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Front cover: The Hill Cuckoo Bee *Bombus rupestris*, taken in Scampston Hall gardens.
Photo: *John Bowers*

Back cover: A Robinson moth trap set for the VC65 YNU excursion near Ravenseat, Whitsundale, with a view north to Hoods Bottom Beck. Photo: *Terry Whitaker*



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Editorial

One of the long-term aims of biological recording is to allow the free flow of data so that those who need them will be able to access them easily and there have been several initiatives intended to achieve this. As Simon Pickles and Matt Millington point out on p187, this has still not been achieved. There are problems and barriers at every step of the process.

Most biological observations are generated by amateur naturalists who do this for their own interest and enjoyment. They work in ways that suit them and are often resistant to the attempts of professionals to direct their activities in the interests of comparability and compatability. Bird watchers often record intensively, visiting the same site on numerous occasions and recording essentially the same birds each time; they usually record abundance and often behaviour, including the direction of birds overflying the site. Botanists often record extensively and if they return to a site they may not record there because 'it has already been done'. The time since it was last 'done' may slip from months into years and even decades.

An observation does not become a record until it is recorded – written down, photographed, caught on an app, etc. Many (most?) observations never become records and we are all guilty of this. Perhaps we feel that anecdotal records have no value or that what we have seen is commonplace or we assume that someone else will have recorded it or perhaps we would not know what to do with the record anyway.

At the recent NBN Conference in York, Andy Musgrove (BTO) commented that when Donald Rumsfeld caused a stir with his 'known knowns', 'known unknowns' and 'unknown unknowns' he omitted the 'unknown knowns', things that we do not know that we know. Records in a

naturalist's notebook come into this category because no-one else knows about them. They only become 'known knowns' when they are incorporated into mainstream biological recording.

Most naturalists are more concerned about the precise identification of the taxa that they record than the precise locations of the records. The nearest village or town is often thought good enough. I hope that we have progressed beyond the collectors of insects in the Natural History Museum who attached printed labels from 'Europe' to them! One advantage of hedgerow surveys is that the taxa are recorded from precise locations and habitats.

Local environmental records centres (LERCs) were established, mainly in the 1970s, 80s and 90s, with a deliberate aim to capture these 'unknown knowns' and make them available to those who needed them – planners in need of an evidence base, developers and consultants needing to assess the implications of their proposals, conservationists wishing to defend and protect sites and naturalists and academics wishing to better understand the web of life that covers these islands, particularly the areas they are familiar with. As Simon and Matt point out, not all records are sent to a LERC. Some go on to social media and are largely ignored by naturalists and biological recorders, perhaps because we are all fully occupied already or perhaps we feel that the tweeters and likers are only playing at being naturalists without making the commitment of discipline and effort which is needed to record species accurately. There may be a role here for younger naturalists to trawl records from these sites and pass them on, becoming part of the biological recording chain in the process.

The Recorder computer program was developed in the late 1980s in part to enable data flow. If LERCs and National Recording Schemes (NRSs) were using the same program then exporting records from one to the other would be greatly simplified. In practice, LERC workers rarely have the time to forward records in a regular manner and the best result is often for the organiser of a NRS to solicit records when an atlas is in preparation.

The mantra 'record once, use many times' was central to the establishment of the National Biodiversity Network (NBN) in the mid 1990s but the NBN Trust's vision of freely accessible data is not universally accepted. At a local level there may be individuals and organisations who believe that knowledge = power = money and they are not prepared to share their records openly. Most LERCs charge some users for some services and may depend on this income stream for their continued operation. They keep control of their data and only allow members of the public to access summaries. Some organisations upload datasets to the NBN Gateway but do not allow members of the public to access them. The Gateway is not set up to interrogate a newly-uploaded dataset and compare it with the previous version so that additional records can be copied to NRS organisers.

The formation of the NBN and development of the Gateway have revolutionised the information available online but we are still far from achieving the aim stated in the opening to this editorial.

Simon Warwick MBE, President of the Union 2015-16



Much to the disappointment of my peers, my early teens did not focus adequately on educational studies, or sport, as wildlife had long-before captured my attention.

My 'stream project' was already the focus of much of my interest. Here I had access to a silted-up 'delta' of a Capability Brown-designed lake and the chance to watch Water Rails and their black-bumblebee chicks wandering feet from me, through species-rich water-edge swamp. I remember well the struggle I had identifying my first Siskins in the top of the Alders, as my grandfather's WWI 'field glasses' lacked a little clarity. As with a number of my childhood heroes such as Peter Scott, trips to the Hebrides to 'bag' a wild goose on a moon-lit night and watch Golden Eagles and Black Guillemots on the Sound of Islay all served to confirm a passion for birds and a growing interest in the habitats in which they lived.

Courting my soon-to-be wife, Jill, saw us returning to Islay – this time with a telescope and quality binoculars; following in the footsteps of the late Alan Walker, Jill's birding mentor and Harrogate & District Naturalists' Society (HDNS) Bird Recorder. From them both I learned valuable new skills, particularly those of recognising bird song and the importance of formal recording; whilst the *Botanical Atlas of the Harrogate District* (Jowsey, 1978), a visionary piece of work, became my regular bedtime reading.

After a childhood based mainly around Tadcaster and Boston Spa, I had grown to appreciate the surrounding Magnesian Limestone landscape and to recognise that limestone exposures resulted in interesting plant communities. Therefore, the move to Ripon after marriage naturally caused me to seek out old quarries and meander sections of river. To my delight, the Ripon library had a photocopy of Rev. Henry H. Slater's *Flora of Ripon and Neighbourhood* (YNU Transactions, 1883-4) – the excitement of visiting some of his locations and rediscovering plants such as Great Fen-sedge left me with a deep-rooted fascination, particularly for wetland communities.

Encouragement by the late Margaret Sanderson (HDNS) to draw up the High Batts NR (part of the Ripon Parks SSSI) management plan in the early 1990s led me to explore in more detail the ecology of the species present. A study of the scarcer moths at High Batts brought home the relevance of the calcareous plant communities and the essential links back to the underlying geology.

Having originally trained in landscape design, I agreed to design the two dragonfly ponds at the High Batts. This also involved the necessary fund-raising and meetings with organisations such as North Yorkshire County Council and English Nature. A meeting with the County's principal landscape architect led to thoughts about 'landscape-scale' opportunities Why were we

building dragonfly ponds when the adjoining sand and gravel quarry could do it bigger, better and free of charge?!

Since the mid-1970s Nosterfield sand and gravel quarry had been attractive to local birders, as a result of the seasonal exposure of the fluctuating water-table. From 1980 onwards, this site had become a regular birding location for us, particularly looking for colour-ringed Canada Geese – a project driven by Alan Walker.

Clearly the minerals industry offered exciting opportunities worth exploring and a failed landfill application at Nosterfield in the mid-1990s offered a chance to turn the theory into practice! Discussions with Tilcon (now Tarmac) and NYCC showed great promise but I could not raise the enthusiasm of any conservation NGOs. The newly created Landfill Tax arrived at just the right time, resulting in the formation of the Lower Ure Conservation Trust (LUCT) and the purchase of the first 29 hectares at Nosterfield in 1997.

The fluctuating groundwater within the underlying Magnesian Limestone meant that water-level control was out of the question – the landform had to be manipulated to create a ‘series of tiered scrapes’. Combined with more sympathetic grazing, this resulted in several pairs of breeding Redshank and Shoveler (our target species) in the first year; followed by reserve expansions and more recently North Yorkshire’s first breeding Avocet and Bittern.

In the early 2000s, Nosterfield NR’s example led to LUCT setting up the Swale and Ure Washlands Project, with a wider partner base, to formulate a strategic approach to mineral extraction in the region. Working with Durham University (English Heritage funded) to look at the surrounding post-glacial landscape, resulted in paleo-environmental studies which we could barely have dreamt of in the past. Peat core-samples produced the evidence we so longed for, of long-lost extensive species-rich calcareous fens. Martin Hammond’s work on plants which had become extinct in the region since 1700 also produced additional data for lost wetland and aquatic species. We had the evidence we needed to create a vision of rich wetland habitats for the future!

Nosterfield lies within the landscape of the Thornborough Henges. As a result of research carried out by the LUCT/SUWP, universities and independently by the quarrying industry, we now know much more about the historical setting of this very important heritage landscape. As we move into new decades there is now an evidence-base which gives the chance to create new habitats, reflecting the earlier species-rich landscape and which will be valued by people - it’s an exciting prospect and one I feel passionate about.

I believe that the YNU’s role in encouraging monitoring, good practice and education for the future can only become increasingly important – both here and throughout Yorkshire.

Aquatic plants in the Calder & Hebble Navigation: distribution and conservation value

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Introduction

The Calder & Hebble Navigation is a mixed canal and river navigation, length c.38km, linking Wakefield and Sowerby Bridge (Anon, 2009). The Navigation is not widely celebrated for the conservation value of its aquatic plant communities. This contrasts with other trans-Pennine canal routes: the Leeds & Liverpool Canal, the Huddersfield Narrow Canal and the Rochdale Canal (that continues the route of the Calder & Hebble) all have sections that are designated as SSSIs because of the richness of their aquatic vegetation (Natural England, 2015). Features of botanical importance have, however, been reported from some canal sections of the Calder & Hebble Navigation. For example, the rare American Pondweed¹, which was first recorded as a native plant in the Outer Hebrides in 1943, has been known in the Calder & Hebble and regarded as an alien plant since 1907 (Preston & Croft, 1997) and was still there in 2011 (Goulder, 2013a). Floating Water-plantain and Hairlike Pondweed, both listed as scarce plants in Britain by Preston & Croft (*loc. cit.*) and the former being specially protected throughout Europe, were to be found in the Calder & Hebble in 2011-2012 (Goulder, 2013a).

The work described in this article was undertaken to explore the extent of aquatic-plant species richness and abundance in canal sections of the Calder & Hebble Navigation and to draw attention to any features of conservation interest. To this end aquatic plants were recorded along all the canal sections (in total c.27km) of the navigation in May and June 2014.

Methods

Aquatic plants were recorded along canal sections of the Navigation from Broad Cut Low Lock on the south-west edge of Wakefield upstream (westwards) to the Tuel Lane Tunnel portal at Sowerby Bridge. The short arms, off the main line, to Dewsbury and Salterhebble were also included. Recording was along 25 topographically defined lengths of canal, i.e. between locks or bridges, which were numbered consecutively with higher numbers towards the upstream end of the waterway (Table 1). The lengths surveyed were not equal and varied between 0.3km and 2.5km. Plants were recorded by eye from the towing path; submerged plants were retrieved using a walking pole extensible to 1.5m with a hook attached to its end; emergent plants on the far side were identified using binoculars. Species recorded were those on the JNCC (2005) *Common Standards Monitoring Guidance for Canals* checklists for native aquatic plants and non-native aquatic vascular plants and/or the list of aquatic plants for England and Wales in Palmer & Newbold (1983). The abundance of each species in each canal length was estimated using a truncated 3-point DAFOR scale; i.e. dominant/abundant (d/a), frequent (f) or occasional/rare (o/r). To obtain an (approximate) integrated measure of both species richness and vegetation

¹ Scientific names which are included in the tables are not repeated in the text. Nomenclature follows Stace (2010).

abundance in each canal length the DAFOR scores were converted to numerical abundance scores (i.e. d/a=3, f=2, o/r=1) and the sum of these abundance scores (Σ AS) was calculated.

Aquatic plants

The plants recorded and their distribution

Altogether 39 aquatic plants were recorded: 19 that were largely submerged or floating-leaved and 20 that were essentially emergent plants (Table 2). Those encountered in the greatest number of canal lengths were Common Duckweed and Hemlock Water-dropwort (both in 24 out of 25 lengths) followed by water-starwort and Reed Sweet-grass (in 23 lengths). Seven others were found in 10 or more lengths of canal: Creeping Bent (19), Unbranched Bur-reed (14), Reed Canary-grass (13), Nuttall's Waterweed (12), Yellow Iris (11), Bulrush (11) and Arrowhead (10). Some occurred only very infrequently. For example, Water Fern, Fat Duckweed, the stonewort *Nitella* sp., Yellow Water-lily, Water Mint, water-cress, Common Reed, Branched Bur-reed and Brooklime were each recorded in only one canal length.

The complete results for the distribution and abundance of aquatic plants along the waterway are available as additional electronic material (Appendix 1a & 1b). The records for plants recorded as dominant or abundant in one or more canal lengths are given in Table 3. No submerged or floating-leaved plant was recorded as generally dominant or abundant along the whole waterway. Submerged or floating-leaved plants that were dominant/abundant in some lengths were: Floating Water-plantain (3 lengths), water-starwort (2 lengths), Arrowhead (2 lengths), Nuttall's Waterweed (1 length), Broad-leaved Pondweed (1 length), Hairlike Pondweed (1 length) and Unbranched Bur-reed (1 length). Amongst emergent plants Reed Sweet-grass was much the most abundant and was recorded as dominant/abundant along most of the waterway (in 17 out of 25 lengths). Otherwise the only emergent plants that were ever recorded as dominant or abundant were Sweet-flag, Narrow-leaved Water-plantain, Water-plantain and Bulrush (each in one length only).

While some plants were widely distributed, others clearly had a non-uniform distribution along the waterway (Table 3, Appendix 1a & 1b). For example: Floating Pennywort was found in the five most downstream (easterly) lengths and otherwise only in the Dewsbury Arm (Length 6); Hairlike Pondweed was dominant/abundant only along the 2.3km between Thornhill Double Locks and Thornhill Flood Lock (Length 7) being otherwise only found in three lengths (1, 8 & 9) where it was occasional/rare; Flowering-rush was found only in the four contiguous Lengths 14-17 where it was frequent; Sweet-flag was dominant/abundant in the Dewsbury Arm but otherwise occurred only in three lengths (3, 7 & 10) where it was occasional/rare; similarly, Narrow-leaved Water-plantain was dominant/abundant in the Dewsbury Arm and frequent along the 2.3km between Thornhill Double Locks and Thornhill Flood Lock but was recorded in only four other lengths (1, 2, 5 & 24) where it was occasional/rare.

There was substantial variation between lengths in the number of plants recorded and in the Σ abundance scores (Table 4). The number of submerged and floating-leaved plants ranged from 1 to 9 (mean = 5.4), that for emergent plants from 0 to 13 (mean = 6.0) and for all aquatic plants from 1 to 20 (mean = 11.4). Σ AS for submerged and floating-leaved plants ranged from 1 to 18 (mean = 7.2), for emergent plants from 0 to 26 (mean = 8.7) and for all plants from 1 to 35 (mean = 15.9). There was a strong tendency for the number of plants and Σ AS to increase with

increase in length of canal section surveyed (Spearman's rank correlation coefficient, $r_s = 0.74$ for number of all plants and 0.71 for ΣAS for all plants, $n = 25$, $P < 0.01$). There was, however, less of a tendency for the number of plants and ΣAS to change systematically along the waterway. There was a weak negative correlation between number of all plants per length surveyed and distance upstream from Broad Cut Low Lock ($r_s = -0.43$, $n = 25$, $P < 0.05$) but there was no significant relationship between ΣAS for all plants and distance upstream ($r_s = -0.35$, $n = 25$, $P > 0.05$).

Also encountered along the margins of the waterway were a number of plants that are associated with riparian habitats but are not on the checklists that were used. These included Wild Angelica *Angelica sylvestris*, Hart's-tongue *Asplenium scolopendrium*, Cuckooflower *Cardamine pratensis*, Pendulous Sedge *Carex pendula*, Remote Sedge *Carex remota*, Great Willowherb *Epilobium hirsutum*, Field Horsetail *Equisetum arvense*, Meadowsweet *Filipendula ulmaria*, Hard Rush *Juncus inflexus*, Gypsywort *Lycopus europaeus*, Water Figwort *Scrophularia auriculata*, Marsh Woundwort *Stachys palustris* and Common Valerian *Valeriana officinalis*.

Rare and scarce plants and canal lengths of notable conservation value

Six plants (Table 5) were considered to be rare or scarce by *The West Yorkshire Plant Atlas* (Lavin & Wilmore, 1994) and/or are included in the provisional *Vascular Plant Red Data List for VC63*, South West Yorkshire (Wilmore, 2013). The most important of these were probably: American Pondweed that was recorded only in two lengths, Hairlike Pondweed in four lengths (being dominant/abundant in Length 7), Floating Water-plantain in eight lengths (being dominant/abundant in Lengths 7, 16 & 17) and Narrow-leaved Water-plantain in 6 lengths (being dominant/abundant in Length 6). Although Flowering-rush and Lesser Pondweed feature in Table 5 neither is included on Wilmore's provisional red data list, hence their vice-county-wide abundance is such that they are not considered to be threatened.

The recognition of sites that possess significant botanical conservation value can be based upon several criteria that include plant diversity (species richness and abundance) and the rarity of species present (e.g. Usher, 1986). This approach is applicable to canals (Goulder, 2008) and in the Calder & Hebble Navigation the number of species, Σ abundance scores and the presence of rare or scarce plants can be used to identify canal lengths that have higher than average conservation interest.

On this basis, the lengths that are suggested as potentially being of notable conservation interest are listed in Table 7. These are not exclusive; their selection should not necessarily be taken as indicating that other lengths are not also of conservation value.

The chosen lengths (Table 7) all had high values of species richness and ΣAS . In addition:

- Length 6, the Dewsbury Arm, had the red data listed Narrow-leaved Water-plantain as dominant/abundant; also dominant or abundant were Water-plantain, Sweet-flag, Bulrush and Reed Sweet-grass.
- Length 7, Thornhill Double Locks to Thornhill Flood Lock, had three Red Data List plants; Floating Water-plantain and Hairlike Pondweed were dominant/abundant while Narrow-leaved Water-plantain was frequent.

- Lengths 16 & 17, Brookfoot Lock to Cromwell Lock and Cromwell Lock to Park Nook Lock, both had Floating Water-plantain (dominant/abundant) and Flowering-rush (frequent).
- Lengths 23 & 24, Salterhebble Top Lock to Copley Viaduct and Copley Viaduct to Sowerby Bridge Lock 1, both had American Pondweed while Length 23 also had Lesser Pondweed.

Alien plants

Five aquatic aliens were recorded (Table 6). Of these, the potentially invasive and aggressive Floating Pennywort gives most cause for concern. By May-June 2014 this plant had colonized the five most easterly (downstream) canal lengths and was also present in the Dewsbury Arm (Length 6), although it was not judged to have reached dominant or abundant status in any of these. Nuttall's Waterweed was widespread, being found in 12 lengths, although it was recorded as dominant/abundant only in Length 15. Sweet-flag, which is a benign alien that has probably been established in Britain since at least the mid 17th century (Preston & Croft, *loc. cit.*) and is well-integrated into Britain's aquatic vegetation, was found in four lengths; it was dominant/abundant in the Dewsbury arm (Length 6). Three fronds only of Water Fern were found in Length 20; this plant can become troublesome but tends to be sporadic. American Pondweed, recorded in Lengths 23 and 24, has been considered to be an alien since its discovery in the Calder & Hebble Navigation in 1907 but, in view of its 1943 discovery in South Uist, it might potentially be valued as a rare example of a native species (although not necessarily of native origin).

The widespread and invasive alien Indian Balsam *Impatiens glandulifera*, which does not feature on the checklists used, was also often abundant along the waterway. Japanese Knotweed *Fallopia japonica* was also encountered from time to time (e.g. along Length 10 between Battysford Lock and Battysford Flood Lock).

Discussion

There were some potential problems with methods.

- A grapnel was not used and the reliance on visual observation of underwater plants and their retrieval using a pole and hook meant that some plants that were potentially restricted to the central channel or obscured by turbidity may have been missed. In general, however, this may not have been a significant problem because turbidity was often transient following passage of boats and submerged plants tended to favour the margins of the channel.
- Some of the records of plants as occasional/rare were based only on loose shoots (e.g. Lesser Pondweed and Hairlike Pondweed in Length 1, Floating Water-plantain in Length 3, Broad-leaved Pondweed in Length 8). It was assumed that these had been dislodged, probably by boats, from within the lengths in which they were recorded but it is possible that they had floated along the canal from other lengths.
- Recording was in May and June which is relatively early in the growing season; greater abundance of some species might have been recorded later in the year.

The number of aquatic-plants recorded in canal sections of the Calder & Hebble Navigation in May-June 2014 (39 taxa, Table 2) approached or exceeded that recorded in recent years (2010-2014) in other West (& North) Riding canal systems (albeit sometimes using a slightly different

checklist); for example: 45 taxa in the Leeds & Liverpool Canal, 35 in the Ripon Canal, 38 in the abandoned Barnsley canals (Barnsley Canal and Dearne & Dove Canal) (Goulder, 2013a), 38 in the Selby Canal (Goulder, 2014a) and 48 in canal sections of the South Yorkshire Navigations (Goulder, 2014b). Rather more were recorded in the Calder & Hebble canal sections than in the Huddersfield Narrow Canal or the Huddersfield Broad Canal (both 28 taxa) in 2012 (Goulder & Morphy, 2013). In terms of their species richness the Calder & Hebble canals are clearly equal to or better than other Yorkshire canal systems.

The observation that the longer survey lengths tended to support greater species richness and Σ AS probably reflects a likelihood of greater habitat diversity within longer lengths. There were more likely to be shallow silted areas alongside wash walls, stretches of soft margin and areas free of shading by trees, conditions that favour both submerged and emergent plants. The 2.3km length between Thornhill Double Locks and Thornhill Flood Lock (Length 7) is a good example. The weak or non-significant relationships between species richness/ Σ AS and distance along the waterway suggests that conditions in general did not systematically become better or worse for aquatic plants with progression along the Navigation. Some of the disjunctive distributions may be related to limited availability of propagules and/or to locally favourable conditions, for example the local success of American Pondweed in Length 24 and Hairlike Pondweed in Length 7.

Some canal lengths had notably little aquatic vegetation. The obvious negative influences were hard sheer sides with adjacent deep water and heavy shading by trees. In addition, intensive mowing between the towing path and the canal margin in places curtailed the emergent aquatic vegetation (Fig.1); Hemlock Water-dropwort was perhaps the most often cut-back aquatic plant. Thus several sections had six or fewer plants recorded (Lengths 11, 12, 13, 21 & 25 – Table 4) and/or Σ AS for all aquatic plants of 10 or less (Lengths 9, 11, 12, 13, 21, 22 & 25 – Table 4). The worst length was the 0.4km Cooper Bridge Cut (Length 11) which has deep water and sheer sides throughout and where was found only a single floating fragment of Unbranched Bur-reed, and that may have been dislodged from elsewhere in the waterway.



Figure 1. Sheer sides, deep water, and closely-mown towpaths are features of several stretches of the canal.

Most of the aquatic plants found in the Calder & Hebble canals (Table 2) also frequently occur in other West (& North) Yorkshire canals and some, especially Reed Sweet-grass, are dominant or abundant in most of them (Goulder, 2013a, 2014a,b, Goulder & Morphy, *loc. cit.*). The populations of some plants found in the Calder & Hebble canals do, however, represent plants of limited distribution. American Pondweed, found only in Lengths 23 & 24 and also reportedly in the Rochdale Canal (Lavin & Wilmore, 1994) is clearly of importance. It is a rare native and is worthy of conservation even though it is likely to be an alien in West Yorkshire. The substantial population of Floating Water-plantain is also important, even though it is also abundant in places along the Huddersfield Broad Canal (Goulder & Morphy, *loc. cit.*) and the Rochdale Canal (e.g. the author's field observations at Littleborough in November 2013). Most Floating Water-plantain biomass in the Calder & Hebble comprised underwater stolon-linked rosettes of linear leaves growing close to the canal bed and visible through clear overlying water; oval floating leaves were sparse and no flowers were observed. This plant is, therefore, liable to be missed if conditions are turbid; thus members of a Yorkshire Naturalists' Union excursion to Cromwell Bottom in May 2013 concluded, with undue pessimism, that it had died out from the canal because of an increase in boating (Goulder, 2014c). The substantial population of Hairlike Pondweed in the Calder & Hebble canals, a plant that is very rare in South-west Yorkshire (Wilmore, *loc. cit.*), is also important although this plant is found, albeit in lesser abundance, in the Huddersfield Broad Canal (Goulder & Morphy, *loc. cit.*) and a single rooted plant was found in the Aire & Calder Navigation immediately east of Broadreach Lock at Wakefield by the author in 2011. Also, this plant was sparsely present in Armley Basin, an arm of the Leeds & Liverpool Canal, in 2013 (Goulder, 2013b). The importance of the Hairlike Pondweed population is enhanced by the apparent decline of this plant in the Leeds & Liverpool Canal; it was recorded as an important component of the Leeds & Liverpool Canal SSSI flora in Kirkstall Valley Park in 1984 (Natural England, 2015) but was not re-found in 2011 (Goulder, 2013a) nor in an additional more-intensive survey in September 2014 (Goulder, 2014d). The population of Narrow-leaved Water-plantain, especially abundant in the Dewsbury Arm, is also valuable. This plant, which is occasional in South-west Yorkshire (Wilmore, 2013), appears to have become a canal specialist; it is to be found in the Selby Canal (Goulder, 2014a) and scattered along the Huddersfield Broad Canal (Goulder & Morphy, *loc. cit.*) and the South Yorkshire Navigations (Goulder, 2014b).

The survey draws attention to the broad botanical conservation importance of the waterway and also allows the identification of specific lengths that are of particular conservation value on the basis of their high species richness and abundance and also the presence of rare/scarcely plants (Table 7). Especially important are lengths with thriving populations of Floating Water-plantain (Lengths 7, 16 & 17), Hairlike Pondweed (Length 7), Narrow-leaved Water-plantain (Lengths 6 & 7) and American Pondweed (Length 24).

Amongst alien plants (Table 6) the potentially invasive Floating Pennywort is the most problematic; it had come to occupy the downstream (easterly) Lengths 1 to 5 by May-June 2014 and was also found in the Dewsbury Arm (Length 6). It was never recorded as dominant/abundant, being either occasional/rare (Lengths 1, 2 & 6) or frequent (Lengths 3, 4 & 5). In recent years (2010 & 2011) it reached nuisance levels in the navigation at Doncaster to the extent that herbicide control has been needed (Hill & Howes, 2011). It is present in the Aire & Calder Navigation east of Wakefield (Goulder, 2013a) and in the River Calder, observed for example in Wakefield by the author in October 2014, but the eastward flow of the canal should

tend to prevent mass movement of loose plants along the waterway so it might be possible with diligent monitoring and removal of invading plants to control further westward (upstream) spread.

