

CLEVELAND NATURALISTS'

FIELD CLUB



RECORD OF PROCEEDINGS

Volume 10 Part 3

Spring 2013

THE OFFICERS & COMMITTEE 2013-2014

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| President. | Vic Fairbrother, 8 Whitby Avenue, Guisborough, TS14 7AP. |
| Secretary. | Eric Gendle, 13 Mayfield Road, Nunthorpe, TS7 0ED. |
| Treasurer. | Colin Chatto, 32 Blue Bell Grove, Acklam, TS5 7HQ. |
| Membership Secretary. | Jo Scott, Tethers End, Hartburn, Stockton.. |
| Programme Secretary. | Neil Baker, 10 Smithfield Road, Darlington, DL1 4DD. |

The immediate past president. Dorothy Thompson.

Ordinary members. Ian Lawrence, David Barlow, Paul Forster, Jo Scott, Vincent Jones, Jean McLean.

Membership Details

The Club seeks to promote an interest in all branches of natural history and to assist members in finding out about the living things that they see in the countryside around them. The present membership includes those who have particular interests in birds, insects, slugs and snails, lichens, fungi, flowering plants and mosses and liverworts. Members with interests in other fields would be very welcome.

In spring and summer there are evening, half-day and whole-day visits to investigate the natural history of a particular area. During the winter months there is a series of meetings held in the Nunthorpe Institute, The Avenue, Nunthorpe, Middlesbrough. If you have any difficulty getting to this venue, please speak to any committee member and we will see if we can arrange a lift for you. A meeting usually takes the form of a lecture given by a club member or visiting speaker. The annual subscription is £8.

Members are entitled to attend meetings of two affiliated organisations:
Yorkshire Naturalists' Union.
Tees Valley Wildlife Trust.

Details are available from Eric Gendle ☎ 01642 281235

President's Address: 18th March 2013.

One of the wettest summers on record meant hard times for many birds, butterflies and moths in the persistently cold and wet conditions but I can report on another excellent year of activity exploring the natural history of Cleveland and the surrounding countryside.

The thirty two field trips organised in 2012 provided some memorable records and experiences which will be described in more detail in the Annual Record of Proceedings and on the club website.

Members enjoyed seven evening events featuring The Howls and the Batts, Black Bobbies Field, Cowpen Bewley Woodland Park, North Gare, Coatham Stob, Greenvale in Stockton and Airy Holme Wood. There were also afternoon meetings at Castle Eden Dene and Stewart Park.

Local venues for full day visits included Moorsholm, Roseberry Topping, Greatham Creek & North Gare, Loftus Wood, South Gare, and Guisborough Woods. A day exploring rock pools at Saltburn marked our growing involvement with the Big Sea Survey.

In County Durham we visited Cronkley Fell and Sunderland Bridge.

The North York Moors inspired visits to Cropton, Hutton-le-hole, Ravenscar, Wykeham Forest, and Levisham. The joint meeting with the YNU featured The Howls, the Ings and the Carrs whilst elsewhere in Yorkshire we visited the YWT reserve at Brockadale and Hackfall Wood near Masham.

The joint meeting with members of the British Dragonflies Society was held in Boltby Forest.

Despite the wet summer most field trips went ahead as planned but heavy rain and floods led to the cancellation of fieldtrips to Anya's Wood and to Eston Woods.

Moth trapping provided a much appreciated pleasant late evening return to the gardens of Mulgrave Castle and as we neared the end of the summer programme we enjoyed a misty day studying lichens near Cod Beck Reservoir.

In view of the snow, ice and flooding which was to disrupt our winter meetings it was perhaps appropriate that Pauline Bastow opened our indoor meetings with *Searching for Emperor Penguins in the Antarctic*.

Krista Langley spoke eloquently about her dedicated work in *Wildlife Rescue and Rehabilitation* and Norma Pagdin and Joan Bradbury brought some welcome light and sun into November with their description of *A Week in Provence*.

We invited Dr. Heather Sugden, Marine Sciences Department, University of Newcastle to present the Elgee Memorial Lecture in the Dorman Museum and I would like to thank Jo Scott, one of Heather's Cleveland volunteers, who chaired the meeting superbly in my absence.

The planned talk by Katherine Lart on the work of Plantlife was a victim of the dreadful weather but the social evening survived and Joan Bradbury ably assisted by Norma Pagdin provided yet another stimulating evening of brain teasers. In recognition of their hard work in preparing this annual entertainment they were presented with a framed botanical print as a small token of our appreciation.

There was more disappointment when snow and ice returned in January and the talk on British Herpetofauna by Graham Skinner had to be cancelled.

On Members' Night, guest Christine Corbett appealed for help with the Boro Becks bioblitz and this was followed by most enjoyable presentations by Eric Gendle, Andrew Ferguson and Jo Scott. The exhibition of paintings and photographs by Paul Forster, Peter Grainger, Mark Stokeld and Ruth & Peter Waterton again demonstrated the wealth of creative talent in the club.

Following the AGM Malcolm Birtle presented *Extracts from a Naturalists' Notebook* and the indoor programme will conclude with the story of *A Wild Flower Quest* by David Smith.

Many people have contributed to the success of the club in the past year including those members who have planned and led field trips and those who have given talks at indoor meetings.

Jo Scott again prepared copy to enable printed versions of the latest on-line Proceedings to be made available for a small charge. The importance of local recording and the value of our archive of Proceedings have been demonstrated again this year with the launch of the local RIGS group project on the fossil plant flora of Marske Quarry.

I would like to thank all members for your positive response to our need to find a new meeting venue following the unexpected closure of Nature's World and for the friendly welcoming atmosphere you help to create.

A programme of over 40 events involved a lot of work for Eric Gendle, Secretary; Colin Chatto, Treasurer; Neil Baker, Programme Secretary; Jean McLean & Jo Scott, Membership Secretaries; Malcolm Birtle, Editor of Record of Proceedings; and committee members David Barlow, who manages our increasingly important website, Vincent Jones, Ian Lawrence, and Paul Forster our digital projector operator. Our Past President, Dorothy Thompson, has continued to host our committee meetings in her own inimitable style.

I would like to thank them all for their support during the past year, and I would ask you to show your appreciation of all their efforts on our behalf.

Vic. Fairbrother.

Correction

In the Proceedings for 2010 on Page 5 the Long Horn Beetle recorded on the 25th April at Moorsholm as *Rhagium sycophanta* should have been *Rhagium mordax*.

Two field meetings in 2012 were lost due to bad weather. These were-

Wednesday, 26th September, 10:30 am, leader Aubrey Colling. Anya's Wood.

Saturday, 27th October, 10:30 am, leader Paul Forster. Eston Woods.

Highlights of 2012 Field Meetings

Wednesday, 11th April, 10:30 am, leader Colin Chatto, Hackfall Wood, Masham.

Hackfall Woods belongs to the Woodland Trust. It is run by the Hackfall Trust, a registered charity, whose aim is to conserve, protect and improve the 18th century garden and buildings at Hackfall.

Eight members attended on a warm, sunny morning which turned cloudier after lunch. Early spring flowers were in evidence throughout the walk and we saw, or heard, a number of birds.

The following were seen – *Sitta europaea* (Nuthatch), *Buteo buteo* (Common Buzzard), *Sylvia atricapilla* (Blackcap), *Aegithalos caudatus* (Long-tailed Tit), *Parus major* (Great Tit), *Cyanistes caeruleus* (Blue Tit) and a few others.

Heard were- *Phylloscopus collybita*, (Chiffchaff), *Troglodytes troglodytes* (Wren), *Regulus regulus* (Goldcrest) and *Strix aluco* (Tawny Owl).

There were a few butterflies on the wing, namely- *Inachis io* (Peacock), *Polygonia c-album* (Comma) and *Parage aegeria* (Speckled Wood).

Other insects seen were the *Bombylius major* (Bee-fly), *Andrena sp.* (Mining Bee), *Apis mellifera* (Honey Bee), *Xylota segnis* (Hoverfly), and a variety of unidentified *Collembola* (Springtails). Malcolm Birtle identified *Trichia hispida* (Hairy Snail) and *Monacha granulata* = *Ashfordia granulata* (Silky Snail). However, the most notable mollusc found appeared to be *Pomatias elegans* (Round Mouthed Snail).



There were also various invertebrates in the stream which were not identified. On our way back to the cars it rained and hailed heavily so everyone dashed off.

Sunday, 29th April, 10:30 am, leader Martin Allen. Moorsholm.

The molluscs noted were *Acanthinula aculeate* (Prickly Snail), *Discus rotundatus* (Rotund Disc), *Arianta arbustorum* (Copse Snail) and *Oxychilus alliarius* (Garlic Snail).

The following were in flower-*Sanicula europaea* (Sanicle), *Anemone nemorosa* (Wood Anemone), *Caltha palustris* (Kingcup), *Oxalis acetosella* (Wood Sorrel), *Primula vulgaris* (Primrose), *Mercurialis perennis* (Dog's Mercury), *Potentilla sterilis* (Barren Strawberry) and *Allium ursinum* (Wild Garlic). There were many *Orchis mascula* (Early Purple Orchids).

Phytomyza ilicis (Holly Leaf-miner), which is the only miner on Holly, had marked some leaves. The miner is an Agromyzid fly. A Rust *Melampsora populina* (?) had disfigured some Dogs Mercury plants. *Sitta europaea* (Nuthatch) and *Numenius arquata* (Curlew) were calling.

A discussion started concerning *Xylaria carpophila* (Beechmast Candlesnuff) and after a very brief search it was found.



Wednesday, 9th May, 2.00pm, leaders Joan and Norma. Castle Eden Dene.

Wednesday, 16th May, 10:30 am. Leader Vic Fairbrother, Roseberry Topping.

Members were met in the National Trust car park by Beth Andrews, who following her lecture to the club had promised to reveal some of the geological features of this area. Members of the Tees Valley RIGS Group also joined us for the day. The first items of note were some basalt setts used to reinforce the footpath leading away from the village. These were not of local origin but basalt was quarried from Cliff Rigg, a site which we would be visiting later in the day.

It was a glorious sunny morning and Newton Woods were carpeted in a haze of *Hyacinthoides non-scripta* (Bluebells) and a multitude of the other common flowers which grace our oak woods in spring. As we climbed up through the wood Beth pointed out layers of sandstone almost buried in the vegetation. Several fossil shells were also admired, evidence of Newton's period beneath the waves. Although no longer a haven for *Phoenicurus phoenicurus* (Common Redstart), *Ficedula hypoleuca* (Pied Flycatcher) and *Phyloscopus sibilatrix* (Wood Warbler) the spring feeling in the woods was confirmed by the presence of *Sylvia borin* (Garden Warbler), *Sitta europea* (Nuthatch) and the welcome calls of the *Cuculus canorus* (Cuckoo). Emerging from the trees onto the sunlit grassy lower slopes of the Topping we stopped to admire the view and Beth reflected on the building materials, origins and purpose of the summer house before continuing our climb. We paused to rest at the next vantage point and Beth pointed out the pits, hollows and other sites of ironstone, jet and alum workings. Of particular interest were the traces of the old mineral railway route along a hedgerow and even discernable across the middle of distant arable fields. We paused again before the last steep climb to the summit to admire *Fulmarus glacialis* (Fulmars) nesting far away from their normal maritime sites but safely lodged high on the summit cliff face. Safe of course only until the next major rock fall and here Beth described the events surrounding the major collapse in 1926? It was a pleasant surprise to find the summit very calm and so we enjoyed our picnic lunch with spectacular views in all directions.

As we began our descent there was speculation on the mystery of the features marked on the Ordnance survey maps as British Settlements. We worked round towards Cliff Rigg and paused to look more closely at the signs of the ironstone mine entrance and the remains of the powder house placed well away from the workings. Here we admired a *Phragmatobia fuliginosa fuliginosa* (Ruby Tiger) moth. After a short steep climb we walked round the rim of Cliff Rigg Quarry with a spectacular view down into the quarry floor. The path back through the woods was rather wet and muddy but woodland flowers carpeted the ground on either side. As we emerged from the woods hard working National Park volunteers were still at work maintaining the steps up from the lane.

Sunday, 20th May, 10:30 am, leader Neil Baker Cronkley Fell

It was a warm, sunny, clear day and the small party walked From Hanging Shaw to Cronkley riverbank, on to the bank opposite Falcon Clints, then over Cronkley Fell to return to Hanging Shaw. A Wood/Field Mouse was wandering along a field edge and then scampered in to a drystone wall.

Actitis hypoleucos (Common Sandpiper) were calling in the river and *Oenanthe oenanthe* (Wheatear), *Anas platyrhynchos* (Mallard) and *Haematopus ostralegus* (Oystercatcher) were active. *Aglais urticae* (Small Tortoiseshell) were on the wing. The following were in flower along the riverbank *Cardamine pratensis* (Cuckoo Flower), *Viola lutea* (Mountain Pansy), and *Caltha palustris* (Kingcup). A Pipit/Skylark flew off a nest on the ground. On Cronkley Fell many *Saxifraga hypnoides* (Mossy Saxifrage) were in flower with *Primula farinosa* (Birds Eye Primrose), and *Gentiana verna* (Spring Gentian). An *Ocyrops olens* (Devils Coach Horse) scuttled along the ground. About 5-6 *Pluvialis apricaria* (Golden Plover), *Numenius arquata* (Curlew) and *Vanellus vanellus* (Peewits) were calling on the fell top. Later, beside the road to Langdon Beck from Hanging Shaw there was a *Tringa tetanus* (Redshank) on a wall and outside the Langdon Beck Hotel a *Buteo buteo* (Common Buzzard) was being harassed by Peewit and Oystercatcher.

Wednesday, 23rd May, 6:30 pm, leader Andrew Ferguson. The Howls and The Batts.

The party met on a warm, sunny, clear and still evening. In the wood near the reservoir *Sanicula europaea* (Sanicle), *Veronica serpyllifolia* (Thyme-leaved Speedwell), *Orchis mascula* (Early Purple Orchid), *Primula veris* (Cowslip), and *Calocybe gambosa* (St George's Mushroom) were noted. The only bird recorded was *Pyrrhula pyrrhula* (Bullfinch). An impressive outcrop of brecciated magnesian limestone (Roker Formation?) was closely examined in the stream side.

Molluscs (A A Wardhaugh)

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|-------------------------------|-----------------------------|---|
| <i>Columella edentula</i> | (Toothless chrysalis snail) | |
| <i>Arion ater</i> agg. | (Great black slug) | |
| <i>Arion subfuscus</i> | (Dusky slug) | |
| <i>Arion circumscriptus</i> | (Dotted slug) | |
| <i>Arion distinctus</i> | (Common garden slug) | [<i>Arion hortensis</i> form A] |
| <i>Oxychilus alliarius</i> | (Garlic snail) | |
| <i>Deroceras reticulatum</i> | (Netted slug) | |
| <i>Deroceras panormitanum</i> | (Chestnut slug) | [<i>Deroceras caruanae</i>] |
| <i>Balea heydeni</i> | (Tree snail) | [new segregate of <i>Balea perversa</i>] |
| <i>Monacha cantiana</i> | (Kentish snail) | |
| <i>Trochulus striolatus</i> | (Strawberry snail) | [<i>Trichia striolata</i>] |
| <i>Cepaea nemoralis</i> | (Brown lipped snail) | |

Names in square brackets are those used in the standard identification work, Collins Field Guide to Land Snails of Britain and North-west Europe, M.P. Kerney & R.A.D. Cameron (1979), some of which have now been superseded.

Two species are of interest. *Columella edentula* is barrel shaped and just 2.5.to 3.0mm tall. Although occurring in a variety of habitats it tends to inhabit relatively undisturbed places. Two individuals were found resting on an ash log.

Balea heydeni is a recent segregate of *Balea perversa*. Neither are common locally but the former seems to be the predominant species. Most often found on calcareous dry stone walls. In the Howls, several specimens (mostly juveniles) were seen at rest on ash sticks and small logs at or near ground level and on the lower part of a timber fence post.

Saturday, 26th May, 11.00 am, leader Malcolm Birtle. Sunderland Bridge, Durham.

