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Front cover: The Opah fish *Lampris guttatus* Ralph Pace (NOAA Fisheries) (see p 10).

Back cover: Attendees at the 2023 YNU AGM in York.

Seven hitherto unpublished letters from John Cordeaux to Sir Charles Anderson

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Introduction

In 2021, I was gifted a book containing seven original letters written by John Cordeaux (1831–99), which were bound into the centre. Cordeaux requires no introduction to many Yorkshire Naturalists' Union members, having published numerous notes and papers in *The Naturalist*, *The Zoologist* and *The Field* over many years, plus two works on the birds of the Humber District (Cordeaux, 1872, 1899). Cordeaux's interests and writings are forever entwined with bird migration, and, especially, migratory connections between the north-east coast of England and the German island of Heligoland. The latter was a place Cordeaux visited in 1874 and 1887 and where he struck up a lasting friendship with its famous resident bird recorder, Heinrich Gätke (Cordeaux, 1888).

A general appreciation of the importance of bird migration came from field workers such as Cordeaux and John Harvie-Brown, who were described as 'two of the most significant in Britain', due to their instigation of bird migration studies around the coast of Britain in 1879 (Newton, 2010). The studies were under the auspices of the British Association for the Advancement of Science for nine years and involved Cordeaux and Harvie-Brown annually sending out printed recording schedules to 100+ lighthouses and lightships, whilst typically receiving almost two-thirds back. Such information provided an insight into the species and numbers attracted to the lights (Allen, 1976; Newton, 2010).

An obituary of Cordeaux, written by William Eagle Clarke, was published in *The Naturalist* in 1899 and, whilst not wishing to repeat much of the content, it is worth quoting Eagle Clarke's opening words when he said that 'this journal loses one of its oldest and most valued contributors; Yorkshire and Lincolnshire, a distinguished naturalist; and British ornithology, a leading authority'.

In 1985, the Spurn Bird Observatory published Brian Pashby's book *John Cordeaux Ornithologist*. This drew on some of Cordeaux's correspondence with Heinrich Gätke and Professor Alfred Newton, on four surviving notebooks which began in May 1876 and on an extensive range of published material (Pashby, 1985). However, despite being 'very welcome' as a 'most creditable attempt to draw together the various strands of published and unpublished material' the publication received criticism from that reviewer regarding its presentation and insufficient research (Seaward, 1986). Cordeaux's four ornithological notebooks covering the years 1876–88, plus a notebook containing ornithological and general notes for ca.1898, currently reside in the British Trust for Ornithology's (BTO) archives at Thetford, having been transferred from Hull University Archives in April 2004. At the Hull History Centre, photocopies of the above notebooks, copies of articles and several hundred

letters, are available to view by arrangement ¹. Given the available sources of information, an opportunity remains therefore for someone to pen a comprehensive appreciation of Cordeaux.

The purpose of this paper is to put into the public domain details of a series of letters written by Cordeaux during the period 1875–87, showing his wider interests, opinions and passions. The letters are hitherto unpublished and add to the chronology and content of Pashby's book. I think that the varied content of the letters, with observations on birds, insects and even man's impact on the environment, justifies their content being published in full.

Background to the letters

In April 2020, David Wilson, former BTO Secretary and later a bookdealer, passed away leaving behind a huge store of books and ephemera collected over many decades (Clugston, 2020). Shortly after David Wilson's passing, David Clugston and I were engaged by the executor of the estate to provide advice and assist disposal of the collection. By way of thanks I was allowed to keep a few special items of interest and this volume, titled *Migration of Birds*, was one of them. The volume's history immediately prior to David Wilson is unknown.

Being a collector of Yorkshire ornithological material, I appreciated the importance of this unique volume, which contains three *Reports on the Migration of Birds* published in the late 19th century plus the seven letters from Cordeaux. The recipient was Sir Charles Anderson, whose coat of arms is impressed on the spine. The volume is one in which Sir Charles had collated several offprints, plus the letters, and had them bound up to suit. The title on the spine is simply *Migration of Birds* and the front paste-down carries the typed inscription 'BOUND BY POTTER & SONS, YORK'.

The original owner was Sir Charles Henry John Anderson, 9th Baronet of Broughton (1804–91). Sir Charles had a broad range of interests and in 1847 published *A Short Guide to the County of Lincoln* which includes *inter alia* a list of birds recorded in that county (Ballance, 2000).

The volume

The volume, measuring some 14 cm in width and 21.5 cm in height, is bound in half leather, with worn marbled side covers and plain dark buff endpapers (Figure 1). The contents comprise the following:

1. Three *Reports on the Migration of Birds in the Spring and Autumn of 1880* plus similar reports for 1881 and 1882, being the Second (published in 1881), Third (1882) and Fourth (1883) Reports respectively. Each contains a summary of the investigations of a Committee on Migration, appointed by the British Association for the Advancement of Science.
2. Tipped in at the front of the volume is a printed circular from Cordeaux to light keepers thanking them for help given during the past five years plus instructions for the sixth year. The circular is dated June 1885 (Figure 2).
3. Seven letters (dated from 1875–87) from Cordeaux to Sir Charles.
4. Bound in at the rear is an offprint (with a specially printed front cover) of the Great Bustard account from pages 65–68 of Clarke & Roebuck (1881), plus the additional information on Great Bustard included in the Appendix at pages 136–137.

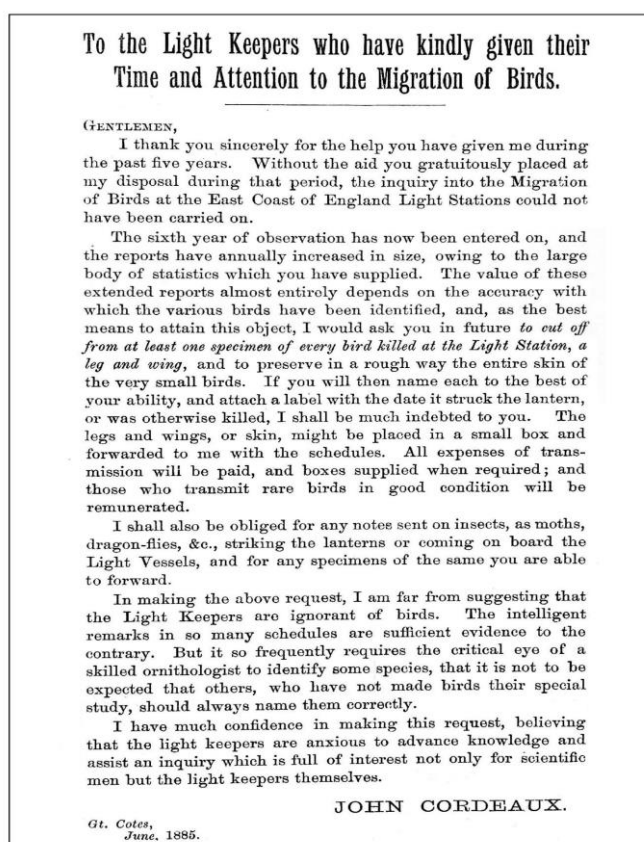


Figure 1. (above left). The *Migration of Birds* volume, owned by Sir Charles Anderson and containing the seven John Cordeaux letters.

Figure 2. (right) Circular from John Cordeaux to light keepers on the east coast of England.

The cover of the third (1882) report includes the written note 'with Mr Cordeaux's Compts', whilst the preface is signed 'John Cordeaux. Secretary to the Committee. Great Cotes, August 1881.' The first page of the second report also carries the note 'Sir C. H. J. Anderson Bart: from John Cordeaux.' All the inscriptions appear to be in Cordeaux's handwriting.

Bound in the middle are Cordeaux's letters on notepaper measuring 11 cm wide and 18 cm tall. The subject matter is wide-ranging, including discussion on a cross-section of natural history subjects plus personal observations on changes in bird populations and insect migration. Interestingly, early feedback (see Letter 6) is given on his second visit (1887) to Heligoland which had taken place during the previous month.

General notes regarding the transcript

1. The letters are difficult to read hence transcripts follow below. In some instances, it is difficult to discern the difference between a full-stop and a dash, as used by Cordeaux, so a best guess has been made.
2. There are three instances where a word is unreadable and these words have been placed in square brackets and a suggested word, or comment, inserted.
3. A few current species names have been added in square brackets for clarity.

The John Cordeaux letters:

Letter Number 1

Cotes Magna, Ulceby Jan 5th '75

Dear Sir Charles,

I am greatly obliged by your long & very interesting letter. The extracts I have sent to my friend Professor Newton who I know will thoroughly appreciate them – I have also copied your ornithological notes into the interleaved copy of my book for future reference.

The local names of the Green Woodpecker is curious, showing as it does, how long some words linger in provincial vocabularies, handed down through many generations. I have several instances of this in North Lincolnshire – instance the local name of the Cuckoo, gowk, – Swedish gök ² –

In the south spring of last year there was an old cock starling in my garden which exactly mimicked the cry of the Curlew, a flight of which passed over the house each morning to their distant feeding grounds in the Wolds. The imitation was most ludicrous & I have several times looked up expecting to see the Curlew –

A bittern was shot in the adjoining parish to this (Bradley) in November last. This bird now never occurs excepting as a rare winter visitant.

I have seen the Great Grey Shrike in this parish in the winter. It is a common migrant (as well as the smaller species *Lanius minor*) in Heligoland every autumn & winter. I was over in this island in the Autumn & collected many remarkable facts from the resident naturalist there (Mr Gatke) on the migration of birds – these notes will appear in the April number of 'The Ibis' –*

** I find the Great Shrike has a local name in N.E Lincolnshire – Matterer ³, so that it can not be very rare in the coast district – I have no doubt this word is taken from its cry resembling the knocking of two pebbles together.*

When riding home from Caistor on Saturday I noticed the most singular Arctic effect of sunlight on the snow. The rain of Friday night had frozen in a hard shining crust over the snow clad hills – when I reached the low country on the N of the hills the sun was setting and the effect of the almost horizontal rays of light streaming across the polished surface of the wold gave the appearance of solid masses of semi-transparent porcelain – later they flushed to a delicate rose, and then all was grey. I have seen similar effects of sunlight in high altitudes at midnight, on the rolling slopes of the Hardanger field.

Believe me

Yours very faithfully

J Cordeaux

Letter Number 2

Great Cotes, Ulceby Sep 12th '81

Dear Sir Charles,

Your letter was forwarded to me just after I left York. The report on migration was a great success and I consider myself especially fortunate in obtaining a grant from the Association of Fifteen Pounds towards the expenses of the enquiry.

With regard to what you say about the decrease of certain species of birds it has been very marked in this district during the thirty years I have known it – Ringdoves, Stock-doves, Starlings and Rooks have certainly increased.

The Martin has also recently bred in some numbers since we weather boarded the ends of our cottages and farm houses. The sparrows I find are the greatest enemy to the Martins, ousting them from their nests and taking possession whenever they have a chance.

The dotterel formerly common example in the first week in May is now rarely seen; and all our shore waders as grey-plover, godwit and redshank are not really as numerous.

Goldfinches are rarely seen, an exception being last year in the autumn & winter when many small flocks of immigrants came in – also innumerable bullfinches.

The very marked scarcity all over England of the Song and Mistletoe Thrushes etc was occasioned by the intense severity of recent winters, when Thrushes perished, and coupled with this the very bad breeding seasons of 1879 and 80 has caused a very marked decrease in many species.

At Heligoland the migration of insects is quite as well marked as that of birds. Nearly all the European butterflies and great numbers of Continental moths, some very rare, both diurnal and nocturnal, turn up on that wonderful crag – one of the best Zoological stations in Europe.

Many insects cross to this side of the North Sea. I have of late years met with instances of the Camberwell Beauty (the continental variety) in North Lincolnshire. Some years ago numerous examples of the Convolvulus Hawk Moth were washed up on the shore at Spurn, doubtless having perished in migration – several locusts also were taken at or near Spurn in the summer of 1880, and I saw two specimens of the Deaths Head Hawk Moth captured on board fishing smacks on the Dogger Bank.

The immense number of Colias edusa [Clouded Yellow] which occurred in various parts of the country in 1877 were doubtless immigrants. They covered this parish in a broad stream from E to W and took about one day in passing, scarcely any being seen on the second day. I traced the flight as far as Limber. There was also great immigrations of the Painted Lady into Southern England two years ago – last year I took note of the number of Spotted Burnet Moths in some low meadows near [a place name]. The tops of the welshed-thistles were covered with them as close as they could sit – and the empty cocoon case might be found on every prominent bent. Common also in the same locality was these pretty emerald-green flies, I believe known as the 'Green Woodman'. This year both these have been remarkable by their scarcity – so likewise the butterflies – Great Cabbage-white, Red-Admiral, Meadow-brown and orange-tipped – I have not seen a single painted Lady, and only two Red-Admirals.

The intense frost of last winter, which penetrated far into the ground, was probably the cause of this scarcity, in fact it has been one of the worst insect years I remember.

Have you noticed that the late severe winter has killed nearly all the Lombardy poplars in the County? –

Excuse long etc letter

Yours very truly

John Cordeaux.

Letter Number 3

Great Cotes, Ulceby 25th Sep '83

Dear Sir Charles,

I am glad you like the Migration Report, it cost me a great amount of time and trouble. We certainly require more stations on the South Coast to shew direction of flight. I have many notes on the migration of insects, some of which are very curious.

I may perhaps publish these shortly in a separate form – There can be no doubt whatever that insects do regularly cross the North Sea.

I saw an account in one of the papers of the great tidal wave on the west coast of Ireland which presumably had some connection with earthquake disturbances – I think it is Sir Ralph Payne Gallway [sic], in his recent work 'The Fowler in Ireland', who mentions the curious fact that on the west coast, even on the calmest days, and without any apparent cause an enormous wave has come in from the Atlantic & swept the coast far above ordinary tide marks.

We had a very successful meeting at Southport, upwards of 2,500 tickets having been issued to members and associates.

I am

Yours very truly

John Cordeaux

(9) skins Blue-throated Warblers – immature birds, have been obtained on the Norfolk coast this Autumn

Letter Number 4

Great Cotes, Ulceby 16 June 84

Dear Sir Charles,

Thank you for the ornithological notes which are very interesting –

The range of the Hawfinch in this County has in late years certainly expanded, and they are now seen in localities in North Lincolnshire where formerly unknown – They have been recorded in two consecutive years – 1882-83 – from the Inner Dowsing lightvessel, moored seventeen miles E.N.E. of Sutton on the Lincolnshire coast in the autumn, so that it looks very much as if some come to us from the continent. This is made more probable by the fact that they migrate regularly across Heligoland.

We have this year had the Nightingale singing in the new fox-cover of Aylesby. Also for some years past a pair or two in Bradley Wood, and always several in Irby Dales wood. I am told also it is becoming quite common in Holderness –

Thirty years ago it was quite a rare circumstance to see a Stock dove here, and now they come in quite large flocks to newly sown fields of peas or tares in the marshes.

The Turtle-dove also comes regularly in the spring to Riby & the woods near Pelham's pillar⁴, and seldom an autumn passes without our seeing one or two in this parish on migration, sometimes for days about stacks of oats out standing in the fields.

I see the thrushes in the garden have, through the long protracted drought, taken to smashing snails against some favourite stones, just as they do in severe frosts, and the young rooks which have taken to the fields are in a starving condition.

*We have had very few butterflies or moths – an exception is *Pyrameis cardui* [Painted Lady] which is certainly more numerous than it has been for many years past.*

You will see an interesting note from Heligoland on the migration of moths there in the autumn of 1883 in our next migration report, a copy of which I hope shortly to send.

Believe me

very faithfully yours,

John Cordeaux

Letter Number 5

[NB home address not handwritten as previously but with an embossed letterhead]

Great Cotes

Ulceby

12th Feb 87

Dear Sir Charles,

I was very pleased to get your note this morning. I need scarcely say I shall be very glad to send you any papers I write this year in the subject of migration, as well as the Report of the Committee when it comes out in July. I enjoyed my short visit to Gainsboro very much, it is always a great pleasure to meet those who are interested in like subjects as ourselves. I fear much, as has been said, that all sylvan & rural England is slowly being dispeopled of her 'charms', of her shy populations in fur, and fish, and feather.

I am told that on some of our streams the Mayfly is no longer found. How it is that the delicate creature and other insects are disappearing, as they undoubtedly are, from our midst, it is difficult to say, probably many causes are working in the same direction and the more man seems to interfere for his own purpose with nature so surely do we find bird, flowers & insect passing away before him. I know that in the neighbourhood of large towns like Manchester that coal smoke is blamed for much of the mischief and I have very little doubt, as you assume, that the suspension of noxious gases in the atmosphere to be precipitated by rain is the chief factor in the cases.

I do not think that, in a natural way, dry summers or unusually scarce frosts conduce much to the permanent loss of insect life, for we find that nature invariably [raises] up the average again & corrects the balance for a time [only] displaced.

We have had some very good notes from the Lighthouses this year. The Yellow-browed Warbler – Phylloscopus superciliosus, turned up on Sep 25 at Sumburgh Head L.H. Shetland. The Harlequin Duck (3) on the Farne Islands, and the Mediterranean Black-headed Gull, on Breydon Broad, Norfolk. We have also the notice of an American Red-winged Starling killed on the Nash L.H. Bristol Channel – that the birds do come as they did ages since I do believe but it wants much working out yet before we can be in a position to maintain this fact. Bird lines seem to be permanent or nearly so, and I have no doubt will continue to follow the same routes long after all these voices are silent.

I am, dear Sir Charles

yours very truly

John Cordeaux

Letter Number 6

Great Cotes, Ulceby 6 Aug 87

Dear Sir Charles,

I was much pleased to get your letter with your notes in connection with the birds & insects in your neighbourhood. I am surprised at what you tell me about the scarcity of insects, it is many years since I have seen so many moths and butterflies in my garden, on warm nights the honeysuckle bushes have literally swarmed with a cloud of moths, and I find it has been generally the same in this district.

I wish also I could endorse your remark about the house fly, but alas they are a perfect plague in our kitchens & we have had to use various means of getting rid of them, thousands perish yet thousands take their place.

I have just returned from Heligoland after a very pleasant sojourn in that small island. I saw very little of migration as this is the sunny season, just the period when the stream of migrants seems the lowest – in fact dead low water – a few crossbills – 20–30 a day were coming in & I saw some in my friend Mr Gatke's garden. I was fortunate overseas in procuring several very interesting bird skins of the rarest wanderers to the island, including the Arctic bluethroat (the red spotted bird) Lapp bunting, Ortolan, Tawny pipit, short-toed lark, Nilsson's pipit ⁵, red-throated pipit and that great pipit best known as Anthus Richardi [Richard's Pipit] from the steppes of Asia.

The best thing I got however, was an example of the Yellow-browed Warbler, a small wanderer from Asia – it breeds in Turkestan and Cashmere – yet curiously example some turn up each Autumn in Heligoland. You will see by the migration report that one was taken in September against the lantern of the Sumburgh Head L-H in Shetland. I am going to exhibit the bird at the meeting of the British Association in Manchester.

Mr Gatke's collection of Heligoland birds is very wonderful when you consider the distance they have come. In instances he has 16 species of buntings in one case, out of 17 known to have occurred. The British list includes 9 altogether. I saw a few waders on the return journey on Sandy island, sanderlings, grey-plover and redshanks, but during much of the day the island is crowded by visitors who have crossed over to bathe, after which they sit for hours on the long shingle beach in picturesque and many-coloured groups, idly watching the long rollers thundering on the reef, like the Lotus eaters

“they sat them down upon the yellow sand; Between the sun & moon upon the shore; And sweet it was to dream of Father-land, of child & wife” ⁶

Only the sand is not yellow but white, and, when bathing you can see the smallest shell at the bottom.

The migration of insects across the island is quite as wonderful as that of the birds, and Mr Gatke's collection contains moths which have never yet been recorded north of Vienna. On one morning I watched from the cliffs, the white cabbage butterflies coming in from the eastward. The nearest land to that direction is forty miles. I have myself seen butterflies on the wing going westward in the middle of the North Sea, and they did not attempt to alight on the vessel but kept on in a direct course for the English coast.

I have just heard of a cock Pheasant flying on board one our Grimsby smacks when one hundred miles from land – but this must be enquired into, if correct it is an extraordinary flight.

My son who is in India with his regiment (the Bays) has been up in Thibet at a great altitude, & is sending home some bird skins, he tells me that he saw the white-spotted bluethroat on several occasions near his camp. This is the central European form or race of the bird & it has never been recorded so far East before.

Hoping you will excuse this long letter

Believe me

Yours very truly

John Cordeaux

Letter Number 7

Great Cotes, Ulceby 24 Sep 87

Dear Sir Charles,

Your letter was forwarded to me in the North where I have been staying for a fortnight in Upper Teesdale. This is the breeding haunt of the Ring-ousels, yet I never saw one. Any number of thrushes, blackbirds and mistletoe thrushes feeding on the rowan berries, but no ring-ousels.

They had all migrated to the south & left the Yorkshire dales till they return again in Spring. At this season they occur regularly on our coast here, also at Spurn, where I seldom go in September & October without meeting with them – These I believe are chiefly birds from the hills of Europe. The regular residents on the moors & fells passing directly from the north to the south through the country, so that at this season they may turn up anywhere.

The garden of the Castle of Lincoln is, I'm sure, a curious place for a ring-ousel to drop in. I have frequently seen them at Great Cotes in the Autumn amongst blackbirds & in the hedgerows. Late in the Autumn we have frequently at Spurn (October) a considerable influx of old cock ring-ousels.

This has been a wonderful season for waders, the Curlew sandpiper & Little stint having turned up in large numbers on Sep: 2 – with the strong gales from N.E. likewise red-breasted knot and sanderlings – all these nesting far within the Arctic Circle. The Eared Grebe [Black-necked Grebe], Lapp buntings and Temminck's Stint have also occurred at Spurn.

I have not yet read Mr Lester Arnold's book ⁷ but I hear it is well spoken of, so also is Mr Fowlers little work ⁸, Bird Life, a series of essays in connection with English and European ornithology. He is, I believe, a fellow of Oriel College.

I have this morning received a box of moths taken at the lantern of the Swin Middle Lightvessel, one of which I do not know so I am forwarding them to an expert. The migration of insects has got to be written & it is quite as wonderful as that of birds. In hours together on some nights in the Autumn moths are passing within the circle of light thrown out by the lighthouse at Heligoland, all going Westward, so it is quite reasonable to suppose many do succeed in reaching us.

Believe me

Yours very truly

John Cordeaux

Acknowledgements

David Clugston and Martin Limbert are thanked for their advice and encouragement throughout the development of this paper. Peter Wilkinson also offered suggestions in the early stages and Lesley Hindley (BTO Archivist) provided information concerning Cordeaux's notebooks. Peter Tuffrey is thanked for enhancing Figure 2 with some digital restoration work.

End notes

1. The Hull History Centre's John Cordeaux collection includes photocopies of lecture notes, copies of articles, four ornithological field notebooks (1876–88) and several hundred letters, including over 100 from Heinrich Gätke (1874–95) and 95 from Professor Alfred Newton (1868–99).

2. Page 70 of *Birds of the Humber District* refers to the provincial name for Cuckoo as being 'Gowk (Swedish, Gök)' (Cordeaux, 1872).

3. Page 16 of *Birds of the Humber District* (Cordeaux, 1872) shows 'Matterer' as being the provincial name for Great Grey Shrike. However, the species is referred to, by Cordeaux, as the 'Mutterer' in *The Zoologist* page 10 (Cordeaux, 1877).
4. Pelham's pillar is a monument dedicated to Charles Anderson-Pelham, 1st Earl of Yarborough who died in 1846. The pillar is in Cabourne, on part of the Yarborough estate at Brocklesby and was a viewing tower built to enable the earls to view the estate.
5. Nilsson's Pipit *Anthus rupestris* is now known as 'Scandinavian Rock Pipit' *Anthus petrosus littoralis*; see *Birds of the Humber District* page 44 (Cordeaux, 1872).
6. Cordeaux described his visits to Heligoland in 1874 and 1887 in *The Naturalist* for January 1888, where the poem and part of the follow-up line are quoted verbatim (Cordeaux, 1888).
7. Presumed to be *Bird Life in England* by E. L. Arnold, published in 1887.
8. Presumed to be *A Year with the Birds* by W. Warde Fowler, published in 1886.

