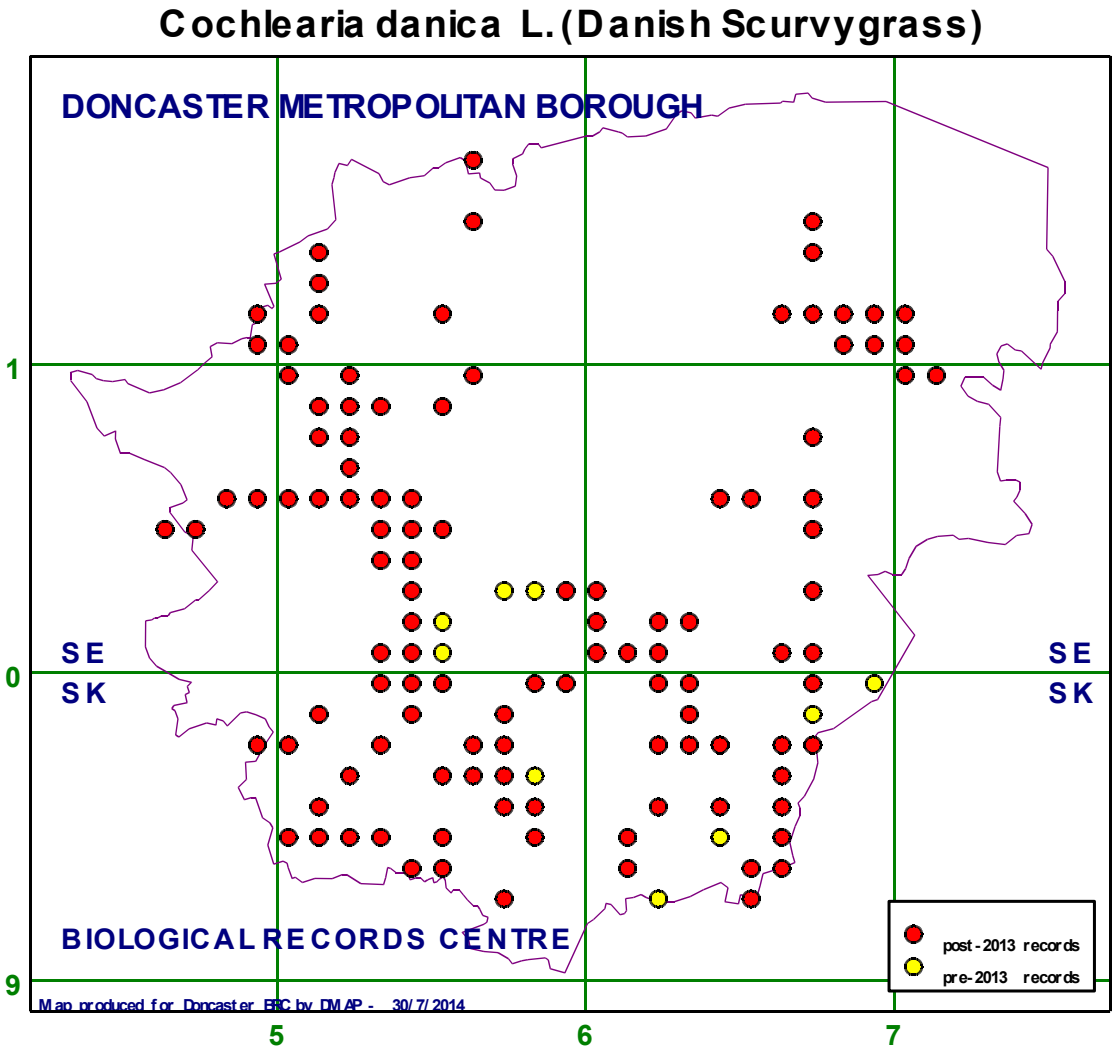

Figure 1: 1km distribution of Danish Scurvy-grass in the Doncaster Metropolitan Borough based on preand post 2013 records in the DMBC Biological Records Centre RECORDER 6 database.

Elsewhere in Yorkshire

Colonisation continued apace through the 1990s. Highway colonies were first noticed in the East Riding (VC61) in May 1994 where it was encountered near Hessle (TA02) and on a slipway from a service station on the west-bound carriageway of the A63 near Ferriby (SE92). It had seemingly spread from north Lincolnshire via the Humber Bridge road network. It was then noticed, evidently entering East Yorkshire from the west, along the eastbound carriageway of the M62 at Howden (SE72) where it was in considerable quantity (Cook 1995). By 1997 its progress along the M62 was complete from Hull (TA02) to the Ouse Bridge (SE72) where it stopped, commencing again in abundance at the A1(M)/M62 junction at Ferrybridge (SE42) (Eades 1997).

In the West Yorkshire Metropolitan areas up to 1994 it had only occurred once or twice on waste ground (Lavin & Wilmore 1994). A decade later in the Bradford Metropolitan area, colonies had become a feature along the M62, the M606 link to Bradford, also

along the by-pass sections of the A650 Bingley to Keighley and A629 Keighley to Skipton (Wilcox 2001). Across Mid-west Yorkshire (VC64) it had increased along the margins of major roads, being particularly noticeable along the A1 and along the A64 between Tadcaster and York (Abbott 2005).

In the Pink

Turning a 'blind eye' to the negative effects of highway salt pollution, it is a pleasure to cast an appreciative eye on the delicate blushes of pink and mauve during the April to June flowering period, caused by the myriads of tiny flowers of the Danish Scurvy-grass colonies along the salt-contaminated 'splash-zones' of our trunk roads and dual carriageways. They are a further delight to view at close quarters if stuck in a bus or car in traffic jams or at traffic lights.

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Doncaster's significant Yews: notable Yew trees at Kirk Bramwith, Edlington Wood, Pot Ridings Wood and Howell Wood

Colin Howes

Yew trees (*Taxus baccata),* are regarded as being the oldest trees in the UK landscape, though our ability to estimate their ages, particularly when specimens achieve a venerable status, is fraught with problems. This is not least because the older specimens tend to be hollow, rendering tree ring counts and girth measurements inconclusive. Local history studies and literary references can however help to place the trees in a general historical context. Since ancient yews and yew woods with their highly specialist associated ecologies are relatively rare, protocols are being developed to record, quantify and archive these features (see the Ancient Yew Group website - http://www.ancient-yew.org/). The Doncaster district contains a number of significant yew specimens and yew habitats, this study highlights four of them.