Members gathered at the bridge on a hot, sunny, day and enjoyed the sight of many shoals of fish in the river. A solitary wasp, probably a *Nomada* sp. was observed actively flying around the road kerb edge, possibly seeking its mining bee host. The group proceeded to walk towards Tudhoe through Coldstream Wood to Page Bank, and back along the North bank of the Wear. *Anthocharis cardamines* (Orange Tip), *Lasiommata megera* (Wall), *Pararge aegeria* (Speckled Wood), *Inachis io* (Peacock), *Aglais urticae* (Small Tortoiseshell), *Lycaena phlaeas* (Small Copper) and *Xanthorhoe montanata* (Silver Ground Carpet) were seen. A member of the *Pyrochroidae* (Cardinal Beetle) was found on a field edge.

At Tudhoe Mill the following molluscs were found under an old tile- *Trochulus striolatus* (Strawberry Snail), *Oxychilus alliarius* (Garlic Snail), *Discus rotundatus* (Rotund Disc), and *Cepaea nemoralis* (Brown Lipped Banded Snail).

A good selection of birds were encountered-

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|------------------|---------------|--------------------------|
| Sskylark | Yellow Hammer | Reed Bunting |
| Pied Wagtail | Chaffinch | Goldfinch |
| Swallow | Sand Martin | Chiffchaff |
| Willow Warbler | Blackcap | Whitethroat |
| Coal Tit | Blue Tit | Goldcrest |
| Blackbird | Wood Pigeon | Collard Dove |
| Common Sandpiper | Carrion Crow | Jackdaw |
| Herring Gull | Robin | Great-spotted Woodpecker |
| Nuthatch | Meadow pipit | |

An interesting association of a fungus and lichen, and the use of the lichen in dye was highlighted by Aubrey Colling.



Wednesday, 30th May, 6:30 pm, leader Ian Lawrence Black Bobbies Field, Thornaby.

The meeting commenced on a warm sunny, if cloudy, evening. *Cardamine pratensis* (Cuckoo Flower), *Allium vineale* (Crow Garlic), *Lychnis flos-cuculi* (Ragged Robin) were in flower. *Acrocephalus schoenobaenus* (Sedge Warbler) were calling. The lack of Hirundines was noticeable, as at other places this year. *Aphelia paleana* (Timothy Tortrix), *Xanthorhoe montanata* (Silver Ground Carpet), *Odezia atrata* (Chimney Sweep), *Ancylis badiana* (Common Roller), *Elachista argentella*, (Swan Feather Dwarf) and *Helophilus pendulus* (Hoverfly) were amongst the vegetation.



Wednesday, 6th June, 6:30 pm, leader Daphne Aplin. Cowpen Bewley Woodland Park.

The meeting took place on another warm, sunny evening. A *Parus major* (Great Tit) was observed using a cable protector on a telegraph pole as a nesting site. *Taphrina pruni* had infected the sloes. There were many insects active including *Ischnura elegans* (Blue-tailed Damselfly), *Coenagrion puella* (Azure Damselfly), *Perizoma albulata* (Grass Rivulet), *Vanessa cardui* (Painted Lady) and *Cercopis vulnerata* (Black and Red Froghopper). However the most important find was a larva of *Leucoma salicis* (White Satin), a very scare moth in County Durham.



Conium maculatum (Hemlock) was prominent in the vegetation and *Rhinanthus minor* (Yellow Rattle) was exploiting the ranker grasses. The highlight was without doubt the Nightingale calling from bushes near the large pond. The shortage of Hirundines was again noticeable. Little Grebe and flying Shelduck were the only other birds of note. The only fungus seen was *Calocybe gambosa* (St George's Mushroom)

Wednesday, 13th June, 10:30 am, leader Vic Fairbrother. Cropton

The party met in the village and proceeded to walk towards Bull Ing Lane. *Cymbalaria pallida* (Italian Toadflax) was growing on the old well, with *Geranium lucidum* (Shining Crane's-bill) and *Saxifraga tridactylites* (Rue-leaved Saxifrage) present on walls. *Plantago media* (Hoary Plantain) and *Propylea 14-punctata* (14-spot ladybird) were also found in the village. In the Lane *Monacha cantiana* (Kentish Snail) and *Anthophila fabriciana* (Nettle-tap) were found. *Moehringia trinervia* (Three-nerved Sandwort) and *Euonymus europaeus* (Spindle) were in flower.

The route had been chosen in order to enjoy the Bull Ings SSSI meadows. The farmer does not introduce stock until the flowering season is over and the two pastures with dry and damp areas and a mix of acidic and calcareous soils provide a diverse flora rich in orchids. *Dactylorhiza fuchsii* (Common Spotted-orchid) and *Listera ovata* (Common Twayblade) were in profusion and although we located several *Ophrys apifera* (Bee-orchid) sadly they were only in bud. The leaves of *Silene silaus* (Pepper-saxifrage), were another indication that this was an unimproved herb rich pasture. *Valeriana dioica* (Marsh Valerian) was a feature of the damp area and a number of sedges were examined including *Carex pallescens* (Pale Sedge), *Carex flacca* (Glaucous Sedge), *Carex panicea* (Carnation Sedge) and *Carex caryophylla* (Spring Sedge).

Panorpa communis (Scorpion Fly), *Camptogramma bilineata* (Yellow Shell) and *Odezia atrata* (Chimney Sweeper) were identified. *Polyporus squamosus* (Dryads Saddle) was noted as we proceeded through Fuescot Wood to Low Lane, past Appleton Mill Farm and on to Tenterhill End Wood.

Claytonia sibirica (Pink Purslane) was growing in Low Lane. *Alopecurus myosuroides* (Black-grass) was noted in a field and a Great Spotted Woodpecker in nearby Birch. *Tilia cordata* (Small-leaved Lime) was a component of the wood. *Rhogogaster viridis* (Sawfly) was found in a hedge near Scarth Wood and at Lower Aiskew a Buzzard was seen. In a field gate entrance adjacent to Beck House Farm *Amsinckia micrantha* (Fiddleneck) was found in flower. Again there were hardly any Hirundines despite many flies rising from the river.



Wednesday, 20th June, 10:30 am, leader Jo Scott. Greatham Creek and North Gare.

It was a hot and sunny day for this outing. A *Numenius phaeopus* (Whimbrel) was spotted next to the Creek with *Coenonympha pamphilus* (Small Heath), *Euthrix potatoria* (The Drinker), *Tyria jacobaeae* (Cinnabar), *Polyommatus icarus* (Common Blue) and *Lasiommata megera* (Wall). The party watched breeding *Sterna hirundo* (Common Tern) and *Recurvirostra avosetta* (Avocet). *Erigeron acer* (Blue Fleabane) and *Artemisia maritima* (Sea Wormwood) were examined. A Seal was seen swimming downstream against the tide. On the path from the Seal Sands Hide *Pyrhria umbra* (Bordered Sallow) was found. This is a coastal specialist that uses *Ononis* sp. (Restharrow) as a foodplant and has not been recorded often in County Durham.

Sunday, 24th June, 10:30 am, leader Andrew Ferguson Loftus Wood.

Wednesday, 27th June, 6:30 pm, leader Eric Gendle. North Gare.

The Club returned to North Gare for a visit on a humid evening with a light breeze. A large number of *Listera ovata* (Twayblade) were growing in the dune slacks some of which were very large. *Ophrys apifera* (Bee Orchid) was growing in very thin vegetation on the dunes.

Some Lepidoptera were found namely *Perizoma albulata* (Grass Rivulet), *Coenonympha pamphilus* (Small Heath), *Polyommatus icarus* (Common Blue), and *Tyria jacobaeae* (Cinnabar)

Pheum arenarium (Sand Catstail) was found on the dunes. *Atriplex laciniata* (Frosted Orache) and *Salicornia* sp. (Glasswort) were evident on the beach.

Saturday, 30th June, 10:30 am, leader Eric Gendle. Brockadale.

A small party of 5 club members enjoyed a rich day on the YWT reserve at Brockadale near Doncaster in spite of the windy conditions and occasional showers. The group entered the reserve under a blanket of cloud but almost immediately the sun emerged and the 5 were surrounded by a cloud of *Melanargia galathea* (Marbled Whites) responding to the sun's rays. The group explored the rich limestone grass land on both the north and south facing slopes and then wandered along the riverside grassland margins. Amongst a rich variety of species the following more interesting types were noted.

Butterflies- Marbled White in profusion, *Polyommatus Icarus* (Common Blue), *Gonepteryx rhamni* (Brimstone), *Ochlodes venata* (Large Skipper), *Parage aegeria* (Speckled Wood), *Maniola jurtina* (Meadow Brown)

Moths –*Camptogramma bilineata bilineata* (Yellow Shell). Micro moth *Myelois cribrella*
Flora –*Dactylorhiza fuchsii* (Common Spotted Orchid), *Anacamptis pyramidalis* (Pyramidal Orchid), *Gymnadenia* sp (Fragrant Orchid), *Listera ovata* (Common Twayblade), *Ophrys apifera* (Bee Orchid), *Helianthemum nummularium* (Common Rock-rose), *Ballota nigra* (Black Horehound), *Bryonia dioica* (White Bryony), *Blackstonia perfoliata* (Yellow-wort), *Solanum dulcamara* (Woody Nightshade), *Filipendula vulgaris* (Dropwort).

Birdlife –*Emberiza citrinella* (Yellowhammers) were present in abundance, *Buteo buteo* (Common Buzzard), *Falco tinnunculus* (Kestrel) and *Garrulus glandarius* (Jay) were seen, whilst on the return journey a *Milvus milvus* (Red Kite) was seen flying by the motorway side.

The riverside gave splendid views of the many male and female *Agriion splendens* (Banded Demoiselles) and the not quite mature teneral forms.

Fungi- *Hygrocybe pratensis* (Meadow Waxcap).

Wednesday, 4th July, 6:30 pm, leader Dave Barlow. Coatham Stob.

The party met at the car park adjacent to the old Chrome works on a sunny evening with thunderstorms in the distance. *Avenula pratensis* (Meadow Oat), *Vicia tetrasperma* (Smooth Tare), *Vicia hirsuta* (Hairy Tare), *Carex flacca* (Glaucous Sedge), very many large *Dactylorhiza fuchsii* (Common Spotted Orchid) with the odd *Dactylorhiza purpurella* (Northern Marsh Orchid), and *Dipsacus fullonum* (Teasel) were notable in the vegetation.

Insects were in short supply but some *Libellula depressa* (Broad-bodied Chaser), *Pyrrhosoma nymphula* (Large Red Damselfly), *Coenonympha pamphilus* (Small Heath), *Scotopteryx chenopodiata* (Shaded Broad-bar) and *Panorpa communis* (Scorpion Fly) were active and perching in the sun. An attractive metallic Soldier Fly which was probably *Sargus flavipes* (Yellow-legged Centurion) was also seen. *Haematopota pluvialis* (Cleg) were annoyingly very active in the humidity. The only birds noted were *Ardea cinerea* (Grey Heron) and *Carduelis carduelis* (Goldfinch).

Saturday, 7th July, 10:30 am, leader Andy Astbury. Nunnington.

Wednesday, 11th July, 10:30 am, leader Colin Chatto. Hutton-le-Hole.

After heavy rain previously, a small band of members set off from Hutton-le-Hole car park on a reasonably fair day. We walked east along field edges to Spaunton and then Lastingham where we visited the Saxon Crypt and then had our lunch. We headed south along Oldfield Lane and Kirkgate Lane towards Appleton-le-Moors, then west along South Ings Lane before turning north along various tracks back to Hutton-le-Hole via a large disused quarry. The beginning and end of the walk were very muddy. On a warmer, drier and sunnier day it would have been a lot better! But those days were in short supply in 2012.

Sunday, 15th July, 10:30 am, leader Vincent Jones. South Gare.

The South Gare is probably the richest area in North-east Yorkshire (Vi-c.62) for rare plants. *Sagina maritima* (Sea Pearlwort) and *Artemisia maritima* (Sea Wormwood) were growing in cracks in sea defences, the latter at its only site in the vice-county. Shore plants seen included *Suaeda maritima* (Annual Sea-blite), *Cakile maritima* (Sea Rocket), *Atriplex laciniata* (Frosted Orache) and the rare *Atriplex glabriuscula* (Babington's Orache), the latter not yet showing its distinctive autumnal characters. A good patch of *Eryngium maritimum* (Sea Holly) was admired on the edge of the dunes. Other dune and coastal plants were *Astragalus danicus* (Purple Milk-vetch) still with some lingering flowers; the hawkweed *Hieracium uiginskyense*, abundant and just coming into flower; *Allium vineale* (Crow Garlic) and occasional *Senecio inaequidens* (Narrow-leaved Ragwort) an alien species which has rapidly moved north in recent years. It was pleasing to see that the wet summer had enabled the nationally very rare *Petrorhagia prolifera* (Proliferous Pink) to enjoy a long flowering period and the tiny pink flowers were much photographed. Nearby *Dianthus deltoides* (Maiden Pink) was exhibiting its lovely deep red flowers. Eyebrights were particularly common in this area, much the commonest being the hybrid *Euphrasia tetraquetra* x *E. nemorosa*. The leader was particularly pleased to find tiny plants of *Parapholis strigosa* (Hard-grass) in the disturbed bare sand at the lagoon exit. Also in this habitat were a few *Carex extensa* (Long-bracted Sedge). *Gymnadenia densiflora* (Marsh Fragrant Orchid) was just coming into flower in the dune slacks, the previous year it had been a wonderful sight a week or two later.

Wednesday, 18th July, 6:30 pm, leader Martin Allen. Greenvale, Stockton.

Saturday, 21st July, 10.00 am leader Mick Carroll. The Howls, The Ings and The Carrs.
There is a full report on this YNU VC62 meeting in the December 2012 issue of *The Naturalist*, 137: 233-234.

Sunday, 22nd July, 10:30 am, leader Jo Scott. Saltburn.

Members of the club were joined by Dr Heather Sugden from Newcastle University's Dove Marine Laboratory who runs the Big Sea Survey. The project, funded by the Heritage Lottery Fund, uses volunteers who survey the marine environment in the north east. The results of the survey are used to help in decision making about protecting this fragile environment.



Halichondria panacea



Urticina felina



Asterias rubens

PLANTS

| | | |
|--------------------------------|----|----------------------------|
| <i>Ceramium spp</i> | C | (red algae) |
| <i>Chondrus crispus</i> | A | (Irish Moss) |
| <i>Cladophora rupestris</i> | C | (green algae racing green) |
| <i>Cladostephus spongiosus</i> | C | (green algae) |
| <i>Corralina officinalis</i> | SA | (Coral Weed) |
| <i>Dumontia contorta</i> | C | (red algae) |
| <i>Fucus serratus</i> | C | (Saw Wrack) |
| <i>Fucus vesiculosus</i> | C | (Bladder Wrack) |
| <i>Laminaria digitata</i> | SA | (Oarweed) |
| <i>Laminaria hyperborea</i> | A | (Cuvie) |
| <i>Lithothamnion spp</i> | SA | (red algae) |
| <i>Mastocarpus stellatus</i> | A | (False Irish Moss) |
| <i>Membranoptera alata</i> | C | (red algae) |
| <i>Osmundia pinnatifida</i> | A | (Pepper Dulse) |
| <i>Palmaria palmata</i> | A | (Dulse) |
| <i>Polyides rotundrus</i> | F | (red algae) |
| <i>Porphyra spp</i> | C | (purple laver) |
| <i>Rhodothamniella florida</i> | SA | (Carpet Weed) |
| <i>Saccharina latissima</i> | SA | (Sugar Kelp) |
| <i>Ulva intestinalis</i> | SA | (Gutweed) |
| <i>Ulva lactuca</i> | SA | (Sea Lettuce) |
| <i>Ulva linza</i> | SA | (green seaweed) |

ANIMALS

| | | |
|-----------------------------|---|---------------------|
| <i>Actinia equina</i> | C | (Beadlet Anemone) |
| <i>Amphipholis squamata</i> | R | (Dwarf Brittlestar) |
| <i>Amphipods</i> | C | |

| | | |
|--------------------------------|----|------------------------------|
| <i>Anomia ephippium</i> | A | (Saddle Oyster) |
| <i>Ansates pellucidum</i> | F | (Blue-rayed Limpet) |
| <i>Asterias rubens</i> | R | (Common Starfish) |
| <i>Balanus crenatus</i> | F | (Barnacle) |
| <i>Botrylloides leachi</i> | F | (Colonial Ascidian) |
| <i>Butterfish</i> | Oc | |
| <i>Cancer pagarus</i> | C | (Edible Crab) |
| <i>Carcinus maenas</i> | C | (Shore Crab) |
| <i>Doris pseudoargus</i> | R | (Sea Lemon) |
| <i>Dynamena pumila</i> | C | (hydroid) |
| <i>Electra pilosa</i> | A | (bryozoans) |
| <i>Gibbula cineraria</i> | A | (Grey Topshell) |
| <i>Halichondria panacea</i> | SA | (Breadcrumb Sponge) |
| <i>Hinia spp</i> | C | (Whelk) |
| <i>Hymenacidion perleve</i> | F | (sponge) |
| <i>Isopods</i> | C | |
| <i>Liocarcinus puber</i> | Oc | (Velvet Swimming Crab) |
| <i>Littorina littorea</i> | A | (Common Winkle) |
| <i>Lumpsucker</i> | R | |
| <i>Membranacea</i> | C | (Sea Mat - bryozoans) |
| <i>membranipora</i> | | |
| <i>Mytilus spp</i> | SA | (Mussel) |
| <i>Nereis spp</i> | F | (worm) |
| <i>Nucella lapillus</i> | A | (Dog Whelk) |
| <i>Obelia geniculata</i> | F | (hydroid) |
| <i>Ophiothris fragilis</i> | Oc | (Common Brittle star) |
| <i>Oshurkovia littoralis</i> | C | (bryozoan) |
| <i>Pagarus bernhardus</i> | A | (Hermit Crab) |
| <i>Patella ulysiponensis</i> | C | (China Limpet) |
| <i>Patella vulgata</i> | C | (Common Limpet) |
| <i>Psammechinus miliaris</i> | R | (Green Sea Urchin) |
| <i>Psidia longicornis</i> | C | (Long-clawed Porcelain Crab) |
| <i>Scaleworm</i> | C | |
| <i>Semibalanus balanoides</i> | SA | (Northern Barnacle) |
| <i>Spirobis rupestris</i> | A | (Spiral Worm) |
| <i>Spirobranchus triqueter</i> | SA | (Keel Worm) |
| <i>Trivia artica</i> | Oc | (Cowrie) |
| <i>Urticina felina</i> | C | (Dahlia Anemone) |
| <i>Verrucoa mucosa</i> | C | (Black Tar Lichen) |
| Abundance Scale | | |
| SA – Super abundant | | |
| A – Abundant | | |
| C – Common | | |
| F – Frequent | | |
| Oc – Occasional | | |
| R – Rare | | |

Sunday, 29th July, 10:30 am, leader Bill Hall. Boltby Forest.