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The Opah *Lampris guttatus* (Brünnich) in the North Sea: A fish of rare occurrence

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Introduction: In researching occurrences of Sunfish *Mola mola* in the North Sea (Howes, in prep.), it became clear that some descriptions and photographs of specimens were of the much less frequent Opah *Lampris guttatus*, variously referred to as the Kingfish, Moonfish and Jerusalem Haddock (see front cover). This member of the Lampridae is closely related to the

Deal-fish *Trachipterus arcticus* and Oar-fish *Regalecus glesne* and has a worldwide distribution in tropical and temperate oceans occurring in waters of 100 to 400 metres in depth in open seas where it feeds mainly on squid, though fish species, including Blue Whiting *Micromesistius poutassou*, Silvery Pout *Gadiculus argentatus* and Hake *Merluccius merluccius* are also taken (Wheeler, 1978). Crustacea and cyphomedusae have also been noted as prey (Quigley, 2001). Its jaws are small and toothless but protrusible, which may be an adaptation for this otherwise inflexible fish to take its highly agile squid prey by suction feeding.

Description: The Opah is a large fish, growing to at least 1.5m in length and weighing around 75kg and up to 272kg (Wheeler, 1978). Its body is deep and laterally compressed (discoid), the fins long, curved and crimson in colour. Its flamboyant body colourings grade from dark steely blue above, through rose red on the flanks to silvery white below, this basic plan decorated with a pattern of circular milky white spots. Its striking body shape, colours and patterning invariably catch the attention of even the most hardened workers in the fishing industry, with press reports of captured specimens routinely describing the Opah as the most beautiful of fish. Quigley (2001) identifies examples of vernacular names reflecting this aesthetic, such as the Icelandic Gudlax (God's Salmon), German Gotteslacks and Danish Glansfisk (Glittering Fish).

History in UK waters: In UK waters there is a long history of chance captures of Opah at depth by commercial long line fishing on the edge of the Atlantic continental shelf along the western seaboard of the British Isles. Specimens are occasionally caught in trawl nets and are rarely found (cast up) as coastal strandings. They are also very rarely caught by recreational sea anglers.

History of occurrences in the North Sea: The earliest North Sea (and British) record was a specimen encountered in 1664 at Queensferry in the Firth of Forth, which is figured by Sir Robert Sibbald in his *Scotia Illustrata*. During the 18th century, also in the Firth of Forth, one was taken at Leith (the port for Edinburgh) in 1750 (Yarrell, 1835-1859) and one reported off Cramond "some years ago" (during the 18th century) (*The Scots Magazine* 1 July 1808 p.7). A specimen was taken in Filey Bay, East Yorkshire in about 1767 (Clarke & Roebuck, 1881) and one was stranded on the beach at Blyth, Northumberland, 12 September 1769 (*Caledonian Mercury* 29 October 1769 p.3).

Although Opah were regularly landed at the trawler ports along the east coast, notably, Aberdeen, North Shields, Hartlepool, Hull, Grimsby and Yarmouth, the accompanying press reports frequently revealed many of these had been caught outside the confines of the North Sea, usually around the Orkneys, Shetlands and the Faroe Islands, though one was from the Westman Islands off Iceland. These examples, though retained in the database, were excluded from the following review. The pencil and water colour illustrations of fish by the celebrated naturalist William MacGillivray (1796-1852) and donated to the Natural History Museum (South Kensington) in 1892 include an Opah (see Figure 1, p12). These were thought to have been based on specimens he encountered in his local (Aberdeen) fish market, probably during the 1830s and 40s.

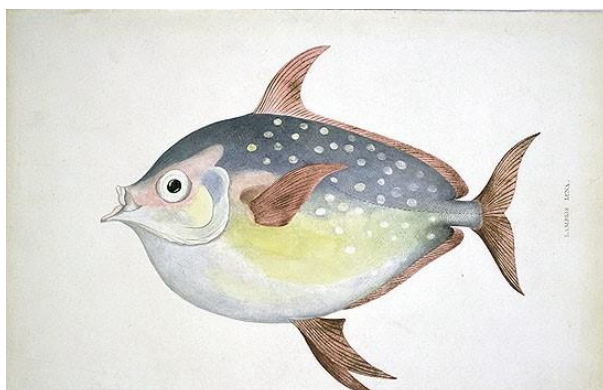


Figure 1: A pencil and water colour portrait of an Opah by William MacGillivray. Image from the Library and Archive of the Natural History Museum.

Aims and Sources: This study seeks to reveal temporal and seasonal patterns of occurrence of the Opah in the North Sea. Though UK historical ichthyological sources such as Pennant (1776) and Yarrell (1835-1859) provide important early landmarks, associated comments are necessarily based on few specific examples. Similarly, regional and local natural histories such as Hinderwell (1811), Clarke & Roebuck (1881) and Spaul (1956), though important as landmarks, are thin on detail and give misleading impressions of status.

Two studies, by D’Arcy Wentworth Thompson (1918) and Quigley (2001), demonstrated that volumes of records were indeed available. D’Arcy Wentworth Thompson collated 60 records from the Aberdeen Fish Market 1883 to 1915. Declan Quigley (2001), based at Sherkin Island Marine Station, Co. Cork, collated a data set of 40 records, generated by the Irish fishing industry 1802-1996. His data enabled the preliminary analysis of periodicity, seasonality, mean size and weight, and distributional preference in Irish coastal waters. Quigley’s (2001) procedures have formed the basis of the present study.

The use of the British Library digital archive of local and regional newspapers (www.britishnewspapersarchive.co.uk) has revealed a rich source of records hitherto missed by students of marine fish. As an experiment, this study undertook a search of 19th to 21st century local and regional newspapers, with a view to abstracting records of Opah for the North Sea coasts of Scotland and the English counties of Northumberland, Durham, Yorkshire, Lincolnshire, Norfolk, Suffolk and Essex.

Results: From press reports between 1800 and 1999, 87 records of Opah, deemed to be from the North Sea, have been gathered in the geographical areas of Scotland (24), Northumberland (14), Durham (3), Yorkshire (26), Lincolnshire (7), Norfolk (11) and Suffolk (2).

Periodicity: Table 1 shows that occurrences have been recorded during each decade from 1800 to 1999. A notable peak of 16 fish was recorded in the decade 1900-1909; other decadal oscillations or trends over the two centuries from 1800 seem inconclusive. The pattern of occurrences aggregated per fifty-year periods from 1800 is 18 (1800-1849), rising to 21 (1850-1899), peaking at 34 (1900-1949) and falling to 10 (1950-1999).

Table 1: Numbers of Opah records along the UK North Sea coast per decade 1800 to 1999 from north to south [¹Northumbria = Northumberland & Durham. ² East Anglia = Norfolk, Suffolk & Essex].

	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990
Scotland	0	0	2	1	2	3	0	0	0	3	3	1	2	1	2	0	1	0	1	2
¹ Northumbria	0	0	0	1	1	0	0	1	0	1	7	2	1	1	0	0	0	1	1	0
Yorks	1	0	0	1	2	4	3	1	2	1	2	2	0	1	4	1	0	0	1	0
Lincs	0	1	1	0	0	0	1	0	0	0	3	0	0	0	0	0	1	0	0	0
² East Anglia	0	0	4	1	1	0	0	0	0	1	1	0	1	0	0	0	0	2	1	0
Total	1	1	7	4	6	7	4	2	2	6	16	5	4	3	6	1	2	3	4	2

Seasonality: Of the 80 Opah records for which the dates of occurrence were available, Table 2a separately lists monthly totals for each of the recording regions from north to south. The totals for the entire North Sea coast shows a rise of occurrences from May to a summer peak in July and August and a decline to October. A brief rise in November is followed by a long tail of occurrences through to April.

Table 2a: Monthly totals of records along the UK North Sea coast from north to south [¹Northumbria = Northumberland & Durham. ² East Anglia = Norfolk, Suffolk & Essex].

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Scotland	0	0	2	0	2	1	12	6	0	1	1	0	25
¹ Northumbria	0	1	0	0	0	3	2	5	3	1	1	1	17
Yorkshire	1	2	0	1	1	0	3	4	4	1	4	1	22
Lincolnshire	0	0	0	0	0	0	1	1	3	0	1	0	6
² East Anglia	1	0	0	0	1	0	2	0	0	2	2	2	10
Total	2	3	2	1	4	4	20	16	10	5	9	4	80

In order to amplify any regional occurrence patterns, table 2b (p14) compares monthly occurrences cumulatively in the northern (Scottish) and southern (English) zones of the North Sea.

Table 2b: Monthly occurrences of Opah in the North Sea off Scotland and England

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Scotland n=25	0	0	2	0	2	1	12	6	0	1	1	0
England n=55	2	3	0	1	2	3	8	10	10	4	8	4

The Scottish data indicates an intermittent rise to an early summer peak in July, reducing in August with minimal presence in the autumn months of October and November. It may be significant that there are no Scottish occurrences during December, January and February, though there are two fish in March. The southern (English) cohort shows that the rise in summer numbers builds later, peaking in August and September. Further, an autumn peak occurs in November with occurrences remaining through to April. A re-examination of the data archive has provided 14 examples of Opah found stranded on the shore (see Table 2c).

Table 2c: Monthly numbers of Opah stranded on the UK North Sea coast.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1				1	1		2	4	2	2

The pattern of strandings from September, through to February, suggests that these sub-tropical fish may be being subjected to thermal cropping. The summer strandings in June and July may be evidence of Opah being poorly adapted for life in a shallow turbulent water body.

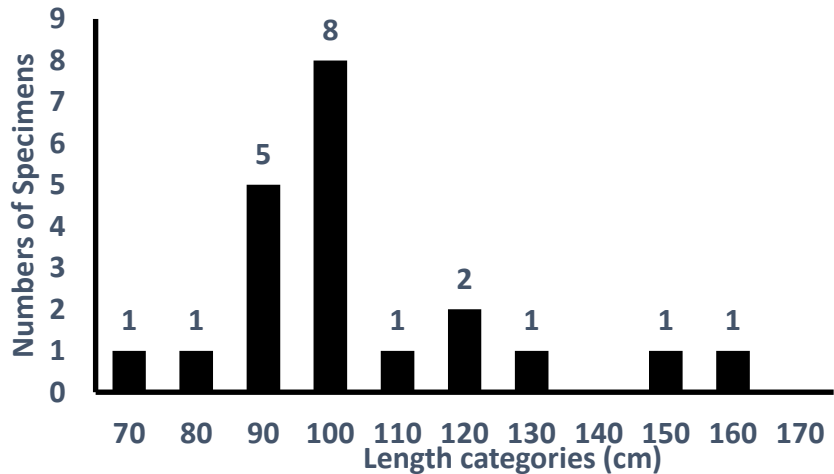


Figure 2: Length measurements of 21 specimens aggregated in 10 cm categories.

Biometrics: All 21 specimens for which length measurements were available have been in excess of 70cm, ranging from 76.2cm to 162.56cm with a mean length of 109.08cm. 13 (62%) of the specimens were within the 90 to 100cm size category.

All 28 specimens for which weight measurements are available were in excess of 2.5kg, weights ranging from 2.94 to 80.73kg with a mean of 32.28kg. 21 (75%) specimens were within the 20 to 40kg range.

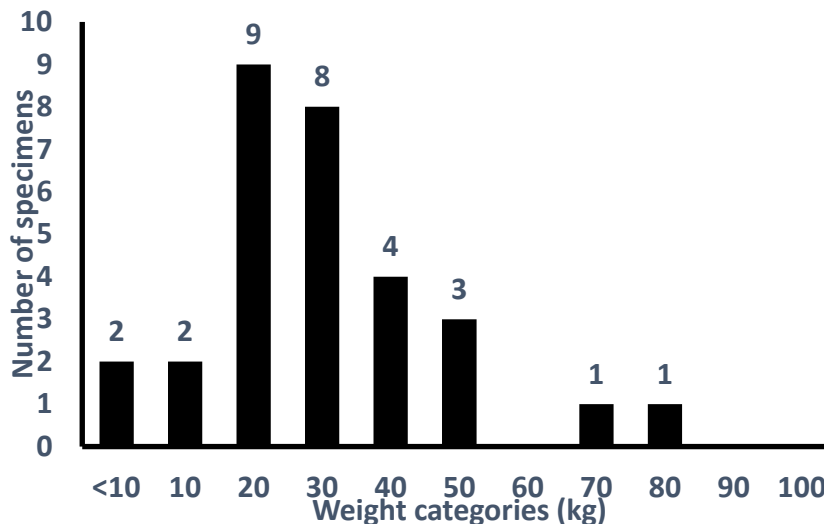


Figure 3: Weights of 28 specimens aggregated in 10 kg categories.

Reproduction: This study has added little to the sparse knowledge of the species reproductive cycle. Data on the size range of North Sea specimens (see Figures 2 & 3) show that no young fish have been encountered. Only in one case has the sex of an examined specimen been established, this being an adult female of 96.5cm long, weighing 22.3kg carrying roes weighing about 0.5kg (*Eastern Daily Press* 19 October 1891 p.5).

Diet: Despite 87 North Sea specimens having been reported on, the stomach of only one fish, one stranded alive at Caister 17 October 1891, dissected by the taxidermist W. Lowe of Great Yarmouth, was found to be empty (*Eastern Daily Press* 19 October 1891 p.5).

Conclusions & discussion: Historical sources have monitored the seemingly random occurrences of the mysterious and exotic Opah in the North Sea since the 17th century. However, Table 1 (p13) shows that Opah have visited the North Sea in every decade during the two centuries from 1800, a notable peak of 16 fish being recorded in the decade 1900-1909. Similar, though much greater peaks have occurred with Ray's Bream *Brama brama* and Sunfish (Howes, in prep). The pattern of Opah occurrences, when aggregated per fifty-year periods (18: 1800-49; 21: 1850-99; 34: 1900-49; 10: 1950-99) may provide evidence to link trends with oceanographic or climatic cycles.

The pattern of increasing occurrences monitored for the 1970s and 80s by Quigley (2001) in the deep waters off the west coast of Ireland, is ascribed to rises in mean sea surface temperature. If increased numbers of Opah have been visiting the North Atlantic since the

1970s as a result, this phenomenon has not yet been reflected in elevated numbers entering the shallow North Sea.

D'Arcy Wentworth Thompson (1918), who in researching records from the Aberdeen Fish Market 1883 to 1915, painstakingly mapped Opah catch sites. These effectively plotted the edge of the continental shelf near the 200m contour to the west of the Hebrides, Orkneys and Shetlands. Relatively few were from the shallower waters of the northern North Sea. His study effectively provided the basis of the understanding of migratory patterns of this oceanic vagrant in UK waters.

In springtime, sub-tropical maritime migrants, including the vagrant Opah, move north with the gulf stream along the western seaboard of the British Isles. A variable proportion of this biota enters the northern North Sea on weather-system-assisted pulses of warm Atlantic waters via channels between the north of Scotland and the Norwegian coast (Smed, 1947; Winther & Johannessen, 2006).

D'Arcy Wentworth Thompson (1918), showed that Opah numbers reached the deep waters off North-west Scotland in early summer, building through June, peaking in July and tailing off by October and November. The present study shows that those which enter the North Sea, progress south through Scottish waters, sequentially passing through to Northumbrian, Yorkshire and finally to East Anglian waters.

Table 2a (p13) principally shows that Opah totals for the entire UK North Sea coast show a rise of occurrences from May to a summer peak in July and August, a month later than on the Atlantic seaboard, and decline to October. A brief rise in November followed by a long tail of occurrences through to April, possibly represents fish being trapped in the shallow North Sea. Table 2b (p14) which compares monthly occurrences separately in the northern (Scottish) and southern (English) zones of the North Sea shows that fish take a month to move south to English waters, peaking at least a month later in August and September.

It may be significant that there were no Scottish occurrences during December, January and February, indicating that most fish have moved south. In English waters a noticeable autumn peak in November with occurrences remaining through to February may be clearer evidence of the southern North Sea acting as a trap with fish not able to find their way south through the Dover straits and the English Channel during autumn and winter to re-join warmer Atlantic waters. This appears to be confirmed in Table 2c (p14) which plots coastal strandings through the autumn and winter, suggesting that these sub-tropical fish may be being subjected to thermal cropping as winter sea temperatures drop below their threshold of tolerance. The summer strandings in June and July may however be evidence of these deep-bodied fish, normally suited to a more stable deep water existence, being subjected to the trauma of life in a shallow turbulent water body.

The archive on which this study is based is available for examination on the YNU Website: <https://www.ynu.org.uk/about-the-ynu/publications/download-page/category/9-appendices>.

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Short-term effects of canal dredging on aquatic plants in the Calder & Hebble Navigation

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Introduction

Yorkshire's many canals are a rich botanical resource (Goulder, 2019). For example, a survey in summer 2014 of aquatic plants along the 27km of canal that makes up much of the Calder & Hebble Navigation, showed that they were often luxuriant and diverse (Goulder, 2015). Altogether, 39 aquatic plant species were found, 19 of which were usually submerged or floating-leaved and 20 were emergent. Some canal lengths were of significant botanical conservation value and some of the plants found are rare in VC63 (South-west Yorkshire), for example Floating Water-plantain and American Pondweed *Potamogeton epiphydrus* (Wilmore, 2013). Others, like Flowering-rush and Arrowhead, are axiophytes; that is 'worthy plants' that a botanist will likely be pleased to encounter (BSBI, undated). In addition to its wildlife value, the waterway is shared by many users. The towing path is used by walkers, runners, cyclists, and anglers while the channel is navigated by pleasure boats. Boat traffic is moderate; Woodside Mills Lock, about 6km west of Brighouse, was used 716 times in 2021 (CRT, 2022).

Navigable canals are, from time to time, liable to be dredged to maintain an open channel. In the short term this may be deleterious to aquatic vegetation but can be beneficial over later years because encroachment by emergent marginal vegetation is checked and open water, needed by submerged and floating-leaved plants, is maintained (IWAC, 2008). Much of the Calder & Hebble Navigation between Brighouse and Sowerby Bridge was dredged during the winter of 2015-2016. The dredging contract (Weatherall, 2015) required that there should be a dredged channel, with depth 1.5m, across a minimum width of 7m. It was also required that the canal bed should slope, from deep water to a depth of c.0.5m against the wash wall on the towing path side, and to c.0.3m on the offside, but there should be deeper water in approaches to bridges and locks and at moorings. In many places an un-dredged shelf was to be left at the canal edge to preserve emergent vegetation. For example, a 2m-wide shelf was to be left along c.300m on the towing path side between Ganny Lock and Brookfoot Lock. Similarly, a 1m- or 2m-wide shelf was to be retained along c.1050m between Cromwell Lock and Park Nook Lock, also on the towing path side.

This article focuses on aquatic plants in three lengths of canal between Brighouse and Elland that were dredged in late 2015. These are: (1) Ganny Lock (Grid Ref. SE 140229) to Brookfoot Lock (c.0.75km); (2) Brookfoot Lock to Cromwell Lock (c.0.55km); (3) Cromwell Lock to Park Nook Lock (c.1.8km). Plants were recorded, in June or July, in 2014, 2017, 2018 and 2019, and again in 2023. An exception was that in 2023 Length 3 was recorded only from Cromwell Lock to Crowther Bridge (c.0.65km). The abundance of each plant in each length was estimated using a truncated 3-point DAFOR scale where d/a=dominant or abundant, f=frequent, and o/r=occasional or rare. Very approximately, d/a>5% whole-channel cover, f=0.1%-5% cover, and o/r<0.1% cover. Greater precision was not attempted because of the variable clarity or turbidity of water. Plants recorded were only those that feature on the JNCC (2005) checklists for aquatic plants that are liable to occur in UK canals. Plants were retrieved for identification using an extensible walking pole with a hook attached to its end, and/or a grapnel. Plants on the offside were sometimes identified using binoculars. Nomenclature follows Stace (2019); scientific names are given in the text at first mention, but only if they do not appear in Table 1.

Aquatic plants before and after dredging

In June 2014 (prior to dredging) 17 aquatic species were recorded; nine were submerged/floating-leaved and eight were emergent (Table 1). The complete data set is available online (available at <https://www.ynu.org.uk/about-the-ynu/publications/download-page/category/9-appendices>). Conspicuous submerged/floating-leaved plants were Water-starwort, Nuttall's Waterweed, Floating Water-plantain, Broad-leaved Pondweed and Arrowhead, which were found in all three lengths and were dominant/abundant in at least one. Unbranched Bur-reed was also dominant/abundant in one length (Cromwell Lock to Park Nook Lock). Especially notable was Floating Water-plantain; clear water allowed the underwater, stolen-linked rosettes of this plant to be seen covering much of the canal bed. There were also occasional elliptical floating leaves, although flowers were not seen. The most abundant emergent plant before dredging was Reed Sweet-grass. This was dominant/abundant in all three lengths and in places formed a marginal fringe of emergent vegetation sometimes 3-4m wide. Also conspicuous was Flowering-rush, which formed scattered emergent clumps, and was frequent in all three lengths.

Aquatic vegetation was much reduced after dredging (Table 1). Over 2017-2019 the only submerged/floating-leaved plant recorded as dominant/abundant in any length was Broad-leaved Pondweed, in 2017, between Ganny Lock and Brookfoot Lock, where its rhizomes appear to have, in places, been missed by dredging or were perhaps disturbed and redistributed by the process. Floating Water-plantain was found in only one length (Cromwell Lock to Park Nook Lock) where it was occasional/rare.

Table 1. Aquatic plants in the Calder & Hebble Navigation from Ganny Lock to Park Nook Lock (c.3.1km) in summer 2014, 2017-2019, and 2023. Values are the number of lengths (out of three) in which the species was recorded (values in brackets are the number of lengths in which the plant was dominant or abundant). The canal was dredged in late 2015.

	2014	2017	2018	2019	2023
Submerged/floating-leaved plants					
<i>Callitriche</i> sp. Water-starwort	3(1)	2	1	2	1
<i>Elodea nuttallii</i> Nuttall's Waterweed	3(1)	1	1	0	3
<i>Fontinalis antipyretica</i> Greater Water-moss	2	2	1	1	1
<i>Lemna minor</i> Common Duckweed	3	3	2	3	3
<i>Lemna trisulca</i> Ivy-leaved Duckweed	1	0	0	0	0
<i>Luronium natans</i> Floating Water-plantain	3(2)	1	1	1	3
<i>Potamogeton natans</i> Broad-leaved Pondweed	3(1)	1(1)	1	1	1(1)
<i>Sagittaria sagittifolia</i> Arrowhead	3(1)	3	2	3	2
<i>Sparganium emersum</i> Unbranched Bur-reed	1(1)	2	1	1	2
<i>Stuckenia pectinata</i> Fennel Pondweed	0	1	0	0	0
Number of submerged/natant plant species	9	9	8	7	8
Emergent plants					
<i>Agrostis stolonifera</i> Creeping Bent	2	2	3	3	1
<i>Butomus umbellatus</i> Flowering-rush	3	3	3	3	3
<i>Glyceria maxima</i> Reed Sweet-grass	3(3)	3(3)	3(2)	3(2)	3(1)
<i>Iris pseudacorus</i> Yellow Iris	2	2	2	2	3
<i>Juncus effusus</i> Soft Rush	0	2	1	1	1
<i>Mentha aquatica</i> Water Mint	0	0	1	0	0
<i>Oenanthe crocata</i> Hemlock Water-dropwort	3	3	3	3	3
<i>Persicaria amphibia</i> Amphibious Bistort	1	1	1	1	1
<i>Phalaris arundinacea</i> Reed Canary-grass	2	2	1	1	3
<i>Typha latifolia</i> Bulrush	3	1	2	2	2
Number of emergent plant species	8	9	10	9	9
Total number of plants	17	18	18	16	17

Several groups of its dislodged stolon-linked rosettes were found in 2017-2019, mostly floating behind the top gates of Cromwell Lock. Additionally, in 2019, sparse rooted plants, with elliptical, floating leaves were seen adjacent to the towing path west of Crowther Bridge, at approximately 900m west of Cromwell Lock.

