Contents

Chairman's report – 2014

Geoff Oxford

This is the last time I'll be writing the YMG Chairman's report, for I step down from the post at the AGM in February 2015. I started this, my second, period as Chairman in 2008 when I took over from Jon Traill. My interest in mammals hasn't diminished but other things seem to have taken over my retirement such that I've had to shed some responsibilities; this is one of them. I wish our new Chairman, Charles Critchley, all the very best.

We have also changed our indoor meeting venue. The Black Swan has served us well for a number of years but increasingly we were being consigned to the noisy, sometimes hot and occasionally too small room downstairs rather than the more commodious accommodation above. As the room was offered free-of-charge there was little we could do about it. I hope our new venue, the Bay Horse at the bottom of Marygate, will prove more satisfactory. It is certainly more convenient for the station for speakers who arrive by train and has almost unlimited (paid) parking in Marygate car park, just round the corner from the pub. But that is the future, the purpose of this report is to reflect on 2014.

During the year our indoor programme has brought us some fascinating talks including a discussion of the functions of modern zoos from Matt Brash, analysis of the effects of tourism on Red deer in the Hebrides from Hagen O'Neill, revelations about the predation of small mammals and birds by domestic cats from Rebecca Thomas and our own John Ray who took us on a beautifully illustrated, whistle-stop tour of some Canadian mammals. Ann Hanson (Field Studies Officer) and Rob Masheder enthusiastically organised another varied selection of mammal detective walks to some beautiful parts of Yorkshire, each containing the essential, elegant, tea shop for post-walk discussion. During the summer, they also planned a number of small mammal surveys. Both activities are reported later on in this issue. Natasha Hambly (Secretary) and John Drewett ensured that the monthly Newsletters were produced and circulated on time, advertising both talks and walks. The YMG was represented at two public events during 2014 at Dalby and at Stillingfleet nurseries. Because other people had other commitments, Ann and Rob manned the forts both times, which was well beyond the call of duty.

Other members of the committee have, as always, kept things running smoothly. Those not mentioned elsewhere, or in different contexts, are John Ray (Website), Amy-Jane Beer (Publicity), John Drewett (Membership and, of course, Chairman of the North Yorkshire Bat Group), Rob Masheder (Treasurer) and Mary Youngman. We also welcome Gill Sinclair to the committee, who has taken on the role of organising the programme of indoor talks from October 2015. The efforts of the whole committee over the past year are all very much appreciated.

Lastly I'd like to sincerely thank all those who have contributed to this issue of *Imprint* and particularly to Andrew Halcro-Johnston for applying his excellent editorial skills.

The borderline hedgehog

Toni Bunnell

It is well known that the West European Hedgehog, once a familiar sight in our parks and gardens, has suffered a massive decline in numbers in the UK over the past few decades. The reasons for this are many and varied and include habitat loss. Members of the public and hundreds of hedgehog and wildlife rescue centres play an important role in rehabilitating those animals in need and returning them to the wild when possible.

When winter approaches decisions have to be taken by hedgehog rescue centres regarding when to bring hedgehogs inside. Hedgehogs found out in the day are obviously in need of help but there are those individuals, seen out at night, that raise questions as to the fate that should befall them; whether to leave them where they are, in the hope that they will hibernate if necessary, or whether to bring them inside. Both options have advantages and disadvantages. Animals taken into rescue centres tend to remain there for the duration, with few exceptions, resulting in stress due to being held in captivity; while those with insufficient body mass, left to fend for themselves, might not survive the winter.

The guidelines for deciding when to remove a hedgehog from the wild, when it is out at night, are often based on the weight of the animal alone. This is tenuous at best and disastrous at worst. A previously delivered minimum pre-hibernation weight necessary for a hedgehog to survive

hibernation of 450g has been superseded by my recommendation of 650g (coupled with a rounded end) (Bunnell T. 2002: see reference below).

But this is not the whole story. Just to confound the issue there is the Borderline Hedgehog: I decided to coin this term after someone brought me a hedgehog in early autumn. She had found it the previous evening in a park in York. Knowing that they should be a certain weight/size to be able to survive hibernation, she contacted me for advice. Not having any scales to weigh it (another problem faced by the public in these circumstances) she brought it to me where I found it to weigh 550g with a rounded end and three small ticks that I removed.

So far so good. What to do next? Decision time. The temperature was set to crash in York in the near future but given the weight/size ratio of the hog it would probably be fine; and there we have it - the word 'probably'. The borderline weight, coupled with the presence of three ticks, suggested a hedgehog that was on the threshold of surviving a period of hibernation. I decided that it was not worth taking a chance and the hedgehog was taken into care for the winter months until it has gained enough weight. It will then be released exactly where it was found in the park.

When deciding whether or not to remove a hedgehog from the wild, when it is out at night in the autumn, the rule of thumb is that the overall health status of the animal needs to be taken into consideration as well as the ambient and expected weather conditions.

I have written a book entitled The Disappearing Hedgehog with the aim of providing much needed advice for members of the public who find a hedgehog out in the day, injured or otherwise in distress. The book is based on 25 years of experience gained from running York Hedgehog Rescue centre. It is available through my website: http://tonibunnell.com/

Reference

Bunnell T. 2002. The assessment of British hedgehog (*Erinaceus europaeus*) casualties on arrival and determination of optimum release weights using a new index. Journal of Wildlife Rehabilitation, Vol. 25, (4): 11-21.

Enough to make your toes curl?

Charles Critchley

An article titled *Aladdin's Slippers* by Professor J W Simpson of the Royal (Dick) School of Veterinary Studies, Edinburgh, published in *'Deer' The Journal of The British Deer Society, Autumn 2013* considers the causes of hoof overgrowth in deer. In Britain usually associated with roe deer, the author relates the condition of hoof overgrowth, reviews the literature, describes deformities observed in the forefeet of four Scottish free-ranging roe deer and suggests similarities with other deer in the literature. However, an increased sample size was required in order to draw firm conclusions.

On the 19th October 2014 twin roe buck kids were photographed couched in the sun, sheltering beside a stock fence a couple of miles from Pickering. At that time they showed no sign of the hoof overgrowth apparent in their mother. She was lying close by but always alert and evaded every attempt to capture a photo. Her curled hooves didn't seem to slow her down as she cleared the fence and darted away. Roe that occasionally step like clowns wearing big shoes have been seen in the area for some years. Because soil conditions on arable fields in this part of the Vale of Pickering can be very sticky, the abnormal gait might be due to

clods of earth sticking to the feet. Sometimes such clods are found having detached from the foot but rarely leaving a clear imprint of the cloven hoof. None thus far have been found with an imprint suggesting hoof overgrowth. Anecdotally, a doe appearing to have a broken leg was shot as an act of mercy close-by in recent years but turned out to be suffering from severe hoof overgrowth. So it seems the condition has been observed in the locality for some time whereas amongst the managed roe deer population on the Tabular Hills and North York Moors just a few miles away the condition is said not to occur.