The Kirk Bramwith Yew

The heroic project to monitor the natural history of Doncaster's historic churchyards (Seccombe & Seccombe 1999) included a preliminary study of Doncaster's churchyard yews (Howes 1999a). Here the girths of 50 yews with circumferences, taken at a chest height (4ft), of at least 20 inches were measured, giving a mean girth of just over 49 inches. The results are shown in Figure 1. This indicates that one specimen was substantially larger than the rest. This was the hollow specimen with a girth measurement of approximately 10ft 2 inches situated just outside the east window of St Mary's church, Kirk Bramwith. Its trunk, measured at ground level by Edwin Pretty (DMBC Tree Preservation Officer) was 11ft 3inches.

Local folklore recorded in the church leaflet claims that the Kirk Bramwith leviathan (right - after pruning) is some 600 years old though there is no evidence as to how this estimate was arrived at. However, the tree has an impressive literary pedigree being regarded as a notable regional veteran as early as 1831. The celebrated historian Reverend Joseph Hunter, in his two-volume review of the parishes of the Deanery of Doncaster refers to it as "…a fine yew tree which has lent its sprigs, probably for many centuries, to decorate the church at the great festival of Christmas…" (Hunter 1831).

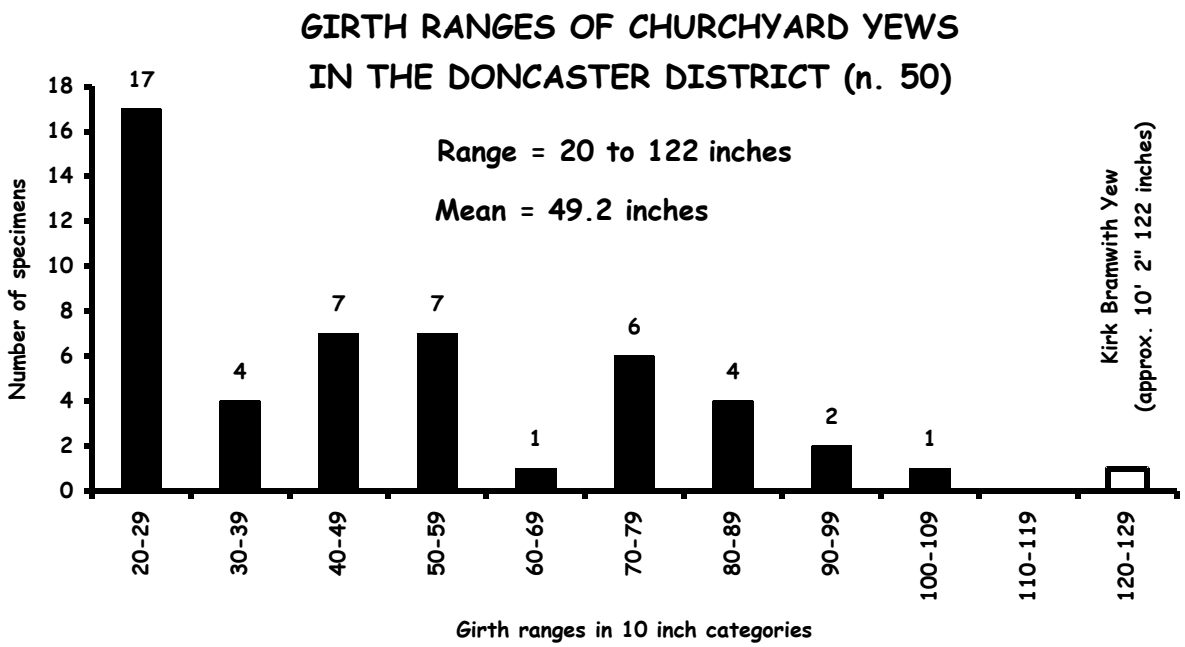

Figure 1: Girth measurements made in 1998 of 50 Churchyard Yews in the Doncaster district.

Possibly an earlier, though undated, literary reference is the 46 line verse penned by the Reverend Richard Bobbitt, one time Vicar of Kirk Bramwith. Rev. Bobbitt became curate at St Mary's on 24 June 1789 and remained the incumbent till his death at the great age of 94 in July 1838 (Anon 1896b). The poem could therefore have been penned as late as 1838 but as early as 1789.

The manuscript of the poem in the possession of Bobbitt's grandson, Rev. William Smith, Vicar of Cowick, was anonymously passed to the editor of the monthly journal *The Doncaster Review* where it was published in 1896 (Anon 1896a). Here are the first eight lines of Rev. Bobbitt's epic:

To An Aged Yew

Hail! aged, venerable yew,
The boast of cent'ries not a few -
Of size, the growth of ages past;
Of vigour, that many ages last -
Oft hast thou seen th'unwearied sun
His annual course of duty run;
And stars, and shifting seasons roll
With changes great beneath the pole.

Rev. R. Bobbitt (b. July 1744 – d. July 1838)

Three other notable yew sites in our region include the yew grove at 'Blow Hall' Edlington Wood (SK5498; 5598), and the yew avenues at Pot Ridings Wood (SE5200; 5300) and Howell Wood (SE4309).

The Edlington Wood Yews

Yew was evidently one of the original forest tree colonists of what is now Edlington Wood, pollen studies showing it to have been a major coloniser of the open limestone grassland left after the period of the Roman occupation. Certainly Yew was a dominant tree here long before any ornamental or commercial species were introduced (Phillips 1973).

The venerable yews of Edlington Wood have long been remarked on. The earliest published reference dates from 1731 in the '*Magna Britannia et Hibernia, Antiqua and Nova*' (Anon. 1731). In 1828, the South Yorkshire historian Rev. Joseph Hunter refers to large yew trees obviously of considerable age growing by the 'Dog Monument' (Hunter 1828). In 1840, Henry Baines, the leading Yorkshire botanist of his time was of the opinion the yews of Edlington Wood were '*truly wild*' (Bains 1840). The notable Yorkshire entomologist, George T. Porritt mentioned them in 1883 (Porritt 1883) and special note was made of the "*magnificent yews*" during the Yorkshire Naturalists' Union visit to Edlington Wood in 1891 (YNU, 1891).

Aerial photographs of the 1950s clearly show the impenetrable canopies of the massive yews and the amazing black area of pure ancient yew woodlands in the 'Blow Hall' area of the wood. Sadly, although nationally very rare, the largest area to survive into modern times was felled between 1960 and 1973. In addition to what remains of the Blow Hall yews, some fine individual specimens are scattered through the wood, particularly near the crags. Of nine yews close to the woodland ridings and measured in October 1998, girths ranged from 4ft 7in to a mighty 10ft with a population mean of 84 inches (7ft) (Howes 2009). Sadly a specimen with the 10ft girth was blown down in the gales during Christmas 1997 (Pretty 2001).