Amongst emergent plants, Reed Sweet-grass continued to occupy all three lengths and to be dominant/abundant in two or three of them. However, where there was 'reed' fringe, it had in places been reduced in width by the dredging. For example, in 2014, between Ganny Lock and Brookfoot Lock, the marginal Reed Sweet-grass, adjacent to the towing path in front of Brookfoot Mills, nearing Camms Mill Bridge, was 3-4m wide (Fig. 1) and there were also emergent clumps of Flowering-rush. In contrast, in 2017 the 'reed' fringe was reduced to 1-2m in width (Fig. 2) and Flowering-rush was represented by submerged plants with trailing underwater leaves. Indeed, this plant was reduced from frequent, in all three lengths in 2014, to occasional/rare in all lengths in 2017-2019. Hemlock Water-dropwort continued to be found in all three lengths, although it was usually occasional/rare. This plant tends to root close to, and within, the wash wall which probably allowed it to escape the dredger.

By 2023, about 8 years after dredging, there were indications of recovery (Table 1, p19). Amongst submerged/floating-leaved plants, Nuttall's Waterweed was again found in all three lengths and was frequent from Ganny Lock to Brookfoot Lock and from Brookfoot Lock to Cromwell Lock, having increased from unrecorded or occasional/rare. Arrowhead had become frequent between Ganny Lock and Brookfoot Lock, and between Brookfoot Lock and Cromwell Lock, having increased from unrecorded or occasional/rare



Figure 1. The canal at Brookfoot Mill in June 2014 (before dredging). Looking south-west towards Camms Mill Bridge; there is a wide margin of Reed Sweet-grass, beyond which are emergent Flowering-rush and Bulrush, and the floating leaves of Broad-leaved Pondweed



Figure 2. The canal at Brookfoot Mill in June 2017 (after dredging). Looking north-east from Camms Mill Bridge; emergent vegetation is reduced to a narrow fringe of Reed Sweet-grass, backed by terrestrial vegetation, no other aquatic plants can be seen.

Unbranched Bur-reed had increased from unrecorded or occasional/rare to frequent between Brookfoot Lock and Cromwell Lock, remaining frequent between Cromwell Lock and Park Nook Lock. Floating Water-plantain was again found in all three lengths, although represented only by occasional, loose, stolon-linked rosettes that mostly had accumulated behind lock gates. Grapnel hauls failed to retrieve rooted plants; however, the canal west of Crowther Bridge, where rooted plants with floating leaves had established by 2019, was not revisited in 2023.

Emergent plants in 2023 continued to be chiefly represented by Reed Sweet-grass. However, emergent clumps of Flowering Rush were, albeit occasionally, again present and the plant was in flower between Cromwell Lock and Park Nook Lock. Hemlock Water-dropwort continued in all three lengths; Reed Canary-grass increased its range to be found in all three lengths and Bulrush continued to be in two lengths.

The species of aquatic plants found were much the same before and after dredging (Table 1, p19). In 2014, 17 species were found compared to 16-18 in 2017-2019, and 17 in 2023. Ivy-leaved Duckweed is the only plant that was found before but not afterwards, a plant that was occasional/rare between Brookfoot Lock and Cromwell Lock in 2014. Three plants were found after dredging that were not recorded in 2014; these were Fennel Pondweed, Soft Rush, and Water Mint, although none became more than occasional/rare.

Discussion

Unsurprisingly, aquatic plants were reduced in abundance by the 2015 dredging. However, by 2023, there was evidence that recovery was underway. Recovery was likely to be enhanced because virtually all plants found before dredging were still there afterwards and were, therefore, readily available to support recolonisation.

Although dredging appears to have had a substantial impact, another potential cause of damage to vegetation was a major flood event in December 2015. The Boxing Day flood of 2015 severely impacted the canal. The channel was overtopped and structures were damaged to the extent that Crowther Bridge, between Cromwell Lock and Park Nook Lock, required rebuilding. The flooded River Calder and overtopped canal were reported to be, in places, flowing as a single watercourse (Calderdale Metropolitan Borough Council, 2016). Potentially, aquatic plants, including their overwintering roots and rhizomes, might have been torn out by flood water. The extent to which this occurred is not quantifiable; under steady flow conditions the velocity of flowing water decreases logarithmically with depth, hence a watercourse which has a fast flow at the surface will have calm conditions in a barrier layer close to the bed. However, in turbulent flood conditions this structure is liable to break down and scouring will occur (Hynes, 1970).

Parallel evidence of recovery following dredging in a nearby Yorkshire canal is provided by events in the Huddersfield Broad Canal (Goulder, 2020). This is a branch canal from the main line of the Calder & Hebble Navigation that extends for c.6km from the River Calder at Cooper Bridge to Huddersfield. It also has a conservation-worthy aquatic flora that includes Floating Water-plantain. It was dredged in 2002 and its vegetation had recovered by 2012; a recovery that persisted to 2017-2019. Based on this precedent, it is to be expected that recovery in the Calder and Hebble Navigation, between Ganny Lock and Park Nook Lock, will continue. A proviso, however, is that the dredging programme for the Huddersfield Broad Canal (Butterworth, 2002) included plant conservation measures that featured reserve inclosures within the canal for Floating Water-plantain, separated from the main channel by a vertical geotextile curtain. How important these on-line reserves were is, with hindsight, not altogether clear. Floating Water-plantain thrived, post-dredging, in the Huddersfield Broad Canal, but

came largely to occupy water alongside the towing path, while the reserves, along the far side, were colonized by Reed Sweet-grass.

Measures to protect aquatic plants were less comprehensive during the 2015 Calder & Hebble dredging, although lengths of shallow, marginal shelf were retained, and this benefitted emergent plants. We suspect, however, that in places, more of the original margin and its vegetation was removed than had been planned.

Essentially, it is good news that the species composition of aquatic plants, in the Calder & Hebble Navigation, was much the same before and after the 2015 dredging, and that by 2023 there were signs that the cover of vegetation was increasing (Table 1). A more definitive conclusion will, however, require patience and longer-term monitoring.

Acknowledgements

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Leaf-mining flies (Agromyzidae) new to the Yorkshire Diptera list: Part 6

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Introduction

Following Warrington (2017, 2018, 2019, 2021 and 2022), seven species of Agromyzidae are hereby added to the Yorkshire Diptera list, based on material reared or collected by the author (unless stated).

AGROMYZINAE

***Ophiomyia pinguis* (Fallén, 1820)**

On 23.vi.2023, a single male was swept from grazed land in Anlaby, South-east Yorkshire (VC61). A single female was collected from the same location on 24.vi.2023.

PHYTOMYZINAE

***Cerodontha (Poemyza) pygmella* (Hendel, 1931)**

During August 2023, several adults (male gen. det.) were reared from leaf mines on *Dactylis glomerata* (Warrington, 2023a) in the author's garden (Hessle, South-east Yorkshire, VC61).

***Liriomyza taurica* Zlobin, 2003**

A single male (gen. det.) was collected from rank grasses at Paull, South-east Yorkshire (VC61) on 7.ix.2023. This species was added to the British list by the author (Warrington, 2020) based on a single male found within a Malaise trap sample in North Lincolnshire (VC 54.). This represents just the second record for Great Britain.

***Napomyza merita* Zlobin, 1993**

On 16.v.2023, a single male (gen. det.) was swept from vegetation along the Humber estuary at Brough, South-east Yorkshire (VC61). This species was recently added to the British list by Tim Hodge (2023) on the basis of a single male collected in East Norfolk (VC27) in 2022.

***Phytobia carbonaria* (Zetterstedt, 1848)**

During 2023, the larval feeding signs of this species were observed in the stems and branches of Hawthorn (*Crataegus*) at many sites within South-east Yorkshire (VC61), South-west Yorkshire (VC63) and Mid-west Yorkshire (VC64) by the author. The species was also found in North-east Yorkshire (VC62) by Linden Hawthorne in Ampleforth.

***Phytobia cerasiferae* (Kangas, 1955)**

Adults were successfully reared (Warrington 2023b) from puparia obtained from Blackthorn stems collected in several sites in South-east Yorkshire (VC61), North-east Yorkshire (VC62) and South-west Yorkshire (VC63).

***Phytomyza rhabdophora* Griffiths, 1964**

A single male (gen. det.) was collected from Clifton Ings, York, North-east Yorkshire (VC62) on 22.v.2023 (Warrington 2023c). This species is associated with *Leontodon* and *Taraxacum*. A rare species, only known elsewhere from Dorset and the Republic of Ireland.

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NOTICE: YNU Library Surplus Material

Following the YNU Office move to Dunnington and subsequent sorting through the library, the YNU Executive has identified a number of publications surplus to our requirements. We are offering these first to YNU members in return for a donation. A list of the publications is available from our Membership Secretary, Clare Langrick (Email: membership@ynu.org.uk; Tel: 01904 641631). If you are interested in any they can be collected, by appointment, from our Dunnington Office. Please contact Clare in advance to arrange a mutually convenient date and time for collection. NB we are not able to post out any of these publications.

Yorkshire Ichneumons: Part 16

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Introduction

Yorkshire statuses are taken from the lists available on the YNU website:

<https://www.ynu.org.uk/recording-sections/sections/insects/parasitic-wasps>

‡ = new county record

* = new vice-county record

The checklist published over the past decade is missing one genus, *Ophion*. It became apparent earlier this century that the variability among *Ophions* masked cryptic species as DNA analyses revealed additional segregates. Armed with this knowledge it was possible to examine *Ophions* and find morphological features that defined the additional species. Johansson and Cederberg (2019) published a revision of the Swedish *Ophions* that more than doubled the number of species in that country. This key has allowed us to sort out many of the species which are new to Britain but this is not a British key so does not resolve all the issues that we have.

Subfamily OPHIONINAE

The British *Ophions* are dealt with here in three groups – those species which are not affected by the DNA analyses, those which were thought to be bivoltine but in which the insects flying in spring and summer belonged to separate species from the ones flying in autumn and winter and those which have been split but cannot be resolved by flight periods.

The ones whose status is unchanged:

Ophion brevicornis Morley, 1915. Scarce in Yorkshire.

*VC61: Rise Lane, Catwick 13.6.2018 J.Morgan.

*VC62: Haxby 10 + 20.7.2010 T.J.Crawford (tG.R. Broad).

*VC63: Brockadale YWT NR 21.7.2021 D.Williamson.

‡VC64: Cawood 10.1996 J.Payne.

*VC65: Magdalen Wood, West Tanfield 14.7.2004 C.H.Fletcher (det. G.R.Broad).

Ophion crassicornis Brock, 1982. Rare in Yorkshire.

*VC62: Haxby 3.6.2019 + 24.6.2020 T.J.Crawford (det. G.R.Broad).

‡VC63: Keighley 1915 [R.Butterfield may have been the collector] (t.G.R.Broad).

DNA analysis has shown that the 'northern morph' of this ichneumon is a separate species.

Ophion longigena Thomson, 1888. Scarce in Yorkshire.

Reported from VC61 in Hincks (1953b) p136 and Brock (1982) p86.

*VC62: Haxby 10.7.2011 T.J.Crawford (tG.R.Broad).

*VC63: Brockadale YWT NR 24.7.2013 J.&P.Simmons.

*VC64: Sharow Grange 26.7.2011 J.C.Warwick.

Ophion minutus Kreichbaumer, 1879. Frequent in Yorkshire.

Unconfirmed report in VC64 by Wilson (1881) p153; Bairstow, Roebuck & Wilson (1882) p105; Roebuck (1907) p214; Morley (1915) p276. Reported from VC62 in Gauld (1973) p61 and from VC63 in Hincks (1953a) p38, Skidmore (2006) p148 and Coldwell (1999) p61.

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

*VC64: Ellington Banks Training Area 2004 + 25.5.2011 C.H.Fletcher.

*VC65: High Batts NR 2004 C.H.Fletcher (det. M.R.Shaw).

Ophion ocellaris Ulbricht, 1926. Scarce in Yorkshire.

Reported from VC63 in Ely (2014b) p39.

*VC62: Haxby 28.5.2014 + 30.6.2015 T.J.Crawford.

*VC64: Hackfall Woods 29.6.2012 C.H.Fletcher.

*VC65: Nutwith Common Woods 23.6.2023 T.M.Whitaker.

Ophion perkinsi Brock, 1982. Rare in Yorkshire.

*VC62: Haxby 31.7 + 2.8.2017 T.J.Crawford.

†VC64: Scar Close NNR 19.7.2013 T.M.Whitaker (tG.R.Broad).

Ophion ventricosus Gravenhorst, 1829. Scarce in Yorkshire.

Reported from VC62 in Ely (1986a) p101 and Key (1987a), from VC63 in Hincks (1953a) p38 and from VC64 in Ely (1986b) p101; Key (1987b) p218, 375.

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

*VC65: High Batts NR 2004 C.H.Fletcher, J.C.Warwick (det. M.R.Shaw).

Two *Ophions* were believed to be bivoltine, *O. luteus* and *O. obscuratus*. The name *luteus* now refers to the *Ophion* that flies in summer and the one that flies in autumn is now referable to *O. slaviceki*. Ian Gould separated these species on morphological grounds forty years ago but this view was not accepted at the time. The name *obscuratus* now refers to the *Ophion* that flies in autumn and winter while the spring and summer species is now *variabilis*. It has been possible to allocate most records to the correct species using the collection dates.

Ophion luteus (Linnaeus, 1758). Scarce in Yorkshire.

Reported from VC62 in Walsh & Rimington (1956) p278 and from VC63 by Coldwell (pers.comm).

*VC64: Saxton 24.3.1923 C.D.Ash.

Ophion obscuratus Fabricius, 1798. Very common in Yorkshire.

Unconfirmed report from VC62 in Roebuck (1877) p38. Reported from VC63 in Butterfield (1908) p71. Morley (1915) p268-9, Hincks (1953a) p38, Brock (1982) p79-83 and Coldwell (1999) p61.

*VC61: Bubwith 11.6.1919 W.J.Fordham.

*VC62: Helwath Beck 26.9.1937 H.Britten (det. G.R.Broad).

*VC64: Appleton Roebuck 4.5.1951 A.Smith.

*VC65: Colsterdale 2-4.6.1978 W.A.Ely.

Ophion slaviceki Kriechbaumer, 1892. Common in Yorkshire.

Reported from VC63 in Coldwell (1999) p61 and from VC64 in Hincks (1953a) p38.

*VC61: Yew Cottage, Kilnsea 21.8.2011 P.A.Crowther (det. G.R.Broad).

*VC62: Whitby 10.8.1936 H.Britten.

*VC65: Harmby 4.9.1982 F.B.Stubbs.

Ophion variegatus Rudow, 1883. Common in Yorkshire.

*VC61: East Cottingwith 18.4.1988 TD.

†VC62: Malton Road, York 30.4.1944 J.H.Elliott.

*VC63: Pollington Camp 2.4.1976 + 4.1977 P.Kendall (det. P.Skidmore).

*VC64: Cawood 15.4.1993 J.Payne.

*VC65: Healey 19.4.2019 D.M.Smiley.

There have been splits in several species. The insect that we called ***O. costatus*** Ratzeburg, 1848, which was uncommon in Yorkshire, was a misidentification and belongs to the group around ***Ophion mocsaryi*** Brauns, 1889, which was very common in Yorkshire and is now split with ***O. brocki*** Johansson, ***O. splendens*** Johansson and ***O. confusus*** Johansson added; ***Ophion parvulus*** Kreichbaumer, 1879 has been split and ***O. paraparvulus*** Johansson and ***O. tenuicornis*** Johansson described; all the British records of ***Ophion pteridis*** Kreichbaumer, 1879 are misidentified and this has been split into ***angularis*** Johansson & Cederberg, ***autumnalis*** Johansson, ***inclinans*** Johansson, ***sylvestris*** Johansson.

Ophion angularis Johansson & Cederberg, 2019. New to Yorkshire.

†VC63: Cavendish Close, Brecks 10.5.2021 M.A.Smethurst.

Ophion autumnalis Johansson, 2019. New to Yorkshire.

†VC62: Glaisdale Moor 26.11.2019 J.O.H.Small.

Ophion brocki Johansson, 2019. New to Yorkshire.

*VC61: Rise Lane, Catwick 29.5 + 3.6.2021 J.Morgan.

†VC62: Haxby 13.6 + 1 + 2 + 11.7.2012 T.J.Crawford.

*VC63: Bolster Moor 16.9.2020 C.Rew.

*VC64: High Bentham 24.6.2019 D.Fisher.

*VC65: Hutton Conyers 19.5.2011 C.H.Fletcher.

Ophion inclinans Johansson, 2019. New to Yorkshire.

*VC63: Bolster Moor, Huddersfield 7.2022 C.Rew.

†VC64: Sulber Cross Woods, Ingleborough 1.8.2020 T.M.Whitaker (t.G.R.Broad).

Ophion mocsaryi Brauns, 1889. Common in Yorkshire.

*VC61: Rise Lane, Catwick 26.5.2014 J.Morgan.

*VC62: Haxby 13 + 22 + 23 + 30.6.2010 T.J.Crawford.

†VC63: Cavendish Close, Rotherham 29.4.2006 M.A.Smethurst.

*VC64: Ingleborough NNR, nr Sulber 18.6.2019 T.M.Whitaker, J. Perry.

*VC65: Healey 26.5.2017; 10 + 23.6.2017 D.M.Smiley.

Ophion parvulus Kreichbaumer, 1879. Scarce in Yorkshire.

Reported from VC65 in Ely (2011) p69.

*VC62: Lealholm, Glaisdale 12-19.10.2012 G.Featherstone.

*VC63: Bradford Road, Keighley 21.6.1927 J.Wood.

*VC64: Colt Park Wood near Washfold Pot 1.6.2019 T.M.Whitaker.

Ophion splendens Johansson, 2019. New to Yorkshire.

*VC62: Haxby 23.8.2022 T.J.Crawford.

†VC64: Colt Park Wood 13.7.2020 T.M.Whitaker (det. G.R.Broad).

Ophion sylvestris Johansson, 2019. New to Yorkshire.

†VC62: Haxby 13.5.2019 T.J.Crawford (t.G.R.Broad).

*VC64: Middle Wood, Askham Bog YWT NR 5.5.2022 T.J.Crawford.

Ophion tenuicornis Johansson, 2019. New to Yorkshire.

*VC62: Cowgate Slack, Broxa Woods 9,9 2023 G.Featherstone.

‡VC63: Austerfield Mosaic NR 26.8.2021 D.Williamson.

*VC64: Oak Bank, Low Bentham 10.8.2023 T.M.Whitaker.

The YNU Ophioninae records have been compiled as follows:

Decade	Species	Records	Collectors
1830-1839	1	1	1
1860-1869	1	1	1
1870-1879	2	5	2
1880-1889	2	2	1
1890-1899	2	4	3
1900-1909	3	9	5
1910-1919	6	18	7
1920-1929	11	20	9
1930-1939	6	10	4
1940-1949	10	31	5
1950-1959	7	10	5
1960-1969	5	6	3
1970-1979	7	60	25
1980-1989	10	89	17
1990-1999	10	49	11
2000-2009	12	42	14
2010-2019	21	874	39
2020-2022	17	248	19

Subfamily **PIMPLINAE**

Additions to Ely (2013):

Scambus calobatus (Gravenhorst, 1829). Scarce in Yorkshire.

*VC64 Adel Dam YWT NR 18.10.2022 A.Carne,A.Cooke.

Tromatobia ovivora (Boheman, 1821). Rare in Yorkshire.

*VC61: Eastrington Ponds LNR 16.6.2017 R.Crossley.

*VC65: Preston Scar 17.6.2022 D.Whiteley.

Dreisbachia pictifrons (Thomson,1877). Scarce in Yorkshire.

*VC64: Adel Dam YWT NR 3.10.2018 S.Lonsdale.

Subfamily **RHYSSINAE**

Addition to Ely (2014a):

Rhyssella approximator (Fabricius, 1793). Rare in Yorkshire.

*VC61: Tophill Low NR 19.8.2023 J.Barnard (det. J. Boparai).

Subfamily **ORTHOCENTRINAE**

Addition to Ely (2020b) :

Orthocentrus frontator (Zetterstedt, 1838). Rare in Yorkshire.

*VC61: Tophill Low NR 28.4.2017 R.Crossley.

Subfamily **PHYGADEUONTINAE**

Additions and correction to Ely (2015b) and (2020b):

Lysibia ceylonensis (Kerrich, 1956). New to Yorkshire.

‡VC64: Upper Dunsforth Carrs YWT NR 24.6.2016 R.Crossley.

Acrolyta pseudonens Schwarz & Shaw, 2000. New to Yorkshire.

‡VC64: Hollins Hill, Baildon 19-25.10.2017 H.N.Whiteley (det. G.R.Broad).

The records attributed to ***Acrolyta nigricolor*** (Aubert, 1980) have been redetermined by G.R.Broad as ***Eudelus scabriculus*** (Thomson, 1884), which is new to Yorkshire.

Gelis anthracinus (Förster, 1850). Scarce in Yorkshire.

*VC65: Pennine Way, Cronkley Fell, Teesdale 21.5.2023 E.Hardy.

Gelis divaricatus Horstmann, 1993 New to Yorkshire.

‡VC63: Boston Park Lake, Hatfield Moor 2-14,10.2022 J.O.H.Small.

Isadelphus longisetosus Schmiedeknecht, 1897). New to Yorkshire.

*VC61: Wilson's Plantation, Limefield Farm, Stamford Bridge 8-15.7 + 5-12.8.2003 S.E.M.Fraser.

‡VC63: Wath Wood 20.6.1985 W.A.Ely.

*VC64: Near Wood, Askham Bog NR 30.5.2015 R.Crossley.

Subfamily **CRYPTINAE**

Addition to Ely (2017):

Cubocephalus anatorius (Gravenhorst, 1829). New to Yorkshire.

‡VC64: Askham Bog YWT NR 6.1946 W.D.Hincks (det. B.Hargreaves).

Cubocephalus nigriiventris (Thomson, 1874). New to Yorkshire.

‡VC65: Deepdale Wood, Startforth 4.10;1985 W.A.Ely.

Echthrus reluctator (Linnaeus, 1758). Rare in Yorkshire.

*VC61: Tophill Low NR 10.5.2017 R.Crossley.

Parmortha parvula (Gravenhorst, 1829). New to Yorkshire.

‡VC63: Maltby Dyke 30.6.2001 W.A.Ely.

Parmortha pleuralis (Thomson, 1873). New to Yorkshire.

‡VC63: Paraffin ponds, Thorne Moors NNR 6-20.6.1990 D.Heaver.

Plectrocryptus digitatus (Gmelin, 1790). Rare in Yorkshire.

*VC62: Starfits Lane, Kirkbymoorside 13.6.1987 D.H.Smith.

Pleolophus brachypterus (Gravenhorst, 1815). Rare in Yorkshire.

*VC61: Tophill Low NR 29.6.2021 J.Barnard (det. J.Boparai)

*VC63: Smithy Wood, Thorpe Hesley 3-10.6.2014 R.I.Wilson.

Enclisis macilenta (Gravenhorst, 1829). New to Yorkshire.