The current management regime clearly favours, to a degree, the development and persistence of aquatic vegetation. The level of boat traffic seems not to be an obvious problem. Silt deposition alongside margins and the persistence of areas that are relatively free of tree shading appear to benefit aquatic plants, whereas elsewhere hard vertical sides with deep water alongside, deep shade and intensive mowing between the towing path and water's edge appear to be adverse factors.

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Table 1. Canal lengths of the Calder & Hebble Navigation along which aquatic plants were recorded in May-June 2014

Length	Location	Approx. distance (km)
1	Broad Cut Low Lock to Broad Cut Top Lock	0.7
2	Broad Cut Top Lock to Horbury Bridge	2.5
3	Horbury Bridge to Figure of Three Upper Lock	1.7
4	Figure of Three Upper Lock to Millbank Lock	0.9
5	Millbank Lock to Thornhill Double Locks	1.0
6	The Dewsbury Arm	1.2
7	Thornhill Double Locks to Thornhill Flood Lock	2.3
8	Greenwood Arm	0.5
9	Shepley Bridge Lock to Ledgard Flood Lock	1.5
10	Battleyford Lock to Battleyford Flood Lock	1.0
11	Cooper Bridge Cut	0.4
12	Kirklees Low Lock to Kirklees Top Lock	0.5
13	Kirklees Top Lock to Anchor Pit Flood Lock	0.9
14	Brighouse Bottom Lock to Ganny Lock	1.1
15	Ganny Lock to Brookfoot Lock	0.8
16	Brookfoot Lock to Cromwell Lock	0.6
17	Cromwell Lock to Park Nook Lock	1.8
18	Park Nook Lock to Elland Lock	0.4
19	Elland Lock to Woodside Mills Lock	1.3
20	Woodside Mills Lock to Long Lees Lock	0.5
21	Long Lees Lock to Salterhebble Top Lock	0.8
22	The Salterhebble (Halifax) Arm	0.5
23	Salterhebble Top Lock to Copley Viaduct	1.2
24	Copley Viaduct to Sowerby Bridge Lock 1	2.3
25	Sowerby Bridge Lock 1 to Tuel Lane Tunnel portal	0.3

Topographical features in this table are shown on the maps in Nicholson's *Waterways Guide 5: North West & the Pennines* (Anon, 2009).

Table 2. Aquatic plants recorded in canal lengths of the Calder & Hebble Navigation, May-June 2014

	Number of canal lengths (out of 25) in which the plant was recorded
Submerged and floating-leaved plants	
<i>Azolla filiculoides</i> Water Fern	1
<i>Callitriche</i> sp. water-starwort	23
<i>Elodea nuttallii</i> Nuttall's Waterweed	12
<i>Fontinalis antipyretica</i> Greater Water-moss	5
<i>Hydrocotyle ranunculoides</i> Floating Pennywort	6
<i>Juncus bulbosus</i> Bulbous Rush	8
<i>Lemna gibba</i> Fat Duckweed	1
<i>Lemna minor</i> Common Duckweed	24
<i>Lemna trisulca</i> Ivy-leaved Duckweed	4
<i>Luronium natans</i> Floating Water-plantain	8
<i>Nitella</i> sp. stonewort	1
<i>Nuphar lutea</i> Yellow Water-lily	1
<i>Potamogeton crispus</i> Curled Pondweed	3
<i>Potamogeton epihydrus</i> American Pondweed	2
<i>Potamogeton natans</i> Broad-leaved Pondweed	5
<i>Potamogeton pusillus</i> Lesser Pondweed	3
<i>Potamogeton trichoides</i> Hairlike Pondweed	4
<i>Sagittaria sagittifolia</i> Arrowhead	10
<i>Sparganium emersum</i> Unbranched Bur-reed	14
Emergent plants	
<i>Acorus calamus</i> Sweet-flag	4
<i>Agrostis stolonifera</i> Creeping Bent	19
<i>Alisma lanceolatum</i> Narrow-leaved Water-plantain	6
<i>Alisma plantago-aquatica</i> Water-plantain	3
<i>Butomus umbellatus</i> Flowering-rush	4
<i>Galium palustre</i> Common Marsh-bedstraw	5
<i>Glyceria maxima</i> Reed Sweet-grass	23
<i>Iris pseudacorus</i> Yellow Iris	11
<i>Juncus effusus</i> Soft-rush	7
<i>Mentha aquatica</i> Water Mint	1
<i>Nasturtium officinale</i> agg. water-cress	1
<i>Oenanthe crocata</i> Hemlock Water-dropwort	24
<i>Persicaria amphibia</i> Amphibious Bistort	5
<i>Phalaris arundinacea</i> Reed Canary-grass	13
<i>Phragmites australis</i> Common Reed	1
<i>Ranunculus sceleratus</i> Celery-leaved Buttercup	8
<i>Solanum dulcamara</i> Bittersweet	2
<i>Sparganium erectum</i> Branched Bur-reed	1
<i>Typha latifolia</i> Bulrush	11
<i>Veronica beccabunga</i> Brooklime	1

Table 3. Distribution of aquatic plants recorded as dominant or abundant in at least one canal length along the Calder & Hebble Navigation, May-June 2014

	Eastern (downstream) canal lengths 1-13 (Broad Cut Low Lock to Anchor Pit Flood Lock)												
Plants	1	2	3	4	5	6	7	8	9	10	11	12	13
Submerged and floating-leaved													
<i>Callitriche</i> sp. water-starwort	o/r	f	f	f	f	f	d/a	o/r	o/r	f	0	f	f
<i>Elodea nuttallii</i> Nuttall's Waterweed	o/r	o/r	o/r	0	o/r	o/r	f	0	0	o/r	0	0	0
<i>Luronium natans</i> Floating Water-plantain	0	0	o/r	o/r	o/r	0	d/a	0	0	o/r	0	0	0
<i>Potamogeton natans</i> Broad-leaved Pondweed	0	0	0	0	0	0	0	o/r	0	0	0	0	0
<i>Potamogeton trichoides</i> Hairlike Pondweed	o/r	0	0	0	0	0	d/a	o/r	o/r	0	0	0	0
<i>Sparganium emersum</i> Unbranched Bur-reed	0	f	o/r	o/r	0	o/r	o/r	0	0	o/r	o/r	0	0
Emergent													
<i>Acorus calamus</i> Sweet-flag	0	0	o/r	0	0	d/a	o/r	0	0	o/r	0	0	0
<i>Alisma lanceolatum</i> Narrow-leaved Water-plantain	o/r	o/r	0	0	o/r	d/a	f	0	0	0	0	0	0
<i>Alisma plantago-aquatica</i> Water-plantain	0	o/r	0	o/r	0	d/a	0	0	0	0	0	0	0
<i>Glyceria maxima</i> Reed Sweet-grass	o/r	d/a	f	d/a	d/a	d/a	d/a	d/a	d/a	o/r	0	d/a	d/a
<i>Typha latifolia</i> Bulrush	0	o/r	0	0	o/r	d/a	o/r	0	o/r	0	0	0	0

d/a=dominant or abundant (infilled), f=frequent, o/r=occasional or rare, 0=not recorded.

Table 3 continued:

	Western (upstream) canal lengths 14-25 (Brighthouse Bottom Lock to Tuel Lane Tunnel at Sowerby Bridge)											
Plants	14	15	16	17	18	19	20	21	22	23	24	25
Submerged and floating-leaved												
<i>Callitriche</i> sp. water-starwort	o/r	f	o/r	d/a	o/r	o/r	o/r	o/r	o/r	o/r	o/r	0
<i>Elodea nuttallii</i> Nuttall's Waterweed	0	d/a	o/r	f	o/r	o/r	0	0	0	0	0	0
<i>Luronium natans</i> Floating Water-plantain	0	f	d/a	d/a	0	0	0	0	0	0	0	0
<i>Potamogeton natans</i> Broad-leaved Pondweed	o/r	d/a	f	o/r	0	0	0	0	0	0	0	0
<i>Sagittaria sagittifolia</i> Arrowhead	o/r	o/r	o/r	d/a	o/r	f	0	o/r	o/r	d/a	f	0
<i>Sparganium emersum</i> Unbranched Bur-reed	f	0	0	d/a	o/r	0	o/r	o/r	0	o/r	f	0
Emergent												
<i>Alisma lanceolatum</i> Narrow-leaved Water-plantain	0	0	0	0	0	0	0	0	0	0	o/r	0
<i>Glyceria maxima</i> Reed Sweet-grass	d/a	d/a	d/a	d/a	d/a	d/a	d/a	0	o/r	d/a	f	f
<i>Typha latifolia</i> Bulrush	f	o/r	o/r	f	o/r	0	0	0	0	0	o/r	0

d/a=dominant or abundant (infilled), f=frequent, o/r=occasional or rare, 0=not recorded.

Table 4. Species richness and Σ abundance scores for aquatic plants in canal lengths of the Calder & Hebble Navigation, May-June 2014

	Canal length												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Number of plants													
Submerged & floating-leaved plants	6	7	7	5	5	7	9	4	3	7	1	2	2
Emergent plants	9	13	7	8	8	12	10	5	4	6	0	4	4
All species	15	20	14	13	13	19	19	9	7	13	1	6	6
Σabundance scores													
Submerged & floating-leaved plants	6	9	9	7	7	9	16	4	3	8	1	3	3
Emergent plants	10	17	9	10	10	26	14	8	6	7	0	7	6
All species	16	26	18	17	17	35	30	12	9	15	1	10	9

Table 4 continued:

	Canal length											
	14	15	16	17	18	19	20	21	22	23	24	25
Number of plants												
Submerged & floating-leaved plants	5	6	8	8	5	7	5	4	4	7	9	2
Emergent plants	8	7	4	8	3	4	4	2	4	4	8	4
All species	13	13	12	16	8	11	9	6	8	11	17	6
Abundance scores												
Submerged & floating-leaved plants	6	12	11	18	5	8	5	4	4	9	12	2
Emergent plants	12	10	7	12	6	7	6	2	4	7	9	5
All species	18	22	18	30	11	15	11	6	8	16	21	7

Table 5. Notable West Yorkshire aquatic plants recorded in May-June 2014 in canal lengths of the Calder & Hebble Navigation

Plants	West Yorkshire status (Lavin & Wilmore, 1994)	VC63 Red Data List status (Wilmore, 2013)	Canal lengths where recorded in May-June 2014
<i>Butomus umbellatus</i> Flowering-rush	Rare	Not a Red List species	14, 15, 16, 17
<i>Alisma lanceolatum</i> Narrow-leaved Water-plantain	Rare	Occasional	1, 2, 5, 6, 7, 24
<i>Luronium natans</i> Floating Water-plantain	Increasing in canals of Kirklees and Calderdale	Rare	3, 4, 5, 7, 10, 15, 16, 17
<i>Potamogeton epihydrus</i> American Pondweed	Scattered in the Rochdale and Calder & Hebble canal network	Rare	23, 24
<i>Potamogeton pusillus</i> Lesser Pondweed	Scarce and local	Not a Red List species	1, 10, 23
<i>Potamogeton trichoides</i> Hairlike Pondweed	Very scarce	Very rare	1, 7, 8, 9

Table 6. Alien aquatic plants recorded in canal lengths of the Calder & Hebble Navigation, May-June 2014.

Species	Canal lengths where recorded in May-June 2014
<i>Acorus calamus</i> Sweet-flag	3, 6, 7, 10
<i>Azolla filiculoides</i> Water Fern	20
<i>Elodea nuttallii</i> Nuttall's Waterweed	1, 2, 3, 5, 6, 7, 10, 15, 16, 17, 18, 19
<i>Hydrocotyle ranunculoides</i> Floating Pennywort	1, 2, 3, 4, 5, 6
<i>Potamogeton epihydrus</i> American Pondweed*	23, 24

*Native in South Uist.

Table 7. Calder & Hebble Navigation, May-June 2014; canal lengths suggested as being of notable botanical-conservation significance

Canal length	Number of aquatic plants	Σ Abundance scores	Rare/scarce plants
Length 6; Dewsbury Arm (c. 1.2 km)	19	35	<i>Alisma lanceolatum</i> Narrow-leaved Water-plantain (d/a)
Length 7; Thornhill Double Locks to Thornhill Flood Lock (c. 2.3 km)	19	30	<i>Alisma lanceolatum</i> Narrow-leaved Water-plantain (f), <i>Luronium natans</i> Floating Water-plantain (d/a), <i>Potamogeton trichoides</i> Hairlike Pondweed (d/a)
Length 16; Brookfoot Lock to Cromwell Lock (c. 0.6 km)	12	18	<i>Butomus umbellatus</i> Flowering-rush (f), <i>Luronium natans</i> Floating water-plantain (d/a)
Length 17; Cromwell Lock to Park Nook Lock (c. 1.8 km)	16	30	<i>Butomus umbellatus</i> Flowering-rush (f), <i>Luronium natans</i> Floating Water-plantain (d/a)
Length 23; Salterhebble Top Lock to Copley Viaduct (c. 1.2 km)	11	16	<i>Potamogeton epihydrus</i> American Pondweed (o/r), <i>Potamogeton pusillus</i> Lesser Pondweed (o/r)
Length 24; Copley Viaduct to Sowerby Bridge Lock 1 (c. 2.3 km)	17	21	<i>Potamogeton epihydrus</i> American Pondweed (f)

d/a=dominant or abundant, f=frequent, o/r=occasional or rare

The labours of a pair of Coot in a floating world: the maintenance of a nest site on a rising water table

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High rainfall during the summer of 2012, a boon to wetlands but a problem for nesting water birds, provided an opportunity to quantify the industrious activities of a pair of Coot *Fulicula atra* at Doncaster’s Lakeside Park (SE5901). A nest built in an exposed site against the vertical wooden post revetment protecting the bank of the park’s southerly ornamental island was observed from April to August, when it was used to raise a brood of four chicks and subsequently to act as a preening/roosting platform for parents and fledged young. The nest structure, renovated from a submerged mound of vegetation, possibly the remains of nests of previous years, was rebuilt for the 2012 season when the water level at this location was c.40cm. Subsequently, four episodes of high rainfall (see Figure 1) saw the nest platform temporarily inundated then finally submerged.

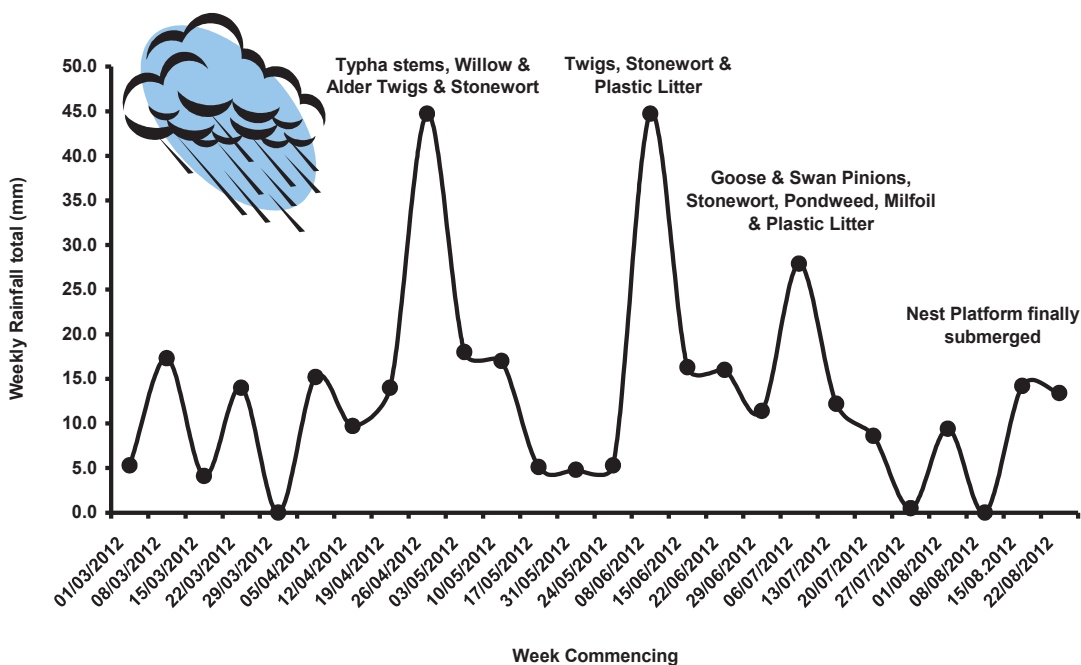


Figure 1: Weekly rainfall totals for Doncaster showing main peaks of precipitation in weeks commencing 26 April, 8 June and 6 July. Materials used in raising the nest platform after each major rise in water level are indicated.

This in turn resulted in three hectic bouts of nest enlargement to bring the standing platform just above the rising water level which reached a depth of 64cm by late July. Materials opportunistically used for structural scaffolding purposes were from 'seasonally available' floating debris. At repair phases, mid April to early July, materials included old flowering stems of Lesser Bulrush *Typha angustifolia* and twigs of willow and alder up to 50cm in length. For the mid June and early July nest repairs, a flotsam of polythene bread wrappers from family visits to feed the swans were used together with bagged dog droppings, storm-blown from nearby waterside disposal bins. With Lakeside Park having developed as a summer moult refuge for Canada Geese *Branta canadensis* and Mute Swans *Cygnus olor*, the large moulted flight feathers (pinions) of both birds were used from early July. Each of these successive and distinct layers of 'scaffolding' materials were anchored down by bulk layers of especially harvested submerged vegetation, the latest contributions including the stonewort *Chara vulgaris* var. *longibracteata*, Water Milfoil *Myriophyllum spicatum* and the so-called Swedish Pondweed *Potamogeton filiformis* x *pectinatus* = *P. x suecicus* K. Richt. (det. Les Magee). Although a distribution of this latter plant is recorded in the Vale of York and along the lower Aire/Calder corridor, this is the first evidence of its occurrence in South Yorkshire (see Wilmore *et al.*, 2011). Due to the absence of riparian vegetation in the Coot territory which could have provided dry materials for nest lining, the customary dry woven basket-like nest cup as described by Fjeldså (1977) was never fully completed, though the primary emphasis in nest construction was to keep pace with wave action and the rising water level.

The dimensions of the nest and the vegetation zones of the adjacent lake bed, illustrated diagrammatically in Figure 2, are given below and size ranges in Cramp & Simmons (1979) are shown in parenthesis for comparative purposes. The semicircular nesting/roosting platform which was maintained just above water level had, by late July, a diameter of 46cm (cf. 16 to 30cm), the water depth and consequently the height of the nest above the lake bed finally reached 64cm (cf. 8 to 28cm but up to 35cm or even 45cm with rising water levels) and the base of the semicircular nest mound had a diameter of 160cm (cf. 25 to 55cm). The volume of the nest structure ultimately grew to approximately 132,900cm³ of material (mainly stonewort).

Extending in an arc beyond the base of the nest mound was a 50cm wide ‘zone of denudation’ where the de-vegetated Sherwood Sandstone lake bed was exposed. This represented an area of c.1.6 m² where the Coot had progressively harvested the submerged vegetation to maintain the nest mound. Beyond this was a ‘savannah’ of relatively unexploited stonewort, pondweeds, Water Milfoil and filamentous algae (see Figure 2) used as a food resource by diving Coot and up-ending Mute Swans. The use by Coot of submerged macrophytes as a food source is discussed by Perrow *et al.* (1997). Concentrating on the immediately adjacent vegetation, as shown by the ‘zone of denudation’, demonstrated a labour-saving strategy in gathering such a substantial volume of material.

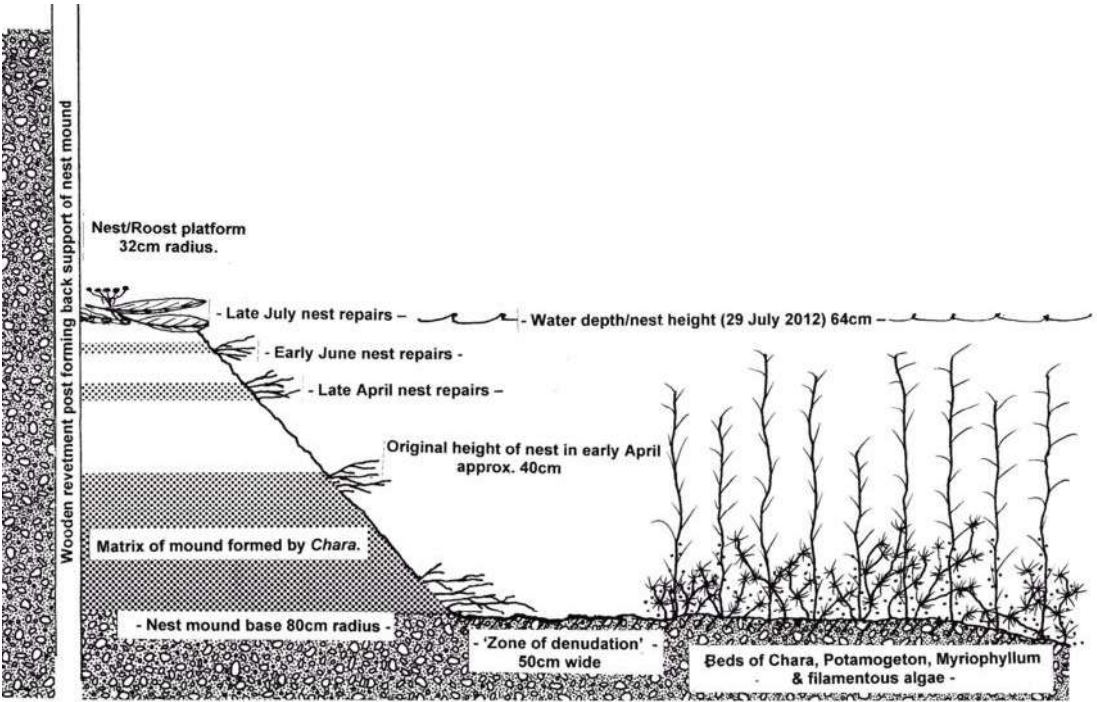


Figure 2: Cross section through the nest mound and adjacent lake bed vegetation.

The size of the nest structure, significantly larger than those described in the literature (Cramp & Simmons, *loc. cit.*), was a) partly a function of water levels, which rose by c.24cm during the 2012 nesting season, and b) enabled by the abundance and close proximity of stonewort and, later in the season, pondweeds and Water Milfoil, for Coot to easily exploit for nest-building

purposes. This accessibility of bulk nest-building material was made possible by the relatively shallow and flat lake bed profile. Coot can reach submerged vegetation by upending in water up to 40cm deep (Cramp & Simmons, *loc. cit.*) which was the method used to restore the initial nest mound. A significantly deeper water body with steeper lake bed profiles would limit the abundance of appropriate aquatic vegetation and reduce its accessibility. Though feeding Coot regularly dive to depths of 1 to 2m and dives of 6.5m have been recorded (Cramp & Simmons, *loc. cit.*) this would be an energetically inefficient way of gathering bulk nesting materials for urgent repairs.

Due to territorial aggression from neighbouring Coot, nesting materials were generally gathered within close proximity of the nest site. However, when the opportunity arose, a large plant of Wild Carrot *Daucus carota* loosened from its bank-side rooting site by a severe downpour on 29 July, was obtrusively transported, flowers, foliage, roots and all, for over 50 metres and deposited on the again submerging nest platform. By this time juvenile Coot roosting on the nest had to stand in about 3cm of water. Later in August the structure was finally abandoned, its surface layers washed away by wave action.

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Notice: YNU Member survey

In its 150-plus years of existence the YNU has experienced much change, not only in the natural history of Yorkshire but also the way people engage with, study and record it. Change continues unabated and, in this context, the YNU is keen to ensure that it continues to serve its members in the best way it can, having due regard to its financial obligations under the Charities Act. To this end the YNU is preparing a survey of its members to investigate such things as why people join the YNU, what they hope to get out of it, etc. We recognise that people are bombarded with survey requests these days and therefore the intention will be to make this as straightforward and easy to complete as possible. It will be available early in 2016 in both electronic and paper format and we do encourage as many of you as possible to complete it.

Yorkshire Ichneumonids: Part 4

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Introduction

Yorkshire statuses are taken from the chart shown on the YNU website.

‡ = new county record

* = new vice-county record

Subfamily PIMPLINAE

Additions to Ely (2013):

Tribe *Ephialtini*

Dolichomitus mesocentrus (Gravenhorst, 1829)

*VC64: Malham Tarn Fen 5.2013 P. & S. Flint.

Itopectis aterrima Jussila, 1965

*VC64: Malham Tarn Fen 5.2013 P. & S. Flint.

Subfamily TRYPHONINAE

Correction and additions to Ely (2015):

Tribe *Phytodietini*

Phytodietus (Phytodietus) gelitorius (Thunberg, 1822)

*VC62: Fen Bog 6.6.2014 R.Crossley

*VC65: Marske 29.6.2015 W.A.Ely

Tribe *Tryphonini*

Polyblastus (Polyblastus) tener Habermehl, 1909

*VC61: Wigman Wood, Wheldrake 4-11.9.2003 S.E.M.Fraser

Polyblastus (Labroctonus) stenocentrus Holmgren, 1855

*VC64: Hackfall Woods 6.5.2011 C.H.Fletcher (W.A.Ely)

Erromenus brunnicans (Gravenhorst, 1829)

*VC65: Lamb Close Hag, Marrick Park 26.6.2015 W.A.Ely

Tryphon (Tryphon) abditus Kasparyan, 1969

The report from VC61 in Ely (2015) is an error.

*VC65: Braithwaite Hall 2.7.2015 W.A.Ely

Tribe *Exenterini*

Smicropectus perkinsorum Kerrich, 1952

The report from Kerrich (1952) and Hincks (1953) was from VC63.

Eridolius elegans (Stephens, 1835)

‡VC63: Hatfield Moors 31.5.2013 H.E.Beaumont.