The Don Gorge Yews

Large solitary wild yews are a feature of the ancient woodlands of the Don Gorge, a truly venerable specimen of which grew in nearby Sprotbrough Park in 1838. Its girth, measured at 3ft from the ground, was a very respectable 15ft 6in, its canopy had a diameter of some 63ft and it was judged to have been 34ft in height (Loudon 1838). This was significantly larger than any of the yews currently surviving in the Doncaster Borough. According to Edwin Pretty, Doncaster's largest yew is situated on the edge of private woodland in the village of High Melton and has a trunk girth of 12 feet 10 inches (Pretty 2001). Other enormous specimens survive just outside the Borough in the woodlands around Roche Abbey, Maltby (SK5489) (Pretty 2008).

Seven fine yews, possibly seedlings from the Sprotbrough Park giant, currently form a brooding backcloth to Sprotbrough Church and range in girth from 3ft 10in to 9ft with a mean of 70 inches (5ft 10in).

The curious avenue of yews in Sprotbrough's Pot Ridings Wood mysteriously marks out the ghost of a woodland ride not used since it was sliced through in the late 19th century by the deep cutting of the now defunct South Yorkshire Junction Railway. Fifty-two specimens measured in August 2010 had girths very similar to the churchyard yews, ranging from 3ft to 9ft 4in with a mean of 67 inches (5ft 7in). No doubt both Pot Ridings Wood avenue and churchyard plantings formed part of the Sprotbrough Park landscaping of the early eighteenth century.

It is tempting to speculate that Sir Walter Scott (1771-1832), allegedly having spent time in Sprotbrough while drafting his celebrated novel '*Ivanhoe*', might have personally known the yew avenue. His description of a yew grove in his 1813 poem '*Rokeby*' fits the Pot Riding Wood/Don Gorge circumstance suspiciously well (Howes 2009).

'*But here 'twixt rock and river grew*
A dismal grove of sable yew,'

Rokeby (canto ii), Sir Walter Scott

Howell Wood Yew Avenue

The Yew avenue at Howell Wood, thought to have been planted around 200 years ago, was established for game rearing and rural recreation by the lawyer William Marsden of nearby Burntwood Hall (Robertson, 1985). Marsden, lord of the manor of nearby Boulton-on-Dearne and Goldthorpe was a leading lawyer from Barnsley and steward to the 1st Duke of Leeds. His son William was also interested in estate management becoming Royal Surveyor to King George III of the Woods north of the River Trent. In 1815 the estate was bought by Mr. S.H.Taylor who built most of the current Burntwood Hall and was responsible for landscaping Howell and adjacent West Haigh woods (Reisach undated). This was when the lake at Howell Wood was created and one can assume when the yew avenue was planted. The estate was bought in 1868 by Thomas Dymond, manger of the Barnsley Main Colliery Company. The Dymonds had long had an interest in the natural sciences; in 1768 Joseph Dymond took part in the expedition to the mouth of the Churchill River in Hudson Bay, Canada to observe the transit of Venus as part of the world wide survey instigated by Edmund Halley the Astronomer Royal

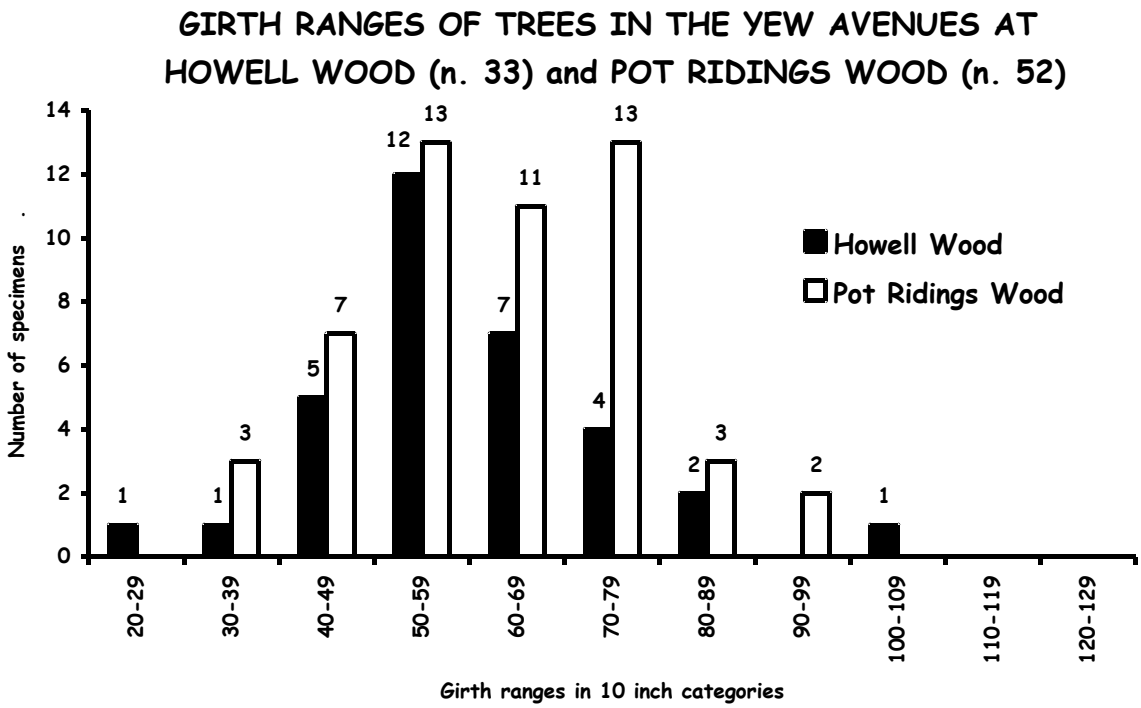

Figure 2: A comparison of the girth measurements of specimens in the Yew avenues in Howell Wood (n 33) measured June 2009 and Pot Ridings Wood (n. 52) measured.

(Reisach undated). More prosaically Thomas Dymond was interested in field sports, his game and fishing books 1877-1937 are deposited in the West Yorkshire Archives Service, Wakefield. In 1961 the contents of the Burntwood Hall estate were again being sold off and Doncaster Museum acquired Robert Dymond's collections of Lepidoptera and mounted birds. Today Burntwood Hall is a nursing home and Howell Wood is run by the DMBC as a Country Park.