‡VC61: Wilson's Plantation, Stamford Bridge 8-15.7.2003 S.E.M.Fraser.

*VC63: Boston Park Lake, Hatfield Moors NNR 22.7-3.8.2022 J.O.H.Small.

Subfamily **ICHNEUMONINAE**

Additions to Ely (2022):

Amblyjoppa proteus (Christ, 1791). Scarce in Yorkshire.

*VC61: Pocklington 4.9.2023 L.Barratt (det. A.Reaney).

Hoplismenus axillatorius (Thunberg, 1824). Rare in Yorkshire.

*VC62: Haxby 12.8.2022 T.J.Crawford.

Virgichneumon albilineatus (Gravenhorst, 1820). Rare in Yorkshire.

*VC64: Lang Road, Bishopthorpe, York 11.8.202 J.Thomas (det. G.Orsnes).

Virgichneumon dumeticola (Gravenhorst, 1829). New to Yorkshire.

†VC63: Boston Park Lake, Hatfield Moor NNR 12-22.7.2022 J.O.H.Small.

Chasmias paludator (Desvignes, 1854). New to Yorkshire.

†VC61: Tophill Low NR 19.9.7.2023 J.Barnard (det. M.Storey).

Ichneumon xanthorius Forster, 1771. Scarce in Yorkshire.

*VC61: Hull Road, Pickhill, Cottingham 22.5.2023 A.McDonald.

Spilichneumon celenae Perkins, 1953. **New to England.**

†VC65: Oxnop Scar, Askrigg Common 19.6.2022 R.I.Wilson.

Tricholabus strigatorius (Gravenhorst, 1829). Rare in Yorkshire.

*VC62 Strensall Common 18.8.2017 R.Crossley.

Additions and corrections to Ely (2023):

Listrodromus nycthemerus (Gravenhorst, 1820). Rare in Yorkshire.

*VC62 Haxby 1.8.2022 T.J.Crawford.

Platylabus iridipennis (Gravenhorst, 1829). Uncommon in Yorkshire.

*VC61: SE corner, Tophill Low NR 28.7.2017 R.Crossley.

Platylabus odiosus Perkins, 1953. Rare in Yorkshire.

*VC63: North Ring Drain, Poor Piece, Hatfield Moors NNR 12-22.7.2022 J.O.H.Small.

Cyclolabus nigricollis (Wesmael, 1845). Rare in Yorkshire.

*VC61: Eastrington Ponds LNR 2.8.2017 R.Crossley.

Cyclolabus pactor (Wesmael, 1845). Rare in Yorkshire.

*VC62 Haxby 22.8.2022 T.J.Crawford.

Apaeleticus bellicosus Wesmael, 1844). Rare in Yorkshire.

*VC65: E boundary of Nosterfield NR from car park to northern hide 19.7.2018 A.R.Godfrey.

Aethecerus placidus Wesmael, 1845. Rare in Yorkshire.

*VC63; Paraffin Works, Thorne Moors NNR 6-20.6.1990 D.Heaver.

Dicaelotus pumilus (Gravenhorst, 1829). Scarce in Yorkshire.

*VC64: Kings Road, Bramhope 21.5.2020 S.G.Compton.

Dirophanes callopus Wesmael, 1844. Scarce in Yorkshire.

*VC65: E boundary of Nosterfield NR from car park to northern hide 19.7.2018 A.R.Godfrey.

Tycherus socialis (Ratzeburg, 1852). New to Yorkshire.

†VC63: Boston Park Lake, Hatfield Moors NNR 22.7-3.8.2022 J.O.H.Small.

Phaeogenes semivulpinus (Gravenhorst, 1829). The unconfirmed report in Roebuck is for VC62.

Subfamily **TERSILOCHINAE**

Addition to Ely, W.A. (2020a):

Phradis morionellus (Holmgren, 1860). Rare in Yorkshire.

*VC64: Bramhope 20.6.2020 S.G.Compton.

Subfamily **TRYPHONINAE**

Additions to Ely (2015a):

Netelia (Netelia) fuscicornis (Holmgren, 1858). Uncommon in Yorkshire.

* VC62 Haxby 24.8.2022 T.J.Crawford.

Grypocentrus incisulus Ruthe, 1855. New to Yorkshire.

†VC64: Upper Dunsforth Carrs 17.8.2016 R.Crossley.

Polyblastus (Labroctonus) alternans Schiødte, 1838. New to Yorkshire.

†VC64: Saltlake Quarry NR 14.6.2017 T.M.Whitaker.

Polyblastus (Labroctonus) nanus Kasparyan, 1973. New to Yorkshire.

†VC64: Upper Dunsforth Carrs 21.7.2015 R.Crossley.

Polyblastus (Labroctonus) westringi Holmgren, 1855. Scarce in Yorkshire.

*VC61: Hagg Wood, Dunnington 31.8.2016 R.Crossley.

Eridolius gnathoxanthus (Gravenhorst, 1829). Rare in Yorkshire.

*VC64: Askham Bog YWT NR 6.7.2022 T.J.Crawford.

Subfamily **STILBOPINAE**

Addition to Ely (2017):

Stilbops limneriaeformis (Schmiedeknecht, 1888). Rare in Yorkshire.

*VC62: Surgate Brow, Broxa Forest, Silpho 10.6.2022 G.Featherstone.

Subfamily **BANCHINAE**

Addition to Ely, W.A. (2018):

Lissonota (Campocinetia) folii Thomson, 1877. Scarce in Yorkshire.

*VC62: Broxa Woods 29.6.2023 G.Featherstone.

Lissonota (Campocinetia) serena Brock, 2017. New to Yorkshire.

*VC61: Three Hagges Wood-meadow, Escrick Park 7.7.2016 A.Grayson.

^VC62: Haxby 28.6.2022 T.J.Crawford.

‡VC63: Marley 28.7.1942 J.Wood.

Subfamily **CTENOPELMATINAE**

Additions to Ely (2019):

Xenoschesis (Polycinetis) ustulata (Desvignes, 1856)). New to Yorkshire.

*VC63: Boston Park Lake, Hatfield Moors NNR 12-22.7.2022 J.O.H.Small.

‡VC64: Copmanthorpe Wood 29.7.-13.8.2004 S.E.M.Fraser (tG.R.Broad),

Perilissus lutescens Holmgren, 1857. New to Yorkshire.

‡VC61: New Covert, Melbourne 8-15.7.2003 S.E.M.Fraser (tG.R.Broad).

Himerta sepulchralis (Holmgren, 1876). Rare in Yorkshire.

*VC62: Brafferton Spring Wood T.Box (det. M.Storey).

Mesoleius armillatorius (Gravenhorst, 1807). Rare in Yorkshire.

*VC64: Breary Marsh, Leeds 7.10.2021 J.Bouwer.

*VC65 Nutwith Common Woods 23.6.2023 T.M.Whitaker.

Mesoleius furax Holmgren, 1857. Rare in Yorkshire.

*VC64: Breary Marsh, Leeds 8.10.2014 K.Rosier.

Mesoleius intermedius (Gravenhorst, 1829). Rare in Yorkshire.

*VC61: meadow, Eastrington Ponds LNR 26.6.2017 R.Crossley.

Anoncus femorator (Thomson, 1893) **New to England.**

†VC61: Rudston Hall 15.7.1989 W.A.Ely.

Lathiponus semiluctuosus (Vollenhoven, 1878). Rare in Yorkshire.

*VC61: Jeffry Bog Plantation 30.8.2016 R.Crossley.

Syndipnus alutaceus (Holmgren, 1857). **New to England.**

*VC62: Cass Plantation, Huby 2.9.2011 W.A.Ely.

†VC63: Worsbrough Reservoir 14.7.1985 W.A.Ely.

Phobetes chrysostomus (Gravenhorst, 1820). New to Yorkshire.

*VC62: Haxby 1.8.2016 T.J.Crawford.

†VC64: Cawood 7.1989 J.Payne.

*VC65 Healey 27.7.2020 D.M.Smiley.

Phobetes rufipes (Thomson, 1893). New to Yorkshire.

†VC63: Holmehouse Wood 26.6.1937 J.Wood (tG.R.Broad).

Subfamily CAMPOPLEGINAE

Additions and correction to Ely (2019):

The VC62 record of *Dusona annexa* (Förster, 1868) is an error.

Dusona blanda (Förster, 1868). Rare in Yorkshire.

*VC62: Coatham, Redcar 7.8.2011 W.A.Ely.

Tranosemella citrofrontalis (Hedwig, 1939). Rare in Yorkshire.

*VC63: Aldwarke 21.8.1985 W.A.Ely.

Subfamily ANOMALONINAE

Addition to Ely (2020a):

Agrypon varitarsum (Wesmael, 1849). Rare in Yorkshire.

*VC61: Skipwith Common 31.7.2017 R.Crossley.

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NOTICE: Ian Cameron Lawrence 1921 - 2019

Regrettably, we only learnt of the death of Ian within the past few months. He was an enthusiastic and accomplished botanist, an active member of Cleveland Field Naturalists' Club and was its President for three separate terms. He was also elected as President of the Yorkshire Naturalists' Union for 1988-89. Outside his natural history interests, Ian's proficiency in German landed him a role at Bletchley Park during the war, listening in to German radio to hear what was being said about how the war was going. Ian now has a brick in his name (Ian C Lawrence – No. C1:380) in the CodeBreakers' Wall at Bletchley Park (Visit: <https://bletchleypark.org.uk/codebreaker-wall/?index=380§ion=C1>)

A full obituary for Ian is available in the 2020 Proceedings of the Cleveland Naturalists' Field Club, available at: <http://clevelandnats.org.uk/>

The Wetland Bird Survey - WeBS: recorders needed!



Alan Burnham - Local Organiser for East Yorkshire and Scarborough
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Historically, the Wetland Bird Survey has existed, albeit under differing names, since 1947. It is a joint project of the BTO, RSPB and the Joint Nature Conservation Committee. The survey monitors non-breeding waterbirds in the UK, with wetland sites visited and water birds counted once per month, providing valuable data for trends in population abundance and distribution. The UK holds internationally important numbers of many species of waterbirds and data collected by the WeBS survey is used by many agencies to inform or mitigate disturbance from development (e.g. a container port development in Southampton Water was turned down due to objections for which WeBS data was key) as well as for many other research reasons.

WeBS is a fine example of 'Citizen Science'. The BTO has some 3000 volunteers who turn out once a month in all weathers to count waterbirds in their allotted patch. Counts are made of all waterbirds including wildfowl, waders, seabirds, gulls and terns, in fact all birds that are associated with water. Around 3.5 million birds are counted. There are some 20 major sites in the UK that together account for around 75% of that total and we are fortunate in having one such in the form of the Humber Estuary.

Within East Yorkshire we have many birds going uncounted in sites ranging from the Humber, up through Hull to Driffeld, Beverley and up to Bridlington. If you feel that you could give some time then please have a look at the vacant sites map on the BTO Website:

Go to www.bto.org, select *Go To Projects* and *Wetland Bird Survey* from the dropdown menu. Scroll down to *Taking Part* then scroll down again to *Vacant Sites Map*:

<https://app.bto.org/websonline/sites/vacant/vacant-sites.jsp#lon=-0.2816196&lat=53.7687938&zoom=10>

If you live outside the East Yorkshire area, the vacant sites map in fact covers the whole country. Some of the East Yorkshire vacant sites that may be of interest are:

- East Park in Hull (over the years around 40 species and good numbers)
- Oak Road Pond in Hull (reasonable spread of species and numbers)
- Brandesburton Ponds to the north of Hull (around 50 species)
- Eastrington Ponds (reasonable spread of species).

Some potentially interesting sites have never been surveyed:

- Barmby on the Marsh (new YWT reserve, generally no public access but can be viewed from road and warden will give access for survey work)
- North Frodingham Pits (North of Hull)
- South Holderness (Mappleton to Eastrington; quite large coastal area which can be split into smaller sub sites).

Commitment is once a month and winter months are key but you may opt to do summer ones as well. Should you find that you have a favourite birding spot that is not set up as a site but holds good numbers, then it can be set up. Additionally, young people under 18 are more than welcome as counters, provided there is parental permission.

You can request a site via the website and your Local Organiser will respond. Either that or feel free to get in touch using the email address above.

The Bumblefly *Pocota personata* in Wensleydale

Derek Whiteley

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The Bumblefly, *Pocota personata*, is a fabulous bumblebee-mimic hoverfly, arguably the best. This remarkable fly not only looks like one of the white-tailed bumblebees but also mimics their

flight behaviour and even their sound. The body of *P. personata* is covered by fairly dense long hairs that give the impression that the head is disproportionately small relative to body size (Fig. 1). The front half of the thorax is covered in bright lemon-yellow body hairs whereas those of the rear half are black (Ball and Morris, 2013). Larvae develop in wet rot holes and other cavities filled with water or wet detritus in mature broadleaved trees. It is one of a suite of saproxylic hoverflies that have proved to be a useful ecological tool for site assessment.



Figure 1. *Pocota personata* (Figs. 1-8 inclusive by the author).

P. personata has a sparse distribution in southern England, the Midlands and Welsh Borders with a few outlying records in Yorkshire, Cumbria and Durham. (Hoverfly Recording Scheme website) and was traditionally associated with the Windsor Great Park, Epping Forest, Burnham Beeches and the New Forest.

Before 2023 there were only two records for Yorkshire from a single site. Peter Skidmore found the first one in Duncombe Park (VC62) in 1983. Skidmore (1985) reported “another

‘new’ Yorkshire hoverfly, *Pocota personata*, has probably long graced our older woodlands. I recall many years ago seeing small numbers of these glorious flies around a rot hole in an old beech in Windsor Forest; an experience never to be forgotten! It was therefore with astonishment that I beheld a female *Pocota* at Duncombe Park on 18 June 1983. She was inspecting a large rot hole in one of the immense beech trees near the hall, about 5m from the ground, and remained there for fully ten minutes”. *P. personata* was again recorded from Duncombe Park (SE607828) on 12 June 1988 by Adrian Fowles (YNU Diptera Records).

On 16 May 2023 I watched a male circling the trunk of an old Sycamore bordering the driveway in Wensley Park (part of the Bolton Castle Estate) showing interest in a rot hole (Fig.2).



Figure 2 (left). Sycamore 1 with rot hole. Figure 3 (right) Sycamore 2 showing huge rotten part. Both at Wensley Park, Bolton Estate. 16 May 2023

A few metres away another *Pocota* settled on the rotten part of an otherwise healthy veteran Sycamore (SE081895). I returned the following day to take photographs and watched two females for some time visiting a huge rotten part of the remaining main trunk, following the

loss of an enormous limb (Fig. 3). These records were confirmed as new for VC65. This discovery prompted a search of other veteran trees in Wensleydale. A further seven sites produced positive records and these are detailed below.

21 May 2023 West Witton (SE060893) in the morning sunshine buzzing around the base of an old field boundary Ash (Fig. 4 below left). This would be the first record within the Yorkshire Dales National Park.



Figure 4 (left). Ash at Low Wanlass, nr. West Witton, 21 May 2023; Figure 5 (centre). Sycamore at Swinithwaite; Figure 6 (right). Close up of Sycamore rot hole at Swinithwaite.

21 May 2023 Swinithwaite Estate (SE048897) in the late afternoon sunshine, a male investigating a rot hole in a large parkland Sycamore (Figs. 5 and 6).

22 May 2023 Wanlass Park (SE057898) investigating a rot hole in a veteran parkland Ash, and basking on sunlit leaves. A courting pair suddenly joined together in mid-air and fell to the ground to mate in the long grass.



Figure 7. Mature field boundary Ash, Well Lane, Redmire.



Figure 8. Mature parkland Sycamore at Wanlass Park.

22 May 2023 Swinithwaite. Flying round a decrepit old Sycamore in the evening sunshine. Later in the year the tree split and blew down in the autumn gales. Another important dead-wood hoverfly *Criorhina floccosa* was also investigating the tree.

26 May 2023 Redmire Well (SE051902). Flying around the base of a mature field boundary Ash also accompanied by *Criorhina floccosa* (Fig. 7).

26 May 2023 Wanlass Park (SE052899). Around a mature parkland Sycamore (Fig. 8) and a parkland Ash.

5 June 2023 A mating pair were observed at the original Sycamore in Wensley Park, 20 days after the first observation. This was the final sighting in 2023.

(Between 23-25 May I had to return to Derbyshire, but spent a day in Haddon Park in the Peak District where I observed *P. personata* investigating a water-filled rot hole in a mature Sycamore and a damp rot hole in a mature Ash.)

These observations form a significant contribution to the Yorkshire and national records and hopefully a better understanding of the species' ecological requirements and flight period. Many hoverfly species are extending their distributions northwards in response to climate change and these changes are well documented. In the case of *Pocota*, I would agree with Skidmore (1985) that they have been here for a long time, benefitting from traditional landscape management.

There are thousands of other veteran and mature trees in mid-Wensleydale that are suitable breeding sites for this species. Most of these are field boundary trees and parkland trees. Indeed the entire area has the feel of being one huge parkland dotted with small woodlands and the potential for *Pocota personata* and other saproxylic insects is quite exciting. The importance of large mature Sycamores cannot be overemphasised. Ash is also important. As the Ash Dieback disease gets a grip we should resist felling and removing large Ash, as dying trees will provide a very important resource for *Pocota* and other saproxylics for the next two decades. Planning for the long-term future by planting and nurturing individual trees, of different species, in appropriate places, is essential. This goes hand-in-hand with the care and protection of existing trees. I am pleased to report that such mitigation is planned and active on the Bolton Castle Estate in Wensleydale and the Haddon Estate in Derbyshire as part of their conservation initiatives.

Acknowledgements

Special thanks go to Tom Orde-Powlett (now Lord Bolton) for encouraging me to record insects on the Bolton Castle Estate in Wensleydale, and to Adrian Thornton-Berry for his interest in the invertebrates on the Swinithwaite Estate. Also to Andrew Grayson (YNU Diptera Recorder) for useful comments and updates on the status of Yorkshire flies.

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NOTICE: YNU Vacancies

The YNU has a number of vacancies (e.g. recorders for some groups, secretaries for some sections). These vacancies are indicated as such in the 2024 Members Booklet. Further details will be given in a YNU Newsletter due for publication before the next edition of *The Naturalist*. However, if you are interested in any of these roles, please contact a member of the Executive.

An overview of invertebrate studies at Three Hagges Woodmeadow (VC61)

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Introduction

Three Hagges Woodmeadow is a privately-owned publically-accessible nature reserve located south of York on the eastern side of the A19 between the villages of Escrick and Riccall in the far western part of VC61 (South East Yorkshire). It is entirely within UK Grid Reference SE6239, with its approximate centre at SE6267039610 (equivalent to latitudinal and longitudinal geographic co-ordinates 53°50'55.96"N, 1°02'56.00"W). The altitude of the site ranges between five and eight metres, but is mainly between six and seven metres.

Prior to its transformation into a managed wildlife site, Three Hagges Woodmeadow was an arable field covering 25 acres (almost 10 hectares). Following a final harvest of Barley in 2012, the field was ploughed and rolled in preparation for sowing flower-rich meadow seed and planting seedlings of various trees and bushes. The first batches of seedlings were planted in regimented rows within discrete coups during December 2012, and a pond was created at the northern end of the site. A high fence was then erected around the embryonic woodmeadow; this was principally to exclude grazing animals such as deer and rabbits. The strict boundary of Three Hagges Woodmeadow is the high fence. However, the broader boundary includes some adjoining land with similar habitats where related habitat-creation work has taken place over recent years.

Ownership of the Three Hagges Woodmeadow site has remained unchanged over the past decade (the land on which it is situated is part of the Escrick Park Estate owned by the Forbes Adam family) but there have been several changes to the name of the site and its management. The site was originally known as Three Hagges Jubilee Wood, as it was designed to commemorate The Queen's Diamond Jubilee in 2012, as part of the Woodland Trust's Jubilee Woods project. Its original website was www.threehaggesjubileewood.org.uk. The site was renamed Three Hagges Wood-meadow and later its hyphen removed to leave 'Woodmeadow' as a conjoined word.

The site was originally managed by Hagge Woods Trust (www.haggewoodstrust.org.uk), which was formed as a charity in 2013. This was subsequently renamed as the Woodmeadow Trust (www.woodmeadowtrust.org.uk). Then in 2023, the Woodmeadow Trust handed over management of the site and its assets and activities to Plantlife (www.plantlife.org.uk). Much information about the site and the 'woodmeadow project' can be found by accessing the aforementioned websites. This information includes the full historical reasoning behind the 'Three Hagges' part of the site name. In part, 'hagges' refers to village wise women and in the case of the site, applies to three ladies who were integral in creating the woodmeadow, viz.

Rosalind Forbes Adam and her assistants Lin Hawthorne (horticulturalist) and Tango Fawcett (conservation consultant).

Background to invertebrate studies at Three Haggas Woodmeadow

From the outset of the woodmeadow project, the steering group within the then Hagge Woods Trust planned to record the natural history of the site. This included monitoring ongoing changes in its biota, particularly the flora and fauna, as the site developed from flower-rich grassland into woodmeadow. Studying the site's invertebrate fauna would be an integral part of the project, as Invertebrata form such a large and diverse group, with some species dependent on specific plants.

The Trust was particularly interested to record and monitor any invertebrate fauna changes which occurred during the first few years of the woodmeadow project, with a specific interest in flower-visiting invertebrates which act as pollinators. Such flower-visiting invertebrates occur in a wide range of invertebrate orders and are not restricted to bees (Apidae).

In early 2014, I was invited by Rosalind Forbes Adam (chair of the then Hagge Woods Trust) to become involved with invertebrate studies at the site, and a plan was established which involved a survey during the summer of 2014, to be repeated annually, or possibly triennially, partly dependant on the availability of funding. Four-year funding was subsequently provided in 2015 by the Esmée Fairbairn Foundation, and further support from other sources facilitated intensive invertebrate studies until 2020.

For invertebrate recording purposes, it was essential to establish the extent of the Three Haggas recording area. Following consultation with Rosalind Forbes Adam, the main limits of the recording area were set as the main meadowland, plantation coups and pond area within the high fence. In addition, strips of land outside the fence to the north, east and west, which were formerly part of the 25-acre arable field, and an adjoining small plot of managed woodland, then known as About Thyme Wood (now Bomber Wood), were also to be surveyed. For the 2017 and 2018 invertebrate studies the recording area was extended southwards to include an adjacent strip of plantation and part of an adjacent field. The field was used as a 'control' area for monitoring purposes, as it had not been seeded with wildflower mixes.

The main meadowland of the site produced a spectacular floral display during the summer of 2014, largely as a result of cornfield annuals in the wildflower seed-mixes. The following two years saw a great reduction in the abundance of flowers on the meadowland followed by a great increase from 2017 onwards, although the suite of flowering plants had changed considerably since 2014. The main meadowland was regularly mown from 2014 onwards but never on an industrial scale and never including mowing the entire site at once. From 2018 onwards sheep were periodically brought in to graze the southern half of the meadowland.

During the first few years of the woodmeadow project, most of the seedlings within the coups of the main meadow area were smaller than the maximum height of the meadow flowers and grasses and were therefore inconspicuous by midsummer. The seedlings have now developed into recognisable young trees.

Invertebrate studies 2014 to 2023

I was responsible for the majority of invertebrate recording between 2014 and 2020 but the overall results were greatly supplemented by the work of other specialists. My baseline study was carried out between April and September 2014, and involved compartmentalising the recording area, then investigating the invertebrate fauna within each compartment on a once-monthly basis using a variety of diurnal recording techniques. This methodology was repeated annually between April and September 2015 to 2017. In 2018, the recording techniques were unaltered, but the recording period was extended so that each compartment was investigated once monthly throughout the year.