This joint meeting was attended by 9 Cleveland Naturalists Field Club members, 3 Yorkshire Dragonfly Group members and 1 joint member. It had an emphasis on finding and identifying dragonflies and damselflies. The weather was fine though not particularly warm with heavy showers falling during the day, some of which were experienced by the group at the beginning of the walk.

Keith Gittens from the YDG was familiar with the area and led us first to Boltby reservoir, the level of which had been lowered and the exposed banks seeded with wild flowers by Yorkshire Water making a very attractive environment. On arrival 3 *Buteo buteo* (Common Buzzards) were seen. Members examined the area in some detail and found the following butterflies- *Aphantopus hyperantus* (Ringlet), *Maniola jurtina* (Meadow Brown), *Polyommatus icarus* (Common Blue), *Thymelicus sylvestris* (Small Skipper), and *Artogeia napi* (Green-veined White).

It turned out to be hard work to find dragonflies and only small numbers were found of *Enallagma cyathigerum* (Common Blue Damselfly), *Ischnura elegans* (Blue-tailed Damselfly), *Pyrrhosoma nymphula* (Large Red Damselfly) and an *Anax imperator* (Emperor Dragonfly). Surprisingly no Darters were seen. Two specimens of different forms of female Common Blue Damselfly were caught and examined by the group before being released. Lunch was taken while sheltering from a heavy mid-day shower.

The group moved on after lunch to two new conservation ponds, at a higher level, recently created by the Forestry Commission. Not much was seen at the first pond but at the second was the sad sight of an emergent female *Aeshna cyanea* (Southern Hawker) in the water where it had presumably been dashed by a shower. Though still alive its wings were extensively damaged making survival impossible. A second was discovered on the far side of the pond at a similar stage of development though in this case still attached to the reeds and with wings intact. Keith considered however that by that time of the day (mid afternoon) it should have been able to fly and was thus also vulnerable. Also seen were a *Libellula quadrimaculata* (Four-spotted Chaser) and a number of newly emerged *Sympetrum danae* (Black Darter).

The day had been successful, though both absolute numbers and total species were limited for the target family of dragonflies.

A number of other insects were seen including *Scotopteryx chenopodiata* (Shaded Broad-bar), *Cerapteryx graminis* (Antler Moth), the hoverflies *Episyrphus balteatus*, *Helophilus pendulus*, *Syrphus vitripennis*, *Meliscaeva cinctella*, *Volucella pellucens*, and *Panorpa communis* (Scorpion Fly). *Ceratocapnos claviculata* (Climbing Corydalis) was found scrambling amongst bilberry and bracken.

Wednesday, 1st August, 10:30 am, leader Eric Gendle. Ravenscar.

On an overcast, cool, breezy morning members met outside the old station accompanied by twittering Swallows. The group walked along the cliff to Hayburn Wyke. Rusts were examined on Cocksfoot and Bramble. The lepidoptera noted were *Aphantopus hyperantus* (Ringlet), *Chiasmia clathrata* (Latticed Heath) and *Maniola jurtina* (Meadow Brown). About 3/4 mile east of the lookout *Epipactis helleborine* (Broad-leaved Helleborine) was found on the cliff path. There were several large patches of *Vicia sylvatica* (Wood Vetch) on the cliffs. The uncommon grass, *Milium effusum* (Wood Millet), was found on the wooded sides of the disused railway near Hayburn Wyke; the hawkweed *Hieracium sublepidostoides* occurred in profusion south of Staintondale Station and a well-naturalised patch of *Dianthus barbatus* (Sweet William) was spotted in Staintondale. Returning by the old railway *Rutpela maculata* (Spotted Longhorn Beetle) was spotted on some flowerheads.

Wednesday, 15th August, 10:30 am, leaders Peter and Ruth Waterton. Wykeham Forest Raptor Viewpoint.

Nine members gathered at the first viewpoint where two *Accipiter gentilis* (Goshawk) were briefly seen. The group then walked along the road to the second (main) viewpoint. Flora along the roadside included *Dactylorhiza fuchsii* (Common Spotted Orchid), *Rhinanthus minor ssp. stenophyllus* (Yellow Rattle), *Pulicaria dysenterica* (Common Fleabane), and *Achillea ptarmica* (Sneezewort). Lepidoptera along the road were one *Vanessa atalanta* (Red Admiral), three *Thymelicus sylvestris* (Small Skippers), and three *Inachis io* (Peacock). At the main viewpoint car park an Odonata, *Aeshna cyanea* (Southern Hawker) was patrolling. Along the footpath to the viewpoint itself was found *Hypericum pulchrum* (Slender St. John's Wort) and the fungi *Collybia maculata* (Spotted Toughshank) and *Amanita rubescens* (The Blusher). At the viewpoint only distant views of *Pernis apivorus* (Honey Buzzard) and *Buteo buteo* (Common Buzzard) were seen. There was little activity after this apart from a flock of five *Loxia curvirostra* (Common Crossbill) which passed overhead.

An interesting hoverfly, *Leucozona glauca*, both female and male, was seen on Umbellifers accompanied by *Meliscaeva cinctella*, *Episyrphus balteatus*, *Eristalis tenax* and *Rutpela maculata* (Spotted Longhorn Beetle).

After lunch visibility became poor due to a sea fret so it was decided to visit Fen Bog, a Yorkshire Wildlife Trust reserve.

Here we had good views of the Odonata *Orthetrum coerulescens* (Keeled Skimmer), *Sympetrum danae* (Black Darter) and *Aeshna juncea* (Common Hawker). A *Lacerta vivipara* (Viviparous Lizard) basking on an old railway sleeper posed for the photographers. The flora of Fen Bog is well known and we saw the typical bog plants such as *Drosera rotundifolia* (Round-leaved Sundew), and *Pinguicula vulgaris* (Butterwort). On the track back to the cars a good number of *Gentianella amarella ssp. amarella* (Autumn Gentian) was seen. Lepidoptera seen were four *Coenonympha pamphilus* (Small Heath), three *Thymelicus sylvestris* (Small Skipper) and several *Artogeia napi* (Green-veined White).

24th August 2012, Mulgrave Castle

Eighteen persons including Cleveland Naturalists and guest attended a moth trapping session at Mulgrave Castle in and around the private gardens.

The weather was indeed perfect for this event, being overcast warm with no wind. The session started at 7.30pm and finished at 12.00am.

Six light traps were set up around the garden using MB Bulbs 160w 240v (Mercury blended).

The garden is cultivated with various flowers, vegetables as well as fruit trees. Outside the surrounding walls the trees are both deciduous and coniferous.

Thirty five species were recorded for the night with a total of two hundred and eighty two moths in total. Considering the conditions and the time of year, this was a low number of moths both in total and numbers (35 species 282 individuals).

| Code | Taxon | Vernacular | Authority | No. |
|-------|-------------------------------------|--|----------------------------------|-----|
| 464 | <i>Plutella xylostella</i> | Diamond-back Moth | (Linnaeus, 1758) | |
| 658 | <i>Carcina quercana</i> | | (Fabricius, 1775) | 5 |
| 873 | <i>Blastobasis lignea</i> | | auctt. | 60 |
| 1260 | <i>Cydia splendana</i> | | (Hübner, 1799) | 1 |
| 1305 | <i>Agriphila tristella</i> | | ([Denis & Schiffermüller], 1775) | 6 |
| 1344 | <i>Eudonia mercurella</i> | | (Linnaeus, 1758) | 5 |
| 1405 | <i>Pleuroptya ruralis</i> | Mother of Pearl | (Scopoli, 1763) | 3 |
| 1702 | <i>Idaea biselata</i> | Small Fan-footed Wave | (Hufnagel, 1767) | 10 |
| 1708 | <i>Idaea dimidiata</i> | Single-dotted Wave | (Hufnagel, 1767) | 1 |
| 1713 | <i>Idaea aversata ab. Remutata</i> | Riband Wave [non-banded form] | 6 | |
| 1722 | <i>Xanthorhoe designate</i> | Flame Carpet | (Hufnagel, 1767) | 2 |
| 1762 | <i>Chloroclysta citrata citrate</i> | Dark Marbled Carpet | (Linnaeus, 1761) | 6 |
| 1764 | <i>Chloroclysta truncate</i> | Common Marbled Carpet | (Hufnagel, 1767) | 2 |
| 1768 | <i>Thera obeliscata</i> | Grey Pine Carpet | (Hübner, 1787) | 4 |
| 1777 | <i>Hydriomena furcate</i> | July Highflyer | (Thunberg, 1784) | 4 |
| 1802 | <i>Perizoma affinitata</i> | Rivulet | (Stephens, 1831) | 2 |
| 1906 | <i>Opisthograptis luteolata</i> | Brimstone Moth | (Linnaeus, 1758) | 8 |
| 1922 | <i>Ourapteryx sambucaria</i> | Swallow-tailed Moth | (Linnaeus, 1758) | 2 |
| 1937 | <i>Peribatodes rhomboidaria</i> | Willow Beauty | ([Denis & Schiffermüller], 1775) | 5 |
| 1941 | <i>Alcis repandata</i> | Mottled Beauty | (Linnaeus, 1758) | 4 |
| 2050 | <i>Eilema lurideola</i> | Common Footman | (Zincken, 1817) | 2 |
| 2089 | <i>Agrotis exclamationis</i> | Heart and Dart | (Linnaeus, 1758) | 2 |
| 2107 | <i>Noctua pronuba</i> | Large Yellow Underwing | Linnaeus, 1758 | 15 |
| 2109 | <i>Noctua comes</i> | Lesser Yellow Underwing | Hübner, 1813 | 20 |
| 2111 | <i>Noctua janthe</i> | Lesser Broad-bordered Yellow Underwing | Borkhausen, 1792 | 20 |
| 2134 | <i>Xestia xanthographa</i> | Square-spot Rustic | ([Denis & Schiffermüller], 1775) | 1 |
| 2318 | <i>Cosmia trapezina</i> | Dun-bar | (Linnaeus, 1758) | 30 |
| 2321 | <i>Apamea monoglypha</i> | Dark Arches | (Hufnagel, 1766) | 25 |
| 2342 | <i>Mesoligia literosa</i> | Rosy Minor | (Haworth, 1809) | 8 |
| 2343x | <i>Mesapamea secalis</i> agg. | Common Rustic agg. | 10 | |
| 2387 | <i>Caradrina Morpheus</i> | Mottled Rustic | (Hufnagel, 1766) | 1 |
| 2389 | <i>Paradrina clavipalpis</i> | Pale Mottled Willow | (Scopoli, 1763) | 1 |
| 2441 | <i>Autographa gamma</i> | Silver Y | (Linnaeus, 1758) | 4 |
| 2474 | <i>Rivula sericealis</i> | Straw Dot | (Scopoli, 1763) | 2 |
| 2477 | <i>Hypena proboscidalis</i> | Snout | (Linnaeus, 1758) | 2 |
| 2489 | <i>Zanclognatha tarsipennalis</i> | Fan-foot | (Treitschke, 1835) | 1 |
| 2298 | <i>Amphipyra berbera</i> | Svenson`s Copper Underwing | Fletcher, 1968 | 2 |

Svenson`s Copper Underwing (*Amphipyra berbera*)



Wednesday, 29th August, 6.00pm leader Tony Wardhaugh. Airy Holme Wood.

This meeting was arranged as a follow up to a talk on Land Snails at Nature's World on 26th March 2012. Some information on the history of this wood and its rich molluscan fauna can be found in *The Naturalist* (2005) vol. 130, pgs. 99-104.

We entered the wood via the lower, more southerly footpath leaving the minor road from Dikes Lane to Aireyholme Farm. Not far from the entrance we came upon a number of snail species climbing up nettles and other herbage. The first of these was a colony of *Succinea putris* (Large Amber Snail) [Fig. 1], known to occur here at this season in recent years. Generally a wetland species, *S. putris* does occur in a few similar damp woodland habitats locally. Also climbing the vegetation was the very thin shelled *Zenobiella subrufescens* [Fig. 2], a species which is characteristic of ancient semi-natural woodland, and along with it *Trochulus hispidus* (Hairy Snail) and *Trochulus striolatus* (Strawberry Snail). Both *Cepaea nemoralis* and *C. hortensis* were found (Brown-lipped and White-lipped Snails respectively), predominantly the latter, many of which were resting on tree trunks. Also located on tree trunks were many of the spindle-shaped, sinistrally coiled *Clausilia bidentata* (Door Snail) [Fig. 3] and a few *Merdigera obscura* (Lesser Bullin) [Fig. 4] whose scientific name translates as 'the obscure excrement bearer'. It is so named because it often coats its shell with soil particles, fragments of lichen or the green alga *Pleurococcus*; some of the individuals which we found were clad in mud. Conventional wisdom suggests that this is some form of visual camouflage but against what predator?

On a dull evening beneath the tree canopy it became increasingly difficult to locate the smaller ground dwelling species so we were fortunate in finding three members of the genus *Oxychilus*. These were *O. alliarius* (Garlic Snail), just one specimen which was rather reluctant to emit its characteristic odour; the slightly larger and flatter *O. cellarius* (Cellar Snail) and interestingly, *O. navarricus helveticus* (Glossy Snail) [Fig. 5] which is quite scarce locally, being at the northern edge of its range.

In view of the recent rain and generally damp conditions surprisingly few slugs were found. Five species were located including the very watery and translucent *Lehmanna marginata* (Tree Slug) [Fig. 6] and *Boetgerilla pallens* (Worm Slug) [Fig. 7]. The latter is a relatively recent immigrant to Britain, being first recorded here in 1972. Since then it has spread very rapidly.

Airy Holme Wood has a very rich molluscan fauna with 45 terrestrial and three freshwater species recorded here since the beginning of 1995. Nonetheless our visit somewhat surprisingly added two new species, the Glossy Snail and the Worm Slug.