Little hard information exists on the Howell Wood yew avenue so the opportunity was taken to measure the girths of 33 of the larger specimens during the YNU VC63 meeting organised by Bob Marsh on 20 June 2009. The girths ranged from 2ft 5inches to 8ft 4 inches with a mean of 48 inches (4ft). The results are included in Figure 2. Incidentally, the avenue consists of not two but four approximately parallel rows of yews.

By graphing the size ranges of our local yews we gain an impression of patterns in age groups, but sadly we only have a sketchy idea as to what these age groups are. Tantalisingly, figures 1 and 2 indicate a consistent dip in the 60 to 69 inch girth size range/age group. Does this indicate a synchronised variation in the planting, management, harvesting or growth rate for this cohort and is this reflected in findings from other regions?

In England today, even quite small fragments of pure yew woodlands are extremely rare, justifying special recognition under conservation conventions associated with the

National Biodiversity Action Plan. In the Doncaster region, notable yew habitats survive under English Nature or Local Authority protection. Edlington Wood and the Don Gorge woods are statutory Sites of Special Scientific Interest (SSSIs). Other woodland yews are present in the range of Local Authority Sites of Scientific Interest (SSIs), the Yew avenue at Howell Wood is part of the DMBC Country Park with several of the Yews protected by Local Authority Tree Preservation Orders.

I would like to dedicate this article to an inspirational colleague and friend Edwin Pretty, DMBC Tree Preservation Order and Historic Hedgerows Officer who sadly died in October 2014. DNS members will have encountered Edwin's knowledge and enthusiasm during various campaigns to save notable trees and hedgerows. He has also recently lectured to the society. Edwin's encyclopaedic study of *Notable and Venerable Trees of the Doncaster Borough*, a genuine labour of love, is available on the DMBC Website.

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The year of the spider (for me anyway)

Joyce Simmons

On a lovely spring day (23 May 2015), DNS visited Partridge Hill Farm near Austerfield. As is our wont, we wandered through the grasslands looking for anything interesting. There were lots to interest us: spring flowers, butterflies and even Woodlarks. Eventually we passed through the farm boundary onto the sandy scrubby land beyond, still looking for the unusual.

It was there I espied the spider. She was observing the passing insect life from a silken tunnel, constructed with an extensive patio area in front. This, I thought is not one of our usual local spiders. No circular web or undistinguished mat of spinnings - this was a beautiful and elaborate construction. So, handy camera to the fore, I managed to take one photo before she became camera-shy and hid in her tunnel. The photograph showed a spider with a small pimple at the end of the abdomen (see photo), but despite scouring the *Collins Field Guide to Spiders* I failed to identify it.

I sent the photo to Colin Howes, who suggested that I send it to Geoff Oxford, the secretary of the Arachnological Society and of York University. He in turn sent it to 2 other experts (it is good to have a mystery spider!). The answer came back that it was an immature Labyrinth Spider *Agelena labyrinthica.* Although this spider is common in the south there are only 2 previous records from Yorkshire, 1969 and 1977 (by a certain Colin Howes!)

There the matter might have rested - a lone spider who had left the balmy south for our tough northern climes. But no, another DNS excursion, this time to Tickhill Green Lanes on July 18 yielded another sighting. I saw a spider tunnel against a wall at the side of the lane - this time with 2 spiders cohabiting! This site is about 6 miles from the Austerfield site, as the spider scuttles.

To check up on the Austerfield spider Geoff Oxford joined John Scott, Paul and I on an expedition on July 27 hoping to find the spider again. We didn't find just one, instead we found around 40 webs without trying - most with obliging spiders sitting amongst the raindrops on their webs. So, the population seems to have been quietly expanding here, without anyone noticing.

Strangely, when John Scott visited Austerfield around a month later, there was no sign of webs, and no Labyrinth Spider. Timing is critical it would seem. In recent years *Agelena* has been recorded on the Lancashire and Cumbria coasts but not any further north than Nottinghamshire in the east, until now. We must look out for it on further DNS excursions.

My spider year was not limited to one species. Brian Eversham (native of Thorne, but now C.E.O. of Cambridge, Northampton and Bedford Wildlife Trust) visited Brockadale in late October 2014 in search of the tiny rare snail *Truncatelina cylindrica* which lives there Not knowing where to look, he chose a likely spot, and though he did not find the snail he did find the webs of the Purse-web Spider *Atypus affinis* - a spider of distinction and Nationally Scarce.

Paul and I tried to find the webs in the spring of 2015, and then again with John Scott and Geoff Oxford in July, but without success. It was only when Brian Eversham came along that we actually found the webs. We failed alone because we didn't know what to look for. The webs resemble the finger of an old glove. Dead grass and other vegetation are woven in making for excellent camouflage. The sealed silken tube lies along the ground, under vegetation, with most of the length below ground. The spider lives inside waiting for an unsuspecting victim to walk over the top. Her huge jaws then slice through the silk tube and drag the unsuspecting insect or woodlouse inside.

It is very difficult to actually see the spider which can head underground in the tube if disturbed. Neither Geoff nor Brian have actually seen one, but Paul and I were more lucky. We returned to the site two days later (2 September) and found a fearsome-looking spider repairing her tube.

The Purse-web Spider is not known anywhere further north in Yorkshire than Brockadale, and we found the webs on south-facing limestone slopes, which are warm and dry with thin vegetation. There is a historical record from Thorpe Marsh. This raises lots of questions - where at Thorpe Marsh? Is it still there? What about other local sites? Sprotbrough perhaps? It is certainly worth investigation.

International trade brings Black Widow Spiders to Doncaster

Colin Howes

Considering the ease and frequency with which creatures are transported around the globe via international trade and holiday travel, it is no surprise that alien organisms regularly appear on our doorstep.

A 'classic car' enthusiast in the Doncaster district had long nurtured the ambition to restore and run a Sunbeam Alpine, a stylish British sports car of the early 1960s. He tracked down an example in the hands of a car dealer in the dry, automobile-preserving climate of California USA, and in July 1992 the car was imported to the UK and three weeks later it was in a Conisbrough garage being dismantled for restoration.

On 13 August, while working under the chassis, the enthusiast dislodged a glossy black globose spider about 15mm long and with a leg span of about 25mm. It ran across his hand and he reflexively struck at it with whatever came to hand – in this case a paint brush laden with metal primer paint. At this point the Museum was contacted for advice on the identification of this sinister-looking black spider.