At first light on the 26th December a photograph was taken of the same family group and a very grainy image captured of the Aladdin's Slipper forefeet of the doe. By that time one of the kids seemed to be developing a slightly awkward gait and the pedicles of both twins were clearly visible from which their first set of antlers would soon begin to emerge.

On 1st February 2015 a roe buck kid exhibiting early stages of hoof overgrowth, but no other limb deformity, was found dead within 100 metres of where the doe and twins had been photographed. The deer had been dead for no more than two or three days at most and, on inspection, the circumstances were peculiar. The carcass had been gralloched (partly eviscerated) through a neat incision down the ventral line between ribcage and pelvis and the rumen and lower intestines left in a grass field at what appeared to have been the point of kill, judging by the disturbance to the ground. The carcass had then been carried to a nearby hedgerow and bled by an incision to the neck before being moved again a short distance to where it was found lying on the ground in a gap in the hedge. The torn skin and exposed flesh around the white caudal disc at the top of the haunches and also the appearance of the throat suggested a dog or dogs had been involved at the time of killing. There was no sign of the deer having been shot although it would have been necessary to skin the carcass to determine beyond doubt. The likeliest explanation would seem to be that the person(s) responsible were acting illegally and were interrupted in their actions or prevented from taking the deer away or from returning later to collect the carcass, the nearest road being some distance away.

In order to salvage a useful outcome all four feet were removed from the carcass, photographed and then submitted to Professor Simpson who rapidly confirmed consistency with the early findings of his ongoing study. The feet showed a loss of bone on the last digit bone (phalanx 3 or the pedal bone) resulting most probably from inflammation such as laminitis, a painful condition causing the deer to walk in such a way as to allow hoof overgrowth to develop. Professor Simpson points out that a number of factors can cause laminitis and that further study is required, including blood samples from affected deer to see if mineral deficiency might be involved.

The doe and surviving buck kid continue to be seen together, most recently at the time of writing on the 16th February when his gait was normal in spite of the clods sticking to his feet. He is unlikely to remain with his mother for very much longer especially if she is carrying young and might be driven out of the area altogether by mature bucks establishing their territories as soon as the velvet is shed from their antlers. The only time the doe was seen unaccompanied by the kids since the twins were dropped in May or June was during the rut on the 8th August 2014 when she was being chased around in the middle of a grass field by a mature buck. The last time the twins were seen to suckle was on the 16th October. Without her distinctive Aladdin's Slippers her identification and the record of her associations would not have been possible.

Postscript:
On the morning of 28th February 2015, about 500 metres from where the buck kid was found dead, a dismembered roe carcass was discovered, killed overnight, consisting in one piece and still in the skin, of the neck, forelegs/shoulders, ribcage and organs forward of the diaphragm. The rumen and intestines were scattered around. The hind legs/haunches and saddle behind the ribcage had been taken away in the skin. The size and weight of the amputated remains and the condition of the feet indicated an adult roe. The fact that the head had been removed and taken away might suggest it was a roebuck, although if so, likely to be still in velvet or barely clean of velvet. Fresh fraying is sometimes found before the end of February in this locality but not this year. Given the condition of the feet which exhibited significant hoof overgrowth, there must be some likelihood that the dismembered carcass was that of the doe with Aladdin's Slippers, though the reason for removal of her head is mystifying. Both front feet have been sent to Professor Simpson to contribute to his study.

To add to the peculiarity of the circumstances resulting from the overnight activities, a short distance from the dismembered roe carcass were two adult rabbit carcasses in perfect condition, one of which had been gutted. Neither of the rabbits appeared to have been shot and nor was there any wound visible to the neck, shoulders or ribcage of the deer. The deer remains had been thrown under some thorns out of sight in a field corner but the rabbit carcasses were left on the ground in the open alongside a track accompanied by the viscera of one of the rabbits, a Mayfair cigarette butt and a blue nitrile glove floating in the nearby ditch.

A vehicle and red filtered lamp were seen in the area on the evening of the 27th February. Lamping is a relatively common activity in the British countryside. It may be a perfectly legal undertaking subject to landowner permission, the methods employed and the animals targeted. Whatever the legalities of the operation (and in this instance it would appear to have been illegal on several counts) at least the brazen behaviour and wanton wastefulness might be said to have thrown some light on the condition of Aladdin's Slippers.

Yorkshire polecats

Peter Franklin

Having been an avid ferret breeder in my teenage years and having a particular fondness for a polecat/ferret that I had as a pet, polecats have always fascinated me. I've always been disappointed that they had become extinct in Yorkshire due to persecution.

My interest was enhanced after reading the chapter on polecats in 'British Wild Animals' by H. Mortimer Batten. He was born in Otley in 1888 and lived a considerable part of his life in Burnsall in Wharfedale. In his book, published in 1924, he states that polecats were still found in the Fens, Norfolk Broads, parts of Devon and also parts of Wales and the Lake District. In a second book of the same title published in 1952 he mentions the Forge Valley near Scarborough.

In this book, he also mentions that he remembers as a young boy seeing two or three dead polecats hanging on a barn door at Grimwith House, between Pateley Bridge and Grassington, which was occupied by the Daggett family. At roughly the same time he also had a shot at one scrambling over some rocks but 'unfortunately' he missed, or fortunately depending on your viewpoint. After this he didn't hear of any more polecats in the area for about twenty years. Another ten years after that they reappeared on the moors above Grimwith Reservoir. I guess this would be around 1930.

The 'Vincent Wildlife Trust' polecat survey of 2004-2006 showed the spread of polecats from their stronghold areas and they had been sighted close to the Yorkshire border in Cheshire, North Lancashire and Cumbria. In fact, judging by the map, one looks as if it could be in the Cowan Bridge-Ingleton area. This was very encouraging to see as it meant that they would soon be back in Yorkshire in numbers. I also remember hearing some where that a road casualty polecat, and not a polecat/ferret had been found near Marston Moor.

About three years ago, whilst driving from Galphay to Ripon, I came across a road casualty polecat on the roadside. The body was still warm, so it was a very recent casualty. I sent a photo to Lizzie Croose at the Vincent Wildlife Trust and she confirmed my suspicion that it was a polecat/ferret

as the dark area of the mask did not quite reach the nose. At the same time I was told that the carcass of an albino/greyhound ferret had been found not far away. Subsequently I was speaking to someone who goes lamping in the area around Studley Cricket Club on the outskirts of Ripon and he told me that he regularly sees what he believes to be feral polecat/ferrets.

Fast forward to early 2014 when I found three polecat or polecat/ferret carcasses. This would be within two or three weeks of each other in March. One was on the outskirts of my own village, Laverton. It had been mangled and flattened as had the second, which I found on the Laverton to Galphay Road. It was impossible to make out the facial markings on both. The third carcass was on the dual carriageway of the A168 where it leaves the A1. It was far too dangerous to stop and examine the carcass more closely.