Eridolius pictus (Gravenhorst, 1829)

*VC65: Braithwaite Hall 2.7.2015 W.A.Ely

Eridolius rufilabris (Holmgren, 1857)

*VC65: Downholme Park, Richmond 25.7.1987 W.A.Ely

Subfamily ADELOGNATHINAE

These are parasitoids of the larvae of Symphyta. Information on the identification works which are available for this subfamily can be found on the YNU website:

<http://ynu.org.uk/insects/parasitic%20wasps/%20Ichneumonoidea%20sub%20families>

Adelognathus brevicornis Holmgren, 1857. Rare in Yorkshire.

Reported from VC64 (as *Adelognathus* sp.) by Ely (1989 p148).

*VC63: Agden Bog NR 7.7.1983 W.A.Ely.

Adelognathus chrysopygus (Gravenhorst, 1829). Rare in Yorkshire.

†VC62: Dother Pits, Runswick Bay 9.6.1990 W.A.Ely.

*VC63: Brockadale NR 4.8.2013 W.A.Ely.

*VC64: Hollins Hill, Baildon 8.2013 H.N.Whiteley.

Adelognathus dorsalis (Gravenhorst, 1829). Rare in Yorkshire.

*VC62: Ingleby Cross church 10.6.2012 W.A.Ely.

†VC63: Lindrick Golf Course 22.6.1989 W.A.Ely.

Adelognathus laevicollis Thomson, 1883. Rare in Yorkshire.

†VC63: Wickersley Wood 27.5.2005 W.A.Ely.

*VC64: West Woods, Bramham 3.5.2011 W.A.Ely.

Adelognathus leucotrochi Shaw & Wahl, 2014. New to science.

Reported from VC64 in the original description by Shaw & Wahl (2014 p237).

Adelognathus nigriceps Thomson, 1888. Rare in Yorkshire.

Reported from VC64 (as *Adelognathus* sp.) by Ely (1989 p148).

Adelognathus nigrifrons Holmgren, 1857. Rare in Yorkshire.

*VC62: Ellerburn Bank SSSI 2-6.7.2007 P.J.Mayhew.

†VC63: Pot Riding Wood 24.5.1989 W.A.Ely.

Adelognathus pallipes (Gravenhorst, 1829). Rare in Yorkshire.

†VC63: Carr Lane, Ulley 5.5.2003 W.A.Ely.

Adelognathus punctulatus Holmgren, 1855. Rare in Yorkshire.

†VC63: Lindrick Dale Quarry 27.6.1985 W.A.Ely.

Adelognathus stelfoxi Fitton, Gauld & Shaw, 1982. Rare in Yorkshire.

Reported as new to England from VC63 by Ely (2001 p140).

*VC65: Barth Bridge, Sedburgh 29.9.2012 W.A.Ely.

Subfamily XORIDINAE

These parasitise the larvae of wood-boring beetles. Information on the identification works which are available for this subfamily can be found on the YNU website:

<http://ynu.org.uk/insects/parasitic%20wasps/%20Ichneumonoidea%20sub%20families>

Odontocolon dentipes (Gmelin, 1790). Rare in Yorkshire.

†VC62: Dalby Forest 2008 P.J.Mayhew.

Ischnoceros caligatus (Gravenhorst, 1829). Rare in Yorkshire.

†VC62: Kilburn 7.3.1936 M.D.Barnes.

*VC63: Brecks Plantation, Listerdale 7.10.1984 W.A.Ely

Ischnoceros rusticus (Geoffroy, 1785). Scarce in Yorkshire.

Unconfirmed reports from VC62 by Hincks (1945 p133) and Walsh & Rimington (1956 p276).

Reported from VC63 by Coldwell (1999 p61) and from VC64 by Hincks (1945 p133; 1946 p38).

*VC62: Hayburn Wyke NR 19.5.1984 W.A.Ely.

Xorides fuligator (Thunberg, 1822). Rare in Yorkshire.

Reported from VC64 by Hincks (1949 p33).

*VC63: Lindrick Dale Quarry 27.5.2000 W.A.Ely.

Xorides praecatorius (Fabricius, 1793). Rare in Yorkshire.

*VC63: Birch Wood, Rawmarsh 11.9.1984 W.A.Ely.

†VC64: Becca Banks, Aberford 26.5.1984 W.A.Ely.

Xorides rufipes (Gravenhorst, 1829). Rare in Yorkshire.

†VC65: High Batts N.R. 21.7.2014 W.A.Ely.

Subfamily **AGRIOTYPINAE**

Parasitic on caddisfly larvae. The identification of the single British specis can be found on the YNU website:

<http://ynu.org.uk/insects/parasitic%20wasps/%20Ichneumonoideae%20sub%20families>

Agriotypus armatus Curtis, 1832. Rare in Yorkshire.

Reported from VC61 by Foster (1927 p139), Hincks (1944 p258), Walsh (1945 p10) and Whitehead (1945 p125) and from VC64 by Whitehead (1944 p15; 1945 p125; 1949 p167-8) and Hincks (1944 p258; 1945 p35).

Subfamily **CRYPTINAE**

This is a huge subfamily which attacks a very wide range of hosts including spiders and pseudoscorpions as well as insects. Information on the identification works which are available for this subfamily can be found on the YNU website:

<http://ynu.org.uk/insects/parasitic%20wasps/%20Ichneumonoideae%20sub%20families>

Tribe ***Gelini***

This tribe has been subdivided and, although these subtribes are out of fashion because there are ichneumons which do not fit easily into them, they are being retained here for convenience.

Subtribe ***Acrolytina***

The collar/top of the neck has a short ridge flanked by small pits, but ichneumons in other subtribes may have a similar appearance.

Encrateola glabra Horstmann, 1998. Rare in Yorkshire.

†VC63: Harthill Reservoir Copse 11.7.2011 W.A.Ely.

Encrateola laevigata (Ratzeburg, 1848). Frequent in Yorkshire.

Unconfirmed reports from VC62 by Roebuck (1877 p38; 1907 p214) and Morley (1907 p153). Reported from VC63 by Ely (1990 p9)

*VC61: Atwick 25.8.2011 W.A.Ely.

*VC62: Beast Cliff 6.9.1986 W.A.Ely.

*VC64: Cookridge 10.7.1963 [E.Broadhead may have been the collector].

Acrolyta marginata (Bridgman, 1883). Rare in Yorkshire.

*VC61: Skipwith Common 13.8.1988 W.A.Ely.

*VC63: Listerdale 2.9.1981 W.A.Ely.

†VC64: Harrogate ex pupa 12 (em 19).5.1958 [E.Broadhead].

*VC65: Cordilleras 18.8.1990 W.A.Ely.

Acrolyta nens (Hartig, 1838). Rare in Yorkshire.

*VC61: New Covert, Melbourne 4-11.9.2003 S.E.M.Fraser

†VC63: Shibden ex *Alsophila aescularia* 20.7.1926 G.T.Lyle.

Acrolyta rufocincta (Gravenhorst, 1829). Scarce in Yorkshire.

Unconfirmed reports from VC62 by Roebuck (1877 p38). Reported from VC64 by Ely (2011 p215).

*VC61: Dane Hills, Skipwith Common 18.6.1983 W.A.Ely.

*VC63: Maltby Low Common NR 21.6.1983 W.A.Ely.

*VC65: West Stonedale 14.8.2011 W.A.Ely.

Diaglyptidea conformis (Gmelin, 1790). Scarce in Yorkshire.

*VC61: Sandy Lane, Wintringham 17.5.2014 W.A.Ely.

†VC63: Charltonbrook 6.7.1977 SA.

*VC64: Dallowgill 7.7.1979 W.A.Ely.

Lysibia nana (Gravenhorst, 1829). Scarce in Yorkshire.

Unconfirmed report from VC63 by Coldwell (1999 p61). Reported from VC64 by Morley (1918 p398).

*VC61: Spurn ex *Apanteles infusculus* cocoons 29.5.1956 W.D.Hincks.

*VC63: Cusworth Park 3.8.1975 P.Skidmore.

Lysibia tenax Townes, 1983. Rare in Yorkshire.

*VC62: Northallerton Rigg 29.6.2013 W.A.Ely

*VC63: Barley Hall Colliery site 14.9.1991 W.A.Ely.

†VC64: Scar Close Pavement NNR 7.1984 R.S.Key.

*VC65: Cordilleras 18.8.1990 W.A.Ely.

Subtribe ***Hemitelina***

The sides of the second metasomal tergite are rolled over rather than being separated from the sternites by sharp creases.

Obisiphaga stenoptera (Marshall, 1868). Rare in Yorkshire.

†VC62: Beast Cliff 6.9.1986 W.A.Ely.

Xiphulcus floricator (Gravenhorst, 1807).

Unconfirmed records from VC63 by Butterfield (1908 p71) and from VC64 by Hincks (1942 p172; 1943b p58).

Hemiteles bipunctator (Thunberg, 1824). Rare in Yorkshire.

Unconfirmed records from VC62 by Roebuck (1877 p38; 1907 p214) and Morley (1907 p147-8) and from VC64 by Morley (1918 p398) and Anon (1919 p35). Reported from VC61 by Hincks (1953 p135).

Hemiteles similis (Gmelin, 1790). Rare in Yorkshire.

Unconfirmed records from VC62 by Roebuck (1877 p38; 1907 p214), Morley (1907 p147-8) and Walsh & Rimington (1956 p276). Reported from VC63 by Hincks & Dibb (1940 p174) and from VC64 by Schwarz & Shaw (2000 p175).

*VC61: Bubwith 14.6.1919 W.J.Fordham.

Aclastus eugracilis Horstmann, 1980. Uncommon in Yorkshire.

Reported from VC63 by Higginbottom (2011 p49) and from VC64 by Ely (2012 p224).

*VC61: Allerthorpe Common 5.8.1989 W.A.Ely.

*VC62: Over Dinsdale 3.9.2012 W.A.Ely.

*VC65: Freeholders Wood 15.6.1985 W.A.Ely.

Aclastus flavipes Horstmann, 1980. Rare in Yorkshire.

Reported from VC64 by Schwartz & Shaw (2000 p176).

*VC63: Firbeck Hall 26.10.1991 W.A.Ely.

*VC65: River Tees, Winston 4.10.1985 W.A.Ely.

Aclastus gracilis (Thomson, 1884). Very common in Yorkshire.

Unconfirmed records from VC64 by Hincks (1942 p172; 1943b p48).

†VC61: Spurn 20.8.1949 W.D.Hincks.

*VC62: Buttercrambe 6.4.1952 J.H.Elliott.

*VC63: Denaby Ings 1.3.1975 W.A.Ely.

*VC64: River Wharfe, Otley 19.8.1984 W.A.Ely.

*VC65: Marfield 30.8.1980 W.A.Ely.

Aclastus micator (Gravenhorst, 1807). Uncommon in Yorkshire.

Unconfirmed records from VC62 by Roebuck (1877 p38; 1907 p214), Morley (1907 p130) and Walsh & Rimington (1956 p276). Reported from VC61 by Schwarz & Shaw (2000 p177).

*VC62: Beast Cliff 6.9.1986 W.A.Ely.

*VC63: Fulwood 29.6.1971 T.H.Riley.

*VC64: Malham 1-6.6.1955 R.B.Benson.

*VC65: Witton Fell 24.9.1969 [E.Broadhead].

Aclastus minutus (Bridgman, 1886). Frequent in Yorkshire.

*VC61: Stone Creek 7.6.1980 W.A.Ely.

†VC62: Malton Road crossing, York 3.5.1944 J.H.Elliott.

*VC63: Bentley Common 23.6.1976 P.Skidmore.

*VC64: Dallowgill + High Skelding 7.7.1979 W.A.Ely.

*VC65: River Dee, Dentdale 29.9.2012 W.A.Ely

Aclastus pilosus Horstmann, 1980. Rare in Yorkshire.

*VC62: Ingleby Cross church 10.6.2012 W.A.Ely.

*VC64: Hollins Hill, Baildon 6 + 7.2013 H.N.Whiteley.

†VC65: Oxnop Gill 5.10.1985 I.F.G.McLean.

Aclastus solutus (Thomson, 1884). Frequent in Yorkshire.

Reported from VC64 by Ely (2012 p227).

*VC62: Allerthorpe Common 30.6.1984 W.A.Ely.

*VC63: Cusworth Park 6.8.1975 P.Skidmore.

*VC65: Rake Beck Wood 4.10.1985 I.F.G.McLean.

Polyaulon paradoxus (Zetterstedt, 1838). Rare in Yorkshire.

*VC61: Stone Dale picnic area + Painsthorpe Dale 5.6.2013 W.A.Ely.

†VC62: Whitby 20.9.1936 H.Britten jnr.

*VC63: Blackbrook Wood 13.7.1989 D.Roberts.

*VC64: Malham Tarn 26.7.1958 W.D.Hincks.

Cremnodes atricapillus (Gravenhorst, 1815). Rare in Yorkshire.

Unconfirmed record from VC62 by Walsh (1922 p72) and Walsh & Rimington (1956 p276).

Reported from VC61 by Hincks (1953 p135) and from VC64 by Hincks (1943a p58).

*VC65: Barth Bridge, Dentdale 29.9.2012 W.A.Ely.

Cremnodes costalis Horstmann, 1992. Rare in Yorkshire.

†VC63: Rockley Dyke marsh, Worsbrough 17.5.1980 W.A.Ely.

*VC65: Millthrop 29.9.2012 W.A.Ely.

Cremnodes rufipes (Perkins, 1962). Rare in Yorkshire.

†VC64: Hollins Hill, Baildon 8 + 9.2012 H.Whiteley.

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Inclusion of biological records and related information in local decision making

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For over a decade, the North and East Yorkshire Ecological Data Centre (NEYEDC) has been collecting, collating, analysing and disseminating environmental data. The Centre achieved the Defra-recognised Association of Local Environmental Record Centres (ALERC) accreditation in 2013.

One of our main functions is to ensure that the best possible biodiversity data are considered when local decisions that may adversely affect species or habitats are made. Key sources of this evidence base are amateur naturalists, providing both records and expertise. The intellectual copyright of all biological records is retained by the original observer.

NEYEDC would like to know what amateur naturalists feel should be considered when local planning issues arise in their areas. Sites can often have ecological, social or cultural value locally that is not recognised from available records of species and habitats or land use. Therefore these green spaces can be often overlooked in the planning system, leading to the loss of 'important' sites at a town, village or parish level. Many sites that are valued locally have no status in the planning system because they do not match the relevant ecological criteria necessary to become local wildlife sites, are too small to qualify or have not been proposed for formal surveys. NEYEDC would like to start exploring this issue with interested parties.

Another area of interest that has not been fully explored is identifying and reporting on sites that contain an assemblage of species which do not hold legal protection in their own right but collectively show the value of a site that is not apparent just from the plant community present. This is most relevant to invertebrate groups but can also be an issue for birds, for example those reliant upon areas of scrub.

In order to recognise sites of this type, NEYEDC does not need to hold raw supporting data but must be able to 'signpost' a reliable and available source, which can be a local source.

For the evidence base to be effective in local decision making, it is essential that the information is kept up to date. For example, Allerthorpe Common SSSI is the only known site in East Yorkshire for Adder *Vipera berus*. Although it is well-known as an obvious site by groups and individuals, only one of the 34 Adder records currently held in the NEYEDC database dates after 2003. A cross reference with NBN Gateway (which now contains 100 million records) provides no further records of Adder on this site in the last 11 years. It is worth noting that planning decisions often only consider records from the preceding ten years.

Some naturalist groups assume that data sent to national schemes and societies, associated local groups or online recording schemes such as iRecord, will automatically be considered in important local decision-making processes. This is not necessarily so; even the very large national organisations lack the resources to support every local decision, or are unable to provide the original data at the level of detail required for local decision-making.

For example, a search on the NBN Gateway provides 587 records for the Marbled White butterfly *Melanargia galathea* in the North and East Yorkshire area. However, only 9 of these are given at a high enough resolution to be meaningful in a planning application, with most being kept at a 10km grid square resolution. Only 17 of these records are from the last ten years. This pattern is repeated for many taxonomic groups.

This lack of data can lead to disappointment when there are significant gaps in the information used to support decisions or formulate policies. Previously, NEYEDC had entered into an agreement with the NBN and National Schemes and Societies to try to create the most efficient data flows possible; this was designed to minimise replication of effort on the part of data donors, including amateur naturalists and county recorders. Under this agreement, NBN Gateway was working with National Recording Schemes to allow any data entered into the Gateway to be recoverable by local record centres at the resolution it was given, but this has still not taken place and a lot of records from National Societies are only available at 10km grid square resolution.

Hypothetical scenario

An application is submitted to a local planning authority for a small-scale development on a semi-improved grassland. This field was surveyed in the previous year by a local naturalist group, which resulted in an extensive butterfly list including the UKBAP species Dingy Skipper *Erynnis tages*. This survey had been sent directly to Butterfly Conservation for its records. However, many National Societies do not make their data readily available to local record centres, so the information cannot be used in local data searches.

This grassland is also 'known' by local individuals to have Thistle Broomrape *Orobanche reticulata*, a nationally rare plant. However, this record has never been submitted to NEYEDC and so is not in the evidence base. Therefore, the initial data searches requested from NEYEDC as part of the planning application provide no biological records from the grassland and so it passes pre-application checks and requires no ecological surveys.

We would like to invite all the natural history groups within North and East Yorkshire to consider the data, information and expertise at their disposal, and which elements they would like to ensure were included when decisions are made about their areas of geographic interest. NEYEDC staff would be delighted to discuss with individuals or groups how this can be achieved.

A peep at the past - microscopes, men and societies in two Yorkshire towns from 1850 to 1910

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Introduction

Most microscopical societies, although beginning independently, soon became parts of larger organizations known as Scientific or Natural History societies, although some were offshoots of already established societies. They proliferated in Yorkshire in the second half of the 19th century and most large towns had one. The forerunners of today's naturalists' societies at Doncaster and Wakefield have been chosen for closer study. In many ways they illustrate similar features but each has its own origin, characteristics and subsequent fate. The society at Wakefield was initially for physicians and surgeons whereas clerics played an important role at Doncaster. As technology improved, manufacturing increased and prices dropped, the microscope became an essential tool, accessible to increasing numbers of naturalists. The vast majority of these were amateurs and included clerics, pharmaceutical chemists, engineers, shopkeepers, accountants, schoolteachers and doctors. Most were passive members but a few made a genuine contribution to knowledge or to their society and, in rare cases, to both.

Background

The formation of provincial microscopical societies was a feature of the second half of the 19th century in Britain (see Appendix 1) and several were established in Yorkshire during this period, such as those at Wakefield (1854), Bradford (1860), Doncaster (1880), Huddersfield (1893) and Sheffield (1877). In the first half of the century few people owned a microscope, which was an expensive show case item rarely taken out of its box and "too valuable and delicate to bring into use except on very special occasions" (Allen, 1978). People did not understand how best to use the instrument and there were no training courses, but soon there were improvements in design. Following Robert Brown's discovery of the cell nucleus in 1831, scientists and medical professionals began to take a greater interest and were using the microscope to identify food adulteration and to examine microbial organisms, diatoms, plankton and diseases. When microscopes became more readily available, they were popular with naturalists seeking to study minute animals and plants, which could only be examined through their lenses.

The proliferation of field clubs, natural history and microscopical societies in towns and villages provided an opportunity for the mixing of the social classes and, although some were working class organizations such as at Huddersfield, a few were established as exclusive clubs. Following

federation of these societies in Yorkshire under the title West Riding Consolidated Naturalists' Society in 1861, which became the Yorkshire Naturalists' Union in 1877, the increasing use of the microscope led to the establishment of the YNU Micro-zoology and Micro-botany Committee in 1886. This later changed its name to Micro-biology, did valuable microscopical work for some decades and continues to do so as the Freshwater Ecology Section (Colin Howes *pers. comm.*). The common interest was natural history, in which microscopy played an important role.

The enthusiastic support for microscopy at the end of the 19th century is well illustrated by the report of a meeting of the YNU, hosted by the Huddersfield Naturalists' Society. There was an exhibition in the Town Hall where "A large number of microscopes, objects and accessory apparatus were displayed...demonstrations with the oxy-hydrogen microscope were given by Mr W. Tunstall. Mr A. Clarke, the energetic secretary of the Huddersfield Naturalists' Society, was in charge of a powerful oxy-hydrogen lime light lantern by which he threw upon a screen a large number of lantern slides, which included a number of marine animals brought by Dr H.C. Sorby FRS, as well as a series of portraits of all the Presidents of the Yorkshire Naturalists' Union and other distinguished Yorkshire Naturalists" (Roebuck, 1893).

In several ways Huddersfield formed the centre of this development where "qualities such as diligence, perseverance, hard work and intellectual stimulus...met the ideals of self help and mutual improvement" (Brooke, 2012). In each of these Yorkshire societies a few men dominated the scene: Dr James Robert Kaye and Frederick William Mills at Huddersfield, the Rev. Thomas Samuel King at Sheffield, Samuel Holdsworth and Thomas Waller Gissing at Wakefield, and John Maw Kirk and Matthew Henry Stiles at Doncaster. This article will concentrate on the societies at Doncaster and Wakefield, in an attempt to compare and contrast them.

Wakefield – time and place

At the start of the 19th century Wakefield was a wealthy market town and inland port trading in wool and grain, while coal had been mined locally since the Middle Ages. The population of Wakefield grew slowly from 16,597 in 1801 to 22,065 in 1851.

The town's premier social events took place in the Public Rooms, known locally as the Music Saloon, built between 1821 and 1823, which had a music saloon, library, newsroom, bank, baths and a public dispensary. The Mechanics Institute, the Institute for Literature and Science and the City Museum were all based there for a time.

The Wakefield Microscopical Society

The situation at Wakefield, at least initially, was not typical. Unlike most microscopical societies, established largely by amateur naturalists, the Wakefield society was initially limited to medical professionals for microscopic investigations relating to medicine, admission being on the condition that "they possessed a 'good' achromatic microscope" (Marland, 1987a). They met in rotation in each others' homes to debate microscopical subjects of a medical nature where the topic, agreed in advance, was discussed and slides examined. The first meeting was held on the 26 October 1854 at the home of Samuel Holdsworth, the other founding members being William Dawson, Henry Dunn, Francis Horsfall, William Ralph Milner, William Wood and Thomas Giordani Wright. A group photograph of the society was produced in 1862 (Figure 1). The host

provided specimens and illustrations and members examined blood (from humans and cows), diseased tissues and other tissue samples. The society also subscribed to microscopic journals and purchased newly-published books (Marland, 1987a). Occasionally meetings were held in Wakefield Prison where Milner, the Prison hospital doctor, had access to the laboratory. Several of the founding members were closely involved with charitable work, organizations and civic affairs in Wakefield such as the Literary and Philosophical Society and the Mechanics' Institution.



Figure 1. Wakefield Microscopical Society. Taken by G. and J. Hall, Wakefield on 19 March 1862. Front Row - left to right Wainwright, Holdsworth, Wright, Walker, Thompson, Jones. Back Row left to right Binks, Moore, Naylor, Gissing, Milner. Wakefield Museum Collection, Accession number 1993.853 - see acknowledgements.

After four years the society 'opened its doors' to interested laymen and by 1871 the membership included only four medical men – Holdsworth, Wright, James Fowler and Thomas Walker. These men make an interesting quartet. Holdsworth was described as an apothecary, Walker had a long career as a GP in Wakefield and Wright was consultant physician to the West Riding Lunatic Asylum (see Plate II, centre pages) and consultant to other local hospitals. Thomas Waller Gissing had a chemist's shop on Westgate (now number 60 and the Nat West Bank) and behind it was his home. Gissing senior was a botanist of note, author of *The Ferns and Fern Allies of Wakefield and its Neighbourhood* (1862) and *Materials for a Flora of Wakefield and its Neighbourhood* (1867). One herbarium of ferns consisting of "38 sheets collected in the mid 1850s" and titled "A collection of British Ferns and Lycopods chiefly gathered and arranged by T.W.Gissing" (Edmonds, 1999), formed part of the herbarium at the University of Leeds and is now housed at the Discovery Centre, part of the Leeds City Museum. During the early years of the reformed society, members were very active. In December 1859 for example, the society attended a bazaar and exhibition at the Dewsbury Mechanics' Institute to display its 'machinery' (Anon, 1859). In February 1861 it lent a number of microscopes to an

exhibition of the Western Lancastrian Schools (Anon (1861a, b) and for several years attended and exhibited at the annual conversaciones of the Huddersfield Literary and Philosophical Society (Anon (1861c, d), Anon (1862a, b), Anon (1868a, b).

Brief notes on some of the people involved in the Wakefield Microscopical Society

John Binks (1826-1890) Born at Bolton le Moors, Lancashire. Corn merchant (Whiteley and Binks). Involved with the Mechanics Institute, Clayton Hospital and other public bodies in Wakefield. Member in the 1860s. – “Mr. Binks was undoubtedly one of the most popular and respected gentlemen in Wakefield” (Anon, 1890a).

William Dawson (1801 or 1804 -1846) Surgeon. MRCS. Born and died in Wakefield. Founder member.

Henry Dunn (1804-1858) Born in Norwich, Norfolk. MRCS, LSA. Doctor and Surgeon at House of Correction, Medical Officer and Director of the Local Board of British Empire Mutual Life and Fire Assurance Office (1852). Founder member.

James Fowler (1839-1890) Born at Winterton, Lincolnshire, MRCS, FSA. GP and member in 1871. Died at Liphook, Southampton, having lived most of his working life in Wakefield. Authority on the mural paintings in Wakefield Parish Church. Contributed to the third report of the Royal Commission on the pollution of rivers (1870) on conditions in the River Calder and its tributaries for the Wakefield district. House Surgeon at Wakefield Infirmary 1863 – described as a GP specializing in obstetrics. Several publications on medicine, effects of alcohol, agriculture, mural paintings at All Saints, Wakefield. Fellow of Society of Antiquities and Secretary for Yorkshire, Vice President of Mechanics Institute.

Thomas Waller Gissing (1829-1870) Born in Halesworth, Suffolk. Pharmaceutical chemist with interests in natural history, especially botany (ferns), and poetry. A close friend of William Stott Banks (another naturalist and collector of local ferns, fungi and mosses, Petyt, 2006b), Binks and the Milner family in Wakefield. Banks and Gissing were involved with the Mechanics’ Institution where a Natural History Department was founded in 1856 with both as committee members. See Gissing (1862, 1867), Marland (1987b), Petyt (2006a, b, c) and Postmus (2010).