In discussion it was revealed that while wire-brushing off rust, dirt and old paintwork from the vehicle's chassis, numerous spider egg cocoons had been dislodged. CAH and local entomologist Peter Walker visited the site and examined the car and bags of removed debris for evidence of cocoons, spiders etc., which may have been inadvertently imported from sunny California. It seemed that most cocoons had been destroyed by wire brush and electric sander, since only three were located and these were torn and contained no signs of viable eggs. It was noticeable, however, that the car's hollow box-section framework was still full of spider webs and could have contained adult spiders and un-hatched egg cocoons.

Back at the Museum, attention was turned to the assaulted spider, now encased in a hardened gobbet of metal primer, together with two similarly daubed beetles, brushed from spider's webs beneath the chassis. After subtle coaxing with a fine sable brush and dilute paint stripper, the paint blob relaxed, split and sloughed away, revealing, leg by leg, the satin blackness of a plump female Black Widow Spider *Laterodectus mactans*. Dr Peter Skidmore confirmed the beetles as North American examples of a cellar beetle (Tenebrionidae) and a Ladybird (Coccinellidae) which had evidently fallen prey to the spider.

Due to the potentially serious public health implications of this discovery, Doncaster Environmental Health officers were notified and the car, garage and surrounding garden were treated with pesticide. After news of the incident hit the front page of the *Doncaster*

Star (25.09.1992) the story was quickly covered by the popular national tabloids and finally featured as an item on BBC Radio 4's News Quiz (see *YNU Bulletin* (1993) 19: 5).

In March 2001 a parcel, again from sunny California, was delivered to a household in Stainforth and amongst the packing material was a live glossy black web-spinning spider with a characteristic globular, black currant-like, abdomen. The spider was secured in a coffee jar and taken to Sarah's Pet Shop in Stainforth where it was transferred to a secure vivarium. Here it fed voraciously on house crickets from the pets shop supplies. The well nourished specimen in its coffee jar was brought to Doncaster Museum for identification where it clearly showed the red 'hour-glass' marking, characteristic of the notorious Black Widow. Incidentally, the identification was hastily made while preparing for Caroline Flint MP to arrive for the opening ceremony of the Museum's 2001 Science Week exhibition.

Since the keeping of such potentially hazardous creatures (the spider!) is controlled by the 'Dangerous Wild Animals Act (1976)', the specimen was transferred to Mr Barry Naylor, a licensed keeper and proprietor of Art Gecko Exotic Pet Centre Ltd., Bradford. The museum staff got to know Barry as one of the exhibitors at the museum's Exotic Wild Animals events - he was the rather impressive-looking shaven-headed, black leather-clad bloke with a huge Monitor Lizard (*Varanus* sp.) draped his shoulder (*YNU Bulletin* (2001) 36: 41).

In August 2011 BBC Humberside News reported that four Black Widow Spiders had been found at an engineering works in Barton-on-Humber, brought in a consignment of jet aircraft engines imported from the USA and discovered when the engines were being dismantled for parts. Knowing their country of origin, factory staff using the internet had identified them as *L. mactans* on account of the characteristic hour-glass marking on the abdomen. The spiders were removed into a secure glass container, fed on flies by factory workers and offered to Cleethorpes 'Jungle Zoo'.

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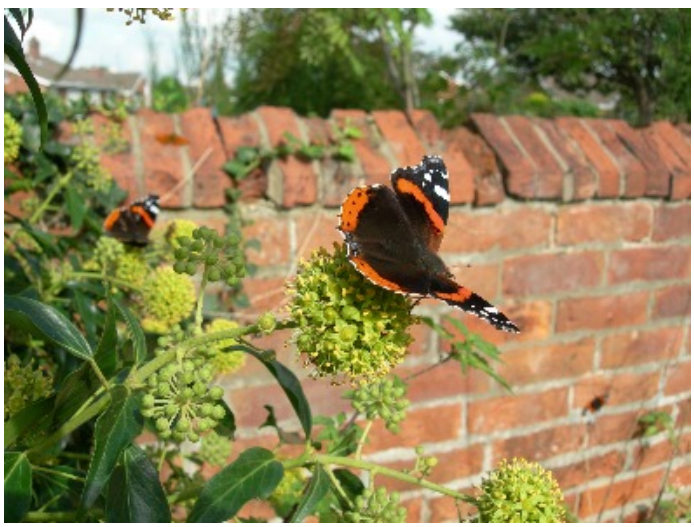
Notes from Finningley Churchyard: of walls and plants

Tricia Haigh

Ivy

Once the churchyard has had its autumn 'cut' and been prepared for its winter dormancy there are few flowers to be seen as you pass through. But one plant that is giving its all at this time is Ivy (*Hedera helix),* which clothes many parts of our churchyard boundary walls as well as some of our trees, to which it clings by means of small aerial roots. It does not take any nutrients directly from the trees although when it grows thickly in the tops of trees it could cause damage in high winds. In my experience it causes less damage to the lime mortar in the boundary walls than other plants that seed and establish themselves there and the Ivy, therefore, provides useful protection for the walls that it clothes. We cut the Ivy back regularly but not all at once so that we always have some mature bushy Ivy, which is most useful to wildlife and some that is growing on after being pruned the previous year.



This amazing plant is just charging up as most plants are closing down. This is its strength and makes it a major player in the conservation of the churchyard. Autumn is when it comes into its own, its heavily scented flowers appearing just at the time when everything else is going over. Vast numbers of late flying butterflies and insects are attracted to its strong scent. On one sunny late-September morning I counted around 100 Red Admiral butterflies on the Ivy that grows along our western boundary wall. Others that were visiting this magnificent food station that morning were Comma, Peacock and Painted Lady butterflies as well as a large number of bees, wasps and hoverflies. The Ivy flowers were, in effect, providing the last fuel stop before hibernation.

In winter the Ivy's evergreen mantle provides shelter for roosting birds and hibernating insects, including one butterfly that is often one of the first and one of the last to be seen on the wing. The yellowy-green underwings of the Brimstone butterfly are perfectly camouflaged among the Ivy leaves as with its wings closed its colour and patterning blends well with the leaves.

As winter takes its hold and other food sources dry up, when the birds have taken the last of the berries from Holly, Hawthorn, Cotoneaster and other shrubs, the Ivy berries have now turned black and are fully ripe. For many birds, such as Blackbirds, Thrushes

and Robins, Ivy berries provide vital sustenance through the hardest winter months.