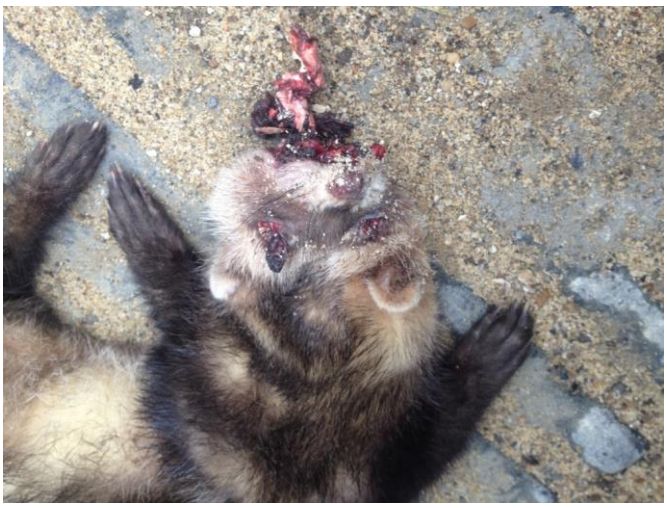
Unfortunately, although I have regular emails from the VWT, I was not aware that a new polecat survey for 2014-2015 had started so I had to submit these records in retrospect, thinking that I would probably not see another polecat in the survey period. How wrong I was proved to be.

On 27th August while driving on the Boroughbridge to Ripon road I found the first intact polecat carcass that I was able to photograph. This was quite a dark specimen, very stocky with a classic polecat mask. It was really quite rancid when I found it and no-one was prepared to put it in their freezer. Particularly Mrs. Franklin.

Only a few days later, on 3rd September, I found another carcass, this time on the Ripon bypass close to Gallows Hill. The face was quite damaged but typical polecat mask was still visible. I was able to freeze this sample and forward to Lancaster University for further research.

Once again, travelling on the Ripon to Boroughbridge Road on 7th October, I found another carcass near the old converted windmill about a quarter of a mile from the A1, and about half a mile from where I found the first carcass. It was quite flattened but it

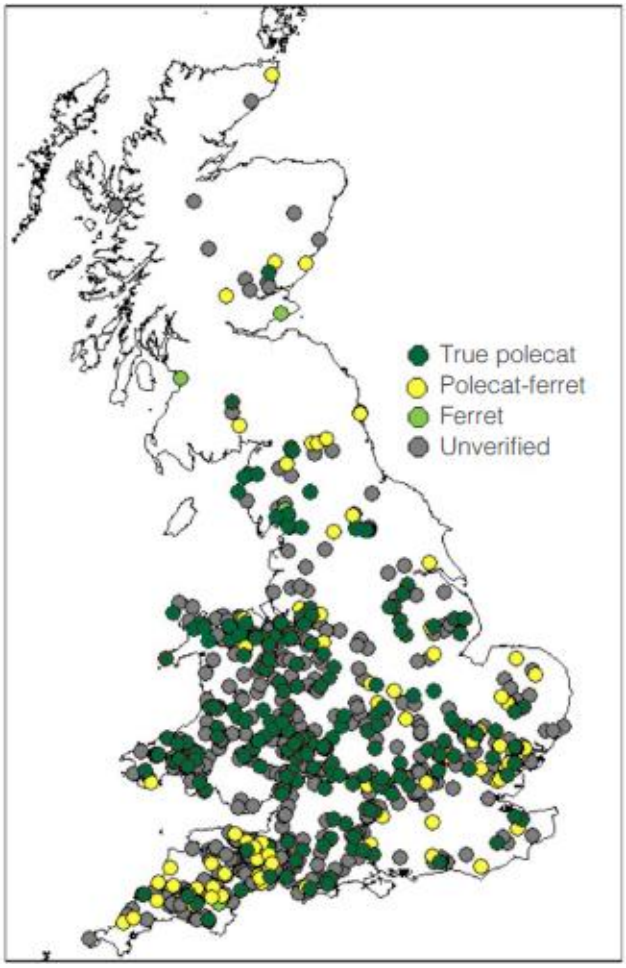
was still easy to make out the typical polecat mask. Unfortunately I wasn't able to take a photograph. On the same road, but much closer to Ripon I found another carcass on 26th October.



The next day, a neighbour, who was aware that I was looking for polecat carcasses, told me that he had seen one on the Ripon to Boroughbridge Road and that he had moved it on to the verge to avoid further mutilation. When I went to photograph the carcass it was only a few yards from where I had found the previous one. Interestingly there was a roadkill rabbit at the same place and a culvert under the road carrying a small beck. This specimen was quite large and was pretty ripe. The mask was a bit mushy and wet, but it still showed the typical polecat mask. Also when I took the photo it was getting near dusk and the flash operated which made the carcass look lighter than it actually was.

On 3rd November I found my final carcass of 2014. This was on the Kirkby Malzeard to Grantley Road, within a one mile radius from where I found two of the carcasses in March. Once again it shows the typical polecat mask.

I really don't have an explanation for this glut of polecats in the Ripon area but I'm pleased they are here. Has someone released polecats in the area? Are they escaped polecat/ferrets with particularly polecatty features, or are they a population that has never completely disappeared? The distance between the



furthest two sightings is about 10 miles and the river Ure separates them, although I know that polecats are very competent swimmers and there are a couple of bridges in Ripon. What is interesting is that the most likely time of year to see roadkill polecats is in September/October when the young are dispersing and in March when it is a time of maximum activity as it is the start of the mating season.

UK polecat distribution, based on records received by VWT between January and December 2014.

Source: National Polecat Survey Update (Vincent Wildlife Trust, 2014)

Mammal training opportunities in 2015

Gill Sinclair

Mammal Society training courses

The Mammal Society is keen to deliver its training courses in as many locations as possible across the UK, and has offered to arrange courses in any area where there are at least 6 people interested in attending. The training ranges from photography workshops and courses on mammal ID or survey techniques, suitable for all, to training specifically aimed at ecological consultants. Full details of the courses can be found at http://www.mammal.org.uk/training.

If you are interested in any of the training, please email Gill Sinclair at gill@sinclair2.karoo.co.uk with the title(s) of the course(s) you are interested in and your address, and we will hopefully get enough demand for some of the courses to be delivered in our area in 2015!

MARINElife marine mammal & seabird surveyor training

Members with an interest in marine mammals, especially cetaceans, may be interested in attending one of these courses and perhaps getting actively involved in MARINElife's ferry-based surveys which operate from various UK ports including Hull, Immingham and Liverpool.

YMG member Gill Sinclair attended such a course hosted at the Yorkshire Wildlife Trust's Living Seas Centre, Flamborough in early December 2014. The day is intensive but fun, with a quiz at the end to help consolidate your knowledge. The Flamborough session was led by Dr. Martin Kitching of the North East Cetacean Project who some of you may have heard speaking about his beloved white-beaked dolphins at YMG's January 2015 talk.

For more information about the MARINElife cetacean training, please go to http://www.marine-life.org.uk/surveyor-training-courses

Water voles in Hull

Gill Sinclair

Water voles seemed to be doing relatively well in Hull in 2014, as observed by YMG member Gill Sinclair. First she spotted a vole at Swine Bank on the Hull/East Riding boundary in early April, and then a few weeks later another vole at Setting Dyke in Hull.