Samuel Holdsworth (1813-1896) Son of Samuel Holdsworth (1777-1842), a local gentleman. Liberal and Methodist. MRCS, LRCP and described as an apothecary. Honorary Surgeon to the Dispensary and Infirmary from 1836 to at least 1863. Councillor and Alderman for Kirkgate Ward,). West Riding County Councillor. JP (1870). Founder member. See Holdsworth (1895).

Francis Horsfall (1822-1901) MRCS (1845). Appointed Guardian in the Wakefield Union for Crigglestone (1863). By 1875 had re-located to Newland House, Lillington, Warwickshire, where he continued as a Registered Physician. Founder member.

Philip William Jones (1838-1905) Born in Leominster, Herefordshire, with a brief early career as a ‘house surgeon’ at the West Riding Lunatic Asylum (see Plate II, centre pages) in Wakefield before moving to Enfield.

William Ralph Milner (1811-1868) Apothecary to the dispensary (1832) and Resident Surgeon at Wakefield Prison (Wakefield House of Correction). At one time in partnership with Holdsworth

(above). Friends included Gissing, Binks and Walker. Methodist. Member of the Phil. and Lit. Committee and Mechanics' Institution. Member of the British Meteorological Society, joining a month after its formation. Following his death it was discovered that he owned eleven microscopes (Petyt, 2006b). Involved in acquiring and selling specimens, for example "The sale of a collection of 39 Fern sheets and 11 different *Selaginella* species prepared to be sold for the benefit of the Wakefield Lancastrian School by Mr W.R. Milner" (Edmonds, 1999). This collection is now housed at the Discovery Centre, Leeds City Museum (see above). Founder member. See Petyt (2006b).

John Daniel Moore (1837-1881) Born in Leicester. LRCP MD. Studied at Edinburgh and died at Lancaster. House Surgeon and physician at Wakefield Dispensary and Clayton Hospital for a period in the early to mid 1860s.

Martin Edward Naylor (1803-1886) Veterinary Surgeon in Wakefield. Member of the Yorkshire Agricultural Society.

Joseph Wainwright (1816/7-1884) Born at Islington. FLS (1856). Solicitor, Alderman and naturalist. President of the Wakefield Naturalists' Society, the Literary and Philosophical Society and of the West Riding Consolidated Naturalists' Society. Very active in natural history circles.

Thomas Walker (1827-1918) Long career and life (died aged 91) as a GP in Wakefield. Married the daughter of Samuel Holdsworth (above).

William Wood (1814-1889) MD Edinburgh. MRCS. Founder member.

Thomas Giordani Wright (1808-1898) Trained in Edinburgh and London. MD FRCP. Wakefield's leading physician in the second half of the 19th century. Consultant Physician to the West Riding Lunatic Asylum (see Plate II, centre pages) and to Wakefield House of Recovery and other local hospitals. Liberal with dissenting sympathies. Vice President, Mechanics' Institution and President Wakefield Literary and Philosophical Society. Friend of Charles Waterton. Founder member. See Johnson (1999).

Doncaster – time and place

In the 1880s Doncaster was a municipal borough and market town with important road and railway connections. There was a railway station, goods yards and an extensive locomotive design and construction plant established in 1853, employing a significant number of people, and these connections were developing. The Parish Church of St George, destroyed by fire in 1853, was rebuilt after the foundation stone was laid in 1854. Other important buildings included the Mansion House, Corn Exchange and Market Hall.

In 1830 Doncaster had a population of c.10,000 but there was little coordinated scientific activity until the 1880s, although a Philosophical Society existed from 1865 to 1874. There have, however, been a notable succession of followers of the natural sciences in the Doncaster region, including Sir Godfrey Copley FRS (1653-1709) and the Reverend Francis Orpen Morris (1810-1893). The town had no public museum in the 19th century, although earlier private ones had been established. A Free Library was opened in 1869.

Doncaster Microscopical Society

The Doncaster Microscopical and General Scientific Society was founded in 1880 with the object 'of affording opportunities for mutual study to those interested in Natural Science' (Anon, 1890b). Here the word mutual is important. Many naturalists and microscopists are "solitaries by temperament" and work alone but an opportunity "to share it with fellow converts as often as we can, meeting those we have written to or whose work we have read, exchanging gossip, comparing records or collections, listening to lectures or passing on tips" (Allen, 2000) within a group gave microscopy an extra dimension and provided the opportunity for discourse and friendship. In addition to the reading of papers and the exhibition of objects and specimens, "Public Lectures by Scientific Men of repute" (Anon, 1890b) were also given occasionally and an attempt was made at forming a library and rudimentary museum of books, slides and specimens.

The three founder members at Doncaster were John Maw Kirk, Matthew Henry Stiles and Frederick Milner who met together on 9 February 1880 at Kirk's house to discuss the forming of a society. They were soon to be joined by George Winter and "The number of microscopes in Doncaster was found to be greater than expected and the owners thereof only needed a lead" (Stiles, 1924). The first formal meeting was held a month later, a small *conversazione* and exhibition with the first papers read on March 3 1880 by Stiles on "The microscope and how to use it" (Stiles, 1924). The society then had 27 members. The first session of talks included topics on 'Animal life in its lower forms' by Kirk and 'The structure of the organs of locomotion in man' by W. Walker.

Founded as the Doncaster Microscopical Society, within a matter of months the society changed its name and before the end of the century had dropped the term "Microscopical", an acknowledgement that the majority of members were interested in natural history rather than microscopy. Although it was a scientific society including all branches a number of natural history and microscopical papers were read during the period 1886 to 1890, including "Milk, its chemical and microscopical examination", "The eye and how we use it", "Bees and their work", "Medusae", "Photography by artificial light", "The microscope, its history and use", "Lantern slides and how they are made", "The migration of birds", "Three forms of bacilli" and "Protective mimicry as exhibited in British Lepidoptera" (Anon, 1890b). At an exhibition meeting in 1886, short papers and notes were read on "Polarized light", "Photomicrography", "The wings of insects" and "The Anthrax bacillus".

Stiles deserves a special mention. Apart from his work as a pharmaceutical chemist he was a photographer, microscopist and naturalist. He was also a "prolific field worker" and a "pioneer in photo-microscopy" (Howes, 2011). Stiles contributed 15 papers on diatoms mainly to *The Naturalist* between 1893 and 1934 (Colin Howes *pers.comm.*) and overall has an impressive list of publications. He was both Secretary and Chairman of the YNU Micro-zoology and Micro-botany Committee and was deeply involved in the Doncaster Scientific Society and a member for 50 years.

Shortly after its formation and at the start of the second session the society held a *conversazione* in the Guildhall which "created great interest in the town and neighbourhood" (Stiles, 1924), at which c.200 people attended with topics presented including "The preparation

and staining of wood cuts”, “Foraminifera”, “The structure of a blowfly”, “cellular tissues in plants” and “The metamorphosis of the Cirripedia”. In 1881 the society was admitted to the Yorkshire Naturalists’ Union and three years later had 80 members which by 1905 had risen to 152. During the 1880s to 1890s, when the society was at its most active, members included engineers, solicitors, architects, schoolteachers, clergymen and doctors but it never repeated the grandeur of these early years.

Through an arrangement with the Gilchrist Trust, an organization to benefit education through money left in his will by Dr John Borthwick Gilchrist (1759-1841), a series of high quality lectures were given in the Corn Exchange in 1883 with speakers including W.H. Dallinger FRS on “An hour with the modern microscope”, W.B. Carpenter FRS on “The voyage of the Challenger” and P.M. Duncan FRS on “Volcanoes and their causes”. In March 1885 the YNU met for the first time in Doncaster to hold its annual meeting, regarded as the most successful one the YNU had held and at which c.60 microscopes were on display.

In 1893, under the Presidency of Dr Mitchell Wilson, meetings were held at the Grammar School with committee meetings at the President’s house. In the course of time, however, a Doncaster Camera Club (1894) and Doncaster Engineering Club (1914-1918) were formed and these specialist societies lured some members away from their microscopical and scientific studies.

Brief notes on some of the people involved in the society at Doncaster

George Battie Bisat (1862 -1935) Had a books and stationery shop in Doncaster. President 1897/8. Interests in geology.

William Sawney Bisat (1886-1973) FRS. Nephew of above. Yorkshire geologist. Member of the family-run business.

Rev. Canon Henry Frederick Brock (1820-1889) Born in Guernsey. MA, Trinity College Cambridge (1854). Vicar of Christ Church, Doncaster, for 30 years, then at Brodsworth. Canon at York Cathedral. First President from 1880-1885.

Herbert Henry Corbett (1856-1921) Born at Pilkington, Lancashire. MRCS, FLS, FES. Surgeon who was elected to Doncaster Town Council. All-round naturalist, especially insects (Lepidoptera). Settled in Doncaster in 1880. President of the YNU but died soon after being appointed. President of the Doncaster Microscopical and General Scientific Society 1892-1893, 1908-1909, 1919-1920 and Secretary 1896-1908, 1911-1919 (see, for example, Corbett, 1918). Played an important role in developing a public museum in Doncaster, becoming its first honorary curator, and very influential in encouraging the study of Doncaster’s natural sciences, leading studies in botany, entomology and geology.

Rev. William Eardley (1828-1892) Born in Castleton, Derbyshire. MA. One time Vicar of Rampton. Rector of Cantley near Doncaster from 1869. Exhibited poultry at local agricultural shows.

Professor Sir Thomas H. Easterfield (1866-1941). As a schoolboy was a junior member of the Doncaster Microscopical and General Scientific Society and was active with a junior group of geologists including W.S. Bisat (see above) investigating Boulder Clay glacial erratics. Professor of

Chemistry at Wellington, New Zealand, and later Director of the Cawthorn Institute of Scientific Research at Nelson, New Zealand.

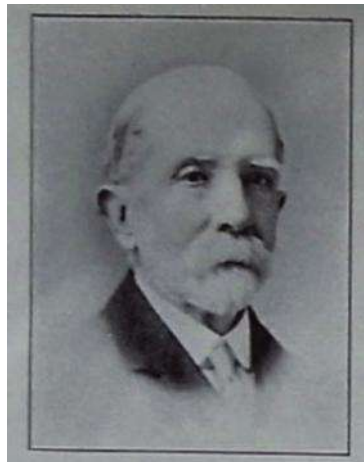
Rev. Canon Arthur Henry Faber (1832-1910) Born Madras, India. MA. Fellow of New College Oxford and Canon of Church of England. Ordained priest 1856. Headmaster of Malvern College and Rector at Sprotborough near Doncaster from 1880.

John Maw Kirk (1850-1894) (Fig. 2). Friend of Stiles and, due to latter, became a keen microscopist and “threw himself into the work with great ardour...and soon became recognized as an earnest and careful worker” (Stiles, 1895). They set up Doncaster Microscopical Society together. Keen musician and artist - music especially at Doncaster Parish Church. Director of Doncaster Musical and Orchestral societies. Secretary of the YNU Micro-Zoological and Micro-Botanical Committee. Member of the Leeds Naturalists’ Club. Initially a manager at his father’s hosiery and tailors outlet then Chief Librarian at Free library, Doncaster. Exhibited pigeons at local shows organised by the Doncaster Ornithological and Fanciers’ Society. Generally active in the YNU, especially the Micro-Zoological and Micro-Botanical Committee excursions, including the various reports of their activities in *The Naturalist* (1886-1891), for example Kirk (1886). On his marriage to the former mayor’s daughter (Lucy Meacock), presented with a handsome binocular microscope by St George’s Church. Founder member and served as President (1888-1889). See Stiles (1895).



Figure 2 (left). John Maw Kirk of Doncaster, from Stiles (1924).

Figure 3 (right). Matthew Henry Stiles of Doncaster, from Stiles (1924).



Thomas Enraght Lindsay (1863-1947) MA, FCS, FGS. Curate at Doncaster Parish Church, Vicar of St Paul’s Church, Middlesborough (1863-1947). Latterly Rector of St Ovin, Lastingham, Yorkshire. Archdeacon of Scarborough. Archdeacon of Cleveland (1907-1938). Fellow of the Chemical Society (1888). Boarded with Kirk when he was first ordained.

Frederick Milner (1856-1939) Born Yorkshire, studied at the Wakefield and Doncaster Schools of Art and in London. Well known local landscape artist who became part of the St Ives (Cornwall) Group. As an artist was known for hard work, his friendly disposition and for his encouragement to younger painters. Travelled extensively home and abroad. Founder member.

James William Smith (1839 -1924) Born Whitby. FRCP, MRCS. Physician and surgeon. Honorary surgeon at the Doncaster infirmary and dispensary until 1892 and died aged 62 in retirement at Bournemouth.

Rev George Smith (c1841-1903) Born at Chattisham, Suffolk. MA. Methodist minister. Head of Doncaster Grammar School from 1881-1890. Subsequently Rector of Great Hornead, Hertfordshire. His son, a mineralogist, worked at the British Museum. President 1887-1888.

Matthew Henry Stiles (1846-1935) Born in Lutterworth, Leicestershire. FRMS. (Fig. 3). Pharmaceutical chemist based at Frenchgate, Doncaster. Contributed 15 papers on the Diatomaceae to *The Naturalist* and *North Western Naturalist* between 1893 and 1934. Supplied slide material and distribution lists of Yorkshire diatoms to West & West (1901). He also contributed an article on algae and Diatomaceae in the British Association for the Advancement of Science (Sheffield) handbook (Stiles, 1910), other articles on natural history (e.g. Stiles, 1900) and pharmaceutical topics. A large collection of his photographic plates and photo-micrographs exists (Howes, 2011). Elected to the YNU in 1884. Secretary and Treasurer of Doncaster Microscopical and General Scientific Society. Secretary and Convenor from 1895 of the YNU Micro-Zoology and Micro-Botany Committee and Chairman 1903-1909. Quekett member (elected 1876) and FRMS (elected 1900). Founder member.

James Greenhalgh Walker (1849-1930) Civil and mechanical engineer, architect and land surveyor at South Parade, Doncaster. Also recorded as something of a playwright and poet.

Rev William Robert Weston (1834 - 1896) Born Kingston, Surrey. Vicar of Balby-with-Hexthorpe. Ordained an Anglican priest in 1870.

James Mitchell Wilson (1845-1927) Scottish-born, Glasgow-trained doctor. Medical Officer of Health, Doncaster. Honorary Surgeon and Physician at Doncaster Infirmary and Dispensary. YNU member. Society of Medical Officers of Health, Vice-president 1890. Paper (with T.H. Easterfield) on "Pollution of the River Aire" read at British Association for the Advancement of Science 1890. Moved to Beverley to become Medical Officer for Health. President 1886-1887.

George Winter (1847-1916) General draper of Baxter Gate, Doncaster. Local Treasurer for the YNU. Died at Scarborough. Founder member.

James Bissell Withington (1845-1920) Cornwall-born surgeon and partner of John Lister FRCS, town Coroner and Surgeon. Latterly a surgeon in London and Cornwall. Died at Bath, Somerset.

Discussion

Microscopy is only one branch of natural history and several of the Yorkshire microscopists found themselves unable to sustain a society of their own for a long period. Soon after the society was established it became part of a larger organization called a natural history society and, as has already been demonstrated with the Bradford Microscopical Society (Baker and Gill, 2015), there were amalgamations, periods of relative inactivity and some periods of great strength.

Some of the societies started in a quiet way, as at Wakefield which was rather atypical. Up until 1859 the society there was an exclusive private club of medical men seeking to examine human tissues and samples and discuss medical issues at the microscopical level. It soon became clear that medical men alone could not sustain the society and individuals without medical qualifications were admitted four years after its foundation. Doncaster began with exhibitions

and conversaciones to 'show off' their instruments and enthusiasms and was established by naturalists for mutual support.

In each of the societies mentioned there were one or two outstanding people who, though supported by others, were willing to take the initiative in forming a society, driving it forward and making a major contribution to its activities and success. A Natural History Society was formally established at Huddersfield in 1850 but a microscopical society not until 1893. Members met initially in the office of the Medical Officer for Health, James Robert Kirk who, although involved in bacteriology and sanitary conditions as part of his professional work, had an interest in natural history. In Doncaster's case it was Mathew Stiles and John Kirk and at Wakefield Thomas Gissing and Samuel Holdsworth who were amongst the most progressive and active members.

Clergymen naturalists were a common feature of natural history, especially in the 19th century (Armstrong, 2000) and some of them, like the microscopist Rev. W.H. Dallinger, are international figures. Unlike Wakefield, several 'parson naturalists' were active at Doncaster including George Smith, Arthur Henry Faber, Thomas Enraght Lindsay and William Robert Weston. Indeed, in the first eight years of the society, three clerics became president, Canon Henry Frederick Brock, Weston and Smith.

Many naturalists are solitaires by temperament (Allen, 2000) and this is probably also true of microscopists and the work involved can be pursued indoors alone during the winter, when field studies are often prevented by inclement weather. However, it is only one part of the much wider field of natural history and geology, important enough nevertheless for the YNU to have had a Micro-Zoology and Micro-Botany Committee. As the smaller species were being studied for their structures, local distribution and records of occurrence, the microscope became an essential tool. The fact that societies developed in the ways described is an indication that fellow microscopists wanted to meet together and share their common interest.

Acknowledgements

The authors would especially like to thank Colin Howes M.B.E. and Pip Seccombe for their generosity, help and interest. Colin was kind enough to read a draft and to add extra comments. The authors would also like to acknowledge help from Anthony Petyt. He provided copies of photographs of the Wakefield people mentioned in the paper, the places visited by T.W. Gissing when collecting specimens and a list of Gissing's publications. Leanne Dodds provided an image of the group photograph of microscopists from the Wakefield Museum collection and we are grateful to her and to Wakefield Council for help and permission to use. We would also like to record the help from Albert Henderson.

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Appendix 1. A list of Microscopical Societies and Clubs in the North of England, noted during our research and which might well reward further investigation:

Blackburn Field Naturalists' Society (Microscopical Section)
 Blackpool Microscopical Society
 Bolton Microscopical Society (founded 1877)
 Bradford Microscopical Society (founded 1860)
 Carlisle Microscopical Society
 Colne and Nelson Microscopical Society
 Derbyshire Microscopical Society (est. prior to 1875)
 Huddersfield Microscopical Society (est. 1893)
 Hull Microscopical Society
 Liverpool Microscopical Society (founded 1868)
 Manchester Microscopical Society
 Manchester Philosophical and Literary Society (Microscopical Section)
 Manchester Science Students' Microscopical Society
 North of England Microscopical Society (Newcastle upon Tyne)
 Oldham Microscopical Society (est. 1864/5)
 Rochdale and Whitworth Microscopical Society
 Rochdale Microscopical Club
 Sheffield Microscopical Society (est. 1877)
 South Shields Microscopical Society
 Stafford Microscopical Society
 Stalybridge Microscopical Society
 Sunderland Microscopical Society
 Warrington Microscopical Society (est. 1870)

Notice: YNU Members' email addresses

The YNU has email addresses for fewer than 240 of our 400+ individual members. Although we would certainly never wish to bombard our members with nuisance emails, we would like to keep you informed of YNU activities from time to time. If you are a YNU member but you do not receive emails from the YNU, for example information about the AGM and Natural Sciences Forum meeting held in November, this means that we do not hold a current email address for you in our database. If this is the case, please contact our Membership Officer Ellen Tidy on membership@ynu.org.uk to let her know your email address. These addresses are held securely and not passed on to any third parties.



Plate I. Calder & Hebble Navigation (see pp165-177).

Left: Accumulated silt in the canal, with marginal vegetation.

Below left: Narrow-leaved Water-plantain *Alisma lanceolatum*.

Below: Floating Pennywort *Hydrocotyle ranunculoides*.

Ray Goulder



Plate II. Yorkshire microscopists (see pp191-193).

Resident doctor's house at the West Riding Lunatic Asylum, Wakefield, connected with some of the early Wakefield microscopists.



Plate III. *Hydromyza livens* (see p201).

Above: A mating pair of *Hydromyza livens* on a leaf of Water Lily *Nymphaea* sp. and

Above right: a characteristic larval mine in the leaf.

Ian Andrews



Plate IV (above). The Stanley misericords (see pp202-7).

This misericord, carved by H.P. Jackson, shows Giant Sloth, Hairy Mammoth, Sabre-toothed Cat or Smilodon and Ape and suggests the Tertiary period.

Plate V (right). Award to Bill Ely (see p238).

YNU Naturalist editor Bill Ely receiving the award of Honorary Membership of the National Biodiversity Network (NBN) Trust from NBN Trust Chairman, Professor Michael Hassell.

Paul Shields





Plate VI. YNU Excursions (see pp221-231).

VC61 Jeffry Bog.

Top left: Herb Paris *Paris quadrifolia*.

Top right: Longhorn beetle *Rhagium mordax*.

Ken White

VC63 Worsborough.

Above left: Mirid plant bug *Stenotus binotatus*. Colin Rew

Above right: Touch-me-not Balsam *Impatiens noli-tangere* with a leafmine caused by the larva of dipteran *Phytoliriomyza melampyga*.

Joyce Simmons

Right: Hawthorn Shield Bug *Acanthosoma haemorrhoidale*.

Colin Rew





YNU Excursions (see pp232-237).

VC64 Trough of Bowland.

Top left: Losterdale Beck and Trough Road looking to Trough Barn. *Terry Whitaker*

Above: Terry Crawford, Geoff Oxford and Adrian Norris ready to sally forth.

Left: Green Spleenwort *Asplenium viride* and Soft Shield Fern *Polystichum setiferum*.

Alison Evans



VC65 Ravenseat (Whitsundale).

Bottom left: Whitsundale Beck. View of woodland in How Edge Gorge.

Below: Goldenrod *Solidago virgaurea*.

Terry Whitaker



***Hydromyza livens* (Diptera: Scathophagidae) in Yorkshire**

Roy Crossley e-mail: roycrossley@btinternet.com

Popularly known as 'dung-flies', the Scathophagidae comprises fewer than 60 species in Britain. Clouds of yellow 'teddy bear' flies used to be a familiar sight in the countryside, where swarms of them would rise from cow pats as you walked by. Such sights are now a thing of the past and not all scathophagid species are associated with dung. Several are phytophagous in the larval stages, one of these being *Hydromyza livens* which is associated with water-lilies *Nymphaea*. The larvae 'mine' the floating leaves, leaving characteristic brown channels between the upper and lower surfaces, and adults can be seen sitting on the leaves where they display and mate.

On 16 July 2015 Ian Andrews (IJA) reported that he had seen the characteristic larval 'mines' and also mating pairs on lily leaves in the Pocklington Canal at Church Bridge, Thornton (SE760444) and he had managed to obtain a photograph and two voucher specimens. This constituted the first YNU record for the species in Yorkshire.

I visited the site the following day and, having familiarised myself with the insect, which was present in some numbers, I visited other locations along the Pocklington Canal that day and saw specimens and mines at East Cottingham, east for c.1km from where the canal joins the River Derwent (SE700427), and both sides of Hagg Bridge, Sutton-upon-Derwent (SE717452). Two days later I searched the canal at Coats Bridge (SE786453), where *H. livens* was present.

Subsequently IJA has found this scathophagid at two locations on the River Derwent:- Sutton-upon-Derwent, downstream from the river bridge (SE705474) on 29/7/15 and downstream from Buttercrambe bridge (SE733578) on 8/8/15, as well as several adults and mines on the River Foss in York (SE609520) on 4/8/15

It is clear that *H. livens* is likely to occur widely across lowland Yorkshire wherever the host plants are present. That it has escaped attention in the past is no doubt due to the considerable difficulty in catching specimens. Much patience is needed, wet nets are inevitable, and there is the ever present possibility of falling into the water in an unguarded moment! Modern close-focussing binoculars and cameras are a great help, but it is important to note that many flies use lily pads to hunt, feed and court, so picking out *H. livens* requires some experience.

IJA submitted the original photographic evidence (see Plate III, centre pages) to Dr Stuart Ball, the organiser of the national Scathophagidae recording scheme run by Dipterists Forum, and in confirming the identification Dr Ball drew attention to photographs of a mating pair and characteristic leaf mines taken at Bursell Gravel Pits (TA097482) on 2/8/2013 and posted on iSpot by John Bratton, a visiting dipterist. This constitutes the first County record, and one of which Yorkshire Diptera recorders were unaware.

The Stanley misericords: a representation of evolution

M. Jill Lucas 8 Camborne Drive, Fixby, Huddersfield. HD2 2NF

“And God said, Let there be light: and there was light.

Let the waters teem with countless living creatures, and let birds fly.

Let the earth bring forth...cattle, reptiles and wild animals

Then God said, Let us make man in our image”

Genesis I: vs 14, 20, 24, 26.

Shortly after *All Things Wild and Wonderful* was published (Lucas, 2013) I was asked why I had not included the Stanley misericords. This remark initiated many months' search through numerous reference books on church history and furnishings; I then discovered the Internet! Here I found the title of the one book (Stead, 1927) which had a passing reference to the Stanley misericords and I also found the details of their history.

The first St Peter's Church at Stanley near Wakefield was built in 1822 and opened for worship on 6 September 1824. However, a disastrous fire broke out on 4 February 1911, destroying the church completely (Stanley History Online, n.d.).

A new church was consecrated on 5 July 1913. Choir stalls were commissioned later to enhance the chancel and between 1922 and 1924 were designed, carved and installed at a cost of £951-11-0s (Stanley History Online, n.d.). The church became a Grade II listed building on 11 July 1961 (Historic England, n.d.) but sadly was made redundant in 2001 and was demolished in February 2014.

The Wakefield Diocese applied for permission to remove items of historical value to a place of safety. Included in this were the choir stalls, their elbows and misericords (hinged seats with carved corbels on the underside). This request was refused on the grounds that they were part of the church's Grade II listing; a decision which was to cause great distress to the former congregation and inhabitants of Stanley as future events unfolded and involved antique dealers, members of the public and Christie's, the famous auction house (Stanley History Online, n.d.).

The misericords and their elbows were reported missing/stolen in March 2012, but the actual date when they were no longer in the church may have been up to two years previously. Two of the stall elbows and seven of the 16 misericords have been recovered. One turned up on an eBay auction site, four were bought from an antique dealer by a lady in London and two others became the subject of a dispute after being entered into an auction at Christie's by an antique dealer who said he had bought them in good faith (Anon, 2012).