At other times of the year too Ivy has much to offer our native wildlife. In spring its intertwined woody stems and leaf cover provides the perfect nesting site, especially favoured by Wrens. In summer where Ivy grows high enough it becomes a perfect roosting site for one of our most protected species – bats. Its leaves are eaten by a range of specialist insects including the caterpillars of one of our prettiest small butterflies, the Holly Blue. In fact Ivy is essential for the existence of this species since it lays the eggs of its first (spring) brood on Holly and those of its second (summer) brood on Ivy. We are fortunate in our churchyard to have an abundance of both.

The saga of the Finningley Wall-rue

Wall-rue (*Asplenium ruta-muraria),* is a small, distinctive, fern that grows naturally on limestone outcrops but is also found growing on man-made structures where lime mortar has been used, especially old buildings such as churches, monasteries and castles. Our Wall-rue has quite a history.

In the early years of our conservation management of Finningley churchyard I discovered a small fern growing out of the lime mortar on the north wall of the church. I identified it as Wall-rue, a fern that although common throughout Britain is less frequently found in the east of the country. Soon afterwards I read a short piece in the English Heritage publication *Heritage Today* that indicated there was a need to preserve plants of this kind growing on old buildings.

Remembering the 'battles' I'd had on several occasions protecting our tiny plant from being weed-killed, I decided to consult Colin Howes, our local Environmental Records Officer. The result was a confirmation that our Wall-rue was indeed worth protecting, as it was quite a rarity in the Doncaster area, and on visiting the churchyard a second plant was discovered. Sadly, less than a month later, the plants had been destroyed, removed by church 'conservationists' who were repointing the church. They had been asked to leave the ferns as they would not cause any damage to the masonry, but clearly the men had not known what they were supposed to leave.

However this was not the end of the story because as a result of my enquiry members of the Doncaster Naturalists Society had decided to undertake a series of surveys of old churchyards in the area, looking particularly for the presence of Wall-rue. When our churchyard was surveyed in May 1998 one sharp-eyed naturalist spotted a colony of

Wall-rue high up on the south side of the church tower out of reach of everyone and looking quite healthy. So we hadn't lost our Wall-rue after all. The result of all the hard survey work was a beautifully presented and illustrated book of Doncaster's Living Churchyards, which the society published in summer 1999.

Then in September 2004 Don Smith, a member of the British Lichen Society, surveyed the lichens in the churchyard. As I helped him to find lichens on the perimeter walls I discovered, to my delight, 2 small colonies of Wall-rue in the south-west corner of the churchyard rooted in the lime mortar in the wall.

A further development occurred during our annual churchyard 'cut' in September 2005 when another small plant was discovered growing on the north wall of the church, not far from the spot where the original fern had grown. The story had come full circle.

Essex Skippers move through Doncaster

Paul Simmons

We were very fortunate to have had 3 encounters with Essex Skippers in our area in 2015, and have probably seen their westward and northward movement up the country in action.

Essex Skipper is a small butterfly which is found very commonly throughout the continent as well as in large areas of southern England and Wales. It has been moving slowly north, presumably under the influence of global warming, but until recently was only found on the very southern boundary of Yorkshire where it spilled over from Nottinghamshire and Lincolnshire. It has been found in the Doncaster area for several years – looking back through the Yorkshire Butterfly Reports shows that there have been sightings almost every year in our region since at least 2005. Ken Woolley has reported it regularly along the banks of the River Torne and the South Ring Drain, and Paul Townsend, Tony Butler and Martin Warne have noted it on several occasions around Maltby, Balby and Edlington. Ken Woolley has also reported it from Hatfield Moors.

It wasn't until 2011 that Ken began to see Essex Skippers away from their usual south Doncaster haunts as it turned up in Armthorpe in 2011 and again in 2012, and Edenthorpe in 2012. Then Diane Wardley found it in Kirk Sandall in 2013, clearly suggesting a steady northward movement, with perhaps some acceleration. Ron Moat and Paul Townsend saw it on separate occasions in 2014 on Thorne Moors, quite a leap north from its previous colonies, but 2 sightings from Goole suggested that it was really on the move.

David Smith, the county butterfly recorder, picked up on the Essex Skipper story when he got news early in the summer of 2015 that some had been seen not only at Allerthorpe Common and North Cave Wetlands, but also up in the Middlesbrough area. So it seems that this butterfly is now on the march.

We have been lucky enough to see it three times in our area this year. The first was on the Nats excursion to Tickhill Lanes in July when we found several fresh specimens. This isn't too far from where Ken Woolley found it in 2012, or from the regular sightings around Bawtry and Maltby. Our next encounter was again with the Nats – this time at the Lindholme fete, when I found 2 or 3 individuals in the small sand quarry south of the hall. It is 10 years since Ken first reported them in this area, and it is tempting to think that they may have survived unnoticed through the intervening years.

Our last sighting was so late in the year that we sought a second opinion as to identification. I have every sympathy with those trying to identify this species - it is not easy and a good photograph of the underside of the antenna tip is the most certain way. Even so, older specimens can prove problematical. This was certainly the case when we found a skipper at Brockadale on September 7 this year. This is very late for any skipper, but Essex does normally fly later than Small Skipper. After posting photos on the UK Butterflies skipper forum, all those who commented were quite positive that it was an Essex Skipper. I think our Brockadale sighting represents the most westerly record in Yorkshire so far, but I am sure it won't be long before it crosses the A1.

As David Smith says, it is easy to miss these butterflies if you are not expecting them and a brief look is not enough – you have to get close up and personal with them to see the underside of the tips of their antennae – orange (below left) means Small Skipper, but black (below right) equals Essex. So we all need to be much more aware that this species is now amongst us and to start looking for it in earnest next summer.

Chris Devlin (1939-2014): The Doncaster Days

Colin Howes

Chris became part of the Museum staff in the late 1950s and played a large part in transferring and displaying the natural history collections from the old Beechfield House premises on Waterdale to the new purpose-built Museum and Art Gallery on Chequer Road**.**

My first professional contact with Chris was in March 1969 in the Laboratory at Doncaster Museum where he was … shaving mice (!) but more of that later. Chris Devlin, Peter Skidmore and Albert White constituted the museum's natural history team. All were most wonderful people, welcoming and helpful, inspiring and knowledgeable and impressively enthusiastic. Culturally they were definitely from the Goon Show generation and were great fun. Joining them as a junior work colleague was like being adopted into a family.