The full list of species recorded during our visit is as follows:

Succinea putris (Large Amber Snail)



Fig. 1

Merdigera obscura (Lesser Bullin) [*Ena obscura*]



Fig. 4

Arion ater agg. (Black Slug)

Arion subfuscus (Dusky Slug)

Oxychilus cellarius (Cellar Snail)

Oxychilus alliarius (Garlic Snail)

Oxychilus navarricus helveticus (Glossy Snail) [*Oxychilus helveticus*]



Fig. 5

Boetgerilla pallens (Worm Slug)



Fig. 7

Lehmannia marginata (Tree Slug) [*Limax marginatus*]



Fig. 6

Deroceras panormitanum (Chestnut Slug) [*Deroceras caruanae*]

Clausilia bidentata (Two-toothed Door Snail)



Fig. 3

Trochulus striolatus (Strawberry Snail) [*Trichia striolata*]

Trochulus hispidus (Hairy Snail) [*Trichia hispida*]

Zenobiella subrufescens (Brown Snail)



Fig. 2

Cepaea nemoralis (Brown-lipped Snail)

Cepaea hortensis (White-lipped Snail)

Names in square brackets are those used in the standard identification work, Collins Field Guide to Land Snails of Britain and North-west Europe, M.P. Kerney & R.A.D. Cameron (1979), some of which have now been superseded.

Saturday, 1st September, 10:30 am, leader Neil Baker. Levisham Moors and Bottoms.

The party met in heavy mist to start, which gradually cleared. Walking west to Levisham *Hygrocybe conica* (Blackening Waxcap), *Lycaena phlaeas* (Small Copper), *Inachis io* (Peacock), *Vanessa atalanta* (Red Admiral) and *Eulithis testata* (Chevron) were noted. At Dundale pond *Lestes sponsa* (Emerald Damselfly), and *Sympetrum danae* (Black Darter) were very active. *Cichorium intybus* (Chicory) was noted growing on the edge of the track to Levisham. Members stopped for lunch at the Horseshoe Inn in Levisham and were visited by *Dolichovespula sylvestris* (Tree Wasp). At Keldgate Slack *Cernualla virgata* (Striped Snail) was found adjacent to a drystone wall and *Daedalea quercina* (Oak Mazegill) on the base of an Oak At Levisham Station an Amber Snail sp. (*Succineidae*) and *Monacha cantiana* (Kentish Snail) were found. Raygate Slack was examined and *Polygonia c-album* (Comma), *Autographa gamma* (Silver Y), and *Arctia caja* (Garden Tiger). An *Anguis fragilis* (Slow Worm) was probably seen and definitely *Vipera berus* (Adder).

Cladonia floerkeana (Lichen) and *Udea lutealis* (Pale Straw Pearl) were also seen.

Wednesday, 19th September, 2.00pm, leader Ian Lawrence. Stewart Park.

Sunday, 7th October, 10:30 am, leader Andy Astbury. Guisborough Woods.

Members met on a sunny, clear, warm day in Fountain Street. Grey Wagtail was on nearby roofs. *Vanessa atalanta* (Red Admiral) was seen on the old railway. Walking up the lane towards Waterfall and then across the railway bridge and up the hill *Lycaena phlaeas* (Small Copper) and *Syrphus ribesii* (Hoverfly) were on *Heracleum sphondylium* (Hogweed). *Parage aegeria* (Speckled Wood), *Aglais urticae* (Small Tortoiseshell), *Inachis io* (Peacock), and *Autographa gamma* (Silver Y) were also noted. Jays, Cole Tit and Willow Warbler were evident. There were disappointingly few Fungi but *Amanita muscaria* (Fly Agaric), *Xylaria polymorpha* (Dead Man's Fingers), and *Xylaria hypoxylon* (Candlesnuff Fungus) were seen. The party spent some time watching some very active *Aeshna cyanea* (Southern Hawker) around a pond. The members then set off towards the top of Guisborough Woods towards Spa wood. On turning over the corpse of a rabbit a number of Sexton Beetles were found which turned out to be *Nicrophorus vespilloides*. Back in town the Allotment buddleias were very attractive to pristine *Vanessa atalanta* (Red Admiral) and *Aglais urticae* (Small Tortoiseshell).

Wednesday 24th October, 10.30 am, leader David Smith, Cod Beck Reservoir.

On a damp misty morning, ideal for lichens, ten members met for a circular walk through the forest east of the reservoir and back on the path along the side of the reservoir. The aim was to investigate the lichens at two sites, the first a young oak plantation bordered by a derelict drystone wall, the second a section of conifer plantation with old stumps and fallen, uprooted tree trunks. The lichens recorded were: *Baeomyces rufus*, *Bryoria fuscescens*, *Cladonia coccifera*, *Cladonia coniocraea*, *Cladonia fimbriata*, *Cladonia floerkeana*, *Cladonia macilenta*, *Cladonia polydactyla*, *Cladonia subulata*, *Evernia prunastri*, *Hypogymnia physodes*, *Hypogymnia tubulosa*, *Lecanora chlarotera*, *Melanelixia subaurifera*, *Parmelia saxatilis*, *Parmelia sulcata*, *Pertusaria corallina*, *Physcia adscendens*, *Physcia tenella*, *Platismatia glauca*, *Pseudevernia furfuracea*, *Ramalina farinacea*, *Usnea subfloridana*, *Xanthoria parietina* and *Xanthoria polycarpa*. Also noted were the galls *Andricus kollari* (Marble Gall), *Andricus foecundatrix* (Artichoke Gall) and *Neuroterus quercusbaccarum* (Common Spangle Gall) on the oaks, a large fruiting body of a slime mould *Reticularia lycoperdon* and several fungi, including *Marasmius androsaceus* (Horsehair Parachute), *Tremella foliacea* (Leafy Brain Fungus) and a large troupe of *Amanita muscaria* (Fly Agaric).

Fish and Strix: an unusual find in tawny owl pellets.

A A Wardhaugh

For some time I have had an interest in examining the contents of tawny owl (*Strix aluco*) pellets collected from the Flatts Lane and Ormesby areas, albeit on a somewhat intermittent basis (e.g. Wardhaugh 1997). On 25th October 2011 I located a tawny owl roost site in an old ivy-clad hawthorn in the Flatts Lane area; an owl was present but no pellets were found on the ground beneath. However, on 1st March 2012 five pellets were found here, these containing the remains of at least three field voles (*Microtus agrestis*) along with some bone-like structures of a type I have never encountered previously in the pellets of any owl species. (Figures 1 & 2). These were somehow vaguely familiar but I was not able to identify them from memory, nor was there anything remotely like them in the standard identification guide to prey remains in owl pellets (Yalden 2009).

Two more pellets were found on 13th March 2012 and these contained the remains of at least two field voles but subsequent visits to the roost site in the spring and summer of 2012, up to 21st August, revealed no tawny owl and no more pellets.

Being unable to put an immediate name to the mystery bones, I e-mailed images of them to Derek Yalden who very kindly identified them as being the pharyngeal teeth of a carp-like fish. These are teeth, or tooth-like structures, found in the throat region of a variety of fish and located on the bones of the gill arches (see e.g. http://en.wikipedia.org/wiki/Pharyngeal_teeth). This find was somewhat surprising because there is only one very small woodland pool near to the roost and it does not appear to contain any fish. There is no running water of any significance nearby. One possibility is that the pharyngeal teeth in question are those of an ornamental fish because the roost site is only about 300m in a straight line from the nearest residential housing, although in order to reach this the bird would have to cross the A174 Parkway dual carriageway. However, a search through internet images of pharyngeal teeth suggests that they were not those of a goldfish and their precise identification remains uncertain at present.

Tawny owl diet is known to be very varied, typically being made up of small birds and mammals and a significant proportion of earthworms (Cramp 1985). Fish have been recorded as prey items in the past but only as a very minor dietary component. Mikkola (1984) stated that 'occasionally it will snatch fish from streams, ponds - even from ornamental goldfish ponds'. Cramp (1985) comments 'Fish are said to be taken from the water surface whilst the bird is in flight, or by wading in the shallows' and lists as recorded prey items trout (*Salmo trutta*), roach (*Rutilus rutilus*), goldfish (*Carassius auratus*), perch (*Perca fluviatilis*) and miller's thumb (*Cottus gobio*). Goldfish were recorded in the diet of Tawny owls in Holland Park, London (Bevan 1964) and in suburban gardens in Surrey (Bevan 1982). Delamee et al. (1979) recorded young trout as a minor item of diet in Belgium.

One might not associate tawny owls with water but they do like to bathe, something readily observed in captive birds. Hence taking the occasional fish or amphibian could be a deliberate hunting strategy or perhaps opportunistic behaviour associated with visits to water in order to bathe.

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Figures 1 & 2

The Otter (*Lutra Lutra*) on the River Leven North Yorkshire

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Abstract

The frequency of otter sprainting activity has been monitored each month over a period from 2002 to 2011, at a series of sites on the River Leven and some of its tributary streams in North Yorkshire.

The note describes the method employed and gives results in terms of annual totals and variations.

Other miscellaneous data is given, including likely fish prey items and some data on road traffic accidents involving otters in the area.

Some speculative comments are made on possible otter movements between several other adjacent river systems, and the need for more sophisticated studies to investigate this possibility.

1. Introduction

I first became interested in surveying for otters in the late 1970's after hearing a talk by Gordon Woodroffe describing his work on the Yorkshire Esk, and wondering if there were any otters on the River Leven which runs through my home village of Great Ayton. From February 1979 to February 1981 I did a total of 52 site visits, involving 9 sections of the river but encountered just 3 signs of otter. Twenty years later, my retirement in 1999 coincided with the launch of the Northumbrian Otters and Rivers Project so I decided to get involved, as following reports of an increase in signs generally, I was curious to see if the same applied locally. Initially, I monitored a few sites around the village on a routine basis, including other sites as and when time permitted. Then the idea was born to commit to a longer term survey, covering a wider area. A number of sites were selected to be monitored each month. Foot and Mouth restrictions curtailed activity in 2001, so the survey started in January 2002, and continued until December 2011.

2 Background

The otter population of Britain, and especially England, fell dramatically from the mid 1950's, largely due to the introduction of organochlorine pesticides in agricultural practices. Once the problem had been identified and appropriate remedial action taken, the decline halted. Otter numbers started from a very low base, to make a slow recovery. In some areas, re-introductions from captive bred stock were carried out. Recovery continued, but at different rates throughout the country as young animals dispersed into their own territories.

In North Yorkshire, a project was undertaken by Woodroffe (1) and others, to introduce rehabilitated animals to several sites on the River Derwent system and to the River Esk to reinforce small existing populations. This took place between 1990 and 1993, and subsequent monitoring over several years showed an increasing number of otter signs, and evidence that breeding had occurred. There was the distinct possibility that otters may have dispersed more widely, and a survey of 17 sites largely covering the length of the Leven and some of its tributaries was carried out in May 1995 by Woodroffe and Winter (2) found 4 of the sites positive (23.5%).

In February 1998, O'Hara surveyed the Leven (3) and found 5 positive sites from 13 examined (38.5%), all of these positive sites being located in the lower stretches of the river.

3 Method

3.a Sites

The River Leven rises on Warren Moor above Kildale in the northern part of the North York Moors at a height of 279m (915 ft), and flows indirectly northwesterly before joining the Tees below Yarm, a distance of approximately 29 miles (Fig 1). Many of the tributary streams arise in the North York Moors and join the river near Stokesley. The only significant exception is the Tame which drains the generally flat agricultural land extending towards Guisborough. Although the Leven and its feeder streams pass through several villages, the largest being Great Ayton, Stokesley and Hutton Rudby, much of the river system lies in quiet, undisturbed countryside. A high proportion of the river course passes through mature woodlands, and there are many sidestreams which afford shelter for lying up and potential breeding sites.

In view of the observations by O'Hara on the favourable conditions and yield of spraints below Stokesley, priority was generally directed towards the upper reaches and feeder streams where fish food resource may not be quite so abundant. Eleven sites were selected – seven being on the main river and the remainder on tributaries. They are shown in Table 1.

| | |
|----------------------------------|------------|
| Kildale | NZ 607 097 |
| Little Ayton | NZ 569 102 |
| Leven Court , Great Ayton | NZ 565 104 |
| Friends School Weir, Great Ayton | NZ 564 105 |
| Stone Bridge, Great Ayton | NZ 557 107 |
| Ayton Grange, Great Ayton | NZ 552 102 |
| Broughton Beck Bridge, Stokesley | NZ 539 079 |
| Ingleby Beck, Ingleby Greenhow | NZ 589 065 |
| Broughton Beck, Great Broughton | NZ 546 063 |
| Potto Beck, Swainby | NZ 476 023 |
| Nunthorpe Stell – River Tame | NZ 551 133 |

Sites Monitored during the Survey-Table 1

Having built up an idea of the sort of features favoured by otters for sprainting, suitable stones were positioned (some concreted in position to resist flood conditions) at a number of the sites to induce them to scent mark – and this proved successful.

A further criteria was that the sites should be readily accessible by road so that examinations could be carried out within limited time constraints. As a result, some sites were under road bridges in rural built up areas, for example, in Great Ayton, under the busy A173 bridge, with significant human activity close by.

After five years (2002-2006 incl.), the distribution of sites was reviewed, as it was considered to be too concentrated in the Little and Great Ayton area. Consequently the sites at Leven Court, the Friends School Weir and Ayton Grange were no longer monitored on a regular basis. In June, 2007 a sprainting site was set up under a bridge on the Nunthorpe Stell which is a feeder stream of the River Tame, following reports of otters using the stream.

3.b Spraint Counts

At the end of each month, counts were made of the fresh spraints which had been deposited since the previous examination. A series of different coloured poster paints were used to distinguish previous months spraints. Also included in the count were deposits of anal jelly and “tarry/oily” deposits with little or no solid or bone content as these also hold the scent used for communication.

4. Results

Figure 2 shows the annual total of spraints counted at the seven sites with the longest periods of monitoring. It is clear from the results that otters were active at all the selected sites to a varying extent.

The highest total number of spraints deposited over the 10 year period was at Swainby on Potto Beck where a total of 480 spraints was deposited. The next highest total of 389 was from Ingleby Greenhow. Both these sites are on tributaries of the river. The highest number of spraints recorded for the river were from Little Ayton 362, Stone Bridge, Great Ayton 238 and Broughton Bridge Beck at Stokesley 235 spraints). NB these latter 2 values were from just 9 years surveying (Table 2).

| Site | Years Surveyed | Total Spraint | 10 year Equivalent | Max No. & year | Min No. & year |
|---------------------|-------------------|------------------|-----------------------|-------------------|-------------------|
| Kildale | 8.75 | 198 | (226) | 33, 2004 | 12, 2006 |
| Little Ayton | 10 | 362 | - | 48, 2005 | 23, 2003 |
| Leven Court, G.A. | 5 | 65 | (130) | 17, 2004 | 6, 2006 |
| F.S.Weir, G.A. | 5 | 63 | (126) | 22, 2002 | 4, 2006 |
| Stone Bridge, G.A. | 9 | 238 | (264) | 43, 2008 | 11, 2006 |
| Ayton Grange, G.A. | 5 | 90 | (180) | 30, 2003 | 11, 2006 |
| Ingleby Greenhow | 10 | 389 | - | 48, 2010 | 33, 2002 |
| Broughton Bridge B. | 9 | 235 | (261) | 37, 2004 | 15, 2007 |
| Great Broughton | 9 | 128 | (142) | 30, 2008 | 3, 2002 |
| Swainby | 10 | 480 | - | 80, 2007 | 17, 2010 |

Total Number of Spraints/Site over the Survey Period-Table 2

At the 7 sites with the longer periods of observation, the average number of spraints /month/year varied throughout the year, with the lowest values of 1.3 and 1.6 in June and July respectively, the highest being 3.2 and 3.0 for March and September respectively (Table 3).

| Site | J | F | M | A | M | J | J | A | S | O | N | D | years |
|--------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Kildale | 1.9 | 2.4 | 3.1 | 2.7 | 2.1 | 0.9 | 1.1 | 2.1 | 2.0 | 1.1 | 1.9 | 2.0 | 8.75 |
| Little Ayton | 3.4 | 3.2 | 4.4 | 3.6 | 2.6 | 1.3 | 2.8 | 2.8 | 2.7 | 2.6 | 3.5 | 3.2 | 10 |
| Stone Bridge, G.A. | 1.7 | 1.6 | 2.3 | 2.2 | 1.6 | 1.0 | 1.8 | 1.4 | 3.2 | 3.6 | 3.2 | 2.9 | 9 |
| Ingleby Greenhow | 3.3 | 4.9 | 3.7 | 3.8 | 2.7 | 2.4 | 2.0 | 2.7 | 3.4 | 2.5 | 3.6 | 4.0 | 10 |
| Broughton Beck Bridge | 3.0 | 2.6 | 3.2 | 2.3 | 1.6 | 0.8 | 2.1 | 2.4 | 3.2 | 1.6 | 1.2 | 2.7 | 9 |
| Great Broughton | 1.4 | 1.4 | 1.2 | 0.8 | 1.3 | 0.4 | 0.7 | 0.8 | 1.7 | 1.8 | 1.6 | 1.1 | 9 |
| Swainby | 5.2 | 3.4 | 4.6 | 4.2 | 3.7 | 2.5 | 2.5 | 4.0 | 4.8 | 4.4 | 4.0 | 4.7 | 10 |
| Average – all sites | 2.8 | 2.8 | 3.2 | 2.8 | 2.2 | 1.3 | 1.6 | 2.3 | 3.0 | 2.5 | 2.0 | 2.9 | |

Average Number of Spraints / Month-Table 3

Fig. 2 is a bar chart which shows the total number of spraints found each month at the seven sites which were monitored over the longest periods. In general, the sprainting activity appears to be reasonably consistent for each given site with possible indication of small long term increases at Kildale, Little Ayton and Ingleby Greenhow. At Swainby however, the number of spraints increased to an annual maximum of 80 in 2007, the highest number for any of the sites, but from this high count, the totals for the next 3 years progressively fell to a low of 17 in 2010. Nothing as extreme as this happened at any of the other sites.