The carver of the choir stalls was Harry Percy Jackson, an outstanding local wood carver whose work deserves to be better known and valued. The majority of his work is found within a 30 mile radius of Coley, between Halifax and Bradford (Cant, 1994). He was born in 1867 at Lane Head,

Albion Street, Brighouse. He started work as an errand boy to a local grocer but, even as a youngster, he showed an aptitude for drawing and wood carving. At 13 years of age he became apprenticed to a Mr Brook, a wood carver/joiner of Brighouse. He married Mary Elizabeth Watkinson in 1890 and she bore him three sons. In 1906 he moved his family from Brighouse to Coley where he set up his home and his business. He named his house Morriscot in honour of and as tribute to William Morris, whom he greatly admired. When Oliver Hinchliffe, a local cabinet maker, obtained a contract from Brighouse Borough Council to supply furniture for its Council Chamber he commissioned Jackson to carry out this work. Sometime after this Jackson was asked to carve a chancel screen and pulpit for St John's Church in Cleckheaton. This was completed in 1910 and was followed by requests for more ecclesiastical carvings. He also made violins and collected birds' eggs and moths. The whereabouts of his collections is not known. He died in 1931 and is buried in Coley churchyard (*loc. cit.*)

Jackson was given a free hand as to the subject matter of the furnishings of the choir stalls. On the elbows he carved a veritable pantheon of mammals: a hedgehog, Simian apes, a sheep, a pig and, with a touch of humour, a rat with its paw caught in a trap and an ass with one hoof holding down the pages of a book which the animal is reading. In addition, Stanley Church oak misericords were unusual in two respects.

Firstly, with the exception of those in Gloucester Cathedral, as far as is known all English misericords have a central carving with what are called supporters on either side, which may not have any relevance to the main subject, for example a hunting scene may have flower supporters. However, Jackson's carvings took up the whole width of the misericord and therefore there were no supporters. It is also worth noting that the ledge below the seat and above the corbel may be shaped or moulded in a variety of ways. In rare cases the mouldings are ornamented with tiny motifs and, in the case of Stanley Church, all the misericords had motifs appropriate to the subject.

Secondly, Jackson's carvings were unusual, if not unique, in respect of their subject. Many other religious buildings in Yorkshire have depictions of the natural world in wood, stone or glass, including much older misericords, for example those dating from the 16th century in St Peter and St Wilfred, Ripon Cathedral. William Blomfield, Master Carver of the Ripon School of Carvers, was responsible for these choir stalls. St Mary, Ripple in Worcestershire has the distinction of having a complete set of 15th century misericords depicting the agricultural Occupations or Labours of the Months throughout the year. Some other churches also illustrate one or more of these Occupations, but not a whole set. There are the carved stone capitals in the Abbey Church of St Lawrence, Ampleforth, by Sir Giles Gilbert Scott which date from 1924 and which illustrate numerous mammals, birds, fishes and insects. The East window (1958) in St Mary, Scarborough, designed by Harry J. Stammers, portrays innumerable creatures including a camel, a caterpillar, bugs, beetles, jellyfish, a turtle, a whale spouting, a kangaroo with a baby in its pouch, etcetera (Stead, *loc.cit.*). However, the uniqueness of Jackson's misericord carvings was their representation of creation through the process of evolution.

One hundred and fifty six years ago Charles Darwin published the *Origin of Species by Natural Selection*. He was reviled for his revolutionary ideas which caused furious arguments among many people, within both the scientific community and the church. Some scientists were highly

critical and the Anglican Church, which reigned as the official State Church, was hostile to the idea and angered by the book's publication. However, whilst Darwin was staying in Ilkley 'hydropathising' (Henderson, 2003) he received, among many supportive letters, one from his publisher John Murray on 2 November 1859, in which he states:-

By this day's post I send you a specimen copy of your book ... the book from its bulk and size will not be dear at 14/- ...the edition of 1250 copies will yield about £240 (Burkhardt & Smith. 1991).

The next day Darwin replied:-

I am infinitely pleased and proud at the appearance of my child. (loc. cit.)

Among supportive letters was one on 18 November from the celebrated churchman Charles Kingsley:-

I have gradually learnt to see that it is just as noble a conception of the Deity, to believe that he created primal forms capable of self development into all forms needful pro tempore et loco, as to believe that he required a fresh act of intervention to supply the lacunas wh. he himself had made. I question whether the former be not the loftier thought.

On 30 November Darwin replied, asking permission to include this "admirable sentence" in the preface to the second edition of *The Origin* (loc.cit.).

George Rodney Eden, Anglican Bishop of Wakefield between 1897 and 1928, must have been very much aware of the Church's position on this issue. The Rev. Harold Rye Baugh, who was inducted as Vicar of Stanley on 29 September 1917 by Bishop Eden, must also have known of the controversial nature of the carvings, yet Jackson was still given a free hand to carve what he wanted. It is remarkable that a series of carvings such as these was allowed in the church in the first quarter of the 20th century.

Usually the carver worked to cartoons drawn by the designer but Jackson was both designer and carver. Sadly, the fate of his cartoons is not known. The theme of creation through evolution is believed to be unique; there are no other known carvings with this theme in the whole world. They are thought to be the only set of seats to be carved in the 20th century and Jackson has the honour of being the last craftsman to be commissioned to carve a set of misericords (Cant, loc.cit.).

The sixteen Jackson carvings express both creation and evolution from light as the first day that God created (Genesis 1:3-5) to the last carving which depicts scenes from the Nativity and Jesus' Crucifixion. An early photographic record of the sixteen carvings exists as a set of numbered postcards, originally kept in the possession of Mr Ron Owen, a keen supporter of Stanley Church and Outwood Salvation Army (Stanley History Online, n.d.). It is assumed that the order of postcard images corresponds with the order of the misericords in the church, although this can no longer be proved. The order of the carvings, as shown on the postcard images, corresponds with the geological time scale, each carving showing organisms loosely representative of a particular time period. However, there are inevitably gaps in the record and a few anomalies where organisms from different geological time periods are shown together.

An attempt to relate the carvings to their respective geological periods is shown in Table 1 and a small sample of the postcard images is shown in Figures 1 and 2. The postcards themselves attempt to name the principal organisms shown but, as it is impossible to say with certainty what genera the organisms belong to, references to any scientific names in the captions are in inverted commas and not italicised.

Table 1. Geological periods, dates and main evolutionary events from Gradstein *et al.* (2004) in Futuyma, 2009. Nos. refer to the numbering of the individual postcards, viewable at: <http://www.stanleyhistoryonline.com/Saint-Peters-Church.html>

Periods	Start of period (millions of years ago)	Era	Main evolutionary trends	Jackson's carvings
Quaternary Holocene Pleistocene	1.8	Caenozoic	Extinctions of large mammals & birds leading to modern mammals. Evolution of <i>Homo sapiens</i> . Rise of agriculture & civilisation.	Plate IV (centre pages) & Nos. 12-15.
Tertiary	65.5		Continued diversification of mammals, birds, snakes, pollinating insects, bony fishes.	No.10
Cretaceous	145	Mesozoic	Diversification of angiosperms, dinosaurs, mammals & birds	Fig. 2 & Nos. 6,7 & 9
Jurassic	200		Origin of angiosperms. Diverse dinosaurs, first birds. Ammonoids diversify.	
Triassic	251		Gymnosperms dominate. Reptiles diversify, including first dinosaurs. First mammals.	
Permian	299	Palaeozoic	Insects & reptiles diversify, including mammal-like forms.	
Carboniferous	359		Extensive forests of early vascular plants. Early winged insects.	No.5
Devonian	416		Origin of amphibians, insects, seed plants.	
Silurian	444		Origin of jawed fishes. earliest terrestrial vascular plants.	Fig.1
Ordovician	488		Diversification of echinoderms. Origin of Horseshoe Crab ancestors.	No.3
Cambrian	542		Marine animals diversify with most phyla established. Earliest jawless vertebrates.	
Pre-Cambrian	c.640	Proterozoic	First multicellular animals.	
	c.3500	Archean	The origin of the universe and beginning of life.	Nos. 1&2

Today Darwin's theory of evolution by natural selection is widely accepted, although controversy still exists between creationists and evolutionists, particularly in parts of America.

In conclusion I can do no better than quote David Cant "This article has examined the life and work of an important wood carver, who worked in the West Riding from the end of the nineteenth century to the end of the 1920s. His work is largely unknown and unappreciated, and it is hoped this article will contribute to a better understanding and care for the work of Jackson of Coley".

Acknowledgements

I wish to thank David Hemingway for making the arrangements for me to see the choir stalls; the Diocese of Wakefield for allowing me to photograph the remaining choir stalls and their elbows and David Miller for enhancing my original images. The Reverend Bill Henderson is thanked for giving permission to use some of the black-and-white photographs of the misericords as is David Cant for his generosity in allowing me to quote from and to use some of Jackson's personal details. My grateful thanks go to Albert Henderson and Andy Millard for their helpful suggestions and assistance in various ways with the text.

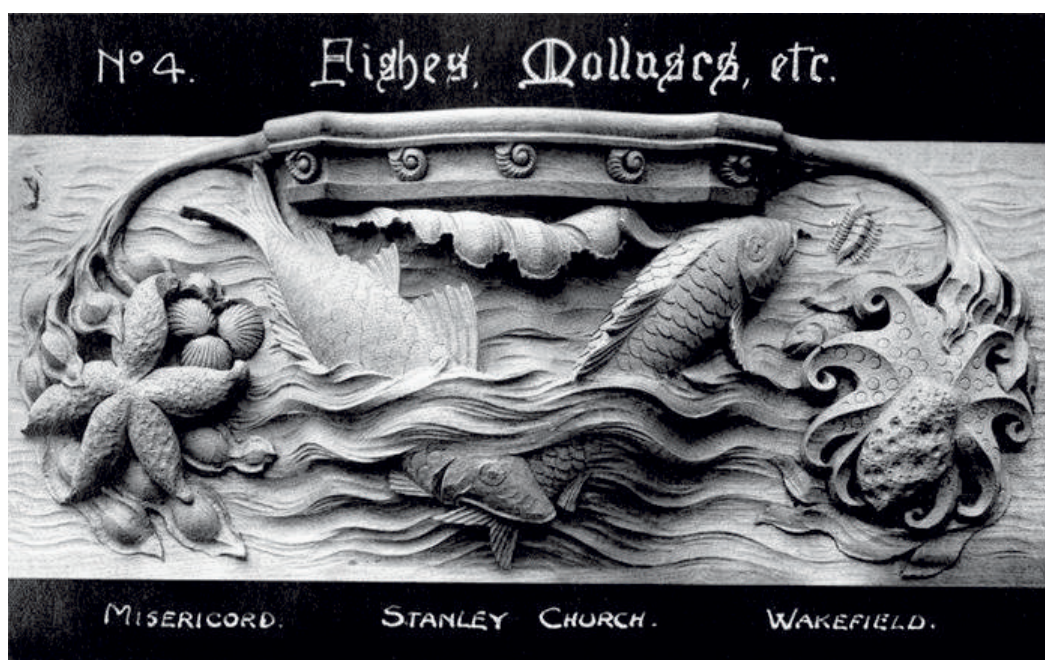


Figure 1. .Postcard showing 'Fishes, molluscs etc.', also includes echinoderms (starfish) and could represent the Silurian period when the first jawed fishes appeared and echinoderms and molluscs were already well established.

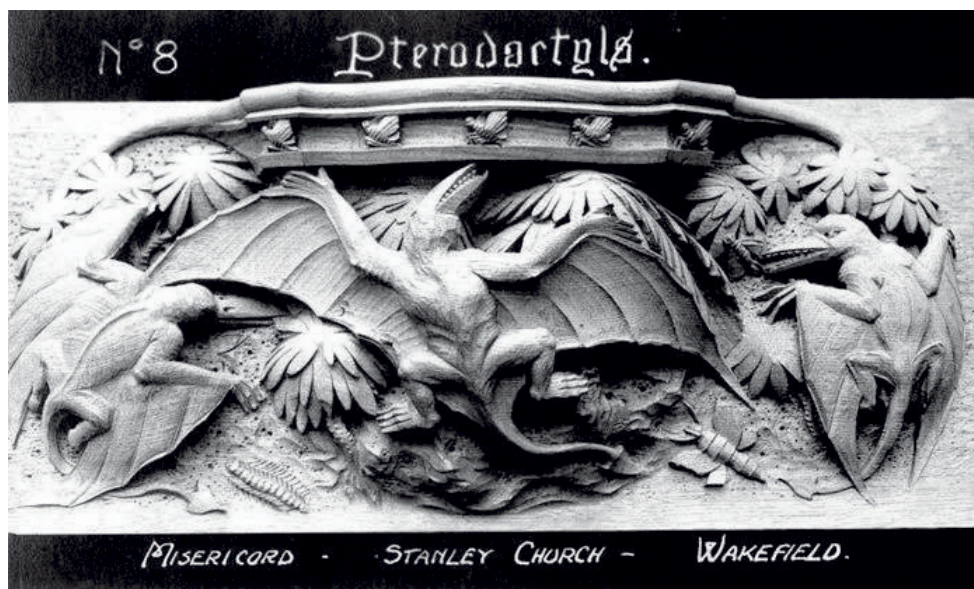


Figure 2. 'Pterodactyls' spanned the Jurassic and Cretaceous periods. There is also a centipede/millipede-like animal depicted (well established by the Carboniferous period) and a segmented butterfly-like creature and what appear to be palm-tree like plants. These last two became well established during the Cretaceous period.

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YNU Bryological section: report for 2014

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Excursions

The following sectional meetings were held in 2014. Nomenclature follows the current British Checklist and Census Catalogue (Hill *et al.*, 2008).

Ingleborough (VC64), 3 May 2014

Although the bryophytes of Ingleborough have been well recorded in the past, it is some years since the higher parts of the hill have been visited by Yorkshire bryologists. We were blessed with near perfect weather for our ascent, dry and clear but with a thin covering of cloud. Our route in was from Storrs Common at Ingleton but we did little bryology until we reached the higher ground above c.600m. Most of our time was spent in three areas: the gritstone scree below the western crags (centred on SD737745), the high limestone cliffs on the north-western side (around SD739747) and the gritstone scree and scattered limestone outcrops on the north side (centred on SD737747).

The gritstone scree on the western side was dry. Among the more plentiful *Racomitrium fasciculare* and *R. lanuginosum* the boulders produced occasional *Andreaea rupestris*, *Racomitrium sudeticum* and (on decaying dung) scattered tufts of *Tetraplodon mnioides*. *Tritomaria quinquedentata* occurred in niches with slight base enrichment and *Polytrichastrum alpinum* on earth. Some areas of gritstone crags were wet from seepage and supported *Andreaea rothii*, *Racomitrium aquaticum*, *Jungermannia pumila* and *Solenostoma paroicum*; *Pohlia elongata* occurred in recesses. An odd *Plagiothecium* with concave leaves and growing in damp turf appears to be a form of *P. succulentum*.

The high limestone cliffs are known to be bryologically rich and we saw many of the expected species, notably *Pseudoleskeella catenulata* and *Schistidium trichodon*, both confined in the Pennines to a few high-level calcareous sites. Among the many others on the crags were *Cololejeunea calcarea*, *Conocephalum salebrosum*, *Leiocolea collaris*, *Preissia quadrata*, *Bartramia ithyphylla*, *Bryoerythrophyllum ferruginascens*, *Distichium capillaceum*, *Encalypta rhaptocarpa*, *Mnium marginatum*, *M. thomsonii*, *Orthothecium intricatum*, *Plagiobryum zieri*, *Plagiothecium denticulatum* var. *obtusifolium*, *Schistidium robustum* and *Seligeria pusilla*. Among the plentiful *Tortella tortuosa* there were also some tufts of *T. bambergeri*. Of special interest in such an exposed site was the presence of *Plagiochila spinulosa* on a turfy ledge; this is a humidity-demanding western liverwort whose occurrence perhaps reflects the regular presence of cloud-cover on the hill.

The gritstone scree on the northern slopes had numerous patches of *Mylia taylorii*, holding out promise of other interesting species, but that promise was hardly fulfilled. Subsequently we spent some time in the area at the head of Meregill looking unsuccessfully for the site where *Anthelia julacea* was seen by the author in 1983 at its only locality in the Dales. It seems likely that we missed the exact spot rather than that it has gone from this site. Two other notable

records that we did not refind on the limestone were *Myurella julacea* and *Encalypta alpina*, the latter in its sole English locality. It is good to report, however, that *Myurella* was refound by the author and Johnny Turner on a subsequent visit to the south-west side of the hill in September 2014. The *Encalypta* remained elusive.

116 species were recorded in total in the two monads SD7374 and SD7474.

Wheldrake (VC61), 4 October 2014

It is several years since the Bryological Section last visited the East Riding, although Colin Wall has done some excellent recording there in recent times for the new national Bryophyte Atlas. Our visit to Wheldrake proved to be very successful, with a much higher number of species than we often manage in VC61. It helped that the forecast rain cleared by late morning, leaving us a better day than anticipated. We began recording on the banks of the Derwent at Wheldrake Ings in monad SE6944. Predictably, *Leskea polycarpa* and *Syntrichia latifolia* dominated the lower parts of trees in the flood zone, though we failed to find the rarer bryophytes that sometimes occur in this habitat. *Leptobryum pyriforme* was found on mud, without capsules but with characteristic rhizoidal tubers. *Orthotrichum anomalum* and *O. cupulatum* were present on the concrete base of the footbridge. Trees and shrubs on the river bank provided plenty of opportunity to search for epiphytes and *Frullania dilatata*, *Metzgeria violacea*, *Cryphaea heteromalla*, *Dicranoweisia cirrata*, *Orthotrichum pulchellum*, *Ulota bruchii*, *U. crispa*, *U. phyllantha* and *Zygodon conoideus* occurred in varying but mostly small quantities. Much more exciting was the presence of *Syntrichia papillosa* on two willows, the first East Riding record since the 19th century, as well as a tuft of *Syntrichia virescens* with capsules. We added a few ruderals near the car park and *Drepanocladus aduncus* occurred in a small pond there.

Wheldrake Wood is largely plantation of various ages, much of it poor in bryophytes but with occasional pockets of good ground. The soil is mainly acidic and peaty. The ground flora included bryophytes common in acid woodland such as *Atrichum undulatum*, *Campylopus pyriformis*, *Mnium hornum* and *Polytrichum formosum*. *Bryum bornholmense*, an inconspicuous tuber-bearing moss, was found on bare humus. A block of immature larches provided a spectacular growth of *Plagiothecium undulatum* and *Hypnum jutlandicum*, with occasional *Dicranum scoparium*. There was some unusually robust *Campylopus pyriformis* on logs here, accompanied by the introduced liverwort *Lophocolea semiteres*. Another interesting site in the west of the wood had some patches of *Thuidium tamariscinum* and a small amount of *Rhytidiadelphus loreus*, a robust moss that became very rare in regions subject to high SO₂ pollution during the 20th century. Old logs and stumps had, in addition to *Campylopus pyriformis*, occasional patches of *Plagiothecium curvifolium* and a little *Orthodontium lineare*. Ditch sides were also productive. We recorded *Aneura pinguis*, *Calypogeia arguta* and *C. muelleriana* near the entrance to the wood and *Pogonatum aloides* in the interior. A particularly fine length of ditch in the western part of the wood, with high steep banks, had some good patches of *Fossombronina pusilla*, a liverwort not recorded in the East Riding for more than 100 years. It was accompanied by other small pioneers, including *Calypogeia fissa*, *Dicranella schreberiana* (with capsules), *Leptobryum pyriforme* and *Trichodon cylindricus*.

The main ride through the wood is surfaced with base-rich gravel and, unexpectedly, this

produced *Didymodon acutus* sens. lat., not previously known from the East Riding. It has been turning up regularly in recent years in ruderal habitats. There is some uncertainty about its taxonomy and the correct name for these ruderal plants may be *D. icmadophilus*. It was also present at the site of some old buildings in the western part of the wood, and *Pseudocrossidium hornschurchianum* occurred in the same habitat. *Plagiomnium affine* was in the grassy verge of the ride as well as under trees in the western area at the *Rhytidiadelphus loreus* site.

The combined number of bryophytes across the two sites was 86, all in 10km square SE64.

Records

The number of records received from each of the Watsonian vice-counties is shown below.

Vice-county	Records received
61	137
62	0
63	482
64	1180
65	129

One of the most interesting sites visited in 2014 was at Rickett's Field near Low Bradfield, north-west of Sheffield. This is an area of rough, wet pasture with several mineral-rich springs and flushes. It supports a number of scarce wetland mosses, notable among which is *Hamatocaulis vernicosus*. This has attracted a lot of attention during the past two decades, having been placed on Appendix 1 of the Bern Convention and Annex II of the EC Habitats Directive in 1990. It has proved to be more frequent in some parts of Wales and Scotland than previously thought but remains very scarce in England and, of course, its wetland habitat is under continuing threat. The record from Rickett's Field is the first confirmed record for VC63.

Twisleton Glen at Ingleton has been visited several times in 2013 and 2014 to search for the liverwort *Liochlaena lanceolata* (= *Jungermannia leiantha*), which was recorded here in the 1960s but now has only one known extant British site (in Scotland). The recent surveys failed to locate it but succeeded in finding many of the other rare bryophytes known from this locality. Among them is *Aphanolejeunea microscopica*, a tiny liverwort of humid habitats whose distribution is restricted to the oceanic west of Britain. Ingleton is one of its easternmost localities.

The recovery of epiphytic bryophytes continues. Johnny Turner has found *Ulota drummondii* near Hebden Bridge, over 150 years since it was last recorded there, and *Orthotrichum pallens* has turned up Brockadale. Unlike many other epiphytes, the latter was apparently never common in Britain, but in the field it is not easy to distinguish from other members of the genus and it may be under-recorded.

The results of Colin Wall's surveys of the bryophytes of Thorne Moors have now been published (McDonald & Wall, 2014). Among his latest records from the area is a second population of *Antitrichia curtipendula* and a further site for *Ptilidium pulcherrimum*. The *Antitrichia* is a distinctive moss that declined catastrophically in England during the 20th century but is now showing early signs of recovery. *Ptilidium pulcherrimum* on the other hand is one of the few

bryophytes that appear to have become less common following reductions in SO₂ pollution. It occurs only on the acid bark of trees such as birch. Colin has also confirmed the presence of *Polytrichum strictum* in VC63, on Lindholme Old Moor, the first modern record for the vice-county.

The list below provides details of these and other records of note, including new vice-county records and updates to the Census Catalogue (identified by an asterisk). The vice-county is given in brackets before each individual record. NWNNU = North-Western Naturalists' Union.

Aloina brevirostris: (65) SE274807 Nosterfield Limekilns, J. O'Reilly, 18 November 2014. A notable record of a rare moss of temporary, open, calcareous habitats.

Anomobryum concinnum: (64) SD74347410 on moist soil on ledge of limestone rocks, Ingleborough Hill, T.L. Blockeel & Johnny Turner, 19 September 2014. This is a very inconspicuous moss that is probably overlooked. Soil among calcareous rocks is one of its characteristic habitats, in contrast with the commoner *A. julaceum* of wetter substrates.

Antitrichia curtipendula: (63) SE7006 One patch on birch, Lindholme Old Moor (Hatfield Moors), Colin Wall, 11 March 2014.

Aphanolejeunea microscopica: (64) SD7074 face of moist slate rock, Twisleton Glen, T.L. Blockeel, 1 November 2014.

Bryum bornholmense: (61) SE66074679 bare peaty humus in woodland, Wheldrake Wood, T.L. Blockeel & YNU, 4 October 2014. A rarely recorded moss of open habitats in woodland and heath, probably widely overlooked.

Bryum elegans: (64) SD9767 limestone rocks, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014. A moss of montane calcareous rocks, well-known from the Malham and Pen-y-ghent areas.

Calliergon giganteum: (64) SE12904538 weakly base-rich mire, Lanshaw Delves, Ilkley Moor, T.L. Blockeel & NWNNU, 15 November 2014; (65) SE2780 Nosterfield Limekilns, J. O'Reilly, 18 November 2014. A rare moss of calcareous mires, recorded from Lanshaw Delves by Mary Dalby in the 1960s but the recent record is notable for the presence of immature sporophytes (found by Michael Wilcox), which are very rarely produced in this moss.

Campylium protensum: (63) SE4917 Brockdale near Wentbridge, T.L. Blockeel, 14 June 2014.

Dicranum bonjeanii: (63) SK2520091255 turf over boulder in springhead, Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014.

***Didymodon acutus* s.lat.**: (64) SD97276783 calcareous soil lodged in cattle grid, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014; (64) SE11704716 on crumbling cobbled surface of ornamental structure, White Wells, Ilkley Moor, T.L. Blockeel & NWNNU, 15 November 2014. As noted in the report of the Wheldrake meeting, these records of *D. acutus* from ruderal habitats probably belong to the closely related *D. icmadophilus*.

Didymodon spadiceus: (63*): at foot of steep woodland bank, near Hebden Bridge, SD988289, Johnny Turner. This moss is found more typically on wet rocks and stream banks. Previous reports from VC63 are thought to be errors, including records from the River Aire in the 1970s.

Didymodon ferrugineus: (64) SD97276783 calcareous soil lodged in cattle grid, and in limestone turf, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014.

Entodon concinnus: (64) SD9767 limestone turf, and SD9667 thin turf on steep bank by track, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014. *Entodon* has a rather patchy

distribution and is often found on open calcareous sites following disturbance. It was present in abundance on the trackside bank at Kilnsey.

Entosthodon muhlenbergii: (64) SD9667 thin soil among limestone rocks, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014. A very scarce moss nationally but occasionally plentiful on Carboniferous Limestone in the Pennines.

Fossombronina pusilla: (61*) SE659466 near-vertical bank of ditch, Wheldrake Wood, Michael Wilcox & T.L. Blockeel, 4 October 2014.

Frullania fragilifolia: (64) SD7074 face of moist slate rock, Twisleton Glen, T.L. Blockeel, 1 November 2014.

Grimmia dissimulata: (64) SD9667 limestone rock in gully, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014. This is a recently recognised segregate from the widespread *G. trichophylla*. The latter rarely if ever occurs on calcareous rocks, whereas *G. dissimulata* is characteristic of them.