Doncaster Zoo

Chris had trained at Doncaster Art School was a keen Ornithologist and Naturalist, so on leaving college the employment which best satisfied these interests was as a junior assistant keeper at the newly formed Doncaster Museum Zoo.

The Zoo had been instigated in 1954 by Dr Elphinstone Forrest Gilmour, the ambitious new director of Doncaster Museum. Under the management of head keeper Albert White, it quickly developed from a few fish tanks and aviaries to a series of outdoor enclosures and animal houses taking up the entirety of the gardens of Beechfield House. The enclosures were cheap and flimsy (it was the 1950s after all) and the inmates were constantly escaping, tunnelling to freedom or in the case of Bob the Himalayan bear, prizing open the bars of his cage. This led to Chris joining with the local Police in rounding up Deer, Porcupines, Snakes and Parrots which had gone AWOL in down-town Doncaster. The cops enjoyed the exercise … and the Press loved it!

From Beechfield House to Chequer Road

With Beechfield House and its grounds being required for Doncaster's new Technical College (now demolished and replaced by the even newer Council Offices), Gilmour lobbied the Council for a new purpose-built Museum and Art Gallery in nearby Chequer Road. With no facilities for live exhibits at the new site, the Zoo was disbanded in 1962 and Chris and Albert joined the museum staff as natural history technicians and proceeded to transfer the entire museum collections to the new premises. Mike Clegg joined them as Keeper of the Natural History in 1963 and they worked all hours, often round the clock (with no overtime pay) to design and set up the new natural history exhibitions in time for the opening ceremony conducted by Princess Margaret and Lord Snowdon on 30 October 1964.

Figure 1: Chris Devlin showing Princess Margaret work on the Lepidoptera collection during the official opening of Doncaster Museum 30 October 1964.
(Photo provided by Alison Devlin)

Figure 2: Chris in the Museum Lab undertaking conservation work on antiquities (Photo provided by Alison Devlin).

Doncaster Museum's 'World View'

Under Gilmour's direction the new museum had a World, rather than a parochial view, so the collections grew exponentially to achieve this aspiration. Chris, together with Mike Clegg and Gilmour toured museums, auction houses and private collections of the UK … these were the 'Raiding Parties' … bringing back collections of exotic birds, fish and fossils, mammals, molluscs and minerals for use in the new displays or for research purposes. Much of this material had to be skilfully cleaned, restored, renovated and even re-mounted and this was Chris's job … I remember him trying samples of hair die to find the right tint to re-colour faded Red Squirrels … Beatrix Potter would have been proud of him. Not so well appreciated was the constant stench of hoof and horn glue, kept on the boil for the restoration and rebuilding of display bases and habitat sets. His material conservation skills also involved him in cleaning and restoring museum antiquities and art-works (see figure 2).

Timber Beetles and Photography

Gilmour's area of research was in large exotic timber beetles from tropical forests around the world. Once the new museum was established, one of Chris's jobs was to photograph these extraordinary insects, many new to science, for Gilmour's scientific publications … this was a highly skilled job. Gilmour, using Chris's photographic images, maintained a prodigious output of published work which appeared in academic journals from

Argentina to Japan … so Chris's photographic talents live on in academic libraries around the globe.

Expedition to Nepal

In 1970 Chris was asked to take part with a team of climbers in an ambitious overland expedition by Land Rover to Nepal. This was not a self indulgent exotic holiday but was envisaged as a productive collecting and recording expedition, providing data, photographs and biological specimens (mainly beetles and plants) for later scientific research.

Having experienced the privations, training and discipline of National Service, Chris was one of the only expedition members not to become ill through the rigours of the journey or through primitive and unsanitary living conditions. Consequently he became the expedition's caterer, general factotum and all round Florence Nightingale figure. Despite this he made time to collect and press plants, collect insects and photograph the local wildlife … and yes … they actually reached Everest base camp.

Local societies

Chris was a founding member in 1955 of the Doncaster and District Ornithological Society, and was an active member of the Doncaster Naturalists' Society. For the centenary celebrations of the Nats in 1980 Chris located numerous glass plate negatives and produced a magnificent exhibition of enlargements featuring some of Doncaster's leading 19th century scientists. He also reconstructed an Edwardian epidiascope with which he gave shows using the old lantern slides and photo-micrographs taken by such photographic pioneers as Mathew Henry Stiles. Although never one for official positions, for years he prepared the Doncaster Naturalists' programmes and lead many of the field meetings.

Historical taxidermy

In regularly handling 19th century taxidermy collections, Chris developed an interest in old taxidermy trade labels and became adept at recognising the work of early taxidermists. This led to his combing the ornithological literature and local trade directories for references to former Yorkshire and UK 'bird stuffers'. His findings, quickly outstripped all previous research on UK taxidermists. Sadly this project was left unfinished but was recently championed by museum volunteer Andrea Marshall, Andrea finally publishing this gazetteer via the Friends of Doncaster Museum as a tribute to Chris.

Road kill and apprentice taxidermists

To provide a supply of fresh specimens for taxidermy, members of the public were encouraged to bring Chris a menagerie of road kill victims. He also functioned as an agency, through the *Y*orkshire and Humber Museums Area Service, providing taxidermy services to museums throughout the region. For this, Chris took on a succession of apprentice taxidermists, one of whom, Graham Teesdale, became one of Britain's most

accomplished practitioners, working for museums and film studios around the world. Graham always valued Chris's training and encouragement and recently returned to visit Chris and Alison to reminisce over past times and to express his gratitude.

Artwork

Chris's time at Doncaster Art School bore fruit in his fabulous panoramic back cloth paintings to accompany the Geological/Palaeontological Dioramas. His skilful model-making provided scientifically accurate models of creatures and plants to accompany their fossil counterparts used in the displays. An early recollection of Chris's craftwork was seeing him harvesting the fur from dead mice (as mentioned earlier) to apply to model woolly rhinos and mammoths for the ice-age display.

Collecting

As a field naturalist Chris had innate talents. Whereas I would bring in the ubiquitous and commonplace, Chris would target interesting looking specimens, which when identified by our colleague Peter Skidmore, often turned out to be rare-habitat-indicator species, new county, or even new British records. For instance Denaby Ings became a YWT Nature Reserve and gained statutory SSSI status as a result of a series of beetles Chris found hibernating under the bark of the grove of Crack Willows there. Chris similarly assisted in designating and saving such places as Potteric Carr and Edlington Wood.