The results from Nunthorpe have not been included in the overall averages because of the relatively short period of monitoring, and two winters when flooding seriously disrupted spraint counting. However, it is worth recording that in 2009, there were two consecutive months when eight spraints were counted; much more activity than had previously been recorded on this small stream. This was found to be the result of a family group using the stream and which was captured on camera several times by Kenny Crooks of The Tees Valley Wildlife Trust as part of their Wild Places Project.

5) Discussion

The River Leven has a history of otter activity in past centuries, although regrettably, much arising from persecution. The Great Ayton Church Warden's accounts show that between 1745 and 1775 four entries were made, when a one shilling bounty was given for an otter's head. This would seem to be quite a low number in relation to the numbers believed to be present today, from which it may be speculated either that the otter wasn't such a serious pest at that time or possibly not so common as it is today. In the late 1800s, children at Crathorne School were given a days holiday when one of the otter hunts came to work the Leven. More recently, Jack Grayson, a blacksmith at Great Ayton shot otters for their pelts in the years shortly following the Second World War.

To what extent the local population was affected by the organo-chlorine pesticide pollution which had such a devastating effect on otter numbers throughout England and beyond, is unknown, but the Biological Records Centre/Mammal Society Otter Distribution Map for 1970-1978 indicates the possibility that a small population may have survived in North East Yorkshire. The Leven is remarkably well connected in this respect for the recruitment of animals from adjacent river systems.

Northumberland rivers were found to be relatively less seriously affected by the pesticide pollution and maintained a significant population during this period. It is possible that otters may have dispersed south along the Pennine watersheds to the upper reaches of the River Tees. Before 1995, the lower stretch of the Tees at its confluence with the Leven was tidal and seriously polluted by industrial discharges. However, since the construction of the Tees barrage in 1995, water quality has improved profoundly to the great benefit of fish and other wildlife. Indeed, one member of the Tees Rowing Club was recently quoted as "having seen more otters on the Tees, than in a week looking for them in Scotland".

The River Tame which joins the Leven downstream from Stokesley, has its origin close to Guisborough, where several otter road casualties have been reported. From here it is a short distance to Howl Beck, which reaches Skelton Beck which flows on towards the coast at Saltburn.

To the west are potential links with the River Swale via the source streams of Cod Beck and the River Wiske, and being separated from the Scugdale and Potto Becks of the Leven system by short distances relative to an otters overland capabilities. To the east, close to its source, the Leven is less than half a mile from Sleddale and Baysdale Becks. Spraints have often been found in this area and in 2010 a live sighting was made. These Becks join the Yorkshire Esk and onward to the sea. Otter Hills Beck is another Leven tributary which

is within a short overland distance of Baysdale, and in which sprainting has been recorded in the higher reaches where the stream is so small as to offer little in the way of sustenance.

The sources of several streams, the rivers Rye, Seph, Dove and Hodge Beck which form a significant part of the catchment for the River Derwent, are also potentially accessible across the moor tops to Ingleby and Scugdale Becks on the Leven system. However, more work needs to be done in this area to find specific evidence of otter movements; the best so far being spraints in the upper reaches of Ingleby Beck and Otter Hills Beck. These links would be of particular relevance to the otter population of the Leven following the Otter Reinforcement Programme of releases into streams in the Derwent and Esk river systems carried out between 1990 and 1993.

Many otters are killed on roads and this area is no exception, with at least 13 over a 12 year period have been brought to the attention of the writer, and it is known that there have been several more in the area. More details are given in Table 4. This data would suggest the male is particularly vulnerable from mid summer to early autumn.

| Date | Location | |
|-------------|------------------------------|------------------------------|
| Jan. 2000 | Dunsdale | Lactating female, 6.1 kg |
| March 2000 | Stokesley | Non-lactating female, 5.8 kg |
| Oct. 2002 | Faceby | |
| Sept. 2004 | Easby | Male, 8.25kg |
| 2005 | Loftus | |
| Jan. 2006 | Croft | |
| Jan. 2006 | Stewarts Park, Middlesbrough | |
| Summer 2007 | Swainby | |
| Sept. 2007 | Stokesley | Male, 7.5 kg |
| Oct. 2007 | Scaling Dam | |
| Aug. 2008 | Great Ayton | Male |
| July 2008 | A174 Parkway, Middlesbrough | Male, 5.9 kg |
| Sept. 2009 | Yarm | Male, 9.1 kg |

Otter Road Casualties -Table 4

Despite this loss of animals there were no apparent reductions in the sprainting frequency at those sites in the immediate area of the fatality.

One interesting observation on the Sept. 2007 specimen from Stokesley was that it had suffered wounding in the genital region as a result of fighting to establish or defend territory, and this behaviour is generally accepted as a sign that the otter population may be increasing to a level where food resources are becoming more limited. It may therefore, be significant that at least seven cases of otters raiding ponds have been brought to the attention of the author since 2008. One was even recorded on camera (again by Kenny Crooks), from the garden pond of a house in suburban Middlesbrough, demonstrating remarkable foraging ability to target food resources. The erection of electric fencing is the only successful and legal way to combat similar poaching incidents.

Further potential conflict with human commercial activities may arise when otters cross land which is maintained for shooting, and there is no doubt that otters would take eggs and birds if they were to encounter them. There is equally little doubt that gamekeepers would take steps to resolve the issue.

A pollution incident on the Main Stell at Nunthorpe in August 2005 killed trout, eels, lamprey, minnows, stone loach and bullheads and provided some evidence on the potential prey fish available in the smaller streams. It is notable that less than two years later, the

presence of spraints indicated that otters were using the adjacent Nunthorpe Stell. Three spined stickleback, pike, and grayling are also known to be present in the survey area. Further downstream, dace, chub and gudgeon are present. Following the installation of a fish pass at Leven Bank in 2007, the Environment Agency has found that salmon are now using the Leven once more after a period of some 150 years.

That otters are using the Leven and it's feeder streams with some regularity is clear, and that with one possible exception, the numbers of spraints counted at the different sites suggest a healthy population is being sustained throughout the Leven system. It may be significant that the site monitored at Potto Beck, Swainby was the site with the highest rate of spraint deposition, and is also close to a number of adjacent rivers known to be used by otters. What is not known however, is how many animals use the river, or to what extent they are resident or transient, or where they may come from or go to. It remains unclear whether there is any routine or pattern to their movements. To attempt to answer these questions would require the use of equipment or techniques beyond the scope of an amateur field naturalist. Nevertheless, the feasibility of extending the work to investigate these aspects could be considered by interested parties who may have access to appropriate facilities and resources. The River Leven, situated as it is at the hub of several other river systems, each with their own otter populations, would seem to present an ideal venue for more sophisticated studies of otter behaviour by University, Governmental or other environmental research bodies.

6) Concluding comments

The objective of many otter surveys is to record the presence or absence of otters in a river system at a given point in time. The work described goes further in that by using a consistent effort, the frequency of the sprainting activity indicates their presence in the River Leven and it's feeder streams over a ten year period, and variations from the normal which may occur.

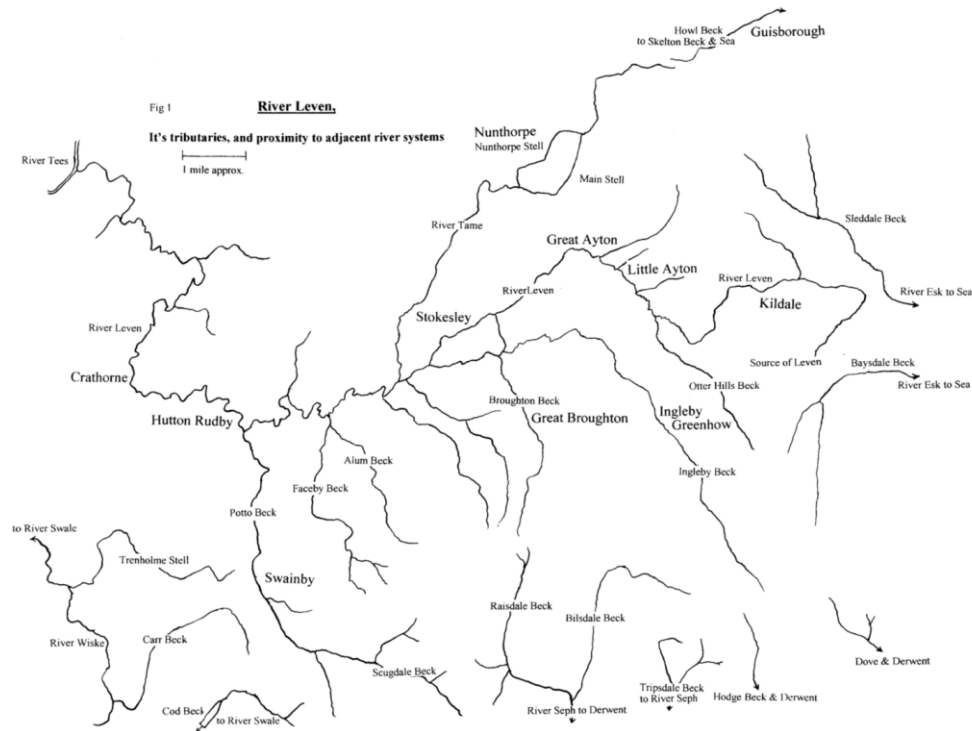
As such, the study is not particularly remarkable, in that it could have been carried out at numerous sites all over the country, probably with similar results following the resurgence in the otter population nationally. No new information has been uncovered on otter behaviour. What it does however, is to place on record, the experiences of one amateur surveyor, and the gathering of miscellaneous associated data from one small area which may be of wider interest. The data provided serves as a benchmark to assess the status of the otter in this river system in the future. It also enables monitoring to be continued on a smaller scale, perhaps at just one site for example. More importantly however, it raises many more questions on the scale and range of otter movements in this and adjacent river systems. With a generally consistent otter population and appropriate resources, the Leven catchment could serve as a very appropriate area for more comprehensive work in the future.

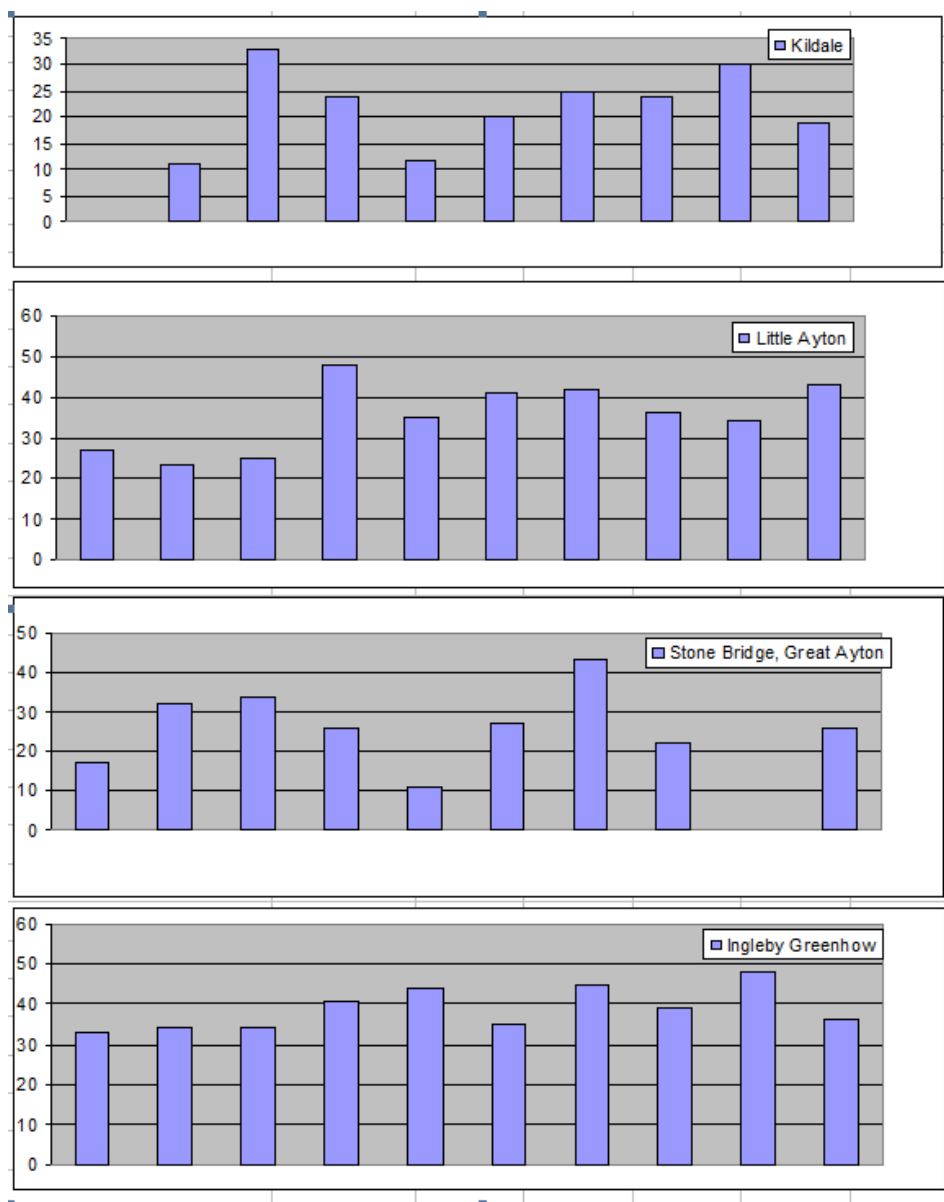
Acknowledgements

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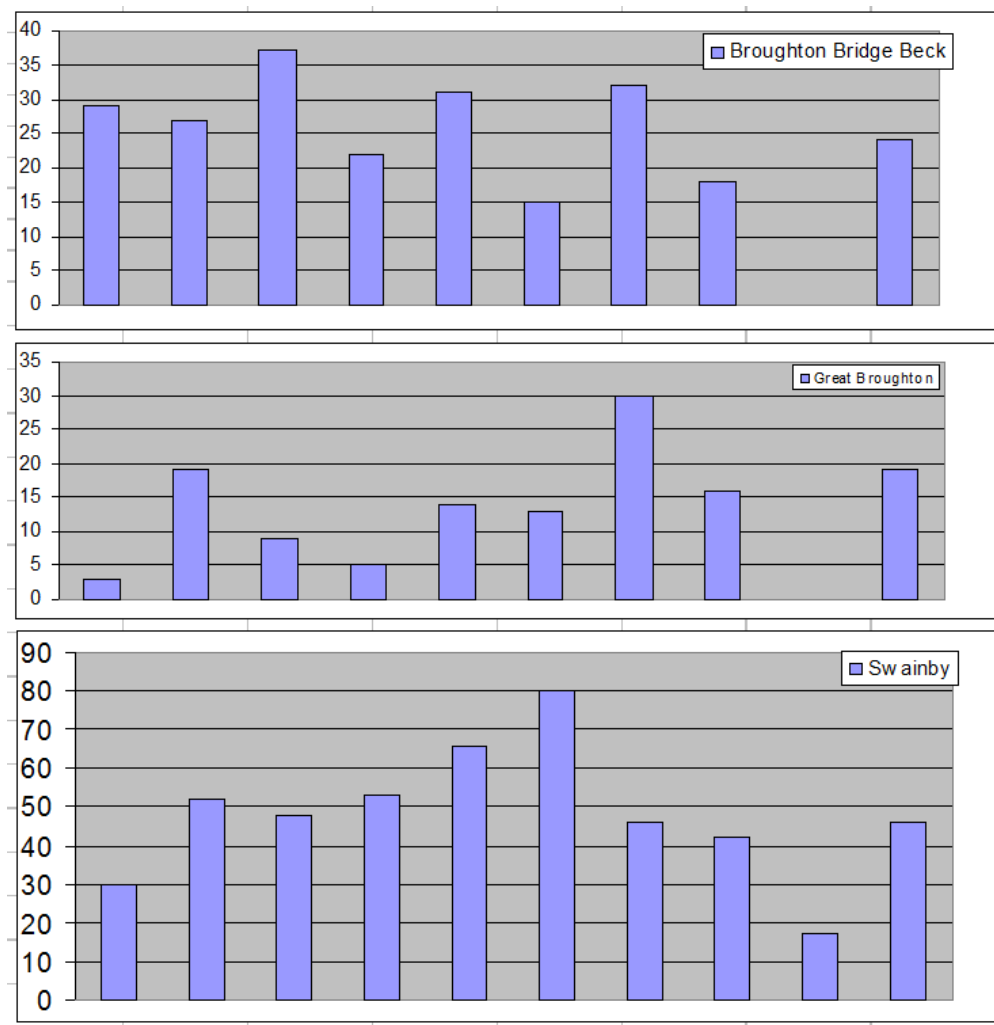
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Total Number of Spraints/Site/Year 2002 – 2011-Fig 2