Hamatocaulis vernicosus: (63*) SK2525291271 and SK2515291343 mineral-rich flushes below springhead, Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014.

Leiocolea badensis: (65) SE2780 Nosterfield Limekilns, J. O'Reilly, 18 November 2014. A liverwort of semi-bare calcareous ground and characteristic of old quarries and workings.

Metzgeria consanguinea: (63) SE5709 Epiphyte (tree unknown), Owston Wood, Colin Wall, 12 April 2014. This is less common than the similar *M. violacea* and tends to occur on more acidic bark.

Microlejeunea ulicina: (63) SE7006 On oak, Lindholme Old Moor, Colin Wall, 11 March 2014. One of several epiphytes that have spread eastwards in England since the 1990s. However *M. ulicina* remains very scarce or absent over most of Yorkshire.

Myurella julacea: (64) SD7434474067 and SD7435974162 crevices in east-facing limestone rocks, Ingleborough Hill, T.L. Blockeel & Johnny Turner, 19 September 2014.

Odontoschisma sphagni: (64) SE21755207 Sandwith Moor, G. Haycock, 23 November 2014.

Orthotrichum pallens: (63*) SE50891712 on branch of Ash tree, Brockadale, T.L. Blockeel, 14 June 2014.

Orthotrichum striatum: (64) SD9767 and SD9667 Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014.

Philonotis calcarea: (63) SK2520091276 mineral-rich flush below springhead, Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014.

Plagiomnium elatum: (63) SK2591 Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014.

Plagiomnium ellipticum: (63) SK25219129 spring/flush area in wet pasture, Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014; (64) SE14 Lanshaw Delves, T.L. Blockeel & NWNU, 15 November 2014.

Pleurochaete squarrosa: (64*) SD97176783 soil pockets on broken limestone outcrops on southeast-facing slope, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014. This is a southern moss near the northernmost limit of its range in Yorkshire. The only previous records in the county are from Oxenber (apparently last seen in 1948), and from Sykes in the Forest of Bowland (an unconfirmed report from 1973).

Pohlia elongata* var. *elongata: (64) SD7374 rock crevice, Ingleborough Hill, T.L. Blockeel & YNU, 3 May 2014.

Polytrichum strictum: (63*) SE7006 Lindholme Old Moor, Colin Wall, 11 March 2014.

Ptilidium pulcherrimum: (63) SE7006 One patch on birch, Lindholme Old Moor, Colin Wall, 20 March 2014.

Ptychomitrium polyphyllum: (63) SK308861 rock, Stumperlow Hall Road, Sheffield, A. Baker, 10 January 2014. *Ptychomitrium* occurs occasionally on gritstone walls, less often rocks, in western regions but rarely in suburban areas.

Scapania scandica: (64) SE12214646 gritty soil under turfy overhang, Ilkley Moor, T.L. Blockeel & NWN, 15 November 2014. A small and rather inconspicuous liverwort that is undoubtedly under-recorded.

Scorpidium cossonii: (63) SK2515891359 & SK2512891359 spring/flush areas in wet pasture, Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014.

Sphagnum flexuosum: (63) SK2591 Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014; (64) SE14 White Wells, T.L. Blockeel & NWN, 15 November 2014.

Sphagnum teres: (63) SK2591 Rickett's Field, T.L. Blockeel & R. Tratt, 18 July 2014; (64) SE14 White Wells, T.L. Blockeel & NWN, 15 November 2014.

Syntrichia papillosa: (61*) SE6946844147 on willow, R. Derwent, Wheldrake Ings, T.L. Blockeel & YNU, 4 October 2014; (64) SD9767 on Ash, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014.

Tetraplodon mnioides: (65) SE0197 Grinton, High Harker Hill, S. Knight, 13 January 2014. A distinctive moss of bones and animal scats in the uplands.

Thuidium assimile: (64) SD9767 limestone turf, Kilnsey Crag, G. Haycock, T.L. Blockeel *et al.*, 25 February 2014.

Tortula modica: (65) SE274807 Nosterfield Limekilns, J. O'Reilly, 18 November 2014.

Trichostomum tenuirostre* var. *tenuirostre: (64*) SD70237418 on wet slate rocks, Twisleton Glen, T.L. Blockeel, 1 November 2014. The varieties of *T. tenuirostre* (= *Oxystegus tenuirostris*) have been redefined recently (see Blockeel, 2013); var. *tenuirostre* appears to be less common in Yorkshire than var. *holtii*.

Ulota drummondii: (63*) on Sycamore at edge of small woodland, 276m alt., Colden, near Hebden Bridge, SD96342815, Johnny Turner.

Thanks are due to all the contributors of records. I am also grateful to Gordon Haycock for arranging the surveys at Ingleton and to Ros Tratt for guiding me round Rickett's Field.

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Recorder's report for the Aculeate Hymenoptera for 2013, 2014 and 2015

Michael Archer 17 Elmfield Terrace, York YO31 1EH

Three new species have been recorded for Watsonian Yorkshire. During 2013, Peter Kendall recorded the Reed Yellow-faced Bee *Hylaeus pectoralis* from Inkle Moor, which indicates a northward extension of its English distribution. During 2015, John Coldwell recorded the solitary wasp *Tiphia femorata* from Elsecar Colliery. This wasp had been found in the author's garden at Heworth, York, during 1968 but it was regarded as a vagrant. This new record could be another vagrant record but, since this species has shown a recent northern extension of its range with a recent record from Lincolnshire, it can be regarded as a non-vagrant record. Jessica Sciven, a PhD student from the University of Stirling, has carried out a genetic (DNA) study of the three species in the *Bombus lucorum* species complex and during 2015 has identified the Cryptic Bumblebee *B. cryptarum* at three sites in North Yorkshire. It was also found that *B. cryptarum* was associated with sites that had a lower summer temperature (March-August), so it is likely to be widespread in the Pennine and North Yorkshire moorlands.

Further rare records of ants, wasps and bees have also been recorded. *Lasius platythorax* was recorded during 2013 by Peter Kendall and during 2014 by Paul Buckland at Inkle Moor. This ant is very similar to the common *L. niger*. *L. platythorax* fortunately tends to be associated with wet habitats, unlike *L. niger*.

Solitary wasps recorded during 2015 were *Spilomena curruca* by Harry Whiteley at Holling Hill, Bradford, and *Stigmus pendulus* at Fishponds Wood, York, and *Cerceris arenaria* at Bachelor Hill, York, both by Michael Archer.

The Sea Aster Bee *Colletes halophilus* was recorded by Andrew Grayson at Welwick Marsh in large numbers and also at Haverfield Quarry. This solitary bee is only known from these East Riding sites, so it is good to know that it is still thriving. Andrew Grayson also found the solitary bee *Lasioglossum minutissima* in 2014 and 2015 during his survey of Three Hagges Jubilee Wood. The cleptoparasitic solitary bee *Stelis punctulatissima* was recorded by Gavin Boyd during 2013 at Dalton and during 2015 by Simon Saxton at Keighley and by Anna Cabriola during a pan-trap study at Leeds University Farm. The host of *S. punctulatissima* is the Wool Carder Bee *Anthidium manicatum*, which was first found in Yorkshire during 2001, although there is an old record from about 1840, and *S. punctulatissimus* was first found during 2007, so that it has taken six years for the cleptoparasite to catch up with its host.

The Hill Cuckoo Bee *Bombus rupestris* was recorded during 2014 by Paul Buckland at Flamingo Land, Michael Archer at Bachelor Hill, York, and during 2015 by Michael Archer at Heworth Holme, York. This bumblebee was not recorded after 1950 and was considered extinct but then re-appeared during 1977 and now seems to be becoming well-established. In contrast, the Spined Mason Bee *Osmia spinulosa*, which was recorded at its only Yorkshire site of Wharram

Quarry, Burdale, during 1998 and 1999, could not be found during 2015. This bee nests in empty large snail shells which also could not be found, so perhaps this bee is now extinct in Yorkshire.

This is my 12th report and the number of records now in the Yorkshire data base is 35,343. These records will be sent to North and East Yorkshire Ecological Data Centre and my national society, the Bees, Wasps and Ants Recording Society (BWARS). The records are held in EXCEL files and are available on request if a CD is sent to me with return package and postage.

Yorkshire Naturalists' Union Conference 2016

Names, Knowledge and Natural History

The YNU conference will be held on Saturday the 19th March 2016 at the National Science Learning Centre, University of York. The conference theme is '*Names, knowledge and natural history – the importance of modern taxonomy to the amateur naturalist*'.

This topic encompasses many fascinating and important questions that we will explore. Why do scientific names have to keep changing, and how can we keep up with these changes? How should we use species' names to communicate about natural history to different audiences? How will the molecular revolution change biological recording, and how does all this relate to the amateur naturalist and the Yorkshire Naturalists' Union?

The format will be a mixture of presentations and plenary discussion, which has proved very successful at previous YNU conferences.

Speakers will include **Susan Chambers** (National Museums Scotland), **Roy Crossley** (YNU), **Alison Dyke** (University of York), **Bill Ely** (YNU), **Lori Lawson Handley** (University of Hull) and **Tim Rich** (formerly National Museum Wales).

Conference tickets will be £25 for YNU members and £30 for non-members. This includes the conference lunch.

Further information, including the conference programme and details of how to book, will be published on the YNU website.

If you would be interested in giving a talk or poster on any aspect of this theme, particularly with regard to natural history in Yorkshire, please contact Paula Lightfoot on p.lightfoot@btinternet.com or 07539 340128.

Obituary David Jack Lindley 12 January 1958 - 7 July 2015

Died aged 57 years, leaving a wife Caroline and daughters Emma Jade and Sophie Amber.

David was born in Leeds, the son of a bus driver and the youngest of a family of three, with sisters Katherine and Pat 11 and 8 years older respectively. He was educated at Becketts Park Infant and Junior School before moving on to Moor Grange School. He joined the Army at 16 and served in the Prince of Wales Mortar Platoon, later to be stationed in Berlin for a period of two years.

At the age of 23, David married Caroline Fawcett on 9 April 1985 whilst on leave in Leeds. He was then posted to Northern Ireland and, with his new wife, was based at the Abercorn Barracks at Ballykinler on the coast in southern County Down, not far from Downpatrick. In his army career he advanced to the rank of Sergeant and after Northern Ireland he was stationed at Catterick Barracks.



After leaving the army, David had a short spell in security at Leeds University before joining the West Yorkshire Police. The Army, followed by the Police Force, helped him to develop a very good, almost photographic, memory. A spell in the Vice Squad, which he thoroughly enjoyed, was followed by a period in the Murder Squad. His military training, particularly in counter-terrorism, enabled his knowledge and experience to be utilised, resulting in his joining the counter-terrorism unit within the police force. A regular uniformed police officer for two years, he soon moved into plain clothes and rose to the rank of Detective Sergeant. An enduringly modest person, he never told even his wife and close friends about his many commendations and citations. His instinct to help others took him to Bosnia as part of a West Yorkshire Police team who delivered a convoy to help the Bosnian people during the Balkan War in September 1993; David co-drove a large van with a *Yorkshire Evening Post* reporter.

His ability to compartmentalise his life helped him to cope with the serious demands of his job. The study of molluscs gave him the opportunity to shut off from his work and think of different, less traumatic, life forms. David joined the Conchological Society of Great Britain and Ireland in 1989, a year after joining the Yorkshire Conchological Society, of which he became the Honorary Secretary in 1991. He was elected to the Executive of the YNU as a representative of the Conchological Section in 1990. I first met David at the age of 12, after he and David Dickinson joined the Leeds Naturalists' Club and Scientific Association. Thereafter, the two Davids regularly joined me to travel to and from field trips. At the age of 14 he joined me on a trip to Shipley Glen near Bradford to find *Vertigos* and we found *V. pygmaea* and *V. substriata* in a marshy field. This group of molluscs dominated his interests from then on and he became a national expert in their study. His delight in finding *V. geyeri*, a species new to Yorkshire, in what are remarkable

and unusual sites in North Yorkshire can be readily understood and, owing to David's hard work, they now have the protection which they deserve. His achievements will continue for some time as not all of his work has yet been seen. Still working on his main interest, the Vertiginidae, he left an unfinished paper on *V. alpestris* and *V. pusilla* in Watsonian Yorkshire, which we hope will be published very shortly. He also left a legacy of £1,000 to the YNU. Within the YNU David was probably best known as its representative and contact for the many affiliated societies over many years.

His family always came first: devoted to his wife and daughters he made certain that their wishes came before anything else. He loved good food and regularly had to leave field meetings promptly to get home to take his wife and family out. His love of life and the outdoors took them on regular holidays, often for walking. He also liked to travel to exotic places as far flung as Antigua, Cuba, Mauritius and the Yucatan Peninsula in Mexico, all of which were real adventures for him and his wife. After several visits to Madeira and having failed to find any specimens of *Leiostyla*, David spent his last holiday on the nearby island of Porto Santo armed with a list of the species I had found in the hope of finding at least one of them. It is a great pity that he never lived to examine in detail nor to fully label any specimens of the one species that he did find, *L. monticola*, in late June 2015. His collection has been bequeathed to the Leeds City Museum to go alongside those of other Yorkshire greats such as the co-founder of the Conchological Society, William Nelson. His family intends to fulfil his wish that his ashes are scattered on Ingleborough, one of his favourite places within the Yorkshire Dales National Park.

David and I carried out a great deal of molluscan recording together across the county, particularly since he changed more recently from full-time to part-time employment. He was an excellent companion and colleague – always enthusiastic, cheerful, positive and very well organised. His premature death, caused by the unforeseen consequences of treatment for a mild heart attack, was acutely felt by his many friends among the army, police and natural historians and, at his funeral, the large church was filled to overflowing. His legacy continues through one of his daughters who has followed his interests and has gained a degree in Environmental Studies.

Adrian Norris

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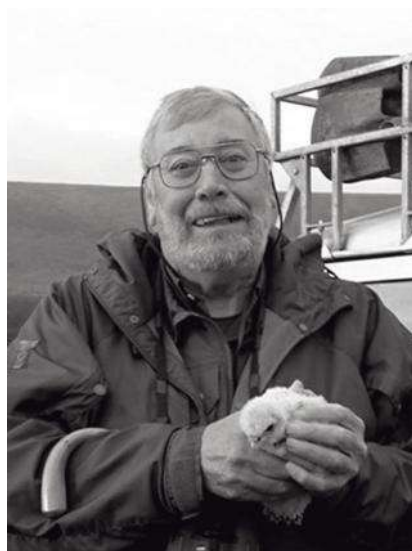
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Obituary Mick Carroll 26 August 1947 - 21 October 2015



Mick was born in Lancashire in 1947. He was adopted by John and Edith Carroll when he was six months old and spent his formative years in Colne, where he went to the local primary school with his life-long friend, Clive Hartley.

Mick was introduced to the natural environment by his father when he was still a young boy. He was only 5 or 6 years old when they left their industrial home together and made their first trip to the nearby Bouldsworth Moor, where he remembered seeing Ring Ouzel, Common Sandpiper and Short-eared Owls. Mick recalled '*I didn't have bins in those days, everything was done by skeg o't eye*'. He would have to wait another six years before he got his first pair of 8 x 32 binoculars, which cost the princely sum of £6 10shillings. That was a huge amount of money back then; half of the average weekly wage for a manual worker and the equivalent of £136 today. Not a bad gift for a 12 year old. With or without binoculars, that first trip to Bouldsworth Moor awakened an all-embracing interest in ornithology.

At 15 years of age Mick started work on a local hill farm and joined the Royal Air Force when he was 19. After completing his basic training he became a member of the RAF Regiment as a gunner. He was initially posted to the RAF Depot at Catterick, North Yorkshire, before serving in Bahrain and Cyprus, Germany and British Honduras, now known as Belize. His last overseas

posting took him to Northern Ireland, where he suffered a back injury that would eventually force him out of military service at just 30 years of age.

Having left the military Mick moved to Pickering with his wife, Helene, and returned to farming. He took an initial course at the agricultural college in Ponteland before moving to Durham to complete a course in farm management.

After qualifying from Durham his first farm job took him to Winteringham. Mick recalled '*That's where I first came into contact with a murderous gamekeeper who shot out a Kestrel nest*'. Mick found one of the young that had survived and took it home and cared for it. The bird was released back to the wild once it was fit to fly. Mick decided that if this behaviour towards birds of prey was the norm on the estate then he would never be happy there and soon moved on. He spent the next few years farming in North Yorkshire before his old back injury forced him out of the industry. He took a job as Trees Officer with Scarborough Council, monitoring Dutch Elm Disease.

His next job with English Country Cottages allowed him to travel the length and breadth of the North of England and that gave him the opportunity to intensify his passion for bird-watching. Coincidentally, at the end of the contract with English Country Cottages, his military pension increased substantially, thereby allowing him to become a full-time birder. He then took on a role at the Blacktoft Sands RSPB Reserve for 12 months and developed a special interest in birds of prey.

This expanded interest led him to monitoring raptors on the North York Moors, initially in the Dalby and Langdale Forests. He was subsequently invited to join the North York Moors Upland Bird [Merlin] Study Group with which he was involved for many years. Mick had maintained his contact with the RAF Regiment and his love of the natural environment and his determination to protect that environment led to an invitation to join the RAF Fylingdales Conservation Group. Within this Group he was called upon to advise the contractors who were responsible for dismantling the 'golf balls'. Prior to the structural changes taking place, Mick and the team initiated a nest box scheme on the base. He continued to provide advice on the environmental management of the site after the work had been completed.

In addition to his conservation commitments at RAF Fylingdales Mick took on the roles of President of Scarborough Field Naturalists, Chairman of the Ryedale Naturalists, Regional Representative for the BTO, Executive Committee member of the Whitby Naturalists' Club and VC62 Divisional Secretary for the YNU. When he was not fulfilling his duties with the various conservation Groups, Mick and Helene travelled extensively, bird-watching across the UK and wider afield, including a trip to Israel to celebrate their 25th wedding anniversary and more recently a trip to the Middle East, bird-watching in the Dhofar region of Oman.

Mick first encountered Hen Harriers by chance on the north-western plain of Germany. At the time he was serving with the RAF and had just bought a local bird guide from the NAAFI. He went to check out the local bird of prey population and saw his first Hen Harrier. That was the start of his obsession with the species which never left him. Back in the UK years later, he joined the Natural England Hen Harrier Recovery Project as a volunteer, working alongside Stephen

Murphy. When Montagu's Harriers made a second attempt to breed in North Yorkshire he was at the forefront, managing the nest monitoring and protection scheme. Mick was on guard duty every day for two months. This extraordinary commitment put him in bed for the best part of a week but he considered the effort a small price to pay when two chicks fledged from the site.

Mick first attended Northern England Raptor Forum (NERF) meetings as a member of the North York Moors RSG. However, his greatest achievement within NERF was the formation of the South Ryedale and East Yorkshire Raptor Study Group, which added both a huge geographical expanse to the overall study area and an influx of colleagues dedicated to monitoring and protecting birds of prey.

He used his expertise to assist colleagues to organise NERF conferences and he represented NERF on the Defra-led Buzzard Stakeholder Group. He was always available to represent the Forum and his expertise was regularly sought by journalists and broadcasters.

In a moment of reflection and with typical candour Mick said. *"I am really proud to have been a part of NERF but we need to be more politically active if we are to protect our iconic birds of prey. Raptors are under continuing and serious threats, particularly from the game shooting industry, which should have been confined to history long ago. NERF is the leading voluntary NGO speaking collectively for raptors and we must continue to work together to ensure that they have a safe future, free from persecution. We will only achieve that goal if we hold successive Governments to account. They have a 'duty of care' for our shared environment and they often fail in that duty. When Government Departments fail birds of prey NERF is there to work with like-minded NGOs to challenge decisions that will have a negative impact on raptors. Long may that continue!"*

Stephen Downing

Notice: National Forum for Biological Recording conference - a celebration of National Recording Schemes and Societies

The National Forum for Biological Recording and the Biological Records Centre are organising a conference at Lancaster University on May 12 and 13 on the theme of *'National Recording Schemes and Societies – celebrating the past, looking to the future'*.

The programme is still being planned, but there will be presentations, software demonstrations, a poster exhibition, quickfire talks, discussion workshops, and the option of a field trip to the Forest of Bowland AONB on Saturday 14 May.

The Yorkshire Naturalists' Union has offered to cover the cost of conference attendance for any of its members wishing to participate as representatives of the YNU. For further information, including the programme and booking information, visit www.nfbr.org.uk or contact Paula Lightfoot on p.lightfoot@btinternet.com.

Yorkshire Naturalists' Union Excursions in 2015

Compiled by **Albert Henderson** and **Adrian Norris**

Jeffry Bog YWT Reserve (VC61) 16 May 2015

INTRODUCTION (Sarah White)

Fifteen members gathered at Jeffry Bog on a breezy and sunny May morning. The grassland, wetland and woodland areas of the reserve all looked in tip-top management condition and, though little was yet in flower in the open areas as a result of the late spring, the timing was perfect for birdsong and woodland flowers.

At the end of the afternoon the tea and meeting were held in Westow Village Hall, accompanied by a chorus of House Sparrows nesting in the village hall roof! A vote of thanks was given to the Yorkshire Wildlife Trust and Natural England for their help in arranging the visit.

LICHENS (Mark Seaward)

Although only 30 lichens were found on the trees, bushes, tree stumps and fences of Jeffry Bog and the adjoining Jeffry Plantation, the potential for more diverse epiphytic assemblages was evident at the latter site; unfortunately, it proved impossible to examine these since they were to be found on inaccessible branches of trees extending over the River Derwent. The relatively recently erected wooden fences supported just a few lignicolous lichens (including *Lecanora saligna*) but, with age, more diverse and interesting assemblages are possible. The most notable epiphytes recorded were *Parmotrema perlatum* on willows and Blackthorn *Prunus spinosa*, *Physcia aipolia* and *Ramalina fastigiata* also on willows and *Usnea subfloridana* on oaks. Time permitted a visit to Westow church and its relatively large churchyard at a rather remote site 1km to the NNE of the village (SE759661). The number of lichens recorded from the site, which included a considerable number of gravestones (albeit almost entirely siliceous), was disappointingly low. In all, a list of only 41 lichens was compiled, the most notable being *Lecanora pannonica* which colonized extensive areas of the S-facing church wall. On a previous visit in 1993 by Don Smith, 54 lichens were recorded – this significant drop in biodiversity may reflect a change in church and churchyard maintenance. The only foliose lichens noted were *Melanelixia fuliginosa* on the slate roof of the church porch and on a single table tomb and *Parmelia sulcata* on several gravestones, as well as some nitrophilous ones on a few gravestones, their presence reflecting the influence of the trees which overshadowed them rather than the substrate; such lichens would have been expected on calcareous gravestones but these were few and far between – one of the reasons for the low diversity count.

PLANT GALLS (Tom Higginbottom)

The varied habitats in Jeffry Bog indicated the potential for a significant gall fauna, although by mid-May many galls have not had time to develop. There were old galls caused by gall wasps on oak buds: the Artichoke Gall *Andricus foecundatrix*, the Marble Gall *A. kollari* and the Cola-nut Gall *A. lignicolus*. Three new season galls were discovered - the Currant Gall *Neuroterus quercusbaccarum* was found on both the male catkins and on the leaves. Also on the catkins the less common Furrowed-catkin Gall *A. quadrilineatus* had formed small grooved and ridged

swellings. The edges of some young leaves had been swollen and distorted by Curved-leaf Gall *A. curvator*. Early season mite galls like the leaf roll on Hawthorn *Phyllocoptes goniothorax* and the big bud on Hazel *Phytoptus avellanae* were common in the hedgerow. In the damp meadows the distinctive orange fungal galler *Triphragmium ulmariae* was seen on the leaves and stems of Meadowsweet.

ARACHNIDS (Geoff Oxford)

The excursion was really too early in the year for many spiders to be mature, especially given the spell of rather cold weather preceding the meeting. The methods used to collect material were sweep-netting and direct observation. The first field at the end of the access lane (approx. SE76166676) yielded immature examples of the long-jawed spiders *Tetragnatha* spp. (not *T. extensa* nor *T. pinicola*), the comb-footed spider *Enoplognatha ovata* (the habitat is just wrong for the alternative, *E. latimana* which, in any case, has not been found this far north) and one of the bright green cucumber spiders *Araniella* sp. The orb-weaving spider *Metellina mengei* was common. The wolf spiders *Pardosa amentata*, *P. pullata* and *P. palustris* were also mature with a proportion of females carrying egg sacs. In the adjacent marshy meadow (approx. SE76056675) wolf spiders of the same species were even more evident. The woodland (approx. SE75916676) was less productive but Terry Crawford spotted a fine mature *Tetragnatha montana* female sitting in characteristic pose on a leaf. Post lunch I accompanied Terry and Adrian Norris to a woodland to the west of Kennythorpe, some 2.5 km south-east of Jeffry Bog (approx. SE78206586). Here, in a clearing at the edge of deciduous woodland, there were several mature males and females of the Nursery-web Spider *Pisaura mirabilis* running about on dried, flattened Bracken. This spider is noted for the remarkable colour variation between individuals, which is almost certainly genetically determined. Two of the males were carrying round in their chelicerae so called 'nuptial gifts', which they present to females in exchange for sex. *Pardosa amentata* was abundant. Sweeping the old erect Bracken here also produced a female crab spider *Xysticus ulmi* and a number of immature *Philodromus* sp.

Finally, the toilets in the village hall at Westow (SE75336536) housed a mature female Daddy-longlegs Spider *Pholcus phalangioides*. This spider has over the past few decades spread northwards and is now common in Yorkshire and beyond.

Note: nomenclature used in all of the Arachnid reports follows the latest British checklist (Merrett *et al.* (2013) *Arachnology* **16**: 134-144).

INSECTS: DIPTERA (Roy Crossley)

Jeffry Bog and the adjoining Jeffry Plantation have been subject to entomological studies in the past; Andrew Grayson has worked the area on many occasions from 1989 onwards but principally in the early 1990s, when visits were made on a weekly or fortnightly basis throughout the collecting season. I undertook a small-scale survey at the Bog in 2000, concentrating on Tipulidae (Crane-flies). In recent years I have been undertaking regular recording of dolichopodid flies at the Bog and the Plantation where, at the latter site, the public footpath normally provides a suitably safe and dry-shod transect line!