During William Bunting's campaigns in the 1960s to 1980s to save Thorne Moors from destruction by the peat industry, naturalists and academics from far and wide undertook surveys to provide evidence of its scientific importance, WB however regarded Chris as *THE* best field naturalist to work the site and one of his most reliable allies … one of Bunting's Beavers.

Many more anecdotes could have been added but we would need a PowerPoint presentation or an epidiascope to do them justice.

Assembling these notes has been an extraordinary and most pleasurable journey of recollection and I am reminded that these were some of the happiest, most interesting and productive times anyone could wish to experience.

Doncaster Naturalists' Society excursions 2015

The photographs below are from a small selection of the wildlife outings undertaken by the Nats in 2015:

Left:
Nats members Margaret Prior, Colin Howes, Sheila Hill with Society president Louise Hill at John Scott's farm, May 2015

Below left: Dwarf Spurge, an uncommon plant found on the visit to Tickhill Lanes in July 2015.

Below right: Sharp-leaved Fluellen, found by John Scott and Louise Hill on the visit to Wadworth Wood in August 2015. This is the first sighting of this plant in VC63 (South Yorkshire) since 1923.

Below: Naturalists with Thorpe Marsh reserve warden Mick Townsend (second from right) during a successful newting session in April 2015 in which Great Crested and Smooth Newts were found.

Presidents Report to AGM 2016

Louise Hill

Doncaster Museum – Natural History Archive, Collections and Enquiries

A definitive catalogue of Dorothy Bramley's Personal Library has been made and some books have been selected for sale. Cataloguing of the Natural History Archive has continued over the winter months. Despite no formal memorandum, we continue to field enquiries and an 'Enquiries Log' is being maintained.

Links with other groups

We held a joint meeting with the South Yorkshire Botany Group on a visit to the meadows at Ash Hill Farm. In June Bob Marsh and I also took advantage of the boat access to Crimpsall Island provided by the Don Catchment River Trust & River Stewardship Company. The Society also visited the meadows owned by the Burnet Heritage Trust in Sykehouse in that month. Members joined various YNU Field Excursions including one to Worsborough in July, and in August we had a joint meeting with members of the British Plant Gall Society at Wadworth Wood. A small number of Society members joined the Rotherham Naturalists' Society on a pre-Christmas outing to Sprotbrough for the BSBI Winter Flowering Plant Count. Derek Allen has continued to provide the link with the South Yorkshire Bat Group during their hibernation surveys in the Don Gorge. Bats have been found in very good numbers this year (a total of 12 bats on the 10th of January and 18 bats on the 8th of February 2016).

Special Sites

We made three visits to the YWT Thorpe Marsh Reserve in search of newts, purple hairstreak and harvest mouse. Paul and Joyce Simmons held regular wildflower and butterfly walks at the YWT Brockadale Reserve. The Society visited Lindholme Old Moor & Hatfield Moors for adders in April and moths in August & September. The Society is still well represented on the Management Group. A seminar/open day is planned for the 3rd of September 2016.

Regular Outings

We made a visit to Sandall Beat Wood for the Dawn Chorus in May, and Kevin Gilfedder and Hiram Wildgust led the annual fungus foray - this time at the Austerfield Mosaic Trust Reserve. Harvest Mouse Hunts were held at Ash Hill Farm and Thorpe Marsh and I also visited Potteric with a view to an organised nest search by the Nats next year.

Getting to new sites and working with private landowners

We continue to maintain good relations with landowners at Scabba Wood by offering a source of wildlife advice (mostly help with identification). A small group of Nats accompanied plot owners on a tour of the wood in May. I also made another visit with Robin Ridley of the Woodland Trust to discuss management of Wetlands Wood. We visited Partridge Hill Farm, near Austerfield, where the highlights were the woodlark and

the acidic heath flora. Carr Lodge, YWT's new land near B&Q was also visited for a quick walk-over prior to wetland creation works. This visit was followed by an excellent fish 'n' chips meal /committee meeting at Whitby's!

Training the next generation
I have assisted an ex YWT trainee with a study of water plants at Potteric and I also met two current trainees at Potteric to show them harvest mouse nest hunting techniques.

Venturing further afield
Members of the Society also joined the South Yorkshire Botany Group on a visit to Wodgen Foot, an old railway site near Penistone which is noted for its limestone plants.

Future Programme
Plans for the coming field season include a return to Wadworth Wood, a visit to Kearsley Brook (Conisbrough's own 'upland stream') and a summer visit to the restored Edlington Pit Heap, a site which, amazingly, manages a passable impression of an alpine meadow!

Promoting the Society
We promote the Society at the South Yorkshire Natural History Day organised by Sorby Nats and have been invited to provide events at the YWT Nature Festival at Potteric. We had a stall and display at the Lindholme Summer Fete with additional hands-on activities and guided walks.

Representations made at various outside meetings and events
The Society was very well represented at the funeral of Honorary Life Member Dorothy Bramley in February 2015. I represented the Society at the Wakefield Invasive Species Conference in March 2015 and both Pip and I attend the Doncaster Biological Records Centre Steering Group and Local Sites Partnership on behalf of the Society in April each year. Annual reports from the Local Records Centre are available. I have also attended several Potteric Carr Monitoring Group meetings and have kept in touch with the Thorne and Hatfield Moors Conservation Forum via their post-AGM presentation.

Publications
There are still a small number of copies of The Doncaster Naturalist Vol 2 Number 4 available. Many thanks are due to Paul Simmons for all his work in producing past and current editions.

Winter Programme
Despite a small decrease in membership, the programme of indoor winter meetings at Doncaster Museum and Parklands are still well attended. The Museum meetings, in particular, regularly attract over twenty five attendees. I hope to see as many members joining us on our summer outings in 2016.

The Doncaster Naturalist is produced by the Doncaster Naturalists' Society on an occasional basis. This issue has been edited and designed by Paul Simmons, and printed by Process Print Solutions, Knottingley.

Doncaster Naturalists' Society welcomes members who have interests in the natural history of Doncaster and district. It has served this function since 1880. The officers of the Society are:

President: Louise Hill
Secretary: Margaret Prior
Recorder: Pip Seccombe
Treasurer: Nora Boyle

The Society's website is: **www.doncasternaturalhistorysociety.co.uk**
and contact can be made via: **doncasternats@talktalk.net**

Events programme

The Society runs a very full programme of indoor and outdoor meetings. Forthcoming events can be seen at:

www.doncasternaturalhistorysociety.co.uk/events

All are welcome to attend.

Membership

The current membership fee is £7 per year. Contact the Treasurer for details.

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