Total Number of Spraints/Site/Year 2002 – 2012-Fig 2

Water Shrews in Danby Dale, North Yorkshire, - Their Diet and Habitat

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Abstract

The report firstly describes work carried out to try to establish a clearer picture of the distribution of the Water Shrew in the northern part of the North York Moors, and then goes on to examine in greater depth their distribution in Danby Beck; a small tributary of the Yorkshire Esk. Further sections draw together data from different sources to describe aspects of their diet, and how it may be influenced by the local environmental conditions.

1 Mammal Society National Water Shrew Survey 2004/2005

1.1 Introduction

The Water Shrew (*Neomys fodiens*) is the largest of three shrew species found on mainland Britain. It is readily distinguished from the other two species by its almost piebald pelage of dark upper parts and lighter underside.

The Mammal Society organised their national survey because there was a great deal of uncertainty about the distribution of the Water Shrew in the UK, and to try to establish a baseline to determine possible future variations in range. More locally, "Yorkshire Mammals" by Delaney, shows 28 records for VC62 and a further 10 for VC61, and there are also records held by the Yorkshire Naturalists Union (1) Many of these records have been collected over a period of many years and may not reflect the present day distribution. Furthermore, there would appear to be large areas of Yorkshire from which the species has not been recorded. Whether this reflects a real absence of water shrews in these areas or a lack of recording activity is unclear.

Having encountered the water shrew at three different sites around Great Ayton, North Yorkshire, while carrying out Longworth trapping for small mammals, the writer decided to take part in the Mammal Society National Survey.(2)

1.2 Method

The method was devised by Dr Sara Churchfield (3), and used 200mm lengths of approximately 38mm diameter plastic drainage pipe with a fine gauge net baffle attached to one end, with the other end left open. The tubes were baited with about two dozen blowfly pupae (casters), and four baited tubes were positioned at approximately 10 m intervals at ground level under the cover of waterside vegetation or rocks at each site under investigation. Small animals were able to enter the tubes to consume the bait and in so doing, usually defecated and were free to leave the tube. After a period of two weeks the tubes were collected and the contents dried and examined for any scats deposited. The bait may be taken by rodents, terrestrial shrews or water shrews, and close examination of the scats was necessary to distinguish the presence of aquatic invertebrate remains in them which would confirm water shrew origin. After personal examination, the scats from the four tubes were amalgamated to form one sample representative of that site, and forwarded to the Mammal Society for official confirmation of identity.

In each of the two years, surveying was carried out in two periods, December to April and July to September. The sites surveyed were principally streams rising in the northern part of the North York Moors and discharging into the Rivers Esk and Leven or directly into the North Sea. In total, 32 sites were surveyed including five areas of still water, four used for

angling and the other a small pond created some twelve years ago by a local farmer as a conservation project. The survey sites are shown in Fig. 1.

1.3 Results

Scats with remains indicating water shrew presence were found in samples from 6 of the 32 sites (18.8%). All were from sites with running water. Scats of terrestrial shrews and rodents were found in 11 (34.3%) and 6 (18.8%) samples respectively. The results are shown in Table 1, and Fig 1.

1.4 Discussion

The survey was successful in identifying sites where water shrews were present. However the fact that water shrews scats were not obtained does not necessarily rule out the possibility that they may be present. Indeed, two of the sites where water shrews had been captured earlier in Longworth traps failed to produce positive results in the National Survey.

The sites from where water shrew scats were taken when using tubes would all appear to be generally similar in character with shallow runs among rocks and stones with gravel beds and deeper pools. Aquatic vegetation was largely absent. They were all in narrow wooded valleys at altitudes ranging from 10m to 170m. There were several sites which appeared to have similar characteristics to those which gave positive results, yet did not provide evidence of water shrew activity.

The value of 18.8% positive sites for the North York Moors was broadly similar to that achieved nationally of 17.4%.

No attempt was made in this survey to identify the invertebrates on which the water shrews were feeding, but the number and size of scats obtained suggest that food was in plentiful supply – at least in time of the survey in 2006. At the site in Danby Dale, the total number of scats (including significant fragments of scats) from the four tubes was more than 50, when the normal yield might be less than a fifth of that value, and was the largest number from a single site that the survey co-ordinator Phoebe Carter and Sara Churchfield had seen.(4)

1.5 Conclusion

The survey showed that the water shrew was widely distributed in the selected area, but that much work remained to be done to establish a clearer picture of the current status, and many areas remain to be surveyed.

2 Local Survey for Water Shrews, Danby Dale, 2006

2.1 Introduction

As a result of questions arising from the earlier work, it was decided that further surveying work might provide more information on the distribution of water shrews within a single stream system and over a longer time period. The choice of Danby Beck was made because it offered a range of differing sites in a reasonably compact area.

2.2 Description of Sites

Danby Dale is a valley in the North York Moors formed by glacial action on Jurassic sandstone and shales. The source of the Beck is at an altitude of 400m draining the peat moorland soil of the surrounding Danby High Moor, and flowing north to join the Yorkshire Esk, approximately 4 miles away at Castleton, 130m above sea level.

Initially 6 sites were selected although one, Site A furthest downstream, was soon abandoned due to summer growth of vegetation making access very difficult. The remaining

5 were used throughout the survey of 7 visits at fortnightly intervals from mid-July until mid-October. Sites C, D and F were on the beck itself at altitudes of 170, 210 and 290 m respectively. Site B was on a tributary of the beck at 165m altitude and was the same site used the in previous year for the National Survey. Site E at an altitude of 300m was a large pond with water flowing through it, close to the adjacent Site F on the Beck.

From its source the beck falls approximately 100m in about half a mile of open moorland to the head of the dale where Sites E and F were located. The pond has some emergent aquatic vegetation and bordered by a grassy margin, is almost surrounded by coniferous woodland. From Site F the stream tumbles steeply over rocks and boulders, with coniferous and mixed woodlands on the steep sides of the ravine, dropping 50m in less than a quarter of a mile.

From this point, the stream flows along the bottom of the dale on a substrate of rocks, sand, and gravel past sites D and C, bordered by several varieties of trees and shrubs including alder, ash, birch, oak, hazel, holly, and sycamore, all of various ages. At these lower levels, the land is cultivated with “improved” grassland and dairy farming is practiced.

Site B is a tributary of the beck in which the stream flows over boulders and rocks on a gravel bed in a steeply sided ghyll shaded by a conifer plantation also containing a few deciduous trees.

2.3 Method

The method was exactly the same as in the previous year, except that scats were not sent to the Mammal Society for confirmation of identity (although verification was forthcoming as described later in Section 3).

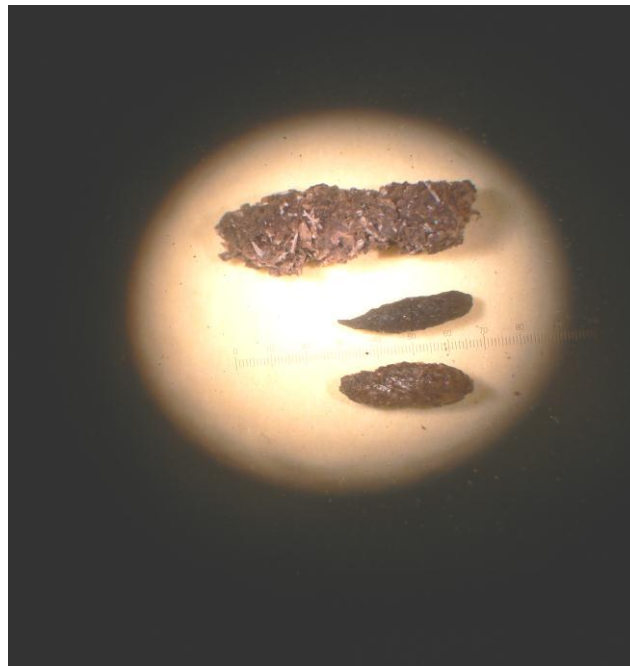


Fig 1-Illustration of Scats:

Top : Water Shrew
Middle : Rodent
Bottom : Terrestrial Shrew

2.4 Results of Survey

The results of the survey are given in Table 2.

The presence of water shrews was detected by scat deposition in the tubes at all 5 survey sites; indeed at 6, because they were also found at Site A which was subsequently abandoned.

In terms of the numbers of scats generated, the results are complicated to some extent because there were times when rainy conditions caused water levels to rise and some bait tubes were lost or inundated. However, Site B, the tributary, which had produced an exceptionally high number of scats in 2005, had consistent activity, generating scats in all 7 periods, and in this survey, the highest total from all sites of 11 scats for a single fortnightly period. High levels of activity were also evident at Site F, the beck at the head of the dale with a positive result in all 7 periods, but not in the same numbers as Site B.

The least productive site was the pond at the head of the dale and next to Site F, where the maximum number of scats in any one period was 4, with 3 single scat periods and two negative ones.

Sites C and D appeared to be intermediate between the highest and lowest activity levels, but also suffered more than the other sites from high water levels leading to loss of tubes.

There was some tentative evidence to indicate that the numbers of scats being deposited were higher towards the end of September and early October, which could correlate to a higher shrew population at the end of the breeding season.

2.5 Discussion

Six sites with a variety of differing characteristics were initially selected for the survey, and at all 6 sites some evidence of water shrew activity was found. If the animal were to live in separate discreet pockets, it would be most unlikely to have randomly located 6 such groups at the first attempt, and would therefore indicate that the water shrew is far from uncommon here and may have a wide distribution along the length of the beck.

The values for the number of scats obtained cannot be taken as any other than broadly indicative because the quantity of casters used for bait was not precisely measured and scatting activity is unlikely to be consistent. In any event it is clear that traffic in and out of the tubes results in scats being crushed and fragmented, and possibly being displaced from the tube.

It is interesting to consider how this small mammal can survive in what would appear to be quite a physically hostile environment. Although the higher parts of the North York Moors have a relatively low rainfall (1000 – 1,200mm/annum) compared with other upland areas in Britain, persistent wet winter weather and summer storms can both lead to swollen turbulent streams and flooding. All shrews have to eat very frequently to sustain their high metabolic rate, and it has been calculated that a water shrew needs to eat approximately half its body weight in food every 24 hours (5). Under such adverse conditions the water shrew will presumably consume a lower proportion of aquatic prey and rely more on terrestrial invertebrates.

3. Diet

During the microscopic examination of scats to determine their providers identity, it was noted that the exoskeletal remains of one particular prey item, characterised by parallel fluting perpendicular to the circular cross section of the exoskeleton, was regularly encountered, but its identification was beyond the skill of the writer. So frequently did it occur that it was considered to be the principal prey item.

3.1 Scat examination and freshwater invertebrate survey

To assist in the task of prey identification, contact was established with Mr Leslie Magee of the Freshwater Ecology Section of the Yorkshire Naturalists Union, who most kindly offered his services and the benefit of his long experience in the field.

Several samples of water shrew scats were sent to him for examination.

Among the prey items he identified from the scats were empty caddis cases of several species, terrestrial beetle chitin, aquatic helminthid beetles, a large millipede, several woodlice, a large spider, summer mayfly larvae, fragments of small black riffle beetles, a terrestrial black beetle and a small orange coloured beetle.

It has to be appreciated that it can be difficult enough to make an accurate identification when the specimen being examined is intact and in good condition, but when the sample has been killed, chewed and passed through the digestive system of a water shrew, then a different approach may be required.

In 2006 therefore, 8 surveys were carried out by Mr. Magee at several of the sites in late Spring and Summer to determine the species of freshwater invertebrates present and potentially available as water shrew prey items. These surveys identified :-

6 species of Tricoptera,
4 species of Ephemeroptera,
3 species of Plecoptera,
3 species of Coleoptera,
and unidentifiable larvae of Chironomids.

His report (6) however, noted that “the populations were sparse both in the numbers of species and the populations, although the latter vary at different seasons.”

These comments refer to the fact that a complete assessment of the freshwater invertebrates would require sampling to be extended over a much longer period of time to accommodate the various stages in the life cycle of certain species. However, the results would be pertinent to the period during which the water shrew work was carried out. The identity of the principal prey item was still unknown and yet it was clearly abundant enough to sustain many animals over at least the period of the survey.

3.2 Further scat examination

During the course of the survey, the writer had been in contact with Dr Churchfield about some aspects of the work, and she too kindly offered to look at some of the scats and give an opinion on their content.

A total of 22 water shrew scats were examined by her, with a minimum of 3 samples from each site, and from these, 76 prey items were identified. A broad division of the prey items showed that 64 were terrestrial, 6 were aquatic and 6 contained snail shell remains but it was not possible to determine whether these were of terrestrial or aquatic origin.

Of the 22 scats examined, 17 contained Diplopoda (millipede) remains, and in 10 of these scats they were present in large amounts and represented a high proportion of the scat content. Isopoda (woodlice) were present in 10 scats, 4 of which also showed high numbers. The next most populous orders were Coleoptera (beetles) and Araneae (spiders) found in 10 and 9 scats respectively.

The only aquatic prey remains found were from Trichoptera larvae (caddis) in 2 scats and Asellus (water slater) found in 4 scats. A total of 17 scats contained no aquatic prey at all, and a further 4 contained just one order. Although the sample is too small to draw conclusions, it is of interest that none of the scats obtained at the head of the dale from the pond or the beck nearby contained any aquatic prey.

The full results of the examination by Dr Churchfield are given in Table 3.

Comments accompanying the results (7) referred to the incidence of aquatic prey being very low and that the water shrews appeared to be subsisting largely on a poor quality prey (millipedes) with lots of indigestible exoskeleton and low energy value. These prey are mostly rejected by Common and Pygmy Shrews, presumably because millipedes have the ability to discharge distasteful fluids to deter predators, and terrestrial shrews only eat them as a last resort in cold winters when other prey is in short supply. Millipede remains however, were not uncommon in water shrew scats.

4 Rainfall & Water Quality

In order to provide supporting information, data on rainfall and pH values during the period of the survey were obtained from Mr Tom Chadwick. The data were the results of a local monitoring group, Environet which has been recording the pH of rainfall, and in Danby Beck and Brown Hill Spring, as well as the pond at the head of the dale since 1990 (8).

By chance, two of the stations used for these recordings were the sites E, the pond, and F, Danby Beck close to it at the head of the dale, used in the water shrew survey.

Figures relating to rainfall, and pH at these sites in the months leading up to and including the water shrew survey period are given in Table 4.