The voles at Swine Bank will have to be temporarily relocated to accommodate the construction of a huge lagoon as part of the Willerby and Derringham Flood Alleviation Schemes (WaDFAS), but it appears that significant lengths of new ditches suitable for voles will be part of the completed project at this location, so the net effect in the medium term will hopefully be a positive one for Ratty.

Happily, the biodiversity survey for WaDFAS didn't find any signs of American mink – the water vole's arch enemy – around Swine Bank.

Water vole at Swine Bank on the edge of Hull, April 2014

Water vole at Setting Dyke in Hull, May 2014

Baseline water vole survey at St Nicholas Fields LNR, York, carried out to inform the St Nicks Water Vole Habitat Improvement Project

Ann Hanson & Rob Masheder

Background

St Nicholas Fields Local Nature Reserve (LNR) is located about one mile from York City centre and comprises 24 acres of mixed grassland, woodland and scrub, with two small watercourses running through the site, Osbaldwick Beck and Tang Hall Beck. Water voles (*Arvicola amphibious*) were first recorded on the reserve in 2007 and have been recorded fairly regularly on both watercourses since 2011. The habitat along the watercourses is currently far from ideal for water voles, especially alongside Tang Hall Beck where the vegetation is dominated by nettle and Himalayan balsam.

Water voles are a UK Biodiversity Action Plan (BAP) priority species and are fully protected under the Wildlife and Countryside Act 1981 (as amended). They have suffered a catastrophic population decline in recent decades, mainly due to predation by non-native American mink (*Neovison vison*), but have also been affected by habitat loss, fragmentation and degradation.

The St Nicks Water Vole Habitat Improvement Project aims to enhance the available habitat and hopefully to increase the water vole population on St Nicholas Fields LNR. The project is funded by SITA and will run for 12 months from August 2014. This report forms a baseline survey of the water vole population carried out on the site by Yorkshire Mammal Group during October 2014.

Methods

Surveys were carried out by two experienced water vole surveyors from Yorkshire Mammal Group, aided by volunteers from St Nicks.

An initial attempt to survey the watercourses in September 2014 by using waders to survey for water vole burrows and latrines from within the

channel was abandoned for safety reasons due to very deep silt deposits and dense bank side vegetation.

The decision was made instead to use small rafts floating within the channels and tethered to the bank, as water voles will readily use such structures as locations for latrines and even feeding stations. This methodology is also suitable for use by trained volunteers, allowing for future repetition of the surveys. Brown rats (*Rattus norvegicus*) are also present on the watercourses at St Nicholas Fields LNR and will deposit droppings on water vole rafts. Therefore, it is important that volunteers are well trained in distinguishing rat and water vole droppings when carrying out this kind of survey.

21 water vole rafts were constructed and placed at 30m intervals along the watercourses, with 7 rafts in Osbaldwick Beck and 14 in Tang Hall Beck. This density will give a good indication of the sections of each watercourse currently being used by water voles, although it will not give an indication of the population size.

The rafts were tethered in place on 27/09/2014 and baited with a slice of apple. They were left in situ for one month and checked for droppings on 08/10/2014, 15/10/2014 and 25/10/2014. Any droppings were recorded and then removed at each checking session to avoid repeat counting.

Water vole raft in Osbaldwick Beck

Water vole droppings on raft

Results

Appendix 1 contains maps of the watercourses, raft locations, water vole dropping locations, and previous water vole sighting locations.

Table 1: Results of water vole raft surveys at St Nicholas Fields LNR, October 2014.

Date	08/10/2014	15/10/2014	25/10/2014
Osbaldwick Beck rafts			
1	Nil	Rat dropping x1	Nil
2	Nil	Water vole droppings x4 plus feeding remains	Nil
3	Water vole droppings x3	Nil	Nil
4	Nil	Not checked (access to island difficult)	Nil
5	Nil	Not checked (access to island difficult)	Nil
6	Nil	Possible rat droppings	Rat dropping x1
7	Nil	Probable water vole droppings x2	Nil
Tang Hall Beck rafts			
1	Water vole dropping x1	Nil	Water vole droppings x5
2	Water vole latrine (pile of squashed droppings)	Possible rat droppings	Water vole dropping x1
3	Nil	Possible rat droppings	Water vole latrine (pile of squashed droppings)
4	Nil	Nil	Nil

5	Nil	Nil	Nil
6	Nil	Nil	Nil
7	Nil	Water vole dropping x1	Water vole droppings x3; rat droppings x2
8	Water vole droppings x2	Nil	Nil
9	Nil	Nil	Nil
10	Rat dropping x1	Nil	Nil
11	Nil	Water vole droppings x10	Nil
12	Rat dropping x1	Water vole droppings x2	Nil
13	1x dropping – species indet.	Possible rat droppings	Nil
14	Rat dropping x1	Nil	Nil

Conclusions

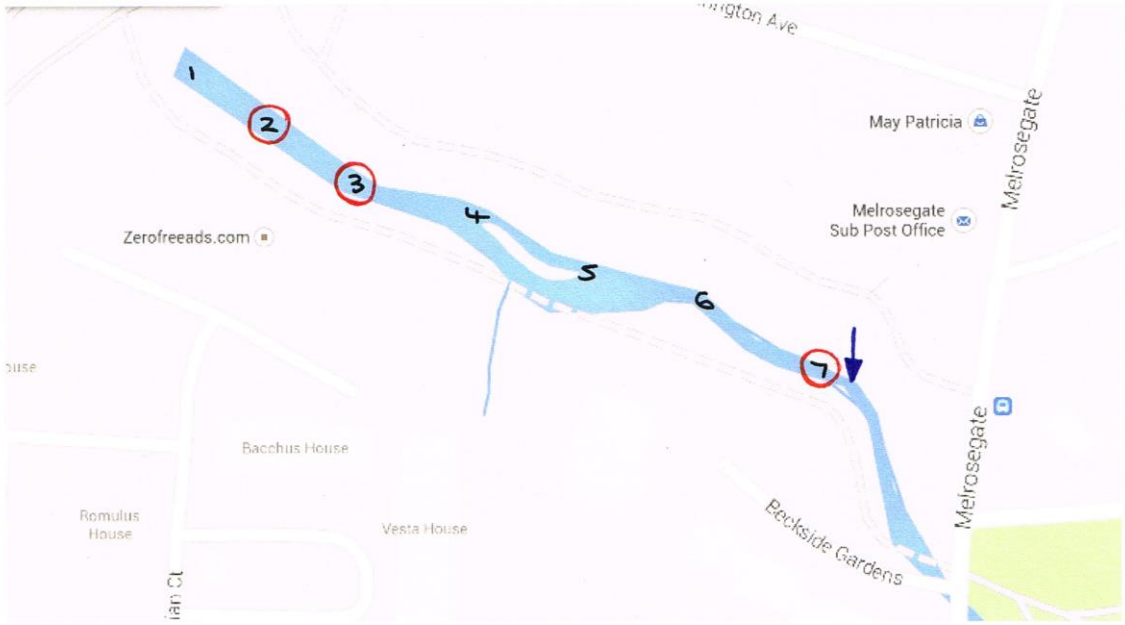
The baseline water vole survey at St Nicholas Fields LNR in October 2014 indicates that water voles are present at several locations on both Osbaldwick Beck and Tang Hall Beck. Signs of brown rats were also found at several locations on both becks.