With the meeting in the middle of what proved to be an unusually cold May, few insects were expected and this proved to be the case, the majority of those recorded being common and widespread. Andrew Grayson recorded a small number of typically common spring flies, including the hover-fly with the extraordinarily long facial snout, *Rhingia campestris*. Michael Archer and Andy Millard recorded a few Aculeate Hymenoptera, all common and widespread with the exception of *Andrena helvola*, which Dr Archer comments is only occasionally found. (Editor's note: The longhorn beetle *Rhagium mordax* was photographed by Ken White (Plate VI, centre pages).

LEPIDOPTERA (Terry Crawford)

Given the generally cool and late spring, plus the breezy conditions on the day, it is not surprising that butterflies and moths were in short supply. Nevertheless, some sunny intervals, particularly in the afternoon, did encourage a few Green-veined White and Orange Tip to venture forth. A male Brimstone and a Common Carpet moth were seen at the woodland edge by the river. Some members visited nearby Fox Covert Hill and Plantation (SE7765/7865) and were rewarded with a few more Green-veined White and Orange Tip plus a couple of Peacock and some Green Longhorn moths *Adela reaumurella* dancing in the sun on a small patch of dry heath. En route to the meeting, Speckled Wood and Green-veined White were noted at Howsham Wood (SE7464/7465).

PARASITIC HYMENOPTERA (Bill Ely)

Roy Crossley and I collected 17 ichneumons from the ridge and furrow meadow but only one, the cryptine *Stilpnus (Polyrhembia) tenebricosus*, was in both samples. It was represented by six males, there were four males and two females of the cryptine *Stibeutes brevicornis* but the other fifteen were all singletons. Female ichneumons are usually more readily identifiable than males but only one other female was in these samples. The ctenopelmatine *Symphaerta antilope*, collected by Roy, was the second Yorkshire record and was new to VC61, *Stibeutes brevicornis* was the third Yorkshire record while another cryptine, *Bathythrix fragilis*, was the fifth Yorkshire record and was also new to VC61. In the bog itself I collected just one ichneumon, the ctenopelmatine *Hadrodactylus graminicola*, the second Yorkshire record and the second for the vice-county (Roy collected one on Skipwith Common in 2011) plus a single diapiiid, *Acropiasta pseudosciarivora* (until recently known as *A. sciarivora*), the fifth Yorkshire record and also new to VC61. Roy has collected a dozen ichneumons in the Plantation in recent years, including three that were the first records for VC61. On this visit I identified seven ichneumons from the northeast corner, six of them represented by males and only one with two examples, all the rest being singletons. Four of them had also been recorded in the meadow. The diapiiid *Spilomicrus hemipterus* was a female and new to VC61.

In total there were 38 identified ichneumon specimens (34 males and 4 females) of 21 species with 14 of them represented by single examples. Three ichneumons were new to the vice-county and 17 were new to the 10km square, raising its count to 57 ichneumons. The four proctotrupoids (three males and one female) were four species with one new to the vice-county.

MOLLUSCS (Adrian Norris)

The Conchological Section had visited the area surrounding Jeffry Bog on 9 May, exploring seven 10km squares; on the date of the meeting we explored a further four. In total we made 177

records of 43 species. One of the main aims for our visits was to re-find the rare Compressed River Mussel *Pseudanodonta complanata*, previously recorded from the River Derwent by Arthur Smith on 21 June 1918. The river being far too high on both days, we failed in our search, so that yet another visit will be needed. Dr Ian Killeen, however, had found both this mussel and Duck Mussel *Anodonta anatina* in the Derwent at Howsham Bridge in 1998. The early date of the meeting and subsequent cold weather plus the drying out of the main parts of the Bog left us feeling that we had missed several molluscs which should occur, yet another reason for a later visit.

The ones we did find include some highlights. Within Jeffry Bog we noted that the Large Amber Snail *Succinea putris* was very common and Pfeiffer's Amber Snail *Oxyloma elegans* occurred on mud by the side of the small drains within the woodland and elsewhere. The River Derwent produced a number of *Pisidia*, including some fine examples of our largest, the River Pea Shell *Pisidium amnicum*. Also noted in the Derwent were some very large examples of the Common Bladder Snail *Physa fontinalis*. The best find of the two days, however, proved to be a specimen of *Trichia sericeus*, very rarely recorded in Yorkshire, here found at a site by the A64 (SE76576992) used by travellers and almost certainly transplanted there.

BIRDS (Ken White)

41 species of birds were recorded during the day, 35 of which were on the reserve. Notable observations were Sand Martins, Swifts and Grey Wagtail feeding over the river; three raptors (Buzzard, Kestrel and Sparrowhawk); singing Whitethroat, Reed Bunting, Yellowhammer, Willow Warbler, Linnet, Blackcap, Garden Warbler and Song Thrush. In the woodland we witnessed an aggressive altercation between 3 Marsh/Willow Tits. Unfortunately it was impossible to identify the species conclusively on appearance: while they looked like Willow Tits the calls were typical of both. Tree Sparrows and Treecreepers were noted at Howsham.

MAMMALS (Sarah White)

Mole hills were noted as well as the presence of Rabbits, Mink footprints (but none of Otter) and a Badger sett.



Hazel Heads, Hawnby (VC62) 13 June 2015

INTRODUCTION (Adrian Norris)

The weather forecast predicted a total washout for the whole of North Yorkshire which resulted in a very poor turnout with only six members attending, representing a total of six affiliated societies, in a very interesting and poorly recorded area. The forecast turned out not to be accurate and at no point did we have any rain; in fact most of the day was hotter than usual and

we welcomed the afternoon meeting down in Hawnby, with its restful ambience. After what turned out to be quite a long walk through the woodland we returned to the cars hot and regretful of taking our coats with us. This was the final official YNU Excursion for Mick Carroll, the YNU VC62 Divisional Secretary, who decided a few days before the meeting that he could no longer continue due to the illness which prevented him attending the last two field meetings. I would like to record my thanks to him for all of his help in organising these meetings. We were all shocked to hear of his death shortly afterwards. See obituary on p218-220.

The woodland proved to be very interesting. A dominant biomass throughout the whole area was the Northern Wood Ant *Formica lugubris* with large numbers of nests and satellite colonies throughout the area. We tried to estimate the chances of survival of other ground-living insects, etc., and decided that they would be very limited due to the impact of such large numbers of ants.

We would sincerely like to thank Mr John Richardson, the Estate Manager, Hawnby Estate Office, for arranging permission for our visit and Sonia and Darren Leeming of the Hawnby Tea Room for allowing us to use their facilities and for their most welcoming hospitality, especially for an excellent garden in glorious sunshine. Finally I would like to thank Jim Pewtress for standing in for Mick Carroll.

ARACHNIDS (Geoff Oxford)

Jim Pewtress and I used sweep-netting, beating and direct observation to collect spiders. The roadside northeast of Ellers Wood (SE5392) yielded the money-spider *Pityohyphantes phrygianus* beaten from gorse, the tiny theridiid *Paidiscura pallens* on a mature oak and the orb-weaving spider *Metellina mendei* (Tetragnathidae) swept from Bracken. *Pityohyphantes phrygianus*, commonly found on Norway and Sitka Spruces, was first recorded in Britain in 1974 and is now known to be widely distributed throughout Scotland and northern England. Very few have been found south of the Humber. The orb-weaver *Theridium sisyphium* (Theridiidae) and the harvestmen *Phalagium opilio* and *Mitopus morio* were swept from low bushes and Bracken. Ellers Wood itself, mostly wall-to-wall conifers, produced very little. One of the cucumber spiders, *Araniella curcurbitina* (Araneidae), together with a number of money-spiders (*Neriene peltata*, *Erigone atra* and another *Pityohyphantes phrygianus*) was swept from stream-side vegetation and *Saarestoa abnormis* (Linyphiidae) was found in leaf litter. More open ground (SE5292) revealed a couple of impressive female *Coelotes atropos* (Amaurobiidae) under a rock and a fallen log respectively, as well as the lycosid *Pardosa pullata*, many with attached egg sacs. In the same 1km square, a pair of pseudoscorpions was discovered in a roll of bark within a lovely open, deciduous wood. They were identified as *Neobisium carcinoides*, one of our commonest species, by Gerald Legg (Pseudoscorpion Recording Scheme). The same wood also produced more *Pardosa pullata* and also *P. lugubris* running over the numerous wood ant nests that covered the ground, apparently without hindrance from the owners. A species-rich grassland beyond the wood had damp, sedge-dominated areas that housed the long-jawed spiders *Tetragnatha montana*, *T. extensa*, *Pardosa amentata* and immature Garden Spider *Araneus diadematus* (Araneidae). Several 'exploding balls' of recently-emerged Garden Spider spiderlings were also found in this area. On the roadside once again (SE5293), a rock overhang provided a *Metellina merianae*. Tea rooms are also worth exploring and the one in Hawnby village (SE5489) was home to a couple of juvenile Daddy-longlegs Spiders.

OTHER ARTHROPODS (Adrian Norris)

Most of the common woodlice were recorded but it was nice to see the Wall Woodlouse *Porcellio spinicornis* on walls close to the old farm buildings at Brewster Hill and, on a wall close to the road near Middle Wood, four of the more common species of millipedes and centipedes, signifying the survival of some invertebrate groups that co-exist with the ant colonies.

LEPIDOPTERA (Terry Crawford)

The morning was fine but cool and only the occasional grass moth was seen. After lunch at Brewster Hill we descended through Green's Wood (SE5292) and the grassland down to the river bridge and ford. The sun had emerged, providing much warmth to these interesting habitats. Green's Wood is shown as coniferous on the OS map whereas it is broad-leaved with a good variety of trees and an open canopy and good herb layer. The grassland has herb-rich patches with indications of calcareous influence and some marsh near the river. These areas could deserve further study under better conditions and a more advanced season. As it was, we saw many grass moths, Hook-streak Grass-veneer *Crambus lathioniellus* and Satin Grass-veneer *C. perlella*. The geometrid moth Silver-ground Carpet, which often flies during the day, was frequent and another geometrid, the Brown Silver-line, was associated with patches of Bracken (its larval foodplant). Green-veined White were flying near the river, as was a single and rather tatty Small Tortoiseshell. A noctuid moth Clouded-bordered Brindle was disturbed from its daytime rest. Across the river a freshly emerged Small Copper was foraging on the grassy slope. A group of about a dozen Yellow-barred Longhorn *Nemophora degeerella* (an adelid micro-moth) were dancing in the sun at the woodland edge near the road. The highlight of the day, though, was a single male Wall Butterfly patrolling its territory on the roadside verge opposite Anya's Wood car park, a sight that has become so much rarer over the last decade.

MOLLUSCS (Adrian Norris)

We visited three 10km squares (SE5292, SE5392 & SE5293) and made 46 records of 20 molluscs. The acidity of the woodland plus the large numbers of wood ants made it difficult to find the smaller and more delicate ones but several noteworthy records were made. The Hollowed Glass Snail *Zonitoides excavatus* proved to be fairly common in most of the woodland visited. The Ash-black Slug *Limax cinereoniger* was also found in Anya's Wood at SE52939227 fairly close to the river. The deciduous woodland which makes up Green's Wood was one of the few places in which the more delicate molluscs, such as the Prickly Snail *Acanthinula aculeata* and one of the segregates of the Tawny Glass Snail *Euconulus fulvus*, were located. It was also interesting to note that the garden pest the Tramp Slug *Deroceras invadens* was located both at Brewster Hill close to the old farm and in Middle Wood close to the road.

BIRDS (Jim Pewtress)

We were greeted at Hazel Heads by a calling Cuckoo, which later flew across to the recent clear fell where there were Meadow Pipits and Mistle Thrush. An initial walk through conifer produced little of note with calling Chaffinch and singing Blackbird. By the river Rye there were Mallard, Grey Wagtail, Wren and Robin with plenty of Woodpigeon flying around. The walk up to Brewster Hill produced Swallow and singing Song Thrush. At the stop for lunch Curlew and Pied Wagtail were seen and a pine tree was full of Woodpecker holes. The descent through Middle Wood added Blue Tit and along the valley bottom female Redstart and Treecreeper. Driving to

Hawnby added Linnet whilst the village produced Swift, House Martin, House Sparrow and a Great Spotted Woodpecker on a large fat ball. Total of 22 species.

MAMMALS & LOWER VERTEBRATES (Geoff Oxford)

The road NE of Ellers Wood was the final resting place for two road-kill Hedgehogs (SE5392 and SE5293) with a third seen on the road at the northern edge of Hawnby village (SE5490). Finding three bodies on just 4km or so of a rural road, with probably little night-time traffic, may suggest a reasonably healthy, if unfortunate, hedgehog population in this area. Mole hills were found in all habitats throughout the three 1km squares covered during the day (SE5392, SE5292 and SE5293), as were signs of Rabbit (scrapes, droppings). Abundant feeding signs of Grey Squirrel were found on stumps in Hazel Head Wood, especially along the banks of the River Rye (SE5292). This is probably too far east for the culprits to be Red Squirrels. A Common Shrew was found dead in a floristically rich meadow (SE5292). The banks of the River Rye were searched for Otter spraints without success. Although Adders *Vipera berus* are known in this area, none was seen. A Common Toad *Bufo bufo* was spotted in damp habitat and a pair of Palmate Newts *Lissotriton helveticus* was discovered under a log in open, deciduous woodland, both in SE5292.



Worsbrough Country Park (VC63) 11 July 2015

INTRODUCTION (Joyce Simmons)

A rather grey day greeted the 22 members of 9 affiliated societies who visited Worsbrough Country Park, though there was some brightening around lunch-time.

As the weather had been dry for some time before the meeting, some species were rather scarce, so there was much interest around the water bodies. The main lake had Moorhen and Great-crested Grebe, with a Kingfisher delighting observers. Four species of dragonfly were seen around ponds at the edge of a field: Southern Hawker, Common Hawker, Emperor and Azure Damselfly. Those ponds also held large aggregations of Common Toad, tadpoles and young Common Frogs *Rana temporaria*. Conchologists reported that the Mill Pond was rich in freshwater snails, though the canal was poor. Brown Trout *Salmo trutta fario*, sticklebacks and Common Carp *Cyprinus carpio* were seen in the River Dove, which feeds the main water bodies.

The meadows were more productive for invertebrates. There was a fourth record for Yorkshire of the long-jawed spider *Tetragnatha nigrita*, and the nationally scarce seed weevil *Oxystoma cracca* was found on its host plant, Tufted Vetch *Vicia cracca*. The Alder Leaf Beetle *Agelastica alni*, which was known only from a single British record 15 years ago, has spread north and was found here and also by Mike Denton at the 2014 VC63 meeting at Thorpe Marsh. The most interesting of the 50 or so plant galls found were three on Aspen *Populus tremula*.

The most notable botanical find was Touch-me-not *Impatiens noli-tangere* (See Plate VI centre pages) growing beside the River Dove. However, there are few individuals; it is beside a well-used path and heavily shaded, so its future is not secure. Management of this area for the benefit of this plant by reducing shading and perhaps discouraging trampling in the area would improve its chances of survival.

The other area which certainly would benefit from some management is known as Candle Green, a bio-diverse piece of grassland rapidly being subsumed by scrub. Unfortunately, Japanese Knotweed *Fallopia japonica* is present, and needs eradication, though this is notoriously difficult.

An interesting tea meeting was held across the road in the Red Lion, as rain arrived.

I would like to thank members of the Barnsley Naturalists' Society, particularly Peter and Annefie Roberts, for their help in organising this meeting. Many thanks also to Trevor Mayne, Barnsley's Biodiversity Officer, who provided us with essential information and joined us at the beginning of the meeting.

FLOWERING PLANTS (Joyce Simmons)

Most of the flora of the area are common species and, as the meadows had been cut for hay, no interesting ones were found here. There were some splendid specimens of the hybrid orchid *Dactylorhiza fuchsii* x *praetemissa* in a rough area of grassland. Bee Orchid *Ophrys apifera*, Pyramidal Orchid *Anacamptis pyramidalis*, Twayblade *Listera cordata* and Common Spotted-orchid *Dactylorhiza fuchsii* were found in the overgrown area known as Candle Green.

The most unusual plant was Touch-me-not, which grows in very small numbers beside the River Dove in deep shade. It is unlikely to flower under these conditions. Other interesting plants were: Square-stalked St John's-wort *Hypericum tetrapterum* beside the pond area of the river, Rest Harrow *Ononis repens*, Red Bartsia *Odontites vernus* and Common Hemp-nettle *Galeopsis tetrahit* on the drier field margins. Around the ponds we found Water-plantain *Alisma plantago-aquatica*, Remote Sedge *Carex remota* and Orange Foxtail *Alopecurus aequalis*. Along the pathsides the Wild Plum *Prunus domestica* and Spindle *Euonymus europaeus* were found and Midland Hawthorn *Crataegus laevigata* grows in a hedgerow near the A61.

A previous visit identified Sea Club-rush growing on the west bank of the Reservoir at a time when the water level was lower for repair. The plant was inaccessible during the YNU visit, but could be seen through binoculars at the water's edge.

PLANT GALLS (Tom Higginbottom)

In a survey of September 2009 oak galls were quite abundant but in 2015 few were recorded. There were Curved-leaf Galls caused by *Bolboschoenus maritimus* on oak leaves and Yellow-pea Gall was also discovered on the underside of some leaves. *Cynips* species have been less common in recent years. On some buds there were old examples of Marble Galls and Cola-nut Galls, which are often recorded. Perhaps there will be more oak galls if the site is surveyed later in the year. Three galls found on Aspen were the highlight of the day. The common mite galler *Phyllocoptes populi* had formed yellowish raised bulges on some leaves. Another less common

mite galler *Aceria dispar* had rolled leaves towards the midrib creating a structure which involved many small distorted leaves. The midge *Contarinia petioli* had formed distinctive globular swellings on the leaf petiole. Lime leaf petioles were swollen by the midge *Contarinia tilarum*. The mite *Eriophyes exilis* had caused small, white raised swellings where the veins joined. There were numerous nail galls caused by *E. tiliae*. In the damper areas the leaves of Meadowsweet *Filipendula ulmaria* were galled by the midges *Dasineura ulmaria* causing white pimples and *D. pustulans* appearing as light coloured disks. The colour of some plants had been changed by the covering of the white mycelium of the fungal galler *Podosphaera macularis*. Shepherd's Purse *Capsella bursa-pastoris* was abundant on the edge of an arable field with most plants covered in white rust caused by *Albugo candida*.

ARACHNIDS (Geoff Oxford)

Sweep-netting, beating and direct observation were employed to collect spiders. The meadow around the canal to the east of Worsbrough Country Park was examined first (SE3503). The nettles/bramble on the edge of a small woodland patch yielded the expected theridiid *Enoplognatha ovata*. Sweeping in tall grass alongside the canal revealed a juvenile, but unmistakable Four-spot Orb-weaver *Araneus quadratus*, *Tibellus oblongus*, an elongated, straw-coloured grassland specialist, and two male long-jawed spiders, *Tetragnatha extensa* and *T. nigrita*. The latter was the most interesting find of the day and represents only the fourth Yorkshire record. The Spider Recording Scheme map shows previous locations at Woodhouse Mill Tip NR (2002), Potteric Carr (2002) and Hatfield Moor (2007). An old brick wall produced a fine female *Amaurobius ferox* and a female *Theridion varians* was spotted lurking beneath an oak leaf in the Country Park car park.

In SE3403, the stone walls of the Mill Museum and tea rooms provided several *Tegenaria* species, only one of which was mature (a female *T. saeva*). A hybrid *T. saeva/gigantea* male was later reared to maturity. Hybridisation between these spiders is extremely common in Yorkshire. The *Tegenaria* were lured from their retreats with a sonic toothbrush, which mimics an entrapped fly, as were immature *Amaurobius* and *Zygiella* species and, next to the mill pond, several of the large orb-weaver *Larinioides sclopetarius*. The latter is characteristically found on man-made structures near water. Two tents of the Nursery-web Spider were found at the edge of a cattle-grazed field but no spiders were seen. In the woodland south of Worsbrough Reservoir, several of the small, black harvestmen *Nemastoma bimaculata* were discovered under a log and further along the tiny *Dictyna uncinata* was swept from nettles/brambles. Many oak leaves were visually scanned for the theridiid *Paidiscura pallens* but only one produced a female together with two characteristic pure white, spiky egg sacs.

The flower-rich meadow at the edge of the woodland west of the Reservoir (SE340035) revealed another Nursery-web Spider, this time with hatched young populating the nursery tent and the female parent on guard.

Round the edge of the first pond were many female wolf spiders *Pirata piraticus* carrying their bright white egg sacs, and several males. This spider is characteristic of the interface between water and land and can run over the water surface. Also present, but in lower numbers, was another wolf spider *Pardosa amentata* carrying light brown egg sacs. The meadow also produced a male *Tetragnatha montana*, another immature Four-spot Orb-weaver and, within a

rolled leaf guarding her egg sac, a *Clubiona stagnatilis*. A zebra spider (*Salticus* sp.) was spotted along the northern edge of the Reservoir by Joyce Simmons.

INSECTS: COLEOPTERA (Mike Denton)

By July a good number of beetles are not present in their adult forms. In addition, the changeable weather conditions experienced during the previous few months, very hot and humid for a few days then cold and wet, must have exacerbated the situation. As a consequence only 41 species were recorded.

The vegetation along the southern edge of the reservoir yielded little with the exception of the Alder Leaf Beetle. Formerly regarded as an immigrant to the British Isles (hence the national status of pRDBK), this beetle has recently (since 2004) been found breeding in Cheshire, South Lancashire and Yorkshire. It was also present on the Alders at the northern edge of Birdwell Wood.

The most productive areas were the ponds to the north and west of Birdwell Wood and the wood itself. The presence of Common Bird's-foot-trefoil *Lotus corniculatus*, Red Clover *Trifolium pratense* and Tufted Vetch revealed a number of 'seed' weevils which are host-specific. These included the Nationally Scarce *Oxystoma cracca* which, as its name suggests, is found on Tufted Vetch. It is locally distributed in northern England, Scotland and Ireland where it occurs in woodlands, grasslands, hedgerows, etc. There are recent indications that it is spreading.

The only ground beetles encountered were all common: *Bembidion obtusum* near the ponds and *Pterostichus niger*, *P. madidus*, *P. melanarius* and *Nebria brevicollis* along the woodland edge. It was pleasing to find the splendid longhorn *Rutpela maculata* on umbellifers in a number of places around the Country Park.

Photographs of other insects found by Colin Rew can be seen in Plate VI, centre pages.

HOVERFLIES (Ricki Bull)

The morning weather was not conducive to hoverflies but brightening skies from noon onward meant that in the occasional clearings along the trail on the western side of the reservoir and river (SE344033, 343033, and 3444032) three common hoverflies were photographed. One Marmalade Fly *Episyrphus balteatus* was present along with two *Myathropa florea* and more *Syrphus ribesii*. *Myathropa* was on flowering Hogweed *Heracleum sphondylium* as well as bramble blossom while *Syrphus ribesii* was only around the areas of flowering bramble. The loop of the *Myathropa* was clearly visible on the photo. Two others were present, one of which appeared to be a male *Platycheirus*, probably *albimanus*, but they could not be caught and therefore not definitely identified.

LEPIDOPTERA (Paul Simmons)

The cloudy conditions for much of the day did not favour the appearance of many butterflies and moths, but a total of 14 butterflies and 8 day-flying moths were seen by the group as a whole. They were generally the expected ones but a Painted Lady and an early Gatekeeper were pleasant surprises. A search in the sunshine for White-letter Hairstreak proved productive as

two individuals were seen flying. Both Six-spot Burnet and Narrow-bordered 5-spot Burnet were found in a damp meadow area and Clouded Border and Latticed Heath were seen nearby.

MOLLUSCS (Adrian Norris)

The meeting took place after a long spell of hot and dry weather, so that I spent most of the day looking at freshwater habitats, and was able to bring the total number of molluscs found in Worsborough Country Park to 47. The head of water behind the main museum site at SE34920331 produced quite a list including the Common Bithynia *Bithynia tentaculata*, the White Ram's Horn *Gyraulus albus*, *Haitia acuta*, the Great Pond Snail *Lymnaea stagnalis*, the Great Ram's Horn *Planorbis corneus*, the Keeled Ram's Horn *Planorbis carinatus*, the Wandering Pond Snail *Radix balthica*, the Common Valve Snail *Valvata piscinalis* and the Horny Orb Mussel *Sphaerium corneum*. A small pond in a field at SE34070348 added the freshwater bivalve, the Capped Orb Mussel *Musculium lacustre* as well as many of the previous list, all of which proved new to the Country Park lists. A side excursion also took place to examine the old Canal at SE353034, which produced a fine specimen of the Swan Mussel *Anodonta cygnaea*. However, this site proved to be very poor and very few molluscs could be found.

Several interesting slugs, also new to the park, included the Large Red Slug *A. rufus*, the False-keeled Slug *A. fasciatus* and the Green Cellar Slug *Limacus maculatus*. Land snails included the Large Amber Snail and the Eccentric Grass Snail *Vallonia excentrica*.

BIRDS (Mike Denton)

The most interesting bird of the day was seen before the meeting commenced: a Kingfisher which flew over the car park. The reservoir held little with the exception of a few Mallard, Coot, Canada Goose, Black-headed Gull and Great Crested Grebe, the latter with young. Over the water a small number of Swallows, House Martins and Swifts were hawking for insects. Moving into the wooded areas, despite the lateness in the season, several birds were still in song: Blackcap, Garden Warbler, Chiffchaff, Blackbird, Song Thrush and, in the willow carr, a single Goldcrest.

The only birds seen near the ponds to the north and west of Birdwell Wood were a Bullfinch, a Jay and a Long-tailed Tit. Although not seen, a pair of Moorhen had at least attempted to nest along the edge of one of these ponds, as a nest with two cold eggs was located in a clump of rushes. The time of year, coupled with the lack of adults and only two eggs, suggests that the eggs were added and not recently laid. Moorhens lay up to 11 eggs and, had the nest been predated, it is unusual for the culprit to leave eggs intact.

In total 28 species were recorded.

MAMMALS (Peter & Annefie Roberts)

We visited the reserve the previous evening and recorded four regular species of bat, all in SE3403: Common Pipistrelle, Soprano Pipistrelle, Noctule and Daubenton's Bat..