The table shows the wide range of rainfall in this upland area, and also the low pH values which can be experienced in Danby Beck. On face value the high acidity may not seem surprising given the peat beds and underlying sandstone on the moor catchment area. The data recorded by Environet show that the pH recorded in the headwaters of Danby Beck has been less than 4.0 for 75% of the time since 1990, rising perhaps to between 5 and 6 during the summer months.

In March 2005 the Centre for Ecology and Hydrology also surveyed the water quality of Danby Beck as part of a larger survey of the North York Moors (9). They measured low pH (4.08), and a strongly negative acid neutralizing capacity. It would appear that the high acidification is probably derived from a combination of the naturally occurring acidic nature of the surface peat layer and the sandstone rock strata below, and additionally, a high concentration of airborne sulphate deposits. In forested streams, nitrate leaching and aluminium concentrations were at higher levels than considered compatible with sustainable populations of fish and invertebrate life.

The causes given for the highly acidic airborne deposits affecting Danby Beck (and many other becks rising on the North York Moors) were in the location of the Moors in relation to the relative close proximity of several large coal-fired power stations along the River Ouse to the South West, and the steel and chemical industries to the North, all with their associated airborne sulphur emissions, coupled with the prevailing wind directions.

5 Concluding Comments

The work has shown that water shrews are present and widespread along Danby Beck. This is despite a physically demanding environment of fast flowing, turbulent water and periodic flood conditions. Under favourable conditions their diet might comprise 50% to 67% of freshwater invertebrate prey (5). The evidence here however, would suggest that the underlying acid nature of the terrain, exacerbated by very high levels of atmospheric acid deposition, create a poor quality of surface water draining into the Beck, and may be a significant factor in reducing the amount of freshwater invertebrate life available for the water shrews consumption. Micro-examination of the scats showed that a high proportion contained little or no aquatic prey at all.

There would however, appear to be an anomalous factor with the pond which showed a consistently higher pH than any of the other sites. In theory, this might be expected to favour a higher population of invertebrate life, but in fact this site produced fewer scats, which contained no freshwater invertebrates during the survey period. This may be connected with the surrounding coniferous woodland but clearly more extensive work would be needed to provide an explanation.

The shrews appear to have adapted to a diet of largely terrestrial prey, which although plentiful, is of low nutritional value. This would imply that the volume of food taken would need to increase markedly to compensate for additional foraging energy requirements.

The work has opened up opportunities for further investigations, eg is the diet of water shrews different in streams arising in the limestone areas of the North York Moors but still influenced by similar prevailing winds with their associated acidic deposition, or indeed in other areas such as the Pennines which may be less affected by the same atmospheric conditions.

This is obviously based on the assumption that water shrews are present in these other areas, although there would appear to be a dearth of recent records of water shrew (and many other mammals) throughout North Yorkshire and especially from the Yorkshire Dales region (10).

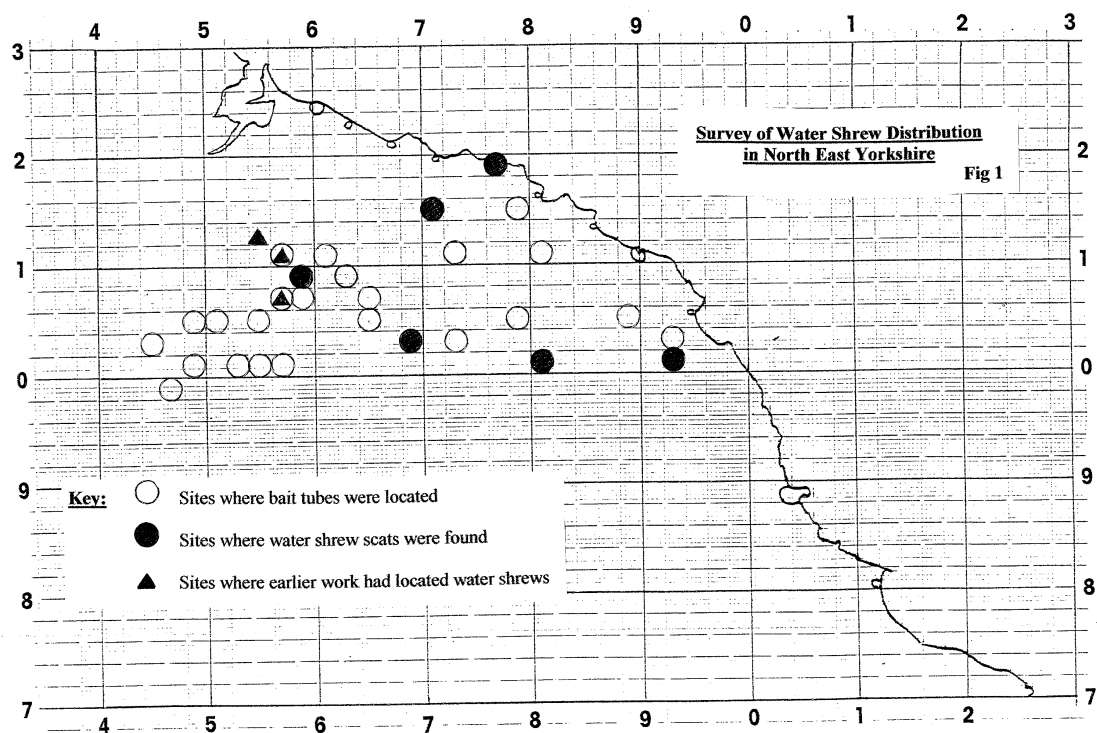
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The report would amount to little were it not for the very significant contributions made to the investigation by the efforts of Mr Leslie Magee, Dr Sara Churchfield and Mr Tom Chadwick, which have added much to the interest and value of the work. I really am most grateful for their assistance.

Other people to whom thanks are due are Rob Masheder, Dr. Geoff Oxford, Liz Chalk and Sam Watson of the Environment Agency, and those residents of Danby Dale who kindly gave permission for access to the survey sites.



| Date | Site | Map Ref | Alt (m) | NP | Result |
|--------------------|-----------------------------|------------|------------|----|-------------------|
| <u>2004</u> | | | | | |
| 23.4. | Great Ayton (S) | NZ 579 105 | 130 | * | - |
| 23.4. | Ingleby Greenhow | NZ 578 065 | 120 | * | Rodent |
| 25.4. | Kildale, Dundale Beck | NZ 593 082 | 130 | * | Terrestrial Shrew |
| 23.4. | Kildale, River Leven | NZ 599 097 | 140 | * | Water Shrew |
| 25.4. | Sleddale Beck | NZ 637 099 | 180 | * | - |
| 25.4. | Baysdale Beck | NZ 651 074 | 160 | * | Terrestrial Shrew |
| 19.7. | Battersby | NZ 598 077 | 135 | * | - |
| 22.7. | Seave Green , Bilsdale | NZ 573 001 | 270 | * | - |
| <u>2005</u> | | | | | |
| 25.4. | Ingleby Arnecliffe | NZ 452 004 | 75 | * | Terrestrial Shrew |
| 25.4. | Oakdale, Osmotherly | SE 475 961 | 190 | * | T. Shrew & Rodent |
| 25.4. | Scugdale, Swainby | NZ 491 005 | 130 | * | Terrestrial Shrew |
| 25.4. | Alum Beck, Carlton | NZ 496 061 | 70 | - | Rodent |
| 25.4. | Carlton (S) | NZ 503 061 | 70 | - | - |
| 25.4. | Faceby (S) | NZ 497 021 | 140 | * | Terrestrial Shrew |
| 22.7. | Littlebeck | NZ 897 049 | 60 | * | Terrestrial Shrew |
| 22.7. | Fylingthorpe, Ramsdale Beck | NZ 942 038 | 40 | * | Terrestrial Shrew |
| 22.7. | Fylingthorpe, Stoupe Beck | NZ 937 019 | 80 | * | Water Shrew |
| 9.8. | Liverton, Mill Beck | NZ 701 154 | 100 | - | Water Shrew |
| 9.8. | Staithes, Easington Beck | NZ 770 181 | 10 | * | Water Shrew |
| 9.8. | Newton Mulgrave | NZ 789 157 | 70 | * | Terrestrial Shrew |
| 9.8. | West Barnby, East Row Beck | NZ 821 112 | 70 | * | - |
| 9.8. | Scaling, Boghouse Beck | NZ 741 119 | 180 | * | - |
| 17.9. | Goathland, West Beck | NZ 814 004 | 130 | * | Water Shrew |
| 17.9. | Glaisdale, | NZ 786 062 | 80 | * | Terrestrial Shrew |
| 17.9. | Great Fryup Dale | NZ 729047 | 140 | * | Terrestrial Shrew |
| 17.9. | Danby Dale | NZ 693 060 | 170 | * | Water Shrew |
| 17.9. | Westerdale | NZ 663 061 | 150 | * | Rodent |
| 19.9. | Ingleby Greenhow | NZ 581 063 | 120 | * | |
| 19.9. | Seave Green, Bilsdale | NZ 563 003 | 165 | * | Rodent |
| 19.9. | Raisdale | NZ 540 006 | 185 | * | - |
| 19.9. | Kildale, New Row (S) | NZ 614 102 | 170 | * | Rodent |
| 24.9. | Great Broughton (S) | NZ 556 069 | 85 | - | - |

Key: (S) – Still water NP – North York Moors National Park

**Details of scats obtained in blowfly pupae baited tubes,
North East Yorkshire, 2004 & 2005
Table 1**

Site B-Between Church House & Lumley House-NZ 693 060

| Position | 1 | 2 | 3 | 4 | <u>Total</u> |
|---------------------|-------|-------|-------|-------|-------------------|
| 3)12 July - 26 July | 1 | F | 3 & F | 4 & F | 8 & F |
| 4) 26 July – 8 Aug | 3 & F | F | 1 & F | 0 | 4 & F |
| 5) 8 Aug – 26 Aug | 2 | 2 & F | 1 | 0 | 5 & F |
| 6) 26 Aug – 7 Sept | 1 | 2 | F | F | 3 & F |
| 7) 7 Sept – 19 Sept | 2 & F | 1 & F | 1 & F | 0 | 4 & F |
| 8) 19 Sept – 1 Oct | 0 | 3 & F | 1 & F | 2 & F | 6 & F |
| 9) 1 Oct – 15 Oct | 2 | 5 & F | 3 & F | 1 | 11 & F |
| | | | | | <u>41 & F</u> |

Site C-Stormy Hall Bridge NZ 693 045

| Position | 1 | 2 | 3 | 4 | <u>Total</u> |
|---------------------|-------|---|-------|-------|-------------------|
| 3)12 July - 26 July | 0 | 0 | 0 | 0 | 0 |
| 4) 26 July – 8 Aug | X | 1 | X | 0 | 1 |
| 5) 8 Aug – 26 Aug | 0 | X | X | X | 0 |
| 6)26 Aug – 7 Sept | 3 | X | 5 | X | 8 |
| 7) 7 Sept – 19 Sept | 0 | 2 | 3 | 0 | 5 |
| 8) 19 Sept – 1 Oct | 5 & F | 0 | 2 & F | 1 | 7 & F |
| 9) 1 Oct – 15 Oct | 0 | F | 1 & F | 2 & F | 3 & F |
| | | | | | <u>24 & F</u> |

Site D-Honey Bee Nest Farm-NZ 690 034

| Position | 1 | 2 | 3 | 4 | <u>Total</u> |
|---------------------|-------|-------|-------|-------|-------------------|
| 3)12 July - 26 July | 0 | 0 | F | F | F |
| 4) 26 July – 8 Aug | X | 0 | 0 | 0 | 0 |
| 5) 8 Aug – 26 Aug | F | X | X | 0 | F |
| 6)26 Aug – 7 Sept | X | X | X | 0 | 0 |
| 7) 7 Sept – 19 Sept | 1 & F | 2 & F | 2 & F | 3 & F | 8 & F |
| 8) 19 Sept – 1 Oct | 2 & F | 1 & F | 1 & F | 1 & F | 5 & F |
| 9) 1 Oct – 15 Oct | 3 & F | 2 & F | 3 & F | 2 & F | 10 & F |
| | | | | | <u>23 & F</u> |

Site E Pond – Head of Dale-NZ 692 025

| Position | 1 | 2 | 3 | 4 | <u>Total</u> |
|---------------------|-------|---|---|-------|------------------|
| 3)12 July - 26 July | 0 | 0 | X | 0 | 0 |
| 4) 26 July – 8 Aug | F | F | 0 | 0 | F |
| 5) 8 Aug – 26 Aug | 1 | 0 | F | 0 | 1 & F |
| 6)26 Aug – 7 Sept | F | 0 | 1 | 0 | 1 & F |
| 7) 7 Sept – 19 Sept | 0 | 0 | 0 | 0 | 0 |
| 8) 19 Sept – 1 Oct | 3 & F | F | F | 1 & F | 4 & F |
| 9) 1 Oct – 15 Oct | F | 0 | 0 | 1 | 1 & F |
| | | | | | <u>7 & F</u> |

Site F-Beck– Head of Dale-NZ 693 025

| Position | 1 | 2 | 3 | 4 | <u>Total</u> |
|---------------------|-------|---|---|-------|-------------------|
| 3)12 July - 26 July | 0 | 1 | 0 | 0 | 1 |
| 4) 26 July – 8 Aug | 1 | X | F | 0 | 1 |
| 5) 8 Aug – 26 Aug | 1 | X | F | 1 & F | 2 & F |
| #6)26 Aug – 7 Sept | X | 0 | X | 3 & F | 3 & F |
| 7) 7 Sept – 19 Sept | 1 | 0 | F | 1 | 2 & F |
| 8) 19 Sept – 1 Oct | 3 & F | 2 | 3 | 1 | 9 & F |
| 9) 1 Oct – 15 Oct | 3 & F | 0 | F | 0 | 3 & F |
| | | | | | <u>21 & F</u> |

Key_: F – Significant Fragment
X - Tubes Lost/Inundated

**Numbers of Water Shrew Scats taken at Five Sites in Danby Dale, North Yorkshire,
2006-Table 2**

| Site/Sample No. | B/ 5 | B/ 6 | B1/ 7 | B2/ 7 | B3/ 7 | B8 | B 9 | B 9 | | C/ 6 | C/ 7 | C/ 8 | C/ 9 | | D4/ 5 | D/ 8 | D/ 9 | | E/ 6 | E/8 | E/9 | | F1/ 5 | F/ 6 | F/7 | F/8 |
|--------------------------------------|---------|---------|----------|----------|----------|--------|--------|--------|--|---------|---------|---------|---------|--|----------|---------|---------|--|---------|--------|--------|--|----------|---------|--------|--------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Terrestrial Prey | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coleoptera adults (beetles) | X | | | | | X | X | X | | X | | X | | | | | X | | X | X | | | | X | | |
| Coleoptera larvae (beetle larvae) | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| Formicidae (ants) | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Other Hymenoptera | X | X | | | | | | | | X | | | | | | | | | | | | | | | | |
| Heteroptera (bugs) | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| Lithobiomorpha (centipedes) | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diplopoda (millipedes) | X X | X | | | | | X | X | | X X | X X | | X | | X | XX | XX | | X | X X | X X | | XX | X | X X | X X |
| Isopoda (woodlice) | | X X | X | XX | XX | X X | X | X | | | X | | X | | | | | | | | | | | X | | |
| Araneae (spiders) | X | | | | X | X | | | | | | | | | | | | | X | X | | | X | X | X | X |
| Opiliones (harvestmen) | X | | | | | | | | | | | X | | | | | X | | X | | | | X | | | |
| Acarina (mites) | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbricidae (earthworms) | X | X | | X | | | | | | | | | | | | X | X | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Terrestrial/Aquatic Prey ? | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gastropoda (snails) | X | | | | X | X | | X | | | | | | | | | | | X | X | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Aquatic Prey | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tricoptera larvae (caddis) | X | | | | | | | | | | | | | | | | X | | | | | | | | | |
| Asellus (water slaters) | X | | X | | | | | X | | | | X | | | | | | | | | | | | | | |

Water Shrew Scat Analysis – Danby Dale – 2006 -Table 3

Key: X – Present XX- Present in Large Quantities

| | Rainfall Mm | pH | Site E pH an Range | Site F pH Mean Range |
|-----------|--------------------|----------------|-----------------------------------|-------------------------------------|
| March | 115 | 5.1 3.7-6.6 | 6.0 5.3-6.7 | 3.9 3.7-4.2 |
| April | 51 | 5.7 6.0-6.6 | 6.3 3.8-3.9 | 3.8 |
| May | 126 | 5.0 4.0-6.4 | 6.5 6.1-6.7 | 4.0 3.9-4.2 |
| June | 20 | 6.3 5.9-6.6 | 6.6 6.6-6.7 | 4.7 4.5-4.9 |
| July | 39 | 6.3 5.8-6.9 | 6.9 6.9 6.7 | 5.4 5.2-5.5 |
| August | 173 | 5.4 4.1-6.4 | 6.7 6.2-7.1 | 3.9 3.6-4.1 |
| September | 55 | 5.5 4.8-6.1 | 6.2 5.4-6.7 | 3.9 3.4-4.2 |
| October | 73 | 6.0 5.4-6.3 | 6.5 6.1-6.8 | 4.0 3.9-4.1 |

Rainfall and pH Values Measured at the Pond (Site E) and Danby Beck (Site F) at the Head of Danby Dale, 2006-Table 4

Miscellaneous Records

P.W.Forster

1 Artichoke Gall *Andricus foecundatrix* 18-08-12 Danby Moor centre



2 *Diastrophus rubi* Cliff bank side quarry Hemsley. Found in February, Gall fly emerged 02-06-12



3 Common Spangle Gall *Neuroterus quercusbaccarum* Danby Moor centre 14-09-12



4 Knopper Gall *Andricus Quercuscalicis* Newton Woods 14-09-12



5 Silk Button Gall *Neuroterus numismalis* Newton Woods 07-08-12



6 Pea Gall *Dipolepis nervosa* South Gare Redcar 01-09-12



12 Sawfly *Portania proxima* Coatham Boating Lake Redcar 26-09-12



14 Robins Pin Cushion *Dipolepis rosae* South Gare Redcar 29-09-12



Fungi

16 Cauliflower fungi *Sparassis crispa* Lockwood beck 25-10-12 Found By P Waterton



17 *Mitrula paludosa* Ingleby Greenhow Bankfoot 09-05-12 Found by P waterton.