Following discussions with the Woodmeadow Trust's Rosalind Forbes Adam and Kat Wotherspoon, my recording activities were significantly amended for the 2019 and 2020 studies. Standardised monthly surveying of invertebrates in each compartment of the site was discontinued in favour of a regime of monthly recording tasks between April and September. My regular set tasks now included pitfall-trapping, light-trapping, transect-walking and aquatic-sampling. In addition, a Flower-Insect Timed Count (FIT Count) was carried out on four occasions each month between April and September as the Trust was keen to become involved with the FIT Count programme operated by the UK Pollinator Monitoring Scheme (PMS).

Fieldwork by other visitors to the site included pond-dipping, light-trapping and photography. Aquatic studies were carried out in the pond at the northern end of the site by the team of Martin Hammond, Naomi Ewald and Anne Heathcote in 2016. Martin Hammond returned to carry out further pond-dipping there in 2020 and also in the large 'Nursery Pond', which had since been created in the southern part of the recording area. In 2021 Martin investigated the aquatic fauna of another recently dug pond in Bomber Wood, which is adjacent to the main woodmeadow area. My aquatic-sampling took place in 2016, 2019 and 2020.

Occasional light-trapping (mainly to record moths) was carried out by Dave Chesmore during 2014 and 2015, Lin Hawthorne in 2015 and 2016, Richard Baker in 2018, Terry Crawford and the writer in 2019 and Allan Rodda in 2022. Pitfall-trapping (mainly to record ground beetles and spiders) was carried out by the writer on a once-monthly basis between April to September 2019 and April to August 2020.

Some invertebrates on the Three Hagges Woodmeadow list were identified by specialists from photographs taken by various visitors to the site. Special mention may be made of Pat Bone, who (initially always accompanied by her late husband Jim) made frequent visits to Three Hagges Woodmeadow between 2015 and 2023 to photograph the site's natural history and count butterfly numbers. Pat's photographic skills and patience have greatly contributed to the excellent photographic record of invertebrates from the site over the past decade. Lin Hawthorne is also worthy of special note for providing numerous excellent invertebrate photographs and records between 2014 and 2016. Lin identified some species from her photographs and forwarded many others to various specialists to obtain identifications or verifications.

Invertebrate recording at Three Hagges Woodmeadow received a boost during 2016 when the Yorkshire Naturalists' Union (YNU) invited its members to visit on the first Thursday of each month between May and September (Fig. 1). This invitation produced many invertebrate records from a number of eminent entomologists. The YNU repeated its invitation to members for 2017 but, unfortunately, there were no YNU attendees other than the writer on any scheduled meeting dates during that year. This was due to a combination of factors, including illness and several days of inclement weather.

A further boost to invertebrate recording occurred in July 2019 when the Woodmeadow Trust BioBlitz took place. This well-attended community-orientated natural history recording event was held in conjunction with the North & East Yorkshire Ecological Data Centre (NEYEDC). The bioblitz recording activities included the only occasion when a Malaise trap (erected by Nick Hall) was used to capture and record invertebrates on the woodmeadow.



Figure 1. Some of the attendees of the first Yorkshire Naturalists' Union visit to Three Hagges Woodmeadow on 5th May 2016. Left to right: Nicholas Atherton, Terry Crawford, Andy Millard, Andrew Grayson, Lin Hawthorne, the late Dave Chesmore, Harry Beaumont and Stuart Foster. *Photo: Rosalind Forbes Adam.*

Other organised invertebrate-themed recording events have targeted grasshoppers, bumblebees, butterflies and earthworms. Dave Chesmore ran a Royal Society Partnership session recording grasshoppers in 2015. Earthworm surveys were carried out in 2021 by members of the Three Hagges Woodmeadow volunteer team, together with Dan Carne and Dave Raffaelli. Butterflies and bumblebees have been the focus of recording along a transect walk that was devised by Terry Crawford in order that the site could participate in a wider study of Yorkshire's butterfly species and numbers. Butterfly Transect Walks commenced in 2019, when weekly walks took place between April and September by a team of Nick Hall, Meg Abu Hamdan and Chris Abbott. 'BeeWalks', registered with the Bumblebee Conservation Trust

(BBCT), commenced in 2021, with at least once-monthly walks taking place between March and October by a team of seven surveyors.

The full list of people who helped to record the invertebrate fauna of Three Hagges Woodmeadow between 2014 and 2023 is given in the Acknowledgements at the end of this paper. Those who might receive a special mention for contributing a good number of additions to the site list, despite having only made a single visit, or very few visits, include: Bob Marsh with Coleoptera, Bill Dolling and Stuart Foster with Hemiptera, and Geoff Oxford with Arachnida. Three Hagges Woodmeadow's impressive list of Parasitica (Hymenoptera) is entirely due to Bill Ely's identifications of specimens taken by the writer. Likewise, much of the site's Arachnida list is due to Jim Pewtress' identifications of the writer's material.

Invertebrate study results 2014 to 2023

The Three Hagges Woodmeadow invertebrate list currently stands at 1,286 species. If the results are restricted to the main meadowland and plantation coups within the high fence, then the list still well-exceeds the 1,000 species mark. Most recording activity occurred between 2014 and 2020; this period produced a list of 1,263 species. Only 23 additions have been made to the site list during the past three years with nine being made in 2021, 14 in 2022, and none so far from 2023.

Full details of all the aforementioned invertebrate studies and all the survey results from the 2014 to 2020 period were contained in my annual reports to Hagge Woods Trust (2014 and 2015) and the Woodmeadow Trust (2016 to 2020). These unpublished reports had a wide circulation, and edited versions were formerly available via the Woodmeadow Trust's website. The References list these annual reports (Grayson, 2014, 2016, 2017, 2018, 2019, 2021a & 2021b), and a 'five-year report' (Grayson, 2020a) that covered the period from 2014 to 2018. These reports are available from the author on request.

Not only has Three Hagges Woodmeadow proved to be very beneficial to wildlife since its transformation from an arable field to flower-rich grassland with coups of developing woodland but, via the many recording activities that have taken place, it has also provided a much larger list of county and vice-county invertebrate additions than was anticipated.

When first identified from Three Hagges Woodmeadow, the ground beetle *Stenolophus teutonius* (Carabidae), the ruby-tailed wasp *Chrysis corusca* (Chrysididae) and the parasitic wasp *Triaspis thoracica* (Braconidae) were new discoveries for Yorkshire, and the parasite fly *Linnaemya picta* (Tachinidae) had only been newly discovered elsewhere in Yorkshire a fortnight earlier (Grayson, 2020b: 62). The details of these discoveries are as follows: *S. teutonius*, 1 female ex pitfall trap set into the sandy margins of the pond at the northern end of the site, centrum SE6268639934, 23-24.vi.2020, A. Grayson (teste R.J. Marsh); *C. corusca*, 1 female ex the bee hotel near the centre of the site, SE62623965, 07.vii.2016, A.V. Millard, det. B. Wisniewski; *T. thoracica*, 1 male ex the 'A19 Strip' at the western edge of the site, centrum SE62593977, 01.ix.2017, A. Grayson, det. W.A. Ely in 2020; and *L. picta*, 1 female ex transect walk section T6 beside York Road, centrum SE6252539357, 04.ix.2019, A. Grayson.

S. teutonius and *L. picta* were extending their British ranges into northern England at the time they were discovered at Three Hagges Woodmeadow, whereas the site's record of *C. corusca* was one of only three British records known at the time of its identification by Bogdan Wisniowski in 2016. It was first published as occurring in Britain by Wood & Baldock (2016) from material captured in a Malaise trap at Goring in Berkshire in 1999.

Including these four additions to the county list, the results of studies at Three Hagges Woodmeadow in the seven seasons between 2014 and 2020 produced 52 invertebrates that had not been recorded previously in VC61. Of these vice-county additions, 44 were in the order Diptera and included a mixture of nationally common, local and uncommon flies, mainly from families that are the preserve of the specialist and inevitably understudied. The largest batch of VC61 additions were from the superfamily Muscoidea (comprising the families Scathophagidae, Anthomyiidae, Fanniidae and Muscidae), which provided the following 17 species new to VC61: *Nanna inermis*, *Adia cinerella*, *Botanophila brunneilinea*, *Fannia pallitibia*, *F. pauli*, *F. sociella*, *Coenosia atra*, *C. pedella*, *C. perpusilla*, *Helina lasiophthalma*, *Hydrotaea militaris*, *H. palaestrica*, *H. parva*, *Limnophora tigrina*, *Phaonia fuscata*, *P. halterata* and *Thricops simplex*.

Other VC61 Diptera additions included the fungus gnat *Bolitophila cinerea* (Bolitophilidae), the winter gnats *Trichocera annulata* and *T. regelationis* (Trichoceridae), the non-biting midge *Cricotopus trifasciatus* (Chironomidae), the dance fly *Platypalpus articulatus* (Hybotidae), the long-legged fly *Xanthochlorus galbanus* (Dolichopodidae), the scuttle fly *Borophaga incrassata* (Phoridae), the hoverfly *Eumerus funeralis* (Syrphidae), the big-headed flies *Eudorylas inferus* and *Pipunculus zugmayeriae* (Pipunculidae), the stilt-legged fly *Neria ephippium* (Micropezidae), the black scavenger fly *Themira leachi* (Sepsidae), the leaf-mining flies *Agromyza alnivora*, *Liriomyza strigata* and *Phytomyza leucanthemi* (Agromyzidae), *Suillia affinis* (Heleomyzidae), the vinegar flies *Scaptomyza flava* and *S. griseola* (Drosophilidae), the shore fly *Discocerina obscurella* (Ephydriidae), the bluebottles *Melinda viridicyanea* and *Protophormia terraenovae* (Calliphoridae), the cluster flies *Pollenia angustigena* and *P. pediculata* (Polleniidae), the flesh fly *Sarcophaga haemorrhoea* (Sarcophagidae) and the parasite fly *Blepharomyia pagana* (Tachinidae). Bill Ely (pers. comm.) reported that the following four parasitic wasps were also new to VC61 based on their discovery at Three Hagges Woodmeadow: *Synelix semirugosa* (Braconidae), *Eurylabus torvus*, *Ichneumon stramentor* and *Macrocentrus pallipes* (Ichneumonidae).

The study area also produced only the second or third county records of many Diptera species, the latest being *Eccoptomera obscura* (Heleomyzidae) from Bomber Wood on 02.xi.2022, which was only the second Yorkshire record after its discovery at Cali Heath (a.k.a. Calley Heath) by Ian Andrews in 2019 (Grayson, 2020b: 61).

Three Hagges Woodmeadow has produced a rather higher number of invertebrates that currently hold significant national conservation statuses than could have been anticipated at the commencement of studies. Currently, 22 species have a national status of at least Nationally Scarce significance, as awarded under the auspices of the Joint Nature Conservation Committee (JNCC), or else hold an equivalent conservation designation based on pre-1994

International Union for Conservation of Nature (IUCN) criteria and terminology. It is fair to acknowledge that some of the 22 species have greatly proliferated to become common species in Britain since their national designations were awarded. Nevertheless, the site list contains a few genuinely scarce invertebrates, some of which have been mentioned already as new to Yorkshire or new to VC61. The list of invertebrates found at Three Hagges Woodmeadow that currently hold a Nationally Scarce or higher (or equivalent) conservation status includes: Dingy Skipper *Erynnis tages* (Hesperiidae) which became established onsite from 2018 onwards, Small Heath *Coenonympha pamphilus* (Nymphalidae) which was recorded once only, the diving beetle *Acilius canaliculatus* (Dytiscidae), the ground beetles *Anthraxus consputus* and *Stenolophus teutonius* (Carabidae), Alder Leaf Beetle *Agelastica alni* (Chrysomelidae), the weevils *Oxystoma cerdo* (Apionidae) and *Polydrusus formosus* (Curculionidae), the solitary wasp *Tiphia minuta* (Tiphidae), the social wasp *Dolichovespula saxonica* (Vespidae), the nomad bee *Nomada fulvicornis* (Anthophoridae), Hill Cuckoo-bee *Bombus rupestris* (Apidae), the dance fly *Platypalpus articulatus* (Hybotidae), the hoverfly *Cheilosia uviformis* (Syrphidae), the big-headed fly *Pipunculus zugmayeriae* (Pipunculidae), the marsh fly *Pherbellia griseola* (Sciomyzidae), the muscoid flies *Conisternum decipiens* and *Norellia spinipes* (Scathophagidae), *Fannia pauli* (Fanniidae), *Coenosia atra* and *Hydrotaea parva* (Muscidae), and the parasite fly *Zophomyia temula* (Tachinidae).

The studies also produced a larger than expected list of 18 invertebrates that are statutorily part-protected having been designated as SPIE (Species of Principal Importance in England) under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The occurrence of SPIE at Three Hagges Woodmeadow is not as significant as the term would indicate, as SPIE on the site list mainly comprise common and widespread moths that were listed as UK BAP Priority Species (list last updated in 2007) under UK BAP (UK Biodiversity Action Plan) for research purposes only, following evidence of declines in some parts of Britain. UK BAP designations remain valid, although UK BAP Priority Species were effectively superseded by SPIE following devolution. The Three Hagges Woodmeadow list of 16 SPIE moths and two SPIE butterflies is as follows: Ghost Moth *Hepialus humuli* (Hepialidae), Shaded Broad-bar *Scotopteryx chenopodiata*, Blood-vein *Timandra comae* and Dark-barred Twin-spot Carpet *Xanthorhoe ferrugata* (Geometridae), Garden Tiger *Arctia caja*, White Ermine *Spilosoma lubricipeda*, Buff Ermine *S. lutea* and The Cinnabar *Tyria jacobaeae* (Erebidae), Knot Grass *Acronicta rumicis*, Ear Moth *Amphipoea oculatea*, Mouse Moth *Amphipyra tragopoginis*, Small Square-spot *Diarsia rubi*, The Rustic *Hoplodrina blanda*, Rosy Rustic *Hydraecia micacea*, Shoulder-striped Wainscot *Leucania comma* and Powdered Quaker *Orthosia gracilis* (Noctuidae), Dingy Skipper *Erynnis tages* (Hesperiidae) and Small Heath *Coenonympha pamphilus* (Nymphalidae).

Popular-interest groups

Butterflies (Lepidoptera: Rhopalocera), bumblebees (Hymenoptera: Apidae), damselflies (Odonata: Zygoptera) and dragonflies (Odonata: Anisoptera) were inevitably disproportionately well-recorded by visitors to Three Hagges Woodmeadow during the 2014 to 2023 period.

Twenty seven butterfly species were recorded, many becoming resident on the site in the first few years following its transformation from an arable field. The full list is as follows: Dingy Skipper *Erynnis tages*, Large Skipper *Ochlodes sylvanus*, Essex Skipper *Thymelicus lineola*, Small Skipper *T. sylvestris*, Orange Tip *Anthocharis cardamines*, Clouded Yellow *Colias crocea*, Brimstone *Gonepteryx rhamni*, Large White *Pieris brassicae*, Green-veined White *P. napi*, Small White *P. rapae*, Peacock *Aglais io*, Small Tortoiseshell *A. urticae*, Ringlet *Aphantopus hyperantus*, Dark Green Fritillary *Argynnis aglaja*, Small Heath *Coenonympha pamphilus*, Meadow Brown *Maniola jurtina*, Marbled White *Melanargia galathea*, Speckled Wood *Pararge aegeria*, Comma *Polygonia c-album*, Gatekeeper *Pyronia tithonus*, Red Admiral *Vanessa atalanta*, Painted Lady *V. cardui*, Brown Argus *Aricia agestis*, Holly Blue *Celastrina argiolus*, Purple Hairstreak *Favonius quercus*, Small Copper *Lycaena phlaeas* and Common Blue *Polyommatus icarus*.

Butterfly enthusiasts are also inclined to notice and often photograph colourful diurnal moths, of which the following uncommon and local Erebidæ moths were particularly interesting arrivals to the meadowland: Clouded Buff *Diacrisia sannio*, Burnet Companion *Euclidia glyphica* and Mother Shipton *Euclidia mi*.

The list of bumblebees recorded comprised all six British cuckoo-bumblebees and the seven most common typical bumblebees, viz. Barbut's Cuckoo-bee *Bombus barbutellus*, Gypsy Cuckoo-bee *B. bohemicus*, Field Cuckoo-bee *B. campestris*, Hill Cuckoo-bee *B. rupestris*, Forest Cuckoo-bee *B. sylvestris*, Vestal Cuckoo-bee *B. vestalis*, Small Garden Bumblebee *B. hortorum*, Tree Bumblebee *B. hypnorum*, Red-tailed Bumblebee *B. lapidarius*, White-tailed Bumblebee *B. lucorum* (a *sensu stricto* queen was collected), Common Carder-bee *B. pascuorum*, Early Bumblebee *B. pratorum* and Buff-tailed Bumblebee *B. terrestris*.

The combined efforts of visitors to Three Hagges Woodmeadow produced a list of 18 Odonata species, viz. Azure Damselfly *Coenagrion puella*, Common Blue Damselfly *Enallagma cyathigerum*, Red-eyed Damselfly *Erythromma najas*, Blue-tailed Damselfly *Ischnura elegans*, Large Red Damselfly *Pyrrosoma nymphula*, Emerald Damselfly *Lestes sponsa*, Banded Demoiselle *Calopteryx splendens*, Southern Hawker *Aeshna cyanea*, Brown Hawker *A. grandis*, Common Hawker *A. juncea*, Migrant Hawker *A. mixta*, Emperor Dragonfly *Anax imperator*, Broad-bodied Chaser *Libellula depressa*, Four-spotted Chaser *L. quadrimaculata*, Black-tailed Skimmer *Orthetrum cancellatum*, Ruddy Darter *Sympetrum sanguineum*, Black Darter *S. danae* and Common Darter *S. striolatum*.

Spiders (Araneae) and true bugs (Hemiptera) comprised a sizeable proportion of the site's invertebrate fauna. Regarding Araneae, of 840 spiders identified to species-level by Jim Pewtress from pitfall-trapping by the writer during 2019 and 2020, the following were the most frequently taken (numbers of individuals given in parentheses): *Drassyllus pusillus* (22), *Erigone atra* (16), *Alopecosa pulverulenta* (64), *Pardosa amentata* (103), *P. palustris* (76), *P. prativaga* (21), *P. pullata* (152), *Pirata piraticus* (10), *Trochosa ruricola* (77), *Pachygnatha degeeri* (64) and *Xysticus cristatus* (21). As might be expected, wolf spiders in the genus *Pardosa* proved particularly numerous in the pitfall traps. Above ground level, orb-weaver spiders in the genus *Araneus* were abundant, especially in the plantation areas of the meadowland and included:

Garden Spider *A. diadematus*, Marbled Orb-weaver Spider *A. marmoreus* variety *pyramidatus* and Four-spot Orb-weaver Spider *A. quadratus*.

Regarding Hemiptera, the Hairy Shieldbug *Dolycoris baccarum* and Green Shieldbug *Palomena prasina* (Pentatomidae) were particularly numerous, as were several grass bugs and plant bugs in the family Miridae, especially *Capsus ater*, *Closterotomus norwegicus*, *Leptopterna dolabrata* and *Stenodema laevigata*. Damsel bugs (Nabidae) were also well-represented on the site, with the following seven species recorded: *Himacerus apterus*, *H. major*, *H. mirmicoides*, *Nabis ferus*, *N. flavomarginatus*, *N. limbatus* and *N. rugosus*.

Pond-dipping produced the following list of 14 aquatic bugs: *Corixa punctata*, *Hesperocorixa linnaei*, *H. sahlbergi*, *Sigara dorsalis*, *S. lateralis* and *S. nigrolineata* (Corixidae), *Gerris lacustris*, *G. odontogaster* and *G. thoracicus* (Gerridae), *Ilyocoris cimicoides* (Naucoridae), *Notonecta glauca*, *N. maculata* and *N. viridis* (Notonectidae) and *Plea minutissima* (Pleidae).



Figure 2. The pond at the northern end of Three Hagges Woodmeadow on 13th August 2019. Photo: Andrew Grayson

Pond-dipping produced 46 different water beetles, of which 24 were diving beetles (Dytiscidae) including the very large great diving beetles *Dytiscus circumflexus*, *D. marginalis* and *D. semisulcatus*. The ground beetle (Carabidae) fauna was mainly collected by pitfall-trapping, which was the only method to capture such large or attractive beetles as *Carabus nemoralis* and *Chlaenius nigricornis*, the latter being one of many ground beetles only to be found around the sandy margins of the pond at the northern end of the site (Fig. 2).

It was here too that the diurnal ground beetle *Elaphrus riparius* occurred in abundance and where Green Tiger Beetle *Cicindela campestris* established a colony during the early years of studies, before being flooded-out by periodic high water-levels in the pond.

Regarding Orthoptera, Common Green Grasshopper *Omocestus viridulus*, Common Field Grasshopper *Chorthippus brunneus* and Meadow Grasshopper *C. parallelus* were all recorded at Three Hagges Woodmeadow before the end of July 2014, and Lesser Marsh Grasshopper *C. albomarginatus* colonised the site in 2020. *O. viridulus* and *C. brunneus* increased in abundance over the first decade of the site's existence. This was in stark contrast to the groundhoppers *Tetrix subulata* and *T. undulata*, which were very numerous throughout the main meadowland and plantation area in the early years but became mainly restricted to the bare sandy margins

of the pond at the northern end of the site after the main area became fully vegetated at ground-level.

At ground-level, the flora of the site was initially interspersed with roughly equal areas of bare ground between each flowering plant and clump of grass. This mosaic habitat attracted invertebrates that prefer, or depend on, sparsely-vegetated areas or areas of bare ground. When the meadowland became densely vegetated at ground-level, most of the site became far less suitable for such species. This can be quantified by some of the survey results, e.g. as all small *Cheilosia* hoverflies (Syrphidae) were collected and retained for identification purposes, it is certain that *Cheilosia vernalis* declined drastically as the vegetation became denser at ground level. The numbers of *C. vernalis* captured in 2014 totalled 67 individuals, yet only 10 were found in 2015, only singles were found in 2016 and 2017, and none were taken thereafter, despite the number of survey days being greatly increased from 2018 to 2020.



Figure 3. The bee hotel near the centre of Three Haggas Woodmeadow on 11th July 2020. Photo: Andrew Grayson.

Despite the decline of a few early-successional invertebrates at Three Haggas Woodmeadow since 2014, the overall quantity and diversity of invertebrates vastly increased over the first decade of the site's existence. Invertebrate numbers increased particularly in the main meadowland and plantation area and the adjacent 'A19 Strip' where predatory invertebrates and those associated with meadow plants increased enormously.

As the tree seedlings began to rise above the maximum annual height of the meadow plants, many invertebrates that were initially recorded only on the fringes of the site, were now penetrating the main meadowland and plantation area. Such invertebrates tended to be arboreal species and those which usually occur in close proximity to trees and bushes, e.g. along woodland margins.

Since the commencement of invertebrate studies in 2014, Three Haggas Woodmeadow has provided a good resource of flowering plants for flower-visiting invertebrates. However, the range of plants has greatly changed from the species in the original flower-rich meadow seed mix. The site is an important flower resource locally as flowering plants are scarce throughout most of the surrounding woodlands and arable fields.

Unlike most examples of its type elsewhere, the south-facing bee hotel at Three Haggas Woodmeadow (Fig. 3) has proved to be rather successful in attracting its target bee and wasp assemblages and their aculeate parasites (Hymenoptera) with an average annual occupancy rate of at least 25% for the bee hotel's many potential aculeate nest-holes. This occupancy success was not properly indicated by the survey results as very few bees and wasps were

collected from the bee hotel for identification purposes. This deliberate under-recording was in order to conserve the nesting assemblages.

Given the extensive scope of survey work carried out at Three Hagges Woodmeadow, particularly between 2014 and 2020, and the size of the invertebrate list that was achieved by the many studies, it has only been possible in this paper to summarise the fieldwork and mention but a few species of special or general interest.