Trough of Bowland (VC64) 25 July 2015

INTRODUCTION (Terry Whitaker)

Although the forecast was not good for moth trapping, traps and generators were placed in seven separate 1km grid squares by Terry Whitaker, John Perry and Charlie Fletcher. Fortunately the wind dropped and the early night was cloudy, giving favourable mothing conditions and allowing the midges to attack. The cloud cleared later and by dawn it was very chill, staying mainly sunny during the main meeting but with a chill breeze. We thank the owners, United Utilities, their biodiversity officer Mr Peter Wilson and Stephen and Ellen Robinson of Sykes Farm for access to their land. Stephen's help in transporting moth traps and generators by FWD to Holdren and Langden Castles was invaluable.

BRYOPHYTES (Tom Blockeel)

(This report follows a visit by the North West Naturalists' Union a few weeks later to the same areas.)

We recorded 99 bryophytes, many of them epiphytes and ruderals, along the tree-lined avenue to the Water Works. Most of the trees were Sycamores *Acer pseudoplatanus* and *Zygodon conoideus* was abundant on the trunks. One small patch of *Cololejeunea minutissima* was also noted. The track further into the Langden Valley had some moist semi-bare areas along its edges with an interesting flora that included *Scapania irrigua*, *Archidium alternifolium*, *Pohlia drummondii* and a small *Fossombronia* that has proved to be *F. incurve*, a new vice-county record. The Langden Valley does not have much rock outcropping on its slopes but the low crag by the stream notably had *Anastrophyllum minutum* on a rockface as well as *Sphagnum girgensohnii*, *Dicranum fuscescens* and *D. maius*. Bare gritty soil on a steep bank further along had a small amount of *Discelium nudum* with immature capsules. I was keen to climb up to Holdren Castle, which the map suggested was craggy. The steep ascent through Bracken and tall Heather was not appreciated by everybody and the crags proved to be limited in extent. Nevertheless, we added *Scapania gracilis*, *Sphagnum quinquefolium*, several *Racomitria* and a very small patch of *Bazzania trilobata* to the day's list.

BOTANY (Alison Evans and Phyl Abbott)

Male-fern *Dryopteris filix-mas*, Lady-fern *Athyrium filix-femina* and Field Horsetail *Equisetum arvense* were noted by the river and in the area around the car park. We then visited the old limestone quarries on the west side of the road north of Langden Brook, noting Hard-fern *Blechnum spicant* on the way. In the quarry the botanical highlights were the ferns – one plant each of Black Spleenwort *Asplenium adiantum-nigrum*, Hart's-tongue *Phyllitis scolopendrium* and Green Spleenwort *A. viride*, plus frequent Maidenhair Spleenwort *A. trichomanes*. We re-found Rigid Buckler-fern *Dryopteris submontana* about half-way up the quarry face. We also

noted a single plant of Soft Shield-fern *Polystichum setiferum* higher up (see Plate VI centre pages). Male-ferns were growing out of reach on the rock face and above there was Bracken *Pteridium aquilinum* and a few plants of Broad Buckler-fern *D. dilatata*.

The first quarry area on the east side of the road had a few plants of Wall-rue *Asplenium ruta-muraria* on the rock face and some small plants of Lemon-scented Fern *Oreopteris limbosperma* on the south edge. A second quarry area to the south was a ferny paradise, where we added Borrer's Male-fern *D. borrieri* to the list. An exciting find in this area was two further large and healthy plants of Rigid Buckler-fern. Walking back down the road, there were further sightings of Hart's Tongue and Wall-rue on various walls. A brief excursion across the bridge near the Langden Brook car park to the ruined building added Polypody *Polypodium vulgare* to the list, growing above extensive colonies of Maidenhair Spleenwort and Wall-rue.

Due to the adjacent presence of sandstone there were typical moorland plants, such as Heather *Calluna vulgaris* and Bilberry *Vaccinium myrtillus*, in close proximity to the afore-mentioned calcicoles. We recorded a total of 104 plants.

ARACHNIDS (Geoff Oxford)

Sweep-netting and direct observation were employed to collect specimens, quite a few of which were immature and could not be identified to species. The stone walls along Langden Brook (SD6351) were occupied by two agelenids, *Tegenaria gigantea* and *Coelotes atropus*, the member of the genus that is common and widespread in the north and west of England. Sweeping the vegetation on the banks of the Brook also revealed *Araniella cucurbitina*, one of the two common, bright green cucumber spiders. The metal bridge was festooned with the giant orb-webs of *Larinioides sclopetarius*, a spider closely associated with artificial structures over or near water. Further up the road the quarry to the southwest (SD6251) produced several of the impressive *Drassodes cupreus* lurking under boulders in their silk retreats, while the wolf spider *Pardosa pullata* was abundant running on the ground, many of them with egg sacs. The side of the road revealed more *Coelotes atropus* beneath rocks. In the second quarry, to the north east of the road (also SD6251), *Textrix denticulata*, a very pretty agelenid, and the orb-weaver *Zygiella x-notata* were found in rock crevices. *Textrix* is another spider characteristic of the north and west of Britain, and rarely found in the southeast. Dunsop Bridge village hall (SD6550), the location for the rounding-up meeting, housed a large female Daddy-longlegs Spider with a clutch of newly-emerged young.

LEPIDOPTERA (Charles Fletcher)

The YNU Lepidoptera Group was invited to trap on the Friday night and several traps were set up in a variety of habitats, most along Langdon Brook in various sites up the valley as far as Langden Castle, with others at Losterdale Brook and Sykes Farm Wood. The night was warm and still and the traps had plenty of moths when examined on the Saturday morning. 104 species of moths were recorded, 54 of which were new for the 10k square SD65.

The most notable macrolepidoptera were mostly those which are typical of damp upland sites - Fen Square-spot, Light Knot Grass, Confused, Striped Twin-spot Carpet and Pinion-streaked Snout. Ling Pug (the upland form of Wormwood Pug) was present in several traps. Interesting microlepidoptera included *Coleophora tamesis*, whose larvae feed on Jointed Rush *Juncus*

articulatus, and the Heather-feeding *Pleurota bicostella*. *Hellinsia osteodactylus* is uncommon in VC64, the larvae feeding on Goldenrod *Solidago virgaurea* or sometimes Ragwort *Senecio jacobaea*. The most unusual moth was the Bracken-feeding *Monochroa cytisella*. This was only the second record for VC64.

COLEOPTERA (Terry Whitaker)

The Alder Beetle and a burying beetle *Nicrophorus vespilloides* (at SD628518) were listed during the meeting. An oil beetle was seen earlier in the year

HYMENOPTERA (Terry Whitaker, Sharon and Peter Flint)

The day's list included a female of the Giant Horntail or Giant Wood Wasp *Urocerus gigas*, a large sawfly strongly resembling a hornet, whose larvae feed by boring tunnels deep under the bark of conifer trees, which was flying in bright sunshine near the car park where there was a small conifer plantation; a green sawfly, possibly *Rhodogaster viridis*; the White-tailed Bumble Bee *Bombus lucorum* s.l.; the Red-tailed Bumble Bee *Bombus lapidarius*; and further up the valley a male Heather or Bilberry Bumble Bee *Bombus monticola*, recognisable by the very extensive ginger-red abdominal hair and as a male by the yellow hairs on its face.

PARASITIC HYMENOPTERA (Bill Ely)

Terry Whitaker's light traps in Crag Wood collected two specimens of the ophonid *Eniscophilus*. The adults of these ichneumons are nocturnal, orange with large eyes and in most cases with one or two small pigmented sclerites in the forewing membrane. Both of Terry's specimens had two sclerites in each forewing; one had a black tip to the abdomen (*E. ramidulus*, which has 25 Yorkshire records) and one had the body completely orange (the recently split *E. adustus* which is new to Yorkshire). Tony Hunter (World Museum, Liverpool) and I explored the valley of the Langden Brook, our captures including the wingless ichneumon *Gelis exareolatus* and the banchine *Lissonota gracilenta*, both new to VC64, and the orthocentrine *Megastylus impressor* which has been found once at the southwestern tip of the vice-county. This is the only record from the far west of the county within SD. The far west of VC64 is under-recorded for ichneumons but this visit increased the number for SD65 from 18 to 27.

FRESHWATER INVERTEBRATES (Sharon and Peter Flint)

We represented the Aquatic Ecology Section and started the day by collecting adult caddisflies and mayflies from the various light traps that had been running during the previous night. Many of the traps had been set some distance from Langden Brook and the numbers of both mayflies and caddisflies were low (one trap in fact having none of either) with a combined total of 15 species of caddisflies from all the traps including, in one of the traps furthest from the brook, a specimen of *Rhadicoleptus alpestris*, an insect of upland bog pools and mires. One trap had been set fairly close to Langden Brook and had caught seven species of caddisflies and one mayfly - the Blue Winged Olive *Serratella ignita*; this was in fact the only trap to have caught any mayflies and there were several specimens, both sub-imagines and imagines.

We remained in the two kilometre section of the Langden Brook valley upstream from the car park. We were joined here by members of The Friends of Bowland, some of whom carry out riverfly monitoring on their local rivers and were very keen to find out more about the aquatic life in this part of the beck, and practicing their identification skills under our supervision. We

had a very enjoyable day looking at the invertebrates, the most abundant of which was one of the Marbled Sedges (*Hydropsyche instabilis*) which was also the most abundant caddis in the light traps. Blue Winged Olive larvae were common in the beck together with those of flattened mayflies of the Family Heptageniidae and swimming mayflies of the Family Baetidae. Among the caddis we found the distinctive larvae of the case-bearing Silver Sedge *Odontocerum albicorne*, whose equally distinctive adults were found in some of the light traps. This part of Langden Brook had abundant macroinvertebrates, indicative of 'good quality' water.

MOLLUSCS (Adrian Norris)

The hot dry spell lasted until early afternoon when light rain started to fall, bringing out some of the slugs. We spent most of the day recording within the two limestone quarries situated on either side of the Trough of Boland at Sykes (SD628517), a site we visited last in September 2006. A total of 16 molluscs was recorded, two of them not recorded on our previous visit: the Smooth or Dull Grass Snail *Aegopinella nitidula* and the Great Grey Slug *Limax maximus*. We also looked at the stream and walls near to the meeting place at Langden Brook (SD632511), and on a wall we found a single specimen of the introduced 'Spanish Slug' *Ambigolimax valentiana*, which until a few years ago was recorded only from greenhouses. Discussions took place as to how it came to occur in this locality and at this altitude, 171 metres. We assumed that it must have been dumped by gardeners; apparently, the area is a bit of a dumping ground for such materials which are regularly cleared away by the district council. This would also account for the fact that we found the Worm Slug *Boettgerilla pallens* on both occasions, another slug normally associated with human activity. Sharon and Peter Flint found a single specimen of the Button or White-lipped Ram's Horn *Anisus leucostoma* in the fast flowing Langden Brook, a snail normally associated with still pools and rarely found in rivers.

BIRDS (Terry Whitaker)

Sightings included Grey Wagtail, Pied Wagtail, House Martin (at least eight nesting pairs at Sykes Farm and Cottages), Buzzard, Kestrel, Oystercatchers (near the water intake station), a flock of Gold Finches on thistles, several Swallows around Sykes Farm and several Heron. Most members noted the extremely high density of Pheasant throughout the area visited, voicing their worries that this was probably not very good for the conservation of invertebrates, amphibians and reptiles.



Ravenseat (VC65) 8 July 2015

INTRODUCTION (Terry Whitaker)

Although a calm night, it was unusually cold for August resulting in the six Robinson traps put out by Charlie Fletcher and myself in four 1 km squares being covered in frost by dawn. This led, however, to a gloriously sunny day for the majority of members and allowed Clive Owen to get his hay in. Thanks are due to him and Amanda Owen for access to their land around Ravenseat

Farm and help with planning the meeting. Amanda provided excellent refreshments of tea and fresh scones for the reporting meeting which took place in the open air near to the farmhouse.

PLANT GALLS (Tom Higginbottom)

Gymnosporangium cornutum, an orange micro-fungal galler found on Rowan *Sorbus aucuparia* leaves, was one of the day's most significant records. It is most frequent in parts of Scotland but in recent years has been found in Arkengarthdale and Swaledale; its alternate host is Juniper *Juniperus communis*. The discovery of Ramshorn Gall *Andricus aries* on an oak bud was a surprise and must be the first record for VC65. The gall was first recorded in Berkshire in 1907. In 2011 Bill Ely found an example at Lindholme (VC63), the first Yorkshire record. In more recent years there have been a number of records from the Doncaster area where the gall wasp seems well established. On the underside of Bracken pinnulets the 'black pudding' gall was discovered, caused by the midge *Dasineura pteridis*. The tips of some pinnules were rolled downwards by the fly *Chirosia grossicauda*. In a small plantation which included oak and Grey Alder *Alnus incana* were Marble Galls on oak buds and on some leaves there were examples of the Common Spangle *Neuroterus quercusbaccarum*. The reddish tongue-like growths of the fungal galler *Taphrina alni* were common on alder cones.

ARACHNIDS (Geoff Oxford)

This location yielded rather few arachnids, possibly because of its altitude and the relatively low diversity of habitats. In such places the money spiders (Linyphiidae) usually predominate but these were not particularly sought. Sweep-netting and direct observation were employed to collect the spiders noted below. In 1km square NY8602 the dry-stone walls revealed the usual suspects for such a habitat; *Segestria senoculata* and *Amaurobius fenestralis* were abundant. The agelenid *Tetrax denticulata* was not seen although some webs in the walls could have been of this spider, one closely associated with dry-stone walls in the north and west. A few mature female Garden Spiders were noted in the angles of the stone walls and around barns. Two species of wolf spiders were found on the acid grassland, *Pardosa pullata* and *Alopecosa pulverulenta*, both common and widespread. Immature *Amaurobius* sp. and penultimate female *Zygiella atrica* were associated particularly with the barns. The latter, although still immature, were identifiable from their coloration and the clear outline of the epigyne developing beneath the integument. The only linyphiid caught was a female *Microlinyphia pusilla*, swept from tussocky grass. In the 1km square containing Ravenseat itself (NY8603) more *Amaurobius fenestralis* and *Pardosa pullata* were found and a third species of wolf spider, *Trochosa spinipalpis* (identity to be confirmed). A female *Theridion varians* was discovered in its tangled web on a dry-stone wall near the farmhouse. *T. varians* is not normally found at altitude (here 400m although the altitudinal range given by the Spider Recording Scheme (SRS) account is up to 673m). This record plugs a rather large, empty gap in the SRS map for the spider.

LEPIDOPTERA (Charles Fletcher)

The YNU Lepidoptera Group was invited to trap on the Friday night and traps were set up in several areas – overlooking How Edge, on moorland at Friar Side and at Ravenseat Farm itself. Nights can be cold at this altitude and under a clear sky temperatures dropped, one sheet being stiff with a ground frost. The catch of moths was understandingly low but not without interest. Pale Eggar was present in several traps. This moth is now quite local in the county having

declined especially on the lower ground. Typical upland species trapped were Red Carpet, Confused and Lempke's Gold Spot.

Several others were noted by day on the Saturday: Green-veined White, Small Tortoiseshell, Red Admiral, Peacock, Small Heath and Ringlet. Butterflies were scarce with the exception of Small Heath, which was widely distributed up Whitsundale. Lots of Common Grey *Scoparia ambigualis* were day-flying and Haworth's Minor was flying in grassland. Several leaf-mining moths were found, the most notable from birches at How Edge, amongst which were mines of *Phylloporia bistrigella* and feeding windows of *Incurvaria pectinea*, the latter being the first record for VC65.

PARASITIC HYMENOPTERA (Bill Ely)

This was another very under-recorded hectad; two visits in recent years had pushed the total to 18 but that increased to a more respectable 35 during this meeting. There was one female of the tersilochine *Baricnemis agilis* in a small plantation upstream from Ravenseat Farm and this is new to Yorkshire. Tersilochines are beetle parasites and other members of this genus have been reared from pill beetles and rove beetles. *Lissonotas* are medium-sized ichneumons with very long ovipositors which are used to drill into stems and seedheads in search of moth caterpillars. Five species were collected here with four of them from the same small plantation, including one female *L. clypealis*. This is the fourth Yorkshire record and the first for VC65. Just one proctotrupoid wasp was collected, a male *Spilomicrus compressus* from the east bank of Hoods Bottom Beck; this is also the fourth Yorkshire record and the first for VC65, all previous ones being from VC63. Nineteen species of ichneumons were collected with two of them in all four samples and two others in three samples. This is 'normal' for most insect groups but ichneumons tend to be more scattered and fourteen of them appeared as singletons.

MOLLUSCS (Terry Crawford)

We searched the area around Ravenseat Farm and down the valley to the sharp bends in the stream at NY867022. The grasslands, mainly acidic, were rather dry and the rock outcrops in the stream gorges were of sandstones and shales. We found very few molluscs, only the Field Slug *Deroceras reticulatum*, Hedgehog Slug *Arion intermedius*, a juvenile *Arion ater* agg. (most likely the Large Black Slug), and the Garlic Snail *Oxychilus alliarius*. The farm itself yielded Bourguignat's Slug *Arion fasciatus* and the Worm Slug, both with a tendency towards human-associated or disturbed habitats. The Worm Slug has spread very successfully since first being noted in Great Britain in 1972; nevertheless, the isolation of Ravenseat and its altitude (400m) makes this an interesting record.



Note: The drawings of Honey Fungus *Armillaria mellea* used to separate the vice-county reports are by the late Dorothy Bramley (see *The Naturalist* (2015) 140: 68-70).

Honorary Membership of the National Biodiversity Network Trust awarded to Yorkshire Naturalists' Union member Bill Ely

Bill Ely received the award of Honorary Membership of the National Biodiversity Network (NBN) Trust at the NBN Conference in York on Friday 20th November, having been nominated for this award by the National Forum for Biological Recording (NFBR). Bill was formerly the Chairman of the Yorkshire Naturalists' Union Executive and is currently a member of the Editorial Board of the *Naturalist*, Chairman of the Entomological Section and Recorder for parasitic Hymenoptera. The award was presented by the NBN Trust Chairman, Professor Michael Hassell, who congratulated Bill on his significant contributions to biological recording and to the NBN (See Plate V, centre pages).

Bill was involved in the NFBR from its inception in 1986 and was its Chairman for many years. He was a member of the Coordinating Commission for Biological Recording, whose report, published in 1995, formally documented the need for an 'NBN'. Bill also created and developed Rotherham Biological Records Centre, which has submitted over 1.6 Million records from 11,650 taxa to the NBN Gateway. It is thanks to his dedication and enthusiasm that the 10km square SK49 within the Rotherham BRC area has the most records (ca 849,000) of any 10km square in the UK, despite this square containing no nationally important nature reserves and being highly urban. In 1962, in the first *Atlas of the British Flora*, the same square then was one of the most under-recorded in the country.

Bill Ely is the second YNU member to become an Honorary Member of the NBN Trust, as former YNU Secretary and President John Newbould received this award in 2013. John Newbould wholeheartedly endorsed NFBR's decision to nominate Bill Ely, and added his personal recollections of Bill's considerable achievements in support of the nomination.

John wrote: "I worked with Bill Ely as a volunteer shortly after he became Keeper of Natural History at Rotherham Museum after local government reorganisation in 1974. Bill quickly realised that for the Museum collections to have any relevance, a database of what, where, when and by whom was important in order to answer questions on distribution within the Metropolitan Borough. Initially he compiled species lists on paper stored by site with a separate card index for each species. Some ten years later, I had started to work with databases and Bill immediately picked up the importance of computers in biological recording. At the time, Stuart Ball was beginning to develop what we now know as Recorder, and Bill along with Tony Irvine at Norwich Museum were immediate supporters, providing ideas and testing software. To support the Museum's growing database, Bill worked tirelessly with Rotherham Naturalists' Society, Rotherham Ornithological Society, the Sorby Natural History Society and the Yorkshire Naturalists' Union. He also looked at areas where recording was unsupported and quickly became a skilled entomologist studying many groups but specialising in parasitic Hymenoptera."

Paula Lightfoot

YNU Calendar 2016

Up-to-date information can also be found on the YNU website at:

www.ynu.org.uk/events/general

Please note that the Marine and Coastal Section events are seashore bioblitz days organised by the University of Hull as part of the Heritage Lottery Funded project 'Capturing our Coast' and supported by the YNU.

Feb	27	Natural Sciences Forum Meeting and Executive Meeting. St Chad's Parish Centre, Otley Road, Far Headingley, Leeds LS16 5JT.
Mar	12	Entomological Section Recorders' Reports and Conversazione. Wilberfoss Community Centre, York. 10.30 to 16.30.
	13	YNU Lepidoptera Group Annual Meeting. From 11.00 at Bramham Village Hall.
	19	YNU Conference. National Science Learning Centre, University of York. See p215 for further details.
Apr	10	Marine and Coastal Section field trip to Selwicks Bay, Flamborough. Low water 0.7 metres at 13.30. Meet at 11.45 at the car park opposite the lighthouse at Selwicks Bay, Flamborough TA25370.
	16	Conchology Field Excursion to Cragg Vale, Calderdale (VC63) SE00012326. Meet at 10.30 on Church Bank Lane near church.
May	5	Entomological Section Field Meeting at Three Hagges Jubilee Wood, Escrick. Meet at 10.30 at the gate to the wood SE627394. Car parking is available.
	7	Bryological Field Meeting Holwick, Upper Teesdale (VC65). Meet at 10:00 at the Bowlees car park off the B6277 NY907282.
	7	Joint Conchological and Freshwater Ecology Sections Field Meeting to Bainbridge. Meet at 10.30 at SD93369018 on Cam High Road.
	8	Bempton Cliffs Bioblitz at RSPB Bempton Cliffs, Visitor Centre, Cliff Lane, Bempton, Bridlington.
	8	Marine and Coastal field trip to Runswick Bay. Low water 0.5 metres at noon. Meet at 9.30 in the car park at NZ809159 on Cleveland Way.
	12-13	NFBR Conference Lancaster University, Bailrigg, Lancaster LA1 4YW. See p220 for further details.
	14	VC65 Field Excursion Marrick Park, Swaledale. Meet at Marrick Park (SE091981) at 10:30 (limited parking).
Jun	2	Entomological Section Field Meeting at Three Hagges Jubilee Wood, Escrick. Meet at 10.30 at the gate to the wood SE627394. Car parking is available.
	5	Marine and Coastal Section field trip to Boggle Hole. YHA Boggle Hole, Mill Beck, Fylingthorpe, Whitby YO22 4UQ. Low water 0.7 metres at 11.00 Meet at 9.00 at the bottom of Mill Bank NZ954040.
	15	Plant Gall Section Field Meeting at Whitecliff Wood LNR, Cleveland. Meet at 10.30 by play area at NZ708192.
	18	VC61 Field Excursion Wharram Percy SE8664.
	23	Plant Gall Section Field Meeting at Thorpe Marsh. Meet at 10:30 by the reserve entrance by the Norwood Gate, SE594087, on Fordstead Lane.

July	6	Plant Gall Section Field Meeting at East Keswick Wildlife Trust. Meet at 10:30 in the car park at SE363453.
	7	Entomological Section Field Meeting at Three Hagges Jubilee Wood, Escrick. Meet at 10.30 at the gate to the wood SE627394. Car parking is available.
	9	VC62 Field Excursion Ashberry Pastures SE58. Meet at 10:30 at Ashberry Farm (SE571844) where off road car parking is available.
	23	VC63 Field Excursion Austerfield near Doncaster. Meet at 10.30 in the Mosaic Trust Field Centre car park in Austerfield, SK661949.
	24	Marine and Coastal Section field trip to Filey. Low water 1.0 metres at 14.30 Meet at 12.30 outside the café in the Country Park car park TA120814.
Aug	4	Entomological Section Field Meeting at Three Hagges Jubilee Wood, Escrick. Meet at 10.30 at the gate to the wood SE627394. Car parking is available.
	20	VC64 Field Excursion Ingleborough Nature Reserve SD772778.
	21	Marine and Coastal Section field trip to Sandsend. Low water 0.5 metres at 13.00 Meet at 11.00 in the car park next to Wits End café NZ860129.
Sep	1	Entomological Section Field Meeting at Three Hagges Jubilee Wood, Escrick. Meet at 10.30 at the gate to the wood SE627394. Car parking is available.
	7	Plant Gall Section Field Meeting at East Keswick Wildlife Trust. Meet at 10:30 in the car park at SE363453.
	11	British Plant Gall Society Field Meeting at Angler's Park, near Wakefield. Meet at 10:30 in the car park at SE373153
	11	Conchological Field excursion to Carnaby (VC61). Meet on Church Lane TA14576550.
	17	Freshwater Ecology Section Field Meeting at Ribbleshead Quarry. Meet at 10.30 in the car park at SD765788 up the track opposite the hotel.
	18	Marine and Coastal Section meeting to South Bay, Scarborough. Low water 0.5 metres at 12.00. Meet at 10.00 in Holbeck car park in South Bay, Scarborough TA049868.
Oct	8	Bryology Section Field Excursion to Caseker Gill near Kettlewell (VC64) Kettlewell SD967722.
	8	Conchological section Field Excursion to Egton Bridge, North Yorkshire (VC62) NZ80450534.
	15	YNU Executive Meeting St Chad's Parish Centre, Otley Road, Far Headingley, Leeds, LS16 5JT.
	15	Entomological Section AGM at Doncaster Museum, from 11.00 to 16.00.
	29	Conchological section AGM 17 West Park Drive, Leeds, LS16 5BL.
Nov	5	YNU AGM and Natural Sciences Forum meeting. Venue to be confirmed.

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Please look at a recent issue of the journal for a general idea of how to present your article. Also see *The Naturalist Guide to Consistency* on p77 of The Naturalist 1079 and please **avoid** the following:

- using any paragraph formatting and line spacings other than single.
- using tabs to tabulate information (please use MS Word table format).
- inserting any figures, graphs or plates into the text; indicate their proposed locations in the text and send them as separate files.

Good quality, high resolution images are very welcome and should be sent as .jpg files, with a separate MS Word file containing the caption and name of the person to whom the image should be attributed.

If electronic submission is not possible, contributions should be sent to Dr. A. Millard, Woodland Villas, 86 Bachelor Lane, Horsforth, Leeds LS18 5NF (Tel. 0113 258 2482).

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