18 *Traphrina alni* Danby Moor centre 10-08-12.



Birds

20 Osprey *Pandion haliaetus* one Adult and one young bird stayed at Lockwood beck reservoir for a three week period giving excellent views.



Cetacean

21 Porpoise & calf *Phocoena phocoena* Hartlepool Pilot quay 28-01-12



North-east Yorkshire (V.-c. 62) Annual Report 2012

In 2012 there were 15,615 records added to the v.-c. 62 MapMate Database, giving a total of 279,273 records.

Work has continued on the Rare Plant Register. We view this as a continuing document which is updated every year. Its format is a list of records on a spreadsheet for each taxon separated (and colour-coded) into three categories – records where the tetrad has not been revisited, recent (from 2007) records with full details, and records where a tetrad/site has been revisited but the taxon not refound.

It was pleasing to find three new sites for *Filago vulgaris* (Common Cudweed), a species thought to be lost to the v.-c. *Carex muricata* ssp. *pairae* (Prickly Sedge), always very rare within the v.-c., was located in a second site recently – a moorland edge at Castleton.

It was a good year for Willowherb hybrid finds – *Epilobium hirsutum* x *E. parviflorum* was discovered in four places and *Epilobium tetragonum* x *E. obscurum*, new to the v.-c., was on waste ground in Northallerton.

A belated start has been made on dock hybrids, three of which were new v.-c. records – *Rumex conglomeratus* x *R. sanguineus*, *Rumex obtusifolius* x *R. conglomeratus* and *Rumex obtusifolius* x *R. sanguineus*.

Several aliens/garden escapes new to the v.-c. were found; these included :- *Conyza floribunda* (Bilbao Fleabane) in three places in Teesside, in abundance at one site; *Tanacetum macrophyllum* (Rayed Tansy) at Husthwaite and *Linaria maroccana* (Annual Toadflax) at Northallerton. *Vicia villosa* (Fodder Vetch) near Cold Kirby and *Saxifraga cymbalaria* (Celandine Saxifrage) at Northallerton were both second v.-c. records.

David Earl visited the v.-c. and four new brambles were found – *Rubus gratus*, *R. x pseudoidaeus* (in two places), *R. bartonii* and *R. intensior*; the former pair east of York and the latter pair at Scarborough.

Four new dandelions were discovered – *Taraxacum angulare*, *T. altissimus*, *T. anceps* and *T. scanicum*; the latter very rare nationally.

We are grateful to D. Earl, G.D. Kitchener, A.J. Richards and M.J. Wilcox for checking specimens.

V. Jones

Field Meetings 2013

Sunday, 14th April, 10:30 am, leader Colin Chatto ☎ 01642 599616

GR NZ410332. **Hurworth Burn.** Meet at the small car park on the right just before the railway bridge, about 3 miles from Elwick and halfway along the Elwick to Trimdon road from the A19. A circular walk of about 4 miles starting from Hurworth Burn reservoir. Easy walking but possibly muddy in places.

Saturday, 27th April, 10:30 am, leader Andy Ferguson ☎ 01642 311831

GR NZ862125. **Mulgrave Woods.** Meet at the entrance to Mulgrave Woods, by the road bridge over East Row Beck in Sandsend. An easy walk of about 5 miles through mixed woodland.

Wednesday, 1st May, 10:30 am, leader Malcolm Birtle ☎ 01642 649938

GR NZ174302. **Witton Park.** Park in the village and meet at the railway underpass off Main Street and Station Court. The walk of about 5 miles will be towards Escomb and Etherley along tracks and field paths, with no significant climbing.

Saturday, 4th May, 10:30 am, leader Colin Chatto ☎ 01642 599616

GR NZ640226. **Marske and Saltburn.** Meet at St. Germain's Church, St. Germain's Lane, Marske-by-the-Sea. A fairly easy circular walk of about 5 miles via Hazel Grove and the sea shore.

Saturday, 18th May, 10:30 am, leaders Peter and Ruth Waterton ☎ 01642 724270

GR SE915868. **Troutdale Moor area.** Meet by the roadside north of Cockmoor Hall. The walk will involve some climbing and cover general natural history.

Wednesday, 22nd May, 1:30 pm, leader Martin Allen ☎ 01642 576295

GR NZ512146. **Fairy Dell.** Meet in the parking layby on Gunnergate Lane outside the entrance to Fairy Dell Park. A short walk through an unexpected haven for wildlife in the middle of densely populated Coulby Newham.

Sunday, 26th May, 10:30 am, leader Paul Forster ☎ 01287 201794

GR NZ278960. **Druridge Pools.** Meet at the National Trust roadside parking area. This will be a relatively easy walk looking at birds, flowers and possibly damselflies.

Wednesday, 29th May, 10:30 am, leader Vic Fairbrother ☎ 01287 633744

GR SE725872. **Spaunton Quarry.** Meet at the start of the quarry footpath on Headlands Road, Appleton-le-Moors. A leisurely exploration of this limestone site should reveal lots of botanical interest and hopefully some butterflies.

Sunday, 2nd June, 10:30 am, leader Peter Waterton ☎ 01642 724270

GR SE866282. **Broomfleet Washlands, near Hull.** Leave the M62/A63 at the North Cave junction. Take the B1230 and before Newport turn left to Broomfleet along Wallingfen Lane. At the end of the road turn right onto Common Road. Continue straight on, the road eventually turns into a track which is passable with care and the car park can be found before reaching the railway. This joint meeting with the YDS has a focus on dragonflies.

Wednesday, 5th June, 10:30 am, leader Eric Gendle ☎ 01642 281235

GR SD911978. **Kisdon**. Meet in Muker car park. A walk of about 6 miles with some climbing. We will start by walking round Kisdon and then return over the top.

Sunday, 9th June, 10:30 am, leader Vincent Jones ☎ 01642 722814

GR SE571844. **Ashberry**. Park at Ashberry Farm, for which we have been given permission. Park in the drive alongside the farmhouse, leaving the other access clear. Parking is limited, so please try to share cars. A **botanical** ramble in one of the richest tetrads in VC62. We shall walk between 2 and 3 miles and there will be some climbing which we shall take very gently.

Wednesday, 12th June, 1:30 pm, leader Daphne Aplin ☎ 01642 884719

GR NZ479254. **Cowpen Bewley Woodland Park**. Meet in the visitor centre car park. An easy walk around this maturing nature reserve with a special emphasis this afternoon on looking for butterflies, but there will also be plenty more of interest.

Sunday, 16th June, 10:30 am, leader Colin Chatto ☎ 01642 599616

GR SE798836. **Pickering**. Meet at the Ryedale Swimming Pool car park (signed to the right off the A169 Malton Road, just south of the A170/A169 roundabout in Pickering). A walk of about 6 miles into Haugh Wood. There may be some climbing.

Wednesday, 19th June, 10:30 am, leader Jo Scott ☎ 01642 897843

GR NZ308327. **Thrislington Quarry**. Meet in the Lefarge car park which is on the left heading north on the Mainsforth to Cornforth road. We will join a Limestone Landscapes Partnership event. An introduction to the magnesian limestone then fossil hunting in the quarry followed by a visit to the nature reserve. If you can, please bring safety glasses. Geological hammers will be provided.

Wednesday, 26th June, 6:30 pm, leader Eric Gendle ☎ 01642 281235

GR NZ462193. **Portrack Marsh**. Meet in the Talpore Hotel car park. An easy ramble through Portrack Marsh itself, away from the river bank.

Friday, 28th June, 8:30 pm, leader Paul Forster ☎ 01287 201794

GR NZ844126. **Mulgrave Castle Walled Garden**. This meeting (weather permitting) is for moth trapping in the private Mulgrave Castle estate grounds, for which we have special permission. Park outside the greenhouse block at the top of the walled garden.

Wednesday, 3rd July, 10:30 am, leader Neil Baker ☎ 01325 361547

GR NZ483363. **Hart Station**. Meet at the Hart to Haswell Walkway entrance. There is roadside parking on the nearby Ocean Road. Please park with consideration for local residents. We will explore the walkway in the morning and then after lunch we will wander through the nearby Hart Warren Dunes LNR. Two short leisurely walks with individual half day options possible.

Wednesday, 10th July, 6:30 pm, leader Dave Barlow ☎ 01642 562625

GR NZ452167. **Black Bobbies Field, Thornaby**. Meet outside the Jolly Farmers on Thornaby Road. Black Bobbies Field is a small local nature reserve by the river Tees. The site is pedestrian access only. There is a parking area just opposite the Jolly Farmers. This is a return visit to this reserve to record in some detail all that we find there.

Sunday, 14th July, 10:30 am, leader Andy Astbury ☎ 01642 823114

GR NZ892025. **May Beck and Falling Foss.** Meet in the May Beck car park. A walk of about 7 miles through a mixture of woodland and moorland.

Wednesday, 17th July, 10:30 am, leader Malcolm Birtle ☎ 01642 649938

GR NZ327552. **Cox Green.** Park at Cox Green on the riverside (south bank of the river). The walk will be about 5 miles around the river and Penshaw along tracks and field paths. There will be a steady easy climb up to Penshaw.

Sunday, 21st July, 10:30 am, leader Neil Baker ☎ 01325 361547

GR SD934902. **Semer Water.** Meet on the village green in Bainbridge. A 7 mile circular walk around Semer Water, passing through the small villages of Stalling Busk (where there is a tea shop with facilities) and Marsett. A shorter option is available by parking on the foreshore at Semer Water (a small charge is payable), which we will reach about 11:30. There will be some climbing, but nothing too strenuous.

Wednesday, 24th July, 6:30 pm, leader Ian Lawrence ☎ 01642 828858

GR NZ463189. **Maze Park.** Meet by the short lane on the south side of the river Tees, immediately east of the bridge over the barrage. An easy walk.

Saturday, 27th July, 10:30 am, leader Eric Gendle ☎ 01642 281235

GR SE965944. **Upper Derwent Valley.** Meet in Reasty Bank car park. A slightly longer walk of about 8 miles to explore the wooded upper Derwent valley. There is descent and ascent from and to the car park, but otherwise it is a riverside walk.

Wednesday, 31st July, 6:30 pm, leader David Laing ☎ 01642 316101

GR NZ453223. **Billingham Beck Valley Country Park.** Meet in the visitor centre car park. An easy walk around this interesting wetland area.

Wednesday, 7th August, 10:30 am, leader Jo Scott ☎ 01642 897843

GR NZ668216. **Saltburn Shore.** Meet in the Cat Nab car park. A day exploring the rock pools in a concentrated area. If you can, please bring a bucket and small net.

Saturday, 10th August, 10:00 am, contact Mick Carroll ☎ 01751 476550

GR unknown. **May Moss and Langdale Forest.** This is the YNU VC 62 meeting. There are no further details available at the time of going to print. Please phone the contact if you are interested.

Wednesday, 14th August, 1:30 pm, leader Tony Wardhaugh ☎ 01642 322935

GR NZ606093. **Mill Bank Wood.** Meet on the grass verge at the west end of Kildale village. We will walk round to Mill Bank Wood, a very good site for molluscs and interesting in general.

Saturday, 17th August, 10:30 am, leader Bill Hall ☎ 01642 823170 or 07753 663589

GR SE162972. **Foxglove Covert, Catterick Garrison.** Meet at Foxglove Covert LNR visitor centre in Catterick Garrison. Entry is through Cambrai Barracks and drivers will need photo id, such as their driving licence. This joint meeting with the YDS has a focus on dragonflies.

Wednesday, 21st August, 10:30 am, leader Alan Simkins ☎ 01642 477484

GR NZ684085. **Castleton to Comondale circular.** Meet at the Eskdale Inn in Castleton. This is a joint meeting with the Tees Valley RIGS Group. A 6 mile circular walk from Castleton to Comondale and back on a mix of footpaths and roads, sometimes venturing off track to see the geology. There will be some climbing involved, but nothing too strenuous.

Wednesday, 4th September, 10:30 am, leader Malcolm Birtle ☎ 01642 649938

GR NZ114242. **Cockfield.** Park in the car park next to the T-junction at the west end of the village. The walk of about 5 miles will be a wander around field paths on and around the fell.

Saturday, 14th September, 10:30 am, leader Andy Astbury ☎ 01642 823114

GR NZ572035. **Greenhow area.** Meet in the Clay Bank car park. A walk of about 7 miles through a mixture of woodland and moorland. We will cross Greenhow Botton and return by the Ingleby Incline and the Cleveland Way.

Wednesday, 25th September, 10:30 am, leader Aubrey Colling ☎ 01609 882339

GR SE529928. **Anya's Wood.** Meet by Hazel Heads information board in the large grass car park off the Hawnby to Osmotherley road. A short circular fungi walk in Ryedale.

Saturday, 12th October, 10:30 am, leader Neil Baker ☎ 01325 361547

GR NZ572195. **Eston Woods.** Meet in the Lazenby Bank car park on the south side of the A174. This is our regular annual fungus foray with Tom Kirby and this year, being the Year of the Fungi, it will be a joint meeting with the North Eastern Fungus Study Group. Any climbing will be done very slowly.

Mobile Phone

The walk leader on the day carries the Club's mobile phone (☎ 07826 787650) that members may ring if necessary (to find the group if late arriving, for example).

I hope that you will find outings to your taste from this varied programme. Any suggestions for future outings are always welcomed by the committee. It is hoped that members will share transport, where possible, to ease any parking problems and be prepared to offer lifts to members without cars.

If you require further details about a walk, or in case of bad weather and possible cancellation, please contact the leader of the walk. Please bring suitable refreshment with you! This will be necessary for the walks that start on a morning and it may well be appropriate to take tea on an afternoon walk.

I should like to welcome any prospective members to join some of our outings. I am sure that you will find our members both friendly and helpful. I have found the field trips an excellent way of learning more about the natural history of the areas we visit.

Vic Fairbrother (President)

Websites

Members with access to the world wide web will find the following sites of interest. These sites contain excellent links to many other sites with a natural history theme.

<http://www.clevelandnats.org.uk>

www.the-vasculum.com

<http://www.davebarlow.co.uk>

<http://www.ynu.org.uk>

<http://www.nhsn.ncl.ac.uk/>

<http://www.dtnfc.org/>

DATES FOR WINTER MEETINGS 2013-2014

Sep 30. Oct 21, 28. Nov 18. Dec 16. Jan 27. Feb 17, 24. Mar 17, 31.