Acknowledgements

In respect of my involvement with the woodmeadow project at Three Hagges Woodmeadow, special thanks must be given to Rosalind Forbes Adam, and thanks are also due to all other past and present members of the Woodmeadow Trust, especially Emma Daniels, Dave Raffaelli, Tom Webborn and Kat Wotherspoon. The Esmée Fairbairn Foundation must also be appreciated for providing funding that facilitated four years of invertebrate studies. The species list of 1,286 invertebrates that were recorded between 2014 and 2023 would not have been achievable without the involvement of the following persons who either provided records, gave information, submitted photographs, helped with identification or were part of an organised recording team (with apologies to anyone I may have missed): Chris Abbott, Rosalind Forbes Adam, Jessica Alvey, Ian Andrews, Mike Archer, Richard Baker, Pat and the late Jim Bone, Anna Cabriolu, Laurie Campbell, Dan Carne, the late Dave Chesmore, Peter Cook, Mike Cowling, Terry Crawford, Bill Dolling, Mike Edwards, Bill Ely, Naomi Ewald, Jim Flanagan, Stuart Foster, Nick Hall, Meg Abu Hamdan, Martin Hammond, Lin Hawthorne, Anne Heathcote, Robin Howard, Reijo Jussila, Roger Key, Steve Lane, Paula Lightfoot, Bob Marsh, Andy Millard, Geoff Oxford, Jim Pewtress, Dave Raffaelli, Martin Roberts, Allan Rodda, Matt Smith, Alison and John South, Dave Tate, Noelle Treanor, Trevor Walton, Barry Warrington, Tom Webborn and Bogdan Wisniowski. The main contributors have also been mentioned in the text of this paper.

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The Critically Endangered Flamingo Moss *Tortula cernua* is still present at Brancliffe Lime Works

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Brancliffe Lime Works near Shireoaks is an old quarry with lime kilns that were common on the Magnesian Limestone in the 19th Century. Flamingo Moss *Tortula cernua* is strongly associated with tips from these lime kilns. It has declined at many of its sites due to direct removal of the substrate and habitat succession as the substrate becomes less hostile over time (Hodgetts 2008, Heathcote & Blockeel 2019) so that it was classified as Critically Endangered in the most recent British Red List (Callaghan 2023). The monitoring of the small number of extant populations is therefore of high importance. All the known populations recorded since 2000 are confined to the Magnesian Limestone in South Yorkshire and (one site) Derbyshire.



Figure 1. The original mound with white markers pointing to groups of fertile Flamingo Moss shoots.

Flamingo Moss was originally recorded at Brancliffe Lime Works in 1952 and surveyed in detail in 2000 (Blockeel 2000). Intensive monitoring was carried out from 2001-2006 as part of the *Back from the Brink* project by Nick Hodgetts (Hodgetts 2008). From 2000-2006 the moss was present on a single low mound and noted to be slowly spreading from the core of the mound to the outer edges but no records were made beyond this mound. Annual variation

of between 100-4000 fertile shoots was noted for these years, all restricted to the single spoil heap recorded in 2000 (Fig. 1). There are no publicly available records for the population after the 2006 survey.

A Doncaster Naturalists' Society field meeting on 25th November 2023 provided an opportunity for the authors to visit the Lime Works and update the status of the population. The previous

area of occupation was searched, then expanded out to the rest of the old quarry looking for the plants in suitable habitat. The species is easily recognised from the distinctive sporophyte when this is present but vegetative shoots are small, often partially buried in the substrate and easily overlooked. When found, locations were marked, photographed and location recorded with handheld GPS accurate to c. 4m. The number of sporophytes was estimated for each separate population encountered.



Figure 2. Some of the Flamingo Moss plants with sporophytes at Branccliffe in November 2023. Photograph by Louise Hill

The moss with its distinctive sporophyte (Fig. 2) was recorded in three separate locations, including the original one with additional vegetative plants found in a fourth location and confirmed microscopically by TB. The central grid reference and population size are reported in Table 1. The total amount of fertile material is estimated at around 290-360 plants with a significantly higher number of vegetative plants (>1000) likely to be present. The number of occupied 1m² grid cells, treated as ‘individual equivalents’ following Callaghan (2022), was recorded as 14. The distribution recorded in the 2023 survey is shown in Figure 3 (p52).

Table 1. Location of *Tortula cernua* colonies.

Location	Sporophytes	Notes
SK 54108 81608 Original mound	30-50	The moss remains spread over much of the area of this mound. It is well-mixed with other small mosses, mostly <i>Didymodon tophaceus</i> . The total number of sporophytes appears much reduced compared to the peak of 4000 noted in 2004.
SK 54110 81606 Small mound	None (material confirmed from vegetative shoots)	This second mound is located between the original population and base of the large mound and is a similar size to the original mound. No fertile material was found, but most of the mound appears suitable habitat.
SK 54114 81605 Large mound eastern base	10	A small number of sporophytes were recorded around the base of the large mound, all within about 50cm of the base. Again, there appears to be much suitable habitat on the mound.
SK 54142 81598 Path to south of large mound	250-300	A large population was found some distance from the other known populations. The ground here is well-trampled kiln waste and the moss appears to be thriving, even with the disturbance.

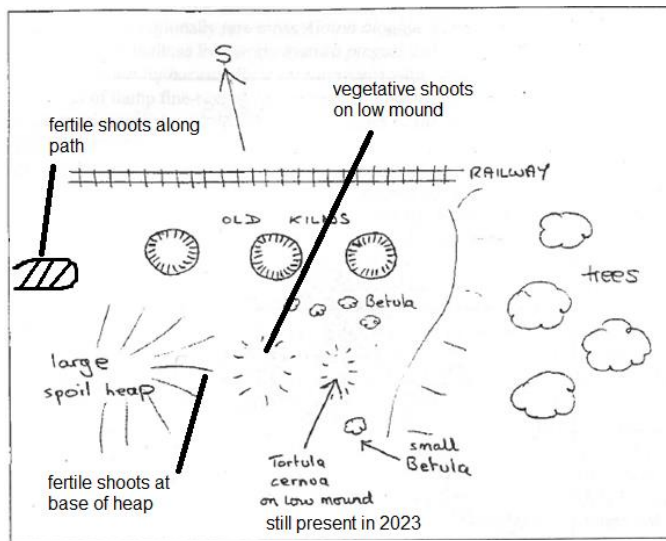


Figure 3. Updated sketch map showing population locations.

Whilst *T. cernua* is in general decline, it is positive to note that the species has not only persisted at Brancliffe Lime Works since 2006, but has evidently colonised new areas of the kiln waste substrate. However, it is possible that the new populations may have remained undetected on previous visits, at least on the path on the far (eastern) side of the large spoil-heap, which is some distance from the population found in 2000-2006. This is only the fourth UK site with a confirmed extant population of *T. cernua* since 2010, along with three others in the Don Valley (Heathcote & Blockeel 2019) with

the species probably lost from a further 4 of the 10 sites recorded between 2000-2006, including both Nearcliffe Quarry sites, Conisbrough Viaduct, and Anston Quarry. Two sites, Lindrick Common and Steetley Quarry have not been searched in detail since 2006. On the basis of 'individual equivalents', the Brancliffe Lime Works site supports around 10% of the population recorded since 2010.

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Obituary: Stephen Lawrence Sutton

Born 21 July 1938, Oxford, England

Died 31 December 2023 in Kota Kinabalu, Sabah, Malaysia

Stephen was the eldest son of Leslie Ernest Sutton FRS (1906-1992), a Fellow of Magdalen College, Oxford, teaching Chemistry. His mother Catharine Virginia neé Stock (1905-1962), married Leslie in 1932 in Oxford. Catharine was American and in 1941 Stephen, his older sister,

Virginia [Ginny], and mother were evacuated to America. For most of the Second World War they lived with his great aunt in a remote house outside of Milton, a very small country village in rural Connecticut. The house was rather basic with no running water but was surrounded by open country and dense woodland. It gave freedom for the children to develop a love of the countryside. After Stephen's mother returned to England in 1943 his polymath grandfather provided a role model during his first formal schooling in the small village school of Milton. On return to Oxford in 1945, when Stephen's younger brother Richard was born, he attended the Dragon School as a day pupil and later Marlborough College. He found the standard school regime rather difficult for his adventurous mind but its natural history society provided an unsupervised escape route. He roamed the countryside on his bicycle, hunting for insects with a killing jar containing enough cyanide to kill half the county.



Stephen, the young entomologist

In 1958-59 he was called up for national service in the Royal Navy. From his own admittance, the Navy considered he was best kept safely away from their ships and he became based at Portland. Somehow he managed to include moth trapping and lepidopteran observations, near to what was to become the Portland Bird Observatory, as part of his duties. Later he published his first paper on insect migration based on those observations (Sutton, 1959).

In 1960 he was admitted as an undergraduate to New College, Oxford University, where he was involved in the organisation of the first of the many expeditions of his life. Along with six other undergraduates (who all went on to have distinguished academic careers), in the summer of 1961, they drove overland to Persia [Iran] where Stephen undertook entomological studies near the Caspian Sea coast (Sutton, 1962).

After his first degree he had a short period with Tate & Lyle, which was not successful. Both parties admitted that being a business executive in industry did not suit his temperament. The golden handshake he received was useful to partly fund a DPhil at the Bureau of Animal Populations, Oxford, under Charles Elton and Kitty Southern. Charles Elton was a pioneering biologist who turned natural history into the science of ecology by applying the scientific method to study the lives of animals in their natural habitats and their interactions with the environment. The original intention was to study the woodlouse *Ligidium hypnorum* in Wytham

Woods, but this species was in exceedingly short supply so he wisely moved to working on the population dynamics of the more common *Philoscia muscorum* and *Trichoniscus pusillus*. This was the first such study on any species of woodlice in the UK.

During this period he met and married Stephanie des Forges. Their wedding took place at Nostell Priory, West Yorkshire, in August 1963. A son Christopher and daughter Francesca came along in 1965 and 1968. Following his mother's death, his father married Rachel Long, and step-brothers Geoff and Martin joined the family.

Appointed as Lecturer in Zoology at the University of Leeds in 1966, Stephen began to establish a small postgraduate isopod research team. He joined the Yorkshire Naturalists' Union (YNU) at the time that the Lepidoptera Group was contemplating an update to the 1970 list of Yorkshire macrolepidoptera. Stephen managed to enroll Helen Smith as a research assistant and she worked largely on the macrolepidoptera list leaving Stephen to use his contacts to bring in grant funding, oversee the project and to liaise with the printers. He also cajoled people to contribute towards the chapters of a book. Harry Beaumont was asked if it was worth including a list of micros and Stephen was pleased that he offered to provide one for the Butterflies and Moths of Yorkshire. This was the first Yorkshire assessment of the group since the lists of G. T. Porritt (1883, 1904, 1907 & 1922). At this time he also extended his interest in Lepidoptera, particularly in Yorkshire, including running a moth trap at his home in Shadwell, near Leeds, as well as undertaking much extensive light trapping throughout Yorkshire to expand the scope of the book (Sutton & Beaumont, 1979). He also renewed his expedition interests, becoming president of the University of Leeds Expedition Society.

Stephen's associates and a growing number of postgraduate students expanded research to other groups of invertebrates and resulted in many original distributional and ecological studies. Paul Harding is summarising much of this work (Harding, 2024 in prep.). The Isopod Survey Scheme (ISS) started as an initiative by Stephen and John Metcalfe, a friend who was a teacher at Trinity and All Saints College in Horsforth (now Leeds Trinity University). Paul Harding teamed up with them in 1969 after a get-together at Shadwell. The development of the recording scheme and British Isopod Study Group (BISG) is described elsewhere (Harding, 2018). It also involved many members of the YNU including the late Douglas Richardson who became its first Myriapoda Newsletter editor. David Burn, a former student at Leeds who had moved into scholastic publishing, commissioned a book, simply titled *Woodlice*, in a short-lived series - *Invertebrate Types*. It was an opportunity for Stephen to compile a well-referenced 'all you need to know about woodlice' and included an off-printed key to species (Sutton, 1972; Sutton *et al.*, 1972) with colour portraits of seven species by Hilary Burn who went on to become a notable wildlife artist. The proof copies of Hilary Burn's illustrations donated by Stephen are currently in trust in the YNU archives awaiting a more permanent archival home. Stephen was pleased to serve as President of the YNU in 1990 and as a Vice-President until his death.

Stephen's growing interest in the tropics was certainly fueled by his involvement in the Zaire River Expedition in 1974-75 led by John Blashford-Snell. It was through this initial work and the contacts that ensued, that he became increasingly involved with Operation Drake and its

successor Operation Raleigh. He became a leader for ecological research on these ambitious international projects. Initially his work in the tropics was based from Leeds University where he still had a teaching role and where, with Arthur Chadwick in 1984, he organised one of the first Tropical Rain Forest meetings, which firmly established him within the tropical forest research community (Chadwick & Sutton, 1984 [eds.]). Prof. John Turner remembers visiting the Zoology Department at the University of Leeds and seeing 'a delightful miniature rain forest set up in his laboratory fume cupboard'. Out of town on overgrown grassland near his house in Shadwell, Stephen set up Bond Ing as a nature reserve and ecological research site. Many research projects were conducted there, including some of the long-term moth trapping which measured the decline of industrial melanism in the peppered moth *Biston betularia* in northern England. This phenomenon, first highlighted in the North of England by Porritt in the 19th and early 20th century, became a prominent case study, supporting a mechanism for Darwin's theory of evolution (Cook *et al.*, 2005).

Stephen soon became the go-to person for the media and publishers regarding woodlice and some other invertebrates. This included a sideline in contributing to radio programmes, mainly natural history panels and excursions. *The Humble Woodlouse* was broadcast by the BBC in 1973 in the 'Living World' series and somewhat later he was involved with a sound recordist in a pioneering programme on the natural sounds of a tropical rainforest. He became a leader for ecological research on these ambitious international projects and later was closely associated with the Royal Society as its Scientific Co-ordinator (1996-2002) for research in Borneo; this was developed particularly with Yayasan Sabah (The Sabah Foundation) in the Danum Valley of eastern Sabah. Several of his students completed research projects at Danum Valley Field Station and some became the resident Chief Scientist. On taking early retirement from the University in 1989 he moved to Heigh Head, a rather dilapidated, remote farmhouse, originally the family holiday home, near Keasden on the edges of the Bowland Fells. Here he pursued a rather eccentric domestic life-style whilst organising the renovation of the crumbling property. In summer this was interspersed with stays near Leeds in the 'shooting hut' involved in the maintenance of the nature reserve at Bond Ing.

By the early 2000s he had moved almost permanently to Kota Kinabalu in Sabah. Here he expanded his interests in books and publishing, establishing an on-line and physical bookshop, Borneo Books, with his future wife, Rosalind Tsang, whom he married in 2006. This expanded his already extended family with step-children, Evangeline and Jeremiah [Jerry] Majawat. He was soon invited to become a member of the Rotary Club of Kota Kinabalu and in 2015 he became the main organiser of a Project Partnership Programme with the Malaysian Rotary Clubs Foundation. The Rotarian project was initially to help the people affected by the deadly 2015 Mount Kinabalu earthquake which had closed the national park to tourists for some years. It centred on the worst hit villages in the Kiau Valley and started with finding money for training and up-skilling some of the unemployed Kinabalu mountain guides as specialist bird guides. Later it helped promote the villages' economy through homestay initiatives encouraging tourists to stay and spend in the local villages. Having learned about the Swallowtail and Birdwing Butterflies Trust, founded by his friend Dato' Henry Barlow to conserve the threatened large butterflies of the world, Stephen realised that some of these red data-book butterflies were in Borneo. More especially *Troides andromache*, the Kinabalu Birdwing

butterfly, was in Kampong Kiau. The natural history education of the villagers was extended from birds to butterflies through the first two day Birds and Butterfly Festival in Kampong Kiau in 2019. Teachers and twelve-year-old school children from schools around Mount Kinabalu participated in various activities, all of which were aimed at raising a better understanding and appreciation of the birds and butterflies around them. In his address Stephen stressed that '*not only is a better understanding of these species useful to science, it is also important to the common people, especially communities who live close to their natural habitat. It would also be good for community-based tourism on the mountain because the Kinabalu Birdwing is so rare that many people around the world would want to come to Sabah to see it.*' This spawned communal initiatives to cultivate the food plant of the butterfly and surveys of the distribution of the butterfly and its food plant around the mountain. Money was also obtained to help fund DNA research investigating the taxonomy of the butterfly. The gazetting in 2023 of *Troides andromache* as Sabah's State Butterfly was almost entirely due to his efforts.

In 1996 Terry Whitaker accessed the extensive pyraloid and other micromoths collections made during Stephen's travels in Southeast Asia. At this stage the idea was to do visual identification of unspread material and allocate it into different taxonomic units near the species level to get some idea of the extent of the pyralid moth group. Eventually this resulted in a database which came to underpin the later *Pyraloids of Borneo* publishing project (POB). They both had hoped that this could be rapidly achieved but neither of them had grasped the sheer magnitude of tropical forest lepidopteran diversity. Initially almost every other specimen examined was different. Eventually the POB project estimated that Borneo had at least 3000 spp. of Pyraloid moths (Whitaker, 2015). Along with Dato' Henry Barlow and Terry Whitaker, Stephen helped produce the first two volumes of the first modern identification book for the group (Barlow *et al.*, 2015; Whitaker *et al.*, 2023). It was good that he was able to see the second volume finished but unfortunately he was not well enough to be able to celebrate it at a formal launch event planned by his brother-in-law Chan Chew Lun of Natural History Publications (Borneo).

From 2015 to 2021 Stephen started regularly trapping for micro moths on Mount Kinabalu and with Terry Whitaker built up a collection deposited in the Borneensis Museum at the Institution of Tropical Biology and Conservation in the University of Sabah, Kota Kinabalu. The intention was to provide a pyralid reference collection suitable for DNA sequencing. This well curated collection is still awaiting taxonomic research.

Throughout all his professional life he nurtured the careers of many young biologists. Overall, Stephen's contribution to scientific research was typified by his enabling and co-ordination abilities to further the research of others, rather than by data collection, analysis and publication of his own studies. His open, collaborative and highly social approach enabled many important research and conservation projects to be funded.

Although not overtly religious he regularly attended church throughout his later life, especially when he was resident at Heigh Head. There in 2006 during a service at St. Mathews Church, Keasden, his marriage to Rosalind, his second wife, received the blessing of the Church of England and the event was celebrated with many of his friends and extended family within a temporary rainforest adorning a local village hall.

His characteristics of a generous open personality, a whimsical sense of humour and an unusually broad knowledge of the natural world will be sorely missed by his colleagues, friends and family.

Selected References [a full list of Stephen's publications is available as an appendix to this obituary on the YNU website at:
<https://www.ynu.org.uk/about-the-ynu/publications/download-page/category/9-appendices>.]

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Terry Whitaker

Obituary: Chris Yeates 1951 - 2023



Chris, a much respected member of the YNU, has been described as ‘a polymath, a Renaissance man, endlessly curious and endearingly keen to share his vast knowledge.’ His sudden death, just before the YNU AGM last year, was a great shock and he will be sorely missed.

Chris was born in Scarborough in 1951 to Gudrun and Christopher Yeates, an only child. At age eleven he won a scholarship to Scarborough College, going on to Leeds University to study Art History. During and after University, he had several manual jobs including harvesting potatoes and working in a saw mill. He then worked as a Ranger in the Meanwood

Valley, near Leeds, which led to a job at Rotherham Museum as an Assistant Curator, where he worked under Bill Ely and studied for his Museum Studies diploma, part-time at Leicester University. By 1986 Chris was regularly reporting on fungal records in *The Naturalist* and remained Mycology Recorder until his death.

While working at Rotherham Museum, in 1991, Helen Thornton, who was Registrar, brought in to show Chris an alarming beige fungus growing out of the side of the shower cubicle in her less than salubrious digs. He identified it immediately as *Peziza domiciliana*. From there things blossomed and when, a year or so later, Chris obtained a new job as Keeper of Natural History at the Tolson Museum, they both moved to Huddersfield and married in 1995. Over their time together, as well as foraging for fungi, Chris and Helen enjoyed many Mediterranean holidays together and, although they divorced in 2006, remained good friends.

Chris had extensive interest in many things. These included words, the classics, the arts, football, cooking, all things Italian, crown green bowls and whisky! His perfect recall included the lyrics of obscure musicians like Captain Beefheart and large chunks of dialogue from comedy programmes. His brain was lightning fast and he was always ready with an entertaining quip. Above all, his intense curiosity about all things, his infectious enthusiasm, patience, kindness and friendliness are the qualities that those who knew him will remember him by.

However, it was his great expertise in mycology that many YNU members will remember him for, although he also had a wide knowledge of plants, insects and birds, identifying the last of these by their calls. Chris could frequently be seen on all fours in the undergrowth peering at a twig with his hand-lens in the process of identifying an obscure micro-fungus. When he died, Chris was in the middle of compiling a new illustrated Yorkshire Mycota, a successor to the *Fungus Flora of Yorkshire* by Willis Bramley, published posthumously in 1985. The YNU understands that this is over 50% complete and would welcome any contributions from mycologists/budding mycologists willing to assist in any way. Chris has left behind a

considerable legacy of knowledge on the fungi of Yorkshire and the completion and publication of his *magnum opus* would be a fitting testament to his memory.

We are extremely grateful to Helen Thornton, Jerry Cooper and Linda Levick for their valuable contributions to this Obituary.

Andy Millard

Yorkshire Heteroptera – Part 5

Pentatomorpha 1 – Aradoidea, Lygaeoidea, Coreoidea

Stuart Foster 128 Lyndale Avenue, Edenthorpe, Doncaster, South Yorkshire DN3 2JX

Introduction

The Aradoidea, Lygaeoidea and Coreoidea are Infraorders within the suborder Heteroptera of the Hemiptera. All British representatives are phytophagous and, although some species cause leaf damage when feeding, few are agricultural or horticultural pests. In Britain there are 141 recorded species representing 9 families; at present 80 of these species and 8 families are recorded from Yorkshire. Overall the number of records held by the YNU is insufficient to truly represent current distribution and status.

The following list is the fifth of six parts which represent all currently recorded Yorkshire Heteroptera together with associated Vice Counties, statuses, hosts/habitats and years for the first and latest records. The host data are indicative only as some overwinter as adults on evergreen plants, shrubs and trees, while continental food plants may differ from British records, and some are polyphytophagous. Some species can only be identified by dissection of male specimens. Consequently where the female cannot be reliably identified, or where specimens are unavailable for examination, such records are indicative only and may not have been validated. Several historic records fall into this group.

The status convention is based on: 1 to 9 records = Rare; 10 to 24 = Scarce; 25 to 49 = Uncommon; 50 to 99 = Frequent; 100 to 199 = Common; 200 or more = Very Common.

The taxonomy of European Hemiptera is relatively well documented for many countries (Aukema & Rieger, 2001; Aukema *et al.*, 2013, both amended in accordance with Schuh & Weirauch, 2020). The Bibliography below includes publications which may assist in the identification of specimens.

Infraorder: Pentatomorpha

Superfamily: Aradoidea

Family: ARADIDAE Brullé, 1836

Subfamily: ANEURINAE Douglas & Scott, 1865

Aneurus (Aneurodes) avenius avenius (Dufour, 1833)

VC61, VC64: rare, under bark of small dead boughs and twigs, 1956-1982.

Subfamily: ARADINAE Brullé, 1836

Aradus depressus depressus (Fabricius, 1794) (see Fig.1 below)

VC61, VC62, VC63, VC64: scarce, in stumps and under bark of beech, birch and oaks, 1921-2017.

Superfamily: Lygaeoidea

Family: LYGAEIDAE Schilling, 1829

Subfamily: LYGAEINAE Schilling, 1829

Horvathiolus superbus (Pollich, 1781)

VC64: rare, single site, foxglove *Digitalis purpurea*, 2019-2022.