The habitat along the becks is to be improved by planting a range of water vole food plants in the spring of 2015. Ground preparation will take place over the winter of 2014/2015 to avoid disturbance to water voles during the main breeding season (March to October).

The water vole raft survey should preferably be repeated in the spring of 2015, after the planting has taken place, as water vole activity tends to be at its peak during the early part of the breeding season. In addition, another survey in October 2015 at the end of the breeding season would be appropriate, as the results could be compared to the October 2014 survey. This will indicate if the planting scheme has influenced water vole distribution along the becks. Future spring and/or autumn surveys would also be useful in order to monitor water vole activity and distribution on the watercourses at St Nicholas Fields LNR.

Appendix 1

Osbaldwick Beck



Tang Hall Beck

KEY

1-7 & 1-14 Raft locations

O Water vole dropping locations, October 2014

↓ Previous water vole sightings

Harvest mice in the North York Moors National Park

Derek Capes

1) Introduction

At a meeting of the North York Moors Mammal Forum in February 2013, the subject of the current status of the Harvest Mouse (*Micromys minutus*) in the North York Moors was raised. It was felt that this was a topic which could usefully be addressed. As I had previously come across the remains of harvest mice in miscellaneous owl pellet analyses I had carried out from a variety of sites, two of which, Little Ayton and another site near Egton Bridge were in the National Park, I offered to spend some time on this work. This note gives an outline on the progress of the project after two years.

2) Method

Because I don't get the opportunity to get out in the field as often as I would like, I chose to carry on with owl pellet analysis as my preferred method as distinct from searching for their nests, because it allows me to do a large part of the work at home. I was fortunate in this respect in making the acquaintance of some bird ringing enthusiasts who were kindly prepared to collect samples of pellets for me during their owl ringing activities. The major difficulty was (and still is) obtaining sufficient samples of pellets from a variety of sites to cover the area under review.

Individual pellets were gently broken down in water in a kitchen flour sieve to wash out the dust and fine fur, hence it is much cleaner than doing them dry. Separation of the bones from the fur was done initially manually, followed by use of a new (to me anyway) bottom blown tuyere technique which utilises the difference in densities of bone and fur, and which also allows separation to continue unattended e.g., overnight, thereby increasing productivity. I also think this technique reduces the chances of failing to notice some of the smaller bones during the separation process.

3) Results

The results are shown in Table 1, and on a map, Figure 1.

The survey started in earnest in 2013, although prior to that 10 generally smaller sized samples (mean number of pellets/sample 13, range 2-36) from 7 sites within the National Park had been analysed from 2008 to 2012. Pellets from three of these sites produced evidence of harvest mice – 1 from Little Ayton (2009), 3 from near Chop Gate (2009), and 1 from near Egton Bridge (2012). These results have been incorporated into the project.

In 2013, 18 samples of pellets (mean number of pellets/sample 17, range 1-43) were analysed from 13 sites. Skeletal evidence of Harvest Mice was found from three of these sites – 5 from Sneaton Low Moor, 1 more from the same site as last year near Egton Bridge, and 2 from a site near Castleton.

Last year, 19 samples were taken (mean number of pellets/sample 28, range 10-50). Analysis of these pellets revealed six sites with harvest mice remains in their pellets – 4 from Hinderwell, 2 from Glaisdale, 6 from the same site near Egton Bridge, 1 from another site in Glaisdale, 1 from Ravenscar, and 2 from a site near Sneaton.

4) Comments

Recent maps showing the distribution of the harvest mouse in North Yorkshire are largely devoid of records for the North York Moors. Apart from a few locations along the coast, most published records are from the periphery of the National Park i.e., Ryedale, the Vale of York and the Tees Valley. The results to date have given some cause for optimism in that samples of pellets were obtained from 22 sites and 10 (45%) were found to contain harvest mice remains. Furthermore, it was interesting to note that positive results were obtained in three successive years from a site near Egton Bridge.

A site near Boulby has also had a continuing occurrence of harvest mouse records since at least the 1990's, and also in 2008. As owls were not known to regularly use the site, the author spent two afternoons in late summer 2014 searching for nests but without success. However, it was later reported that several nests had been found in this area in 2014 by a hedge maintenance team.

The work has also added to our knowledge of the distribution of our other native small mammals in the area, some common, others less so. For example, 14 more sites for water shrews have been identified.

As the map shows, the area covered is to date generally confined to the Esk Valley leaving all of the south and west areas of the National Park still to survey. To enable me to spread the net a little wider, I would be grateful to anyone who can supply owl (or other raptor) pellets, or information and contacts with people who have owl boxes or know of roosts, which may lead me to further pellet sources within the National Park.

Contact: Derek Capes
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January 2015

References

Bond, I (2010). The Harvest Mouse in North-East England. *Transactions of the Natural History Society of Northumbria* 70, 137-148

Bond, I (2012). Mammals, Amphibians and Reptiles of the North East. *Northumbrian Naturalist* 73, 133-135