Lygaeus equestris (Linnaeus, 1758)

VC63: rare, single site domestic garden, 2004.

Subfamily: ORSILLINAE Stål, 1872

Tribe: NYSIINI Uhler, 1876

Nysius cymoides (Spinola, 1837)

VC61: rare, single record, 2003.

Nysius ericae ericae (Schilling, 1829)

VC61, VC62, VC63, VC64: uncommon, 1936-2023.

Nysius huttoni F.B. White, 1878

VC61, VC62, VC63, VC64: frequent, recent invasive foreign bug in sparse vegetation and lawns, often in large numbers, 2014-2023.

Nysius senecionis senecionis (Schilling, 1829)

VC61, VC62, VC63: scarce, 2003-2023.

Nysius thymi thymi (Wolff, 1804)

VC61, VC62, VC63, VC64, VC65: uncommon, older records may be unreliable as the above species were not recognised in Southwood & Leston (1959), 1921-2019.

Tribe: ORSILLINI Stål, 1872

Orsillus depressus (Mulsant & Rey, 1852) (see Fig. 2 below)

VC61, VC63: rare, introduced on Lawson's Cypress *Chamaecyparis lawsoniana*, 1998-2023.



Fig. 1 (left). ARADIDAE. The scarce *Aradus depressus* found at Hatfield Moors, 1 July 2017 VC63.



Fig. 2 (right). LYGAEIDAE. The rare *Orsillus depressus* found at Skellow, 11 June 2006 on Lawson's Cypress VC63.

Subfamily: ISCHNORHYNCHINAE Stål, 1872

Kleidocerys ericae (Horváth, 1908)

VC61, VC62, VC63, VC64, VC65: uncommon, heath vegetation, 1921-2020.

Kleidocerys privignus (Horváth, 1894)

VC63: rare, alder, 1987-1991.

Kleidocerys resedae resedae (Panzer, 1797)

VC61, VC62, VC63, VC64: very common, alder *Alnus glutinosa* and birch *Fraxinus excelsior*, 1970-2023.

Family: CYMIDAE Baerensprung, 1860

Subfamily: CYMINAE Baerensprung, 1860

Tribe: CYMINI Baerensprung, 1860

Cymus claviculus (Fallén, 1807)

VC61, VC62, VC63: uncommon, knotgrass *Polygonum aviculare* and toad rush *Juncus bufonius*, 1935-2023.

Cymus glandicolor Hahn, 1832

VC61, VC62, VC63, VC64, VC65: frequent, marshes, 1935-2023.

Cymus melanocephalus Fieber, 1861

VC61, VC62, VC63, VC64: common, rushes, 1985-2023.

Family: BLISSIDAE Stål, 1862

Subfamily: BLISSINAE Stål, 1862

Ischnodemus quadratus Fieber, 1837

VC63: rare, two records, 2013-2014.

Ischnodemus sabuleti (Fallén, 1826)

VC61, VC62, VC63, VC64: common, 1971-2023.

Family: ARTHENEIDAE Stål, 1872

Subfamily: ARTHENEINAE Stål, 1872

Tribe: ARTHENEINI Stål, 1872

Chilacis typhae (Perris, 1857)

VC61, VC62, VC63, VC64: common, reedmace *Typha latifolia*, 1942-2023.

Family: HETEROGASTRIDAE Stål, 1872

Subfamily: HETEROGASTRINAE Stål, 1872

Heterogaster urticae (Fabricius, 1775)

VC61, VC62, VC63, VC64: common, nettle *Urtica dioica*, 1942-2023.

Family: RHYPAROCHROMIDAE Amyot & Serville, 1843

Subfamily: PLINTHISINAE J.A. Slater & Sweet, 1961

Tribe: PLINTHISINI J.A. Slater & Sweet, 1961

Plinthisus brevipennis (Latreille, 1807)

VC63: rare, 1982-1996.

Subfamily: RHYPAROCHROMINAE Amyot & Serville, 1843

Tribe: DRYMINI Stål, 1872

Drymus latus latus Douglas & Scott, 1871

VC63: rare, 2010-2016.

Drymus brunneus brunneus (R.F. Sahlberg, 1848)

VC61, VC62, VC63, VC64: frequent, 1921-2023.

Drymus ryeii Douglas & Scott, 1865

VC61, VC62, VC63, VC64, VC65: uncommon, 1921-2023.

Drymus sylvaticus (Fabricius, 1775)

VC61, VC62, VC63, VC64: common, 1921-2023.

Eremocoris fenestratus (Herrich-Schaeffer, 1839)

VC61, VC63: rare, 2012-2014.

Gastrodes abietum Bergroth, 1914

VC63: rare, Norway Spruce, 2021.

Gastrodes grossipes grossipes (De Geer, 1773)

VC61, VC62, VC63, VC64, VC65: uncommon, Scots Pine, 1921-2023.

Lamproplax picea (Flor, 1860)

VC61, VC62, VC63: rare, heaths under birch leaf litter, 1921-2017.

Scolopostethus affinis (Schilling, 1929)

VC61, VC62, VC63, VC64: frequent, 1921-2023.

Scolopostethus decoratus (Hahn, 1833)

VC61, VC62, VC63, VC64, VC65: frequent, heath, 1921-2023.

Scolopostethus grandis Horváth, 1880

VC61, VC63, VC64: rare, 1970-2023.

Scolopostethus puberulus Horváth, 1887

VC61, VC63: rare, 1983-2004.

Scolopostethus thomsoni Reuter, 1875

VC61, VC62, VC63, VC64, VC65: very common, 1921-2023.

Taphropeltus contractus (Herrich-Schaefer, 1835)

VC61, VC62, VC63: scarce, 1938-2015.

Tribe: GONIANOTINI Stål, 1872

Aphanus rolandri (Linnaeus, 1758)

VC63: rare, litter, 2016-2023.

Macrodema microptera (Curtis, 1836)

VC61, VC62, VC63, VC64, VC65: uncommon, heath, 1921-2022.

Trapezonotus arenarius arenarius (Linnaeus, 1758)

VC61, VC62, VC63, VC64: scarce, 1921-2015.

Trapezonotus desertus Seidenstücker, 1951

VC61, VC62, VC63, VC64: uncommon, 1954-2022.

Tribe: MEGALONOTINI J.A. Slater, 1957

Megalonotus antennatus (Schilling, 1829)

VC63: rare, single record, 2014.

Megalonotus chiragra (Fabricius, 1794)

VC61, VC 63: scarce, 1976-2020.

Megalonotus dilatatus (Herrich-Schaeffer, 1840)

VC61, VC 63: rare, 2007-2011.

Megalonotus emarginatus (Rey, 1888)

VC63: rare, 1977-1986.

Megalonotus praetextatus (Herrich-Schaeffer, 1835)

VC61, VC63: rare, 1921-2022.

Megalonotus sabulicola (Thomson, 1870)

VC61: rare, single record, 2013.

Tribe: MYODOCHINI Blanchard, 1845

Pachybrachius fracticollis (Schilling, 1829)

VC63, VC64: rare, cottongrass *Eriophorum angustifolium*, 1973-2018.

Tribe: RHYPAROCHROMINI Amyot & Serville, 1843

Peritrechus geniculatus (Hahn, 1832)

VC61, VC62, VC63: frequent, 1973-2023.

Peritrechus lundii (Gmelin, 1790)

VC61, VC63: scarce, 1977-2020.

Peritrechus nubilus (Fallén, 1807)

VC61, VC62, VC63: rare, 2003-2023.

Tribe: STYGNOCORINI Gulde, 1937

Acompus rufipes (Wolff, 1804)

VC61, VC62, VC63, VC64: rare, 1964-1976.

Stygnocoris fuliginus (Geoffroy, 1785)

VC61, VC62, VC63, VC64: uncommon, 1921-2021.

Stygnocoris rusticus (Fallén, 1807)

VC61, VC63, VC64: scarce, 1921-2021.

Stygnocoris sabulosus (Schilling, 1829)

VC61, VC62, VC63, VC64: common, 1921-2023.

Family: PIESMATIDAE Amyot & Serville, 1843

Parapiesma quadratum (Fieber, 1844)

VC61, VC63, VC65: uncommon, 1958-2016.

Piesma maculatum (Laporte, 1833)

VC61, VC62, VC63, VC64, VC65: uncommon, 1921-2020.

Family: BERYTIDAE Fieber, 1851

Subfamily: BERYTINAE Fieber, 1851

Tribe: BERYTINI Fieber, 1851

Neides tipularius (Linnaeus, 1758)

VC63: rare, 2005-2015.

Tribe: BERYTININI Southwood & Leston, 1959

Berytinus clavipes (Fabricius, 1775)

VC61: rare, single record, unverified, pre-1921.

Berytinus minor minor (Herrich-Schaeffer, 1835)

VC61, VC63, VC64: frequent, 1977-2021.

Berytinus (Lizinus) crassipes (Herrich-Schaeffer, 1835)

VC63: rare, single record 1921.

Berytinus (Lizinus) montivagus (Meyer-Dür, 1841)

VC61, VC62, VC63: scarce, 1971-2017.

Berytinus (Lizinus) signoreti (Fieber, 1859)

VC61, VC62, VC63, VC64, VC65: uncommon, 1921-2023.

Subfamily: GAMPSOCORINAE Southwood & Leston, 1959

Tribe: GAMPSOCORINI Southwood & Leston, 1959

Gampsocoris punctipes punctipes (Germar, 1822)

VC61, VC62, VC63, VC64: uncommon, restharrow *Ononis repens*, 1935-2023.

Subfamily: METACANTHINAE Douglas & Scott, 1865

Tribe: METATROPINI Henry, 1997

Metatropis rufescens (Herrich-Schaeffer, 1835)

VC61, VC62, VC63: scarce, enchanter's nightshade *Circaea lutetiana*, 2010-2023.

Superfamily: Pyrrhocoroidea

Family: PYRRHOCORIDAE Amyot & Serville, 1843

Pyrrhocoris apterus (Linnaeus, 1758)

VC63, VC64: rare, 2 records, 1921.

Superfamily: Coreoidea

Family: RHOPALIDAE Amyot & Serville, 1843

Subfamily: RHOPALINAE Amyot & Serville, 1843

Tribe: RHOPALINI Amyot & Serville, 1843

Brachycarenum tigrinus (Schilling, 1829)

VC63: rare, a single record 2022.

Corizus hyoscyami hyoscyami (Linnaeus, 1758)

VC61, VC62, VC63, VC64, VC65: common, 1921-2023. Only one record prior to 2011.

Liorhyssus hyalinus (Fabricius, 1794)

VC61: rare, single record, 1996.

Rhopalus subrufus (Gmelin, 1790) (see Fig. 3 opposite)

VC61, VC62, VC63, VC64, VC65: common, 2005-2023.

Stictopleurus abutilon (Rossi, 1790)

VC61: rare, a single record, 2006.

Stictopleurus punctatonervosus (Goeze, 1778)

VC61, VC62, VC63, VC64: frequent, 2008-2023

Tribe: CHOROSOMATINI Fieber, 1860

Chorosoma schillingii (Schilling, 1829)

VC61, VC63, VC64: uncommon, tall grasses, 2001-2023.

Myrmus miriformis miriformis (Fallén, 1807)

VC61, VC62, VC63, VC64, VC65: common, grasses, 1921-2023.



Fig. 3 (left). RHOPALIDAE. The common *Rhopalus subrufus* found at Potteric Carr, 30 May 2015 VC63.



Fig. 4 (right). COREIDAE. The rare *Arenocoris falleni* as found at Austerfield, 13 September 2020 VC63.

Family: ALYDIDAE Amyot & Serville, 1843

Subfamily: ALYDINAE Amyot & Serville, 1843

Alydus calcaratus (Linnaeus, 1758)

VC62: rare, single record, 1921

Family: COREIDAE Leach, 1815

Subfamily: PSEUDOPHLOEINAE Stål, 1868

Tribe: PSEUDOPHLOEINI Stål, 1868

Arenocoris falleni (Schilling, 1829) (see Fig. 4 above)

VC61, VC63: rare, storksbill *Erodium cicutarium*, 2020-2022.

Ceraleptus lividus Stein, 1858

VC63: rare, red clover *Trifolium pratense*, hare's foot trefoil *Trifolium arvense* and hop trefoil *Trifolium campestre*, 2014-2020.

Coriomeris denticulatus (Scopoli, 1763)

VC61, VC62, VC63, VC64: common, black medic *Medicago lupulina*, hare's foot trefoil *Trifolium arvense* and melilots, 1992-2023.

Tribe: ANISOSCELINI Laporte, 1832

Leptoglossus occidentalis Heidemann, 1910

VC61, VC62, VC63, VC64, VC65: very commonly sighted but rarely captured on hosts, invasive North American pest on pines, adults overwinter in and around buildings, 2010-2024.

Subfamily: COREINAE Leach, 1815

Tribe: COREINI Leach, 1815

Coreus marginatus marginatus (Linnaeus, 1758)

VC61, VC62, VC63, VC64, VC65: frequent, polygonaceae, 1937-2023.

Enoplops scapha (Fabricius, 1794)

VC62: rare, scentless mayweed *Tripleurospermum inodorum*, 1921-1982.

Gonocerus acuteangulatus (Goeze, 1778)

VC61, VC63: scarce, adults overwintering on Leylandii *Cupressocyparis leylandii*, nymphs and adults on *Crataegus*, range expanding, 2019-2023.

Taxonomic Changes since Southwood & Leston (1959) and adopted herein:

Schuh R.T. & Weirauch C. (2020) updated the taxonomy of the Lygaeoidea; family changes are incorporated but not highlighted herein.

LYGAEIDAE:

- Horvathiolus superbus* (Pollich, 1781) is new to Britain.
- Nysius cymoides* (Spinola, 1837) is new to Britain.
- Nysius huttoni* F.B. White, 1878 is new to Britain.
- Nysius ericae ericae* (Schilling, 1829) is new to Britain.
- Nysius senecionis senecionis* (Schilling, 1829) is new to Britain.
- Orsillus depressus* (Mulsant & Rey, 1852) is new to Britain.
- Kleidocerys truncatulus* (Walker) is now *Kleidocerys ericae* (Horváth, 1908).
- Kleidocerys privignus* (Horváth, 1894) is new to Britain.

BLISSIDAE:

- Ischnodemus quadratus* Fieber, 1837 raised from sub-species to species.

RHYPAROCHROMIDAE:

- Trapezonotus desertus* Seidenstücker, 1951 is new to Britain.
- Megalonotus emarginatus* (Rey, 1888) is new to Britain.
- Megalonotus sabulicola* (Thomson, 1870) is new to Britain.
- Peritrechus lundii* (Gmelin) is now *Peritrechus lundii* (Gmelin, 1790).
- Stygnocoris pedestris* (Fallén) is now *Stygnocoris sabulosus* (Schilling, 1829).

PIESMATIDAE:

- Piesma quadratum* (Fieber) is now *Parapiesma quadratum* (Fieber, 1844).

RHOPALIDAE:

- Liorhyssus hyalinus* (Fabricius, 1794) is new to Britain.
- Chorosoma schillingii* (Schilling) is now *Chorosoma schillingii* (Schilling, 1829)

COREIDAE:

- Leptoglossus occidentalis* Heidemann, 1910 is new to Britain.

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Woodroffe G.E. (1960): The identity of the British *Trapezonotus* Fieber (Hem., Lygaeidae), *Entomologist* 93: pp218-224.

A list of some British species and selected photographs can be viewed at:
<https://www.britishbugs.org.uk/gallery.html>

Informative articles on British Heteroptera have been published in Het News and The Hemipterist, available at:
<https://www.britishbugs.org.uk/HetNews.html>
<https://sites.google.com/site/thehemipterist/>

An up to date taxonomic view of the Lygaeoidea is available at:
<http://lygaeoidea.speciesfile.org/HomePage/Lygaeoidea/HomePage.aspx>

YNU NOTICE: The City Nature Challenge 2024 is coming to Hull and York!

The City Nature Challenge is a global nature-recording event taking place from 26-29 April, 2024. A four-day bioblitz event, the challenge started in 2016 and has grown exponentially, from 2 cities participating in its first year to 450+ cities and over 1.87 million observations in 2023 making the CNC the largest, synchronised, global biodiversity competition! The challenge encourages people to discover the biodiversity on their doorstep, make useful biological records and engage in some friendly competition with cities around the world. Participation is free, easy, and fun, all while contributing to science and conservation action!

For the second year running, **NEYEDC** is leading the organisation of **Hull's** City Nature Challenge with the help of a team of local partners. This year, **York** is participating for the first time ever and there will be a **joint YNU/YWT event at Askham Bog on Sunday 28 April**. Our aim is to promote the collection of biological data across the cities and encourage people to connect with nature in their local green spaces, back gardens, nature reserves, urban spaces, and more. Observations from the City Nature Challenge will also support local efforts to look after wildlife in the area and help inform local decision making. Despite the highly urban character of the Hull City Council boundary, Hull did very well last year, with 7th position in the UK, both in

number of observations and species. With a stronger Yorkshire presence, we hope to do even better this year.

Anyone can get involved. To take part, simply download the iNaturalist app to your smartphone or other device, and start making observations within the Hull city or Greater York boundaries. Take a photo or a sound recording of any wildlife: animals (including slugs, insects, spiders, birds, mammals, snakes, etc.), plants, weeds between built surfaces, mosses, lichens or fungi, and submit/upload it via the app. If you're unable to identify your species, iNaturalist's online community will help. Any records made during the course of the weekend will automatically be added to the iNaturalist City Nature Challenge Project pages. After the four-day event, we will process and verify the project records before releasing the results. If you do not wish to or cannot use iNaturalist, you can also submit your records to us using our Species Recording Form.

Please visit the project websites for further announcements. Free events, bioblitzes and nature walks will also be available. These events will also host experts who can help you identify your finds and provide help and support in using the iNaturalist app. We hope you can join us in sharing Hull and York biodiversity with the millions of other people participating in the City Nature Challenge worldwide!

Competition Dates: 26-29 April, 2024

Uploading and Identification Period: 30 April - 5 May, 2024

Results Announced: 6-10 May 2024

Global CNC Webpage: <https://citynaturechallenge.org/>

Hull CNC webpage: www.neyedc.org.uk/hull-cnc-2024

YNU Excursions 2024

Circular No 930

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The VC63 excursion will be to Anston Stones Wood on Saturday 18 May 2024

Maps: OS Landranger 111 1:50000 Sheffield
OS Explorer 279 1:25000 Doncaster

Meeting Place: Meet at 10.30 in the car park of North Anston Parish Hall, SK521842. Leave the M1 at J31 and take the A57 east. At traffic lights in Anston, turn left to North Anston and

Dinnington. The turn off to the car park is signed 'Parish Hall' and is opposite the school in North Anston. The toilets will be open from 9.45am.

Reporting meeting: in the Anston Parish Hall at 4pm. Tea and coffee will be available.

The area: The summary of a YNU visit in 1947, quote:

'Wooded Gorge in the Magnesian Limestone both picturesque and of great botanical interest'

Anston Stones Wood is an excellent example of ancient woodland on Lower Magnesian Limestone, between 60 and 100 metres above sea level. The high limestone crags outcrop along the narrow gorge of the Anston Brook. Archaeologically, the woodland included cave deposits from the Ice Age (7800 BCE) and Roman artefacts such as pottery. It was managed as a coppice with standards, certainly in 1553, supplying oak for naval ships, but some ornamental and game planting was added in the 19th century.

The mixed woodland and grasslands are owned and managed by Anston Parish Council, their intention being to preserve the land as a local amenity.

The flora is characteristic of limestone woodlands, some of which should be in flower at the time of our visit - Spurge-laurel *Daphne laureola*, Toothwort *Lathraea squamaria*, Fingered Sedge *Carex digitata*, Wood Anemone *Anemone nemorosa* and many more can be found here.

The reserve also includes areas of ungrazed grassland managed by mowing annually in September. The meadow was initially sown in 1993 with characteristic limestone meadow flora - Yellow Rattle *Rhinanthus minor*, Kidney Vetch *Anthyllis vulneraria*, Marjoram *Origanum vulgare*, for example, as well as several orchids, providing habitat for a wide range of invertebrates. Adders-tongue fern *Ophioglossum vulgatum*, Betony *Betonica officinalis* and Thyme *Thymus polytrichus* can be found in the many other grassy places. Liverworts and Mosses are frequent in the cool, damp valley.

There are several well-made paths, with steps leading from the upper meadows and woodland to the stream side, making a round walk of around 3km. We will lead a walk around this suggested route for those who wish to join.

Anston Stones Wood was first visited by the YNU on 30 April 1885, with sightings including Hawfinch and Whinchat. Subsequent visits in 1947 and 1955 saw Fly Orchid and, on the last visit in 1979, Bill Ely found a Glow-worm *Lampyrus noctiluca*. Maybe we can match these notable findings!

Circular No. 931

Divisional Secretary VC64: Dr. Terry Whitaker

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VC64 Meeting at Lower Winskill Farm, near Settle, North Yorkshire, on Saturday 22nd June at 10.30.

Maps:

1:50,000 OS Landranger Sheet: 98 Wensleydale & Upper Wharfedale.

1:25,000 OS Explorer OL2: Yorkshire Dales (Southern & Western Areas).

1:50,000 Geological Survey of England & Wales, New map series, Hawes 50 and Settle 60.

Meeting Place: SD826664 at Lower Winskill Farm. Accessed from the Langcliffe-Malham Tarn Road. Turn off to Winskill Stones N.R.

Tea and Meeting: This will be at 4 pm in the Nature Discovery Centre at the Farm. There will be a modest charge for tea. There are toilet facilities.

The Yorkshire Moth Group is invited to trap at various places on the Friday night. There is no mains electricity supply available.

Introduction

The 65ha of Lower Winskill is a working farm set in spectacular limestone scenery, overlooking Ribblesdale in the Yorkshire Dales National Park. Tom Lord and his son farm there to encourage wildlife, to protect the historic farming landscape and to educate the public.

The farm is set between the North and South Craven Faults in the transition zone between the upland Askrigg Block and the Craven Basin. The western boundary of the farm is on the top of the spectacular cliff line of Stainforth Scar which rises to a maximum height in the south at Langcliffe Quarry and Craven Lime Works, before being cut off by the North Craven Fault (Murray, 1983). The uniform nature of the massive limestone is well illustrated by the cliff at the old Craven Limeworks (Langcliffe Quarry) [SD825664]. This is a stunning piece of industrial heritage now scheduled as an ancient monument, best viewed from the cliff edge west of the farmhouse. It contains the remains of various types of lime kiln, including the almost complete example of an 1873 Hoffman Kiln. The extensive chambers in this huge structure are home to hibernating bats and moths. Bee orchids *Ophrys apifera* are found on its walls and roof and on the 50m quarry face jackdaws, pigeons and peregrines live and nest in an uneasy co-existence.

The limestone topography dominates the farm; several other limestone crags and less lofty scars are found across the farm. Formerly there was extensive limestone pavement on the northernmost fields of the farm above Stainforth but quarrying of water-worn limestone for the garden trade up to the 1970s reduced this to a very few patches and consequently the flat

exposed limestone in that part has a very depauperate flora and fauna. However this is where a population of the local heath snail *Helicella itala* is to be found on the sunward sides of low limestone scars. Just to the Northwest is Stainforth Beck and Catrigg Force (SD830672), where Britain's rarest pill woodlouse, the nationally scarce *Armadillium pictum*, was recorded in 1917 (Harding & Sutton, 1985). Although never re-found since in the area, it potentially still exists here and at more sites in the area. Some of the scars were locally quarried to build the drystone walls which delineate the ancient field pattern across Lower Winskill. These distinctive walls were built at different times over the last thousand years. Some display obsolete styles, built to protect against wolves in the medieval period, when Winskill was developed as an upland sheep farm (bercaria) by Sawley Abbey (Lord, 2010).

The hay meadows at Lower Winskill are used for making hay to feed livestock over winter. Documentary evidence shows these meadows were in existence by the late 16th century and they still retain many of the wild flowers from that time. The presence of Bluebell *Hyacinthoides non-scripta* and other wild flowers such as Wood Anemone *Anemone nemorosa*, Wood Cranesbill *Geranium sylvaticum* and Primrose *Primula veris* in the meadows is especially interesting. It suggests the meadows formed at a time when the locality was wooded and some of the plants, which originally grew in open woodland, have been preserved as part of the meadow flora. It is very likely that some woodland was managed as wood pasture and the meadows were created and enclosed where there were deeper and more fertile soils. Careful management of the rates and timing of grazing is also the key to make sure that butterflies have a source of nectar from wild flowers throughout the summer. Some of the limestone pastures are not grazed until early autumn to make sure there are lots of late summer nectar plants for the butterflies such as Common (Black) Knapweed *Centaurea nigra*, Betony *Betonica officinalis* and Devil's-bit Scabious *Succisa pratensis*. This also ensures butterflies have a variety of small-scale habitats in close proximity to each other with clusters of grasses and wildflowers of different heights.

In partnership with Natural England, originally as part of the H.L.S. Scheme, the farm helps preserve butterflies at different stages in their life cycle. The uncommon and threatened Northern Brown Argus *Aricia artaxerxes* butterfly, for example, lays its eggs on Common Rock Rose *Helianthemum nummularium* and this is its sole food plant. So Common Rock Rose is protected by regulating sheep and cattle grazing on the limestone pastures. This provides the colony with lots of rock rose plants on Scar Edge pastures for their caterpillars. By carefully managing where and at what times of the year sheep and cattle graze on different parts of the farm they ensure that many butterflies have their food plants. Caterpillar food plants like nettle are left to grow, especially where the clumps are in sunny locations; these aid generalist butterfly species such as Small Tortoiseshell and Peacock. On the farm more than 17 spp. of butterfly and 162 spp. of moths have been recorded. Two micromoths, *Bryotropha boreella* and *Zelotherses unitana*, are nationally scarce, as is the small macromoth *Eupithecia distinctaria* the Thyme Pug. Simultaneous light trap comparisons of a hay meadow before mowing (Caker Scar) with the adjacent limestone pasture (Scar Edge North) between 2013-2023, recorded 121 moth spp. in the hay meadow and 114 spp. in the pasture; with 106 sp. common to both (T.M.W. unpublished data). Lower Winskill pioneered the first long term upland hay meadow restoration project across the Yorkshire Dales National Park. Beginning in

the mid 1990s, this project restored a large number of hay meadows across the YDNP, which had gone out of use in the 1970s.

The soils at Lower Winskill are very variable, mainly dependent on the thickness of glacial drift and previous management history. They give rise to a wide range of plant communities with abundant flowers in the pastures and hay meadows, and amongst the limestone pavements and cliffs. The limestone pastures at Lower Winskill are home to a number of different orchids including the delightfully scented Fragrant Orchid *Gymnadenia conopsea*. The Early Purple Orchid *Orchis mascula* is one of the first flowers to appear, alongside the Cowslip *Primula veris* in the high limestone pastures. With its vivid purple colour it gives an exotic quality to the grassland in late spring. Occasionally a white flower spike is produced. The leaves are generally marked with dark spots and lie close to the ground making them difficult to see before the flower spike grows. Common Rock Rose is widely found in the Scar Edge pastures. Other rare plants in the limestone pastures include the nationally rare Silky Lady's Mantle *Alchemilla glaucescens*, Spring Cinquefoil *Potentilla tabernaemontani* and Grass-of-Parnassus *Parnassia palustris*. The latter is typically a plant of damp areas flushed with lime-rich groundwater. However, it grows in fairly dry locations in the limestone pastures at Lower Winskill, suggesting that with the right management this beautiful wildflower can expand beyond its more familiar range. As well as the many characteristic plants of limestone grassland, the typical limestone grass, the early flowering Blue Moor Grass *Sesleria caerulea*, is common.

Big trees are found scattered on the field boundaries but unfortunately most are Ash *Fraxinus excelsior* which are being progressively killed by Ash dieback disease. A small dense Sycamore *Acer pseudoplatanus* plantation near the farmhouse contains some of the larger trees and their flowers and aphids provide a rich source of nectar and honey-dew for bees from late spring. A steep footpath from the farm descends Stainforth Scar as the Fairy Steps (SD825668), through a botanically rich and diverse, linear, deciduous, scar woodland, containing Ash, Bird Cherry *Prunus padus*, Hawthorn *Crataegus monogyna*, Wild Cherry *Prunus avium*, Rowan *Sorbus aucuparia*, Holly *Ilex aquifolium*, and willow *Salix* spp. It has a rich ground flora with many plants indicative of ancient woodland. Another footpath heading south leads to The Hags (SD827661), a good example of ancient hawthorn wood pasture. Many of the trees support a rich lichen growth characteristic of an unpolluted area.

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Circular No. 932

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The VC65 Meeting will be held in the woods of the Bolton Estate, near Preston-under Scar, Wensleydale, North Yorkshire on Saturday 6th July at 10.30

Maps:

Ordnance Survey Explorer 1:50,000; OL30 Yorkshire Dales Northern & Central Areas.

Geological Survey of England and Wales 1:50,000 geological map series, N.S. 41 [Richmond], Solid & Drift 1998.

Meeting Place:

SE076914 at entrance to Condenser Wood. Best accessed from the Redmire [Bellerby Ranges-Richmond] road or through Preston-under-Scar village.

Tea and Meeting: This will be at 4 pm in the Preston-under-Scar Village Hall at Preston Springs Garth [SE070911]. There will be a modest charge for refreshments.

The Yorkshire Moth Group is invited to trap in various woodland places on the Friday night. There is no mains electricity supply available.

The area:

Lower Wensleydale is a very broad, large scale, open 'U'-shaped glacial valley, overlying the Great Scar limestone with valley sides formed by rocks of the Yoredale facies beds, whose outcrops form a distinctive stepped valley side profile.

The 'Scar' in the village name is Redmire Scar, which becomes Preston Scar to the east above the village. The highest scar is the outcrop of the Main Limestone which has been extensively quarried by the Wensley Quarries complex, comprising Redmire, Wensley, Preston Scar, Cote Pasture and Black Quarries, all extracting limestone from the Main Limestone outcrop. Wensley Quarry itself covers an area of approximately 124ha within the quarry complex, with Cote Pasture Quarry (overlapping part of Black Quarry, approximately 193ha) located to the east, the two sites being split by Scarth Nick Road. The Wensley and Cote Pasture Quarries were linked by a tramway through the quarry and an aerial ropeway (now dismantled) took limestone to the railway in the valley bottom. The ropeway originating from a disused tip (SE076914) at the top edge of Condenser Wood ran the length of lower Wensley Brook. There is an existing permission to extend the Cote Pasture Quarry from the old 10m working face, northwards to the main road; hence there has been no habitat restitution of the existing worked-out area and natural colonisation has resulted in an area of ruderal vegetation. By the disused tip, planted conifers were felled in recent years and have been replaced by a new mixed woodland planting up to the edges of Gillfield Wood.

Habitats:

On these limestones of the Ure Valley sides, are discontinuous linear woods, probably originally mainly Ash *Fraxinus excelsior*, Rowan *Sorbus aucuparia* and Hawthorn *Crataegus monogyna* scrub but are now mainly estate plantation woodlands. The fourth, fifth and sixth Lords of Bolton (1845-1963) were all avid foresters and keen proponents of Sycamore *Acer pseudoplatanus* and many woodlands still reflect this. Although designated as planted ancient woodland, they have lost many of the ancient species and the few remaining Ash are rapidly being lost from Ash dieback disease (*Hymenoscyphus fraxineus*). Above the scars, land to the north-east, east and west of the village is heavily grazed improved grassland, with plantation woodland. This was enclosed from Redmire Moor in the 19th Century and largely converted from Purple Moor grass and rush pasture (*Molinia-Juncus*) vegetation.

Towards the valley edge at Cote Pasture Quarry is Pasture Wood (SE 072913). Nearby there was a small quarry (SE 072916), set in rough grassland and serving a local lime kiln. The rest of the area to the scar on the OS map (1:10560 series, 1856 Edn.) is shown as a large area of mixed woodland, almost certainly large parts wood pasture. With the start of industrial quarrying at Cote Pasture after WWII, the former extensive scar woodland became confined to a linear strip on the southern edge and later planted over with sycamore. Further west the 13.6ha Preston Spring-Wood (SE064914) was less impacted and, as an ancient semi-natural woodland and County Wildlife Site, is now managed by the Woodland Trust.

As well as the scar woodlands the valley of the Wensley Brook, 0.5km east of the village, has other large areas of woodland, Gillfield Wood (SE078917) and Condenser Wood (SE077912). At Gillfield the site has been under woodland for at least 150 years and is considered to be ancient woodland. In Condenser Wood, also considered as ancient woodland, are remains of the old lead mining industry. The wood is at its most diverse on the eastern side of the ghyll and approaches a typical Upland Oak Wood community where the tree species include Ash, Rowan, Silver Birch (*Betula pendula*), Bird Cherry (*Prunus padus*), Oak (*Quercus robur*), Holly (*Ilex aquifolium*), Hawthorn, willows (*Salix* spp.) and a considerable number of relict Wych Elm (*Ulmus glabra*) as suckering stumps. In the more open area there is a rich ground flora including *Campanula latifolia* the Giant Bell-flower. The rare tephritid fly *Platyparea discoidea*, a species which bores into *Campanula* stems, is recorded. Towards the eastern boundary wall the tree cover is primarily birch with a dense ground cover of Bracken *Pteridium aquilinum*, indicating a transition community from the original pre-enclosure acid moorland vegetation, which is now entirely improved acid pastureland. On the west side of the stream are the remains of the ruins of buildings associated with the Keld Heads Smelting Mill (Gill, 1992; Smith, 1998). Very few buildings are still standing and are now listed. They include the peat store, the only largely intact structure. Various chimneys were built to vent the fumes from the smelting process, but these were quite low in the valley and local fumes were a problem. Because of this, a long flue was constructed that eventually extended for two miles in a northerly direction to a chimney at Cobscar Mill (SE057931) at 375m above sea level. In the woods are parts of this flue and various blocked shaft heads which served the extensive Keldheads Mine whose workings followed the Keld Heads and Chaytor Rake lead veins, deep beneath the area (Dunham & Wilson, 1985). The several streams passing through the wood have been extensively diverted or modified and several shallow reservoirs were constructed, to serve the lead mine. Only one,

D3 (Smith, 1998, fig.3) (SE078914), which served the fans of the Stokoe Patent Condenser house, now contains significant water. One stream passes through a short culvert beneath the flue that runs up the hillside from the overgrown debris of the Smelting Mill, where all join to form Wensley Brook.

At the northwestern edge of Condenser Wood, by the road and across from Pasture Wood, is a small planted area of hybrid Black Poplar *Populus x euramericana*. The ground cover is dominated by the ancient woodland indicator Dog's Mercury *Mercurialis perennis*. Forty species of land and freshwater molluscs have been recorded from the area, including the Heath Snail *Helicella itala*, a declining species (Norris, A, in Milward, 1991). The area supports a rich entomological fauna but is very under-recorded. Bill Ely (in Milward, 1991) gives a tantalising glimpse of its richness including eight species of stonefly, a wide variety of dipterans and beetles, several sawflies, plus ground nesting bees. The moths of this area are grossly under-recorded at just 23 species (21 micros and two macromoths). All the micromoths were leaf-miners, recorded by Charlie Fletcher during a single visit in 2021. The macromoths were the migratory Hummingbird Hawk-moth *Macroglossum stellatarum* and the Speckled Yellow *Pseudopanthera macularia*, a day-flying moth which is scarce in much of Yorkshire despite its foodplant, Wood Sage *Teucrium scorodonia*, being common.

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Previous YNU visits to the area:

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Circular No. 933

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VC61 excursion to Priory Meadows, Hull on Saturday 20th July 2024

Meeting Place: We will meet at a lay-by at Priory Road, TA052314 (postcode HU5 5SF).

Access: Priory Meadows is just south of the village of Cottingham, west of Hull. The site is a 25 minute walk from Cottingham Train Station. There is also a bus service from Hull Paragon station (number 63), with the closest stop being at Humberside Police Headquarters at Priory

Road, just south of the meeting place. This is not a large lay-by and if parking is an issue, there are additional lay-bys north on the same road.

Tea and Meeting: This will be at 4pm at the Brynmor Jones Library café, University of Hull (HU6 7RX). Throughout the weekend, visitors can park in any bay on campus free of charge.

The Area: Priory Meadows is a set of low lying wet meadows and pastureland at both sides of Priory Road, bounded by the village of Cottingham in the north, the gentle foothills of the Yorkshire Wolds in the west, the site of the medieval Haltemprice Priory and Willerby Carr Dyke and Garrowby Community Orchard in the South, and the railway line to the east, comprising about 160 ha. The railway line separates Priory Meadows from Snuff Mill Fields, also designated a Local Wildlife Site and with a similar habitat composition. The area is poorly drained and prone to winter-flooding despite being criss-crossed by open ditches. A recent flood defence reservoir has been created to the south of the area. The eastern and southern areas have been wet meadows or pastures for a long time, enclosed by old hedgerows. A small triangular field east of the road has ridge and furrow markings, evidence of medieval agriculture, but it is unlikely that any other of the meadows have been arable in the past.

There are no natural watercourses, although the irregular route of some ditches running east to west or the zigzagging path of Wood Lane might indicate the presence of ancient streams, which might have been deepened for drainage purposes. There are several natural springs, some of them around the site of the old Haltemprice Priory, and a few ponds. Other than the meadows, there are nearby sites that might well be worth surveying, time allowing. A 300 m stretch of culvert was daylighted in 2016 to create Willerby Carr Dyke (TA050307) as part of a flood alleviation scheme and to benefit wildlife; it is located to the south of the area, just by Garrowby Community Orchard. Swine Bank Dyke and Sands Dyke, drain to the Setting Dyke, an ancient drainage ditch, which carries the water in a more or less straight W to E route to the river Hull and is culverted for some of its route through the city. The higher lying area to the west side of Priory Road, north of Haltemprice Priory, was wooded in past centuries. Place names (*Southwood Hall*, *Southwoods*) indicate the occurrence of woodland. The word 'Hagg' in nearby Haggs Lane and Willerby Haggs means 'clearing in the woods' in old Norse. Pease Wood and Old Wood were still in existence in the OS maps surveyed in 1852 but all woods had been cleared by the 1888 edition. The aptly named Wood Lane retains a relict ancient woodland flora along its banks and hedgerows, shaded by some mature oaks, with drifts of Bluebells, Greater Stitchwort, Black Bryony, Lords-and-Ladies and Wood Melick, and small patches of Wood Anemone. Arable farmland replaced the previously wooded area.

Plants. The meadows are of regional botanical interest, hosting a diverse community of neutral and damp grassland species. Locally notable plants include Pepper-saxifrage, Fine-leaved Water-dropwort, Water-violet, Hybrid Cinquefoil, Devil's-bit Scabious, Betony, Sneezewort, Great Burnet and Brown Sedge. It is one of two known VC61 sites for Corky-fruited Water-dropwort. Both Heath-spotted Orchid and Green-winged Orchid are locally uncommon and not recorded recently at Priory Meadows. Adder's tongue is regionally uncommon and can turn up at several places on the fields.

Insects. The area is also of high entomological interest. A Butterfly Conservation transect survey has taken place since 2007 by Andrew Ashworth, recently taken over by Nick Ballard and Sean Clough (<https://www.yorkshirebutterflies.org.uk/recording/transect-reports/priory-fields>). A total of 23 butterfly species have been recorded. Both Purple Hairstreak and White-letter Hairstreak are present locally. In addition, 14 species of dragonfly have been recorded, including Willow Emerald, Red-eyed Damselfly and Small Red-eyed Damselfly. Notable moths include Chimney sweeper and Mother Shipton. Moth trapping would be highly valuable. The area holds a strong population of Meadow Grasshopper, very local in the area.

Birds. The area holds a good diversity of farmland birds: Yellowhammer, Skylark, Reed Bunting, and Linnet. Snipe, Wigeon, Lapwing, Redshank and Teal frequent the flashes and fields in winter. Tawny Owl, Barn Owl, Little Owl, Buzzard and Kestrel are residents. Little Egrets have recently colonised.

Conservation and Management. The botanical richness of the site, a relict of the extensive meadows of the lower Hull Valley, was noted in the 1990s, and after several unsuccessful attempts at statutory designation and management, Priory Meadows was designated a Local Wildlife Site in 2010 due to its priority habitat of species-rich neutral grassland and hedgerows. Wood Lane is a designated LWS for its hedgerows. Both neutral grassland and semi-ancient woodland are rare habitats in VC61. The meadows are currently managed with an annual hay cut. Poorly carried out drainage in recent decades, lack of management and uncontrolled horse grazing have been threats for the continued maintenance of these precious habitats.

Geology. Little of interest. Silts with some influence of the underlying chalk from the nearby Wolds.

Health and safety: Biting midges and mosquitoes can be a nuisance in July, especially on calm days; be prepared. There are many deep ditches in the area and existing footbridges might be unsafe, so please take care. Given the wet winter we have had, wellies might be advisable. Horses are often grazing some of the fields, please keep your distance. There are no toilet facilities on site.

Previous YNU visits to the area. I'm not aware of any previous YNU visits. Many thanks to Richard Middleton, Richard Shillaker, Gabrielle Jarvis, Jennifer Woollin, and Rohan Lewis for their valuable input. NEYEDC kindly shared records of the area.

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Websites:

Butterfly Conservation Yorkshire - Priory Fields

Coronation meadow:

<https://coronationmeadows.org.uk/meadow/priory-meadows-kingston-upon-hull>

Circular No. 934

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VC62 Meeting to Castle Howard on 10th and 11th August.

This is a two-day meeting, not a residential, so members can attend either or both days.

Maps:

1:50 000 Landranger Sheet: Malton & Pickering 100

1:25 000 Explorer Sheets: Howardian Hills & Malton 300

Meeting Place: On both days we will meet at Bog Hall SE725707 at 10.30am. Access is down an estate track from Coneysthorpe village. At the eastern outskirts of the village, take the track south through white gates between stone pillars. Bog Hall is a complex of farm buildings less than a mile along the track where there is parking and toilets.

Tea and Meeting: On both days this will be held at 4pm at Bog Hall where there will be under-cover facilities.

The Area: The Castle Howard Estate extends to 9,000 acres, comprising approximately 6,000 acres of farmland, 2,000 acres of woodland and 600 acres of parkland as well as a large lake. There are substantial areas of Ancient Woodland. We have privileged access to a private part of the estate which includes arable land, pasture, Ancient Woodland, the course of the Mill Hills Beck, limestone grassland, hedgerows and scrub, as well as veteran trees. The arable land is part of a regenerative farming trial in which no artificial fertilisers or pesticides are used, so our visit offers an opportunity to obtain baseline data for the early period of this trial.

Recent moth trapping in the area has yielded some exciting results and more moth trapping will take place over the Excursion weekend on at least one and possibly both nights, depending on the weather. Members may arrive early if they wish to see the catch; please contact me in advance if you particularly wish to see the moths so that I can let you know on which night(s) mothing will take place.

The Castle Howard estate lies within the Howardian Hills AONB designated in 1987. The AONB forms a clearly defined geographical area of well-wooded rolling countryside bordered by the Vale of Pickering, the Vale of York and the North York Moors National Park. The underlying Jurassic rocks of limestones, sandstones and clay, together with traditional farming, gave rise to a rich mix of habitats from limestone pasture and woodland to arable land and fen. This is now much altered by agricultural improvement and forestry.

The Castle Howard area has a distinguished botanical history. In the 19th Century, the Howardian Hills were regarded as being of considerable botanical importance with many rare species. Both Robert Teesdale and Henry Ibbotson drew up lists of plants with site locations for all the most significant species. There were rare arable plants at Malton Fields and mire species at Terrington Carrs. Gulliver (1990) undertook a detailed analysis of these lists compared with more recent records and has shown that a very high proportion of these rarer species have now been lost through changes in land use and agricultural improvement, with losses being greatest in arable and least in woodland. However, fieldwork carried out by Gulliver since 1976 resulted in some significant rediscoveries and there remains a chance, albeit a slim one, of finding more relict species.

Another distinguished Nineteenth Century botanist, Richard Spruce, was born at Ganthorpe and in his youth recorded extensively in the Castle Howard area. Many of his plant records are included in Baines' Flora of Yorkshire (1840). After a career of botanical exploration overseas Spruce returned to live at Coneysthorpe (where his cottage bears a plaque) and he is buried in Terrington.

Previous Excursions:

There were previous Excursions as follows:

Terrington, 20th June 1898; Castle Howard 19-21 June 1926; Slingsby 5th June 1947; Castle Howard Arboretum May 2009

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Errata

In the December 2023 edition of *The Naturalist*:

On p221, the caption to the lower image should read 'Exuvium of an Aeshnid species' and on p223, under ODONATA, it should read '...two exuvia of Aeshnid species (see p221) found by DTNFC members...'.
On p230, Figure 2 should be labelled as Swallow Prominent *Pheosia tremula*.

The Editorial Board apologises for these errors and the repeat paragraph at the top of p169.

YNU Calendar 2024

For further details and updates visit the YNU Events Calendar website (<https://ynu.org.uk/news-events>).

May	11	Botanical Section VC63. Rossington, near Brodsworth Way Pavilion, DN11 0FD. SK62819790. Contact Louise Hill.
	11	Bryological Section VC64. Wharfedale. Meet 10:00am in the lay-by at Halton Gill, grid reference SD88067646. Contact Steven Heathcote.
	18	VC63 Excursion: Anston Stones Wood. Meet in car park. SK521842. 10.30. Contact Joyce Simmons
Jun	8	Entomological Section VC62. Yorkshire Arboretum, Castle Howard. 10.00 – 15.30. Meet Arboretum car park (SE706697). Contact Alastair Fitter.
	12	YNU Executive via Zoom. 7.30pm.
	22	VC64 Excursion: Lower Winskill Farm, Langcliffe, Settle. SD826664. 10.30. Contact Terry Whitaker.
	29	Botanical Section VC65. Len Pasture SSSI. Meet 10.30am at entrance to site off the lane between Low Row (on B6270) and Crackpot. SD976969. Contact Linda Robinson.
Jul	6	VC65 Excursion: Preston-under Scar, Wensleydale; SE076914. 10.30. Contact Terry Whitaker.
	20	VC61 Excursion: Priory Meadows, Cottingham, Hull. 10.30. Contact Africa Gómez.
Aug	3	Botanical Section VC63: Doncaster Common. Meet 10.30 at Sandall Beat Wood Car Park at the end of the Straight Mile (Sandall Beat Road, off Leger Way) DN2 6JP. SE609037. Contact Louise Hill.
	10/11	VC62 Excursion: Castle Howard Estate. Meet Bog Hall SE725707. 10.30. A 2-day meeting, not a residential, so members can attend either or both days. Contact Sarah White.
Sep	28	YNU Executive. St.Chads. 10.30am. T.B.C.
Oct	5	Bryological Section VC63. Wessenden Head and Brook. Meet at 10:00 am in the lay-by at Wessenden Head SE07710760. Contact Steven Heathcote.
Nov	2	Entomological Section AGM. St. Chad's Meeting Rooms, Headingley 10:30 - 15:30
	16	YNU AGM. Library@The Lightbox, Barnsley S70 1GW. 10.30 – 15.30.

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- using tabs to tabulate information (please use MS Word table format).

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.

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