Delaney, M J (Editor) (1985) *Yorkshire Mammals* University of Bradford, 118-122

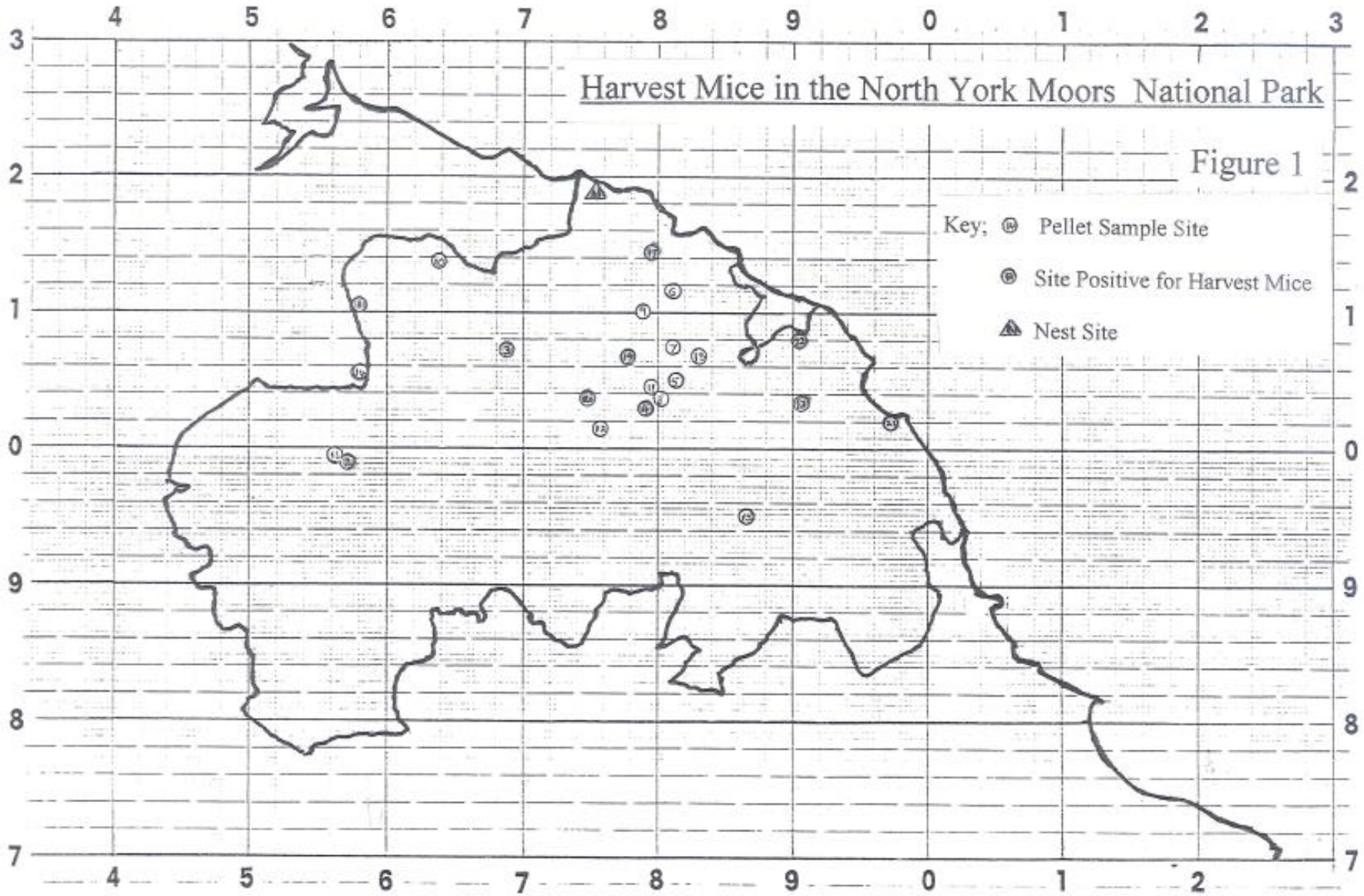
Oxford, G, Mortimer, J, Hanson, A, Pickles, S, Thomson, M, (2007), Preliminary mapping of terrestrial mammal distribution in North Yorkshire 1996-2006. *The Naturalist* 132, 73-98

Acknowledgements

My sincere thanks go to Brian Nellist, Wilf Norman, Geoff Myers and several others for their contributions of owl pellets, and to the many owners for granting access to their boxes and their kind cooperation.

Table 1: Numerical data on search for Harvest Mice remains in owl pellets

Site No.	No. of Samples	Total No. of Pellets	Sites Positive	No. of Harvest Mice Found
1	5	41	yes	1
2	1	36	yes	3
3	7	136	yes	2
4	3	80	yes	8
5	2	15	no	0
6	3	56	no	0
7	5	172	no	0
8	1	24	no	0
9	1	5	no	0
10	1	2	no	0
11	1	31	no	0
12	2	3	no	0
13	1	17	yes	5
14	1	16	no	0
15	2	31	no	0
16	1	11	no	0
17	1	47	yes	4
18	1	43	no	0
19	2	59	yes	2
20	2	74	yes	1
21	1	38	yes	1
22	1	21	yes	2


Harvest Mice in the North York Moors National Park
Figure 1
Key;
Pellet Sample Site
Site Positive for Harvest Mice
Nest Site
4
5
6
7
8
9
0
1
2
3
7

Filey Dams Nature Reserve small mammal survey

Gill Sinclair

YMG member Gill Sinclair helped out with the some small mammal trapping at Filey Dams NR on 18th October 2014, and sent us this photo of a rather disgruntled-looking field vole, which nonetheless sat calmly to have its photo taken (as field voles do).

Almost every trap had something in it, which was testament to the time spent by Jack Whitehead pre-baiting the traps. However the water shrews known to be on the site remained elusive on the day Gill was there.

Experiencing the “autumnal epidemic”

Sue Hull & Jack Whitehead

A report on a weekend trapping session held at Filey Country Park which delivered more shrews than usual and a high death rate.

In September 2014 we held a public trapping weekend on behalf of Friends of Filey Parks. This has become an annual event and attracts adults and children who gain an insight into the small animals that live in the park.

Thirty Tube traps and fourteen Longworth traps were placed in mixed habitats (hedgerows, rank grassland and scrub) on 10th September loaded with bedding, mealworms and a bird seed mix and the traps were locked open. The traps were checked, re-baited and triggered on the Friday evening (12th). Processing began at 9am on Saturday and the whole process was repeated for the Sunday morning, after which the traps were removed. Weather conditions were favourable, dry and remained above 10°C throughout.

As previously at this location the trap rate was high at around 63% and 74 animals of seven species were trapped over the two sessions. Sadly 21 of these were dead shrews and as the body count began to rise we became anxious over the reaction of the spectators; we need not have worried, the children in particular were as interested in dead specimens as live ones and relished the opportunity of examining tiny feet and whiskers.

Bank Vole was by far the most abundant species trapped over the two sessions, followed by Common Shrew and Wood Mouse. The sheer number of shrews caught was surprising (sixteen one day and seventeen the next). In all cases shortage of food does not seem to be the cause of death as viable pupae were found in each trap and all five Water Shrews (which also feed on mealworms, and being heavier would require more food) were trapped alive. The weights of live and dead Common Shrews were similar; no live Pygmy Shrews were trapped to allow comparison.

Traps were attended within fourteen hours, bedding remained dry throughout and the weather was kind. We did not trap at this location again in 2014 but did continue with a constant-effort trap at Filey Dams where, over two weekends using the same 44 traps, we caught one live Common Shrew, and three live and one dead, Water Shrew.

Since this incident we have increased the amount of pupae in the traps but we do suspect that this was an isolated case of mainly adult deaths as would be expected at this season as during the weekend several dead shrews were noted independent of our activity. A full account of the trap has been submitted to Natural England in compliance with the General Shrew Licence.

Sara Churchfield discusses the mortality of Shrews in the Mammal Society booklet, describing how the rapid decline in numbers in autumn has always been of great interest to naturalists and, thought to be due to disease or a parasite, attracted the ‘autumnal epidemic’ tag. In fact shrews rarely live to

experience a birthday and it is mainly the juveniles that carry on through the winter to breed next season. Adults apparently die from old age: worn teeth, incomplete moult and an inability to compete with younger individuals.

Thanks to Hilary Cunningham-Atkins and Mike Day, who helped in the field, handled the recording and cleaned the traps afterwards.

References

Churchfield S. (1986) *Shrews* The Mammal Society

Harris S. & Yalden D.W. (2008) *Mammals of the British Isles: Handbook 4th edition* The Mammal Society

Combined Trap Results: 13th and 14th September 2014

Species	Total number trapped alive	Total number trapped deceased	Mean weight alive (standard deviation)	Mean weight deceased (standard deviation)
Bank vole	26	-	16.6 (3.4)	-
Field vole	3	-	25.7 (7.6)	-
Harvest Mouse	2	-	5.7 (0.3)	-
Wood Mouse	10	-	21.8 (4.1)	-
Water Shrew	5	-	9.4 (1.1)	-
Common Shrew	7	17	7.3 (0.4)	7.2 (0.5)
Pygmy Shrew	-	4	-	3.8 (0.2)

Checking the trap Photo: Hilary Cunningham-Atkins

Constant effort trap at Filey Dams Nature Reserve

Sue Hull & Jack Whitehead

For many years we have been running an annual mammal trap during September at the Filey Dams Nature Reserve. This has provided some interesting long-term data, but we began to wonder if we were missing trends of abundance of each species over the seasons. So, last year we decided to run a constant effort trap at Filey Dams to determine if we could track population changes and breeding peaks of small mammals by sampling at the same site every month with a limited number of traps.

Every month, between April and October inclusive, 33 traps with hay bedding were pre-baited with pupae and grain, and then positioned in fixed locations. The fixed locations were selected to cover the main habitat types at Filey Dams. Traps were positioned in a small woodland, edges of ditches adjacent to the ponds and along a hedge line with each trap position clearly marked so that traps could be located in the same area each month. Traps were set on Wednesday evening and locked open, checked nightly and finally set to trap on the Friday evening and clean bedding and bait was stocked up. After processing the mammals on the Saturday morning, all traps were re-baited and set to trap Saturday night with the mammals

processed on Sunday morning. All traps were then removed and cleaned ready to be reinstated the following month. The small mammals were identified, sexed and weighed (apart from the ones that managed to escape before weighing). Where animals were small and sex could not be determined with any certainty we recorded these individuals as juveniles. We followed the same procedure every month in order to determine how the numbers and the proportion of adults to juveniles varied at that site between April and October.

Overall 397 individual mammals were trapped across the seven months at Filey Dams. By far the commonest species was the Bank Vole (*Myodes glareolus*) with a total of 203 individuals trapped throughout the period (Table 1). Wood Mouse (*Apodemus sylvaticus*) was the next most abundant with a total of 157 individuals, and the remaining species occurred at far lower numbers and did not occur in each month (Table 1). Only two Harvest Mice (*Micromys minutus*) were trapped, both in April and Water Shrew (*Neomys fodiens*) occurred as a single adult individual in July and four juveniles in September.

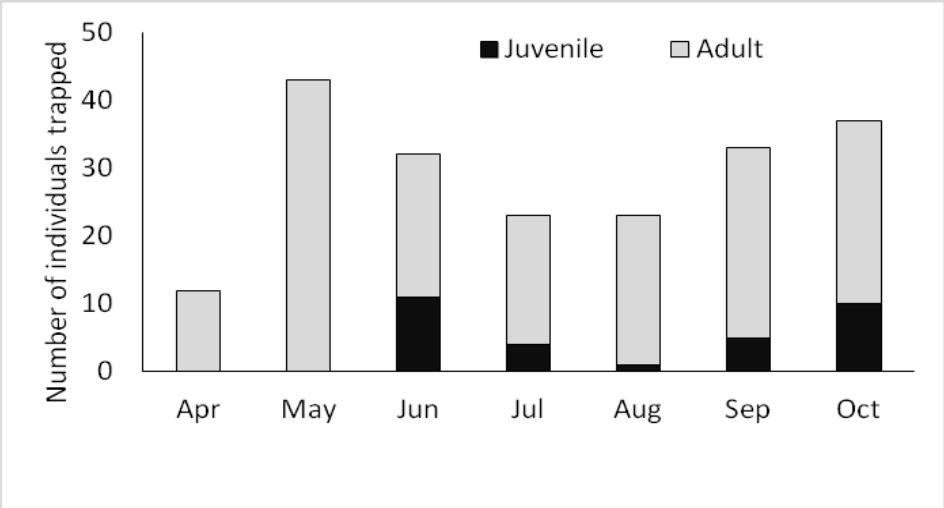
Table 1. Summary of the number of individuals of each species trapped over two nights each month at Filey Dams.

Mammal Species	**April**	**May**	**June**	**July**	**August**	**Sept**	**Oct**
Myodes glareolus	12	43	32	23	23	33	37
Microtus agrestis	0	2	1	1	5	2	2
Sorex araneus	9	1	4	1	1	1	0
Neomys fodiens	0	0	0	1	0	4	0
Apodemus sylvaticus	20	28	19	29	26	15	20
Micromys minutus	2	0	0	0	0	0	0

Overall, Bank Vole numbers peaked in May (Table 1) and their numbers also increased towards the end of the trapping period (Sept-Oct). July saw the highest number of Wood Mouse trapped but interestingly, numbers were lower in June and September. Field Vole (*Microtus agrestis*) remained scarce throughout the year, with the highest count in August. Shrews were not trapped very often; April saw the highest number of Common Shrews but otherwise it was only the occasional individual turning up in the traps (Table 1).

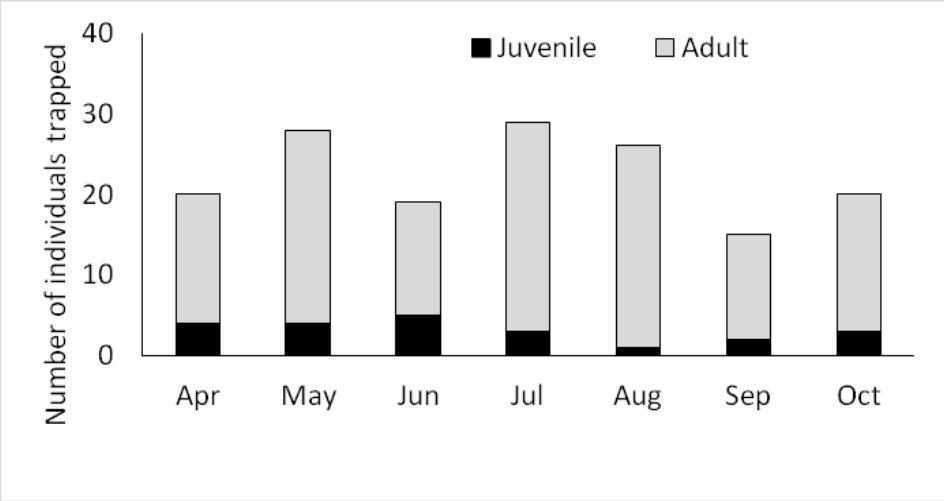
Whilst some species were trapped irregularly, we obtained sufficient data on both Bank Vole and Wood Mouse to have a look at the patterns of adult and juvenile numbers trapped between April and October to determine if the fluctuations in numbers could be related to the appearance of juveniles within the population. Figure 1 below shows the number of Bank Voles trapped each month and the proportion of them that were juveniles. Most striking is the total absence of juveniles until June and then a decline until autumn when the number of juveniles trapped increased.

Figure 1. The number of Bank Voles caught each month showing the proportion of adults and juveniles found.



Wood Mouse, Figure 2 below, showed no distinct pattern; they had already reproduced by April when the trap commenced, and apart from fewer juveniles observed in August, they formed a similar proportion of the individuals trapped throughout the sampling period.

Figure 2. The number of Wood Mice caught each month showing the proportion of adults and juveniles found.



The low number of individuals observed in spring for both species, could reflect the mortality of the previous year's adults during the winter period (The Mammal Society, 2014a, b). Few adult Wood Mice survive to the following spring and the previous year's young generally start breeding in March, however they may also breed throughout mild winters if food is plentiful. So with last year's mild winter it is possible they started breeding quite early. They can start breeding at 12g body weight, so it is entirely feasible that the young born in April may have themselves produced offspring by autumn, although it is generally thought that they produce smaller litters (The Mammal Society, 2014b). From both Figure 1 and Figure 2 it seems that the number of Bank Voles increased as the number of Wood Mice declined, however this may just be an artefact of the nature of the collection of the data. The traps are certainly a first come first served source of data – and may not reflect the actual numbers of each species present, merely the fact that the more nocturnal Wood Mouse may be under represented as the Bank Voles enter the traps first. Whilst Field Voles predominate in the owl pellets collected from the reserve, they are notoriously trap shy at this site and far more abundant in the Barn owl diet than appears from the trap data.

Whilst we have shown some seasonal patterns in the number and proportion of juveniles of the different species from this constant effort trap, it is fair to say we probably needed more traps to ensure larger sample sizes to find out more about the other species. With so few numbers, it is difficult to comment on the dynamics of their populations over time.

We would like to thank Hilary Cunningham-Atkins and Mike Day for their help with the trapping and pre-baiting throughout the sampling period.

References

The Mammal Society (2014a). The Bank Vole.
http://www.mammal.org.uk/mawsespeciesguides/bank-vole

The Mammal Society (2014b). The Wood Mouse
http://www.mammal.org.uk/mawsespeciesguides/wood-mouse

Small mammal monitoring: comparing the experience of using Longworth Traps and BioEcoSS Tube Traps

Hilary Cunningham-Atkins

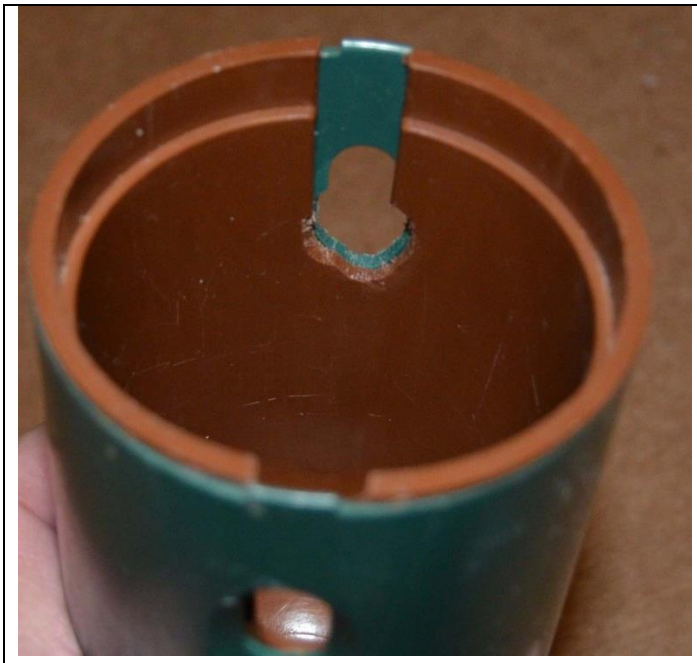
In 2014 Jack Whitehead of Filey Bird Observatory and Group (FBOG) Mammal Group purchased 30 BioEcoSS Tube Traps which were used on 10 weekends of mammal trapping between April and October 2014. In previous years the areas had been surveyed using Longworth Traps. In 2014 in addition to tube traps, from April to the end of August 3 Longworth Traps were used and in September and October 14 Longworth Traps were used. Whilst the group did not carry out a scientific comparison of traps it was felt that the experience of using the two types of trap was worth reporting.

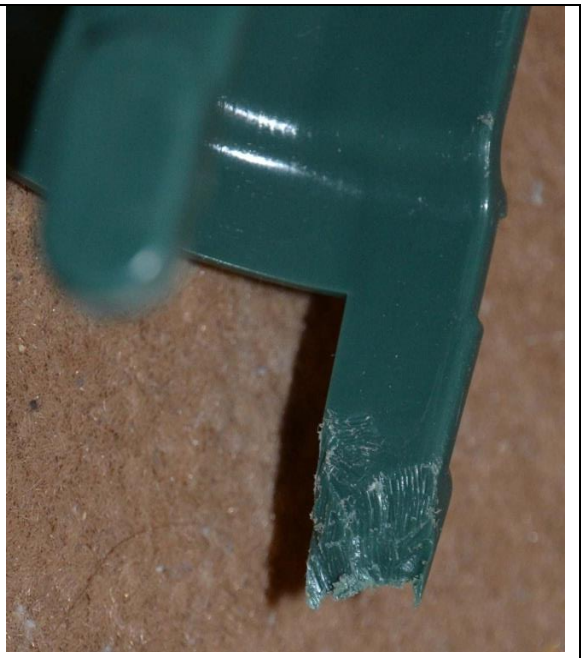
The Longworth Mammal Trap has been around since 1949 (The Hoopoe, 2010) and is widely used by mammal groups for monitoring small mammals. Other, cheaper traps have been available but none has been a serious competitor to the Longworth. However, that may be set to change as groups test out the BioEcoSS Tube Traps. The Tube Trap was designed by Simon Poulton whilst running the National Small Mammal Monitoring Scheme (Biological & Ecological Statistical Services, 2015). Simon wanted to provide a simple, low-cost trap that would make traps more accessible to volunteers. The new trap was launched in 2012.

The popularity of Longworths means that most people will be familiar with their operation. The aluminium trap consists of two oblong parts – a tunnel, which houses the door tripping mechanism, and a nest box which attaches to the end of the tunnel. The nest box provides a large space for food and bedding material. The two parts are connected by adjusting wires and flaps and inserting the flanged end of the tunnel into the nest box. Longworths can be difficult to assemble for inexperienced users and the mechanism may wear with age leading to false drops. The aluminium casing does not provide any insulation against cold or heat and condensation can be an issue. Despite being made of metal, animals have been known to chew their way out of traps.

The plastic Tube Trap also consists of two parts, with a double skinned nest box and tunnel that is smaller than the Longworth. The tunnel clips into the nest box with a push-click fastening. The trap is a round tube as

the name implies and has a swivel foot that prevents it rolling around. The door tripping mechanism is in a separate compartment which is designed to be inaccessible to the animals. The traps are simple to put together and to set. However it can be difficult for users with small hands to separate the tunnel from the nest box and this can lead to animals escaping. Small animals have also managed to get into the door tripping compartment and become stuck. Whilst none have been injured, extricating them has been tricky. The double skinned nest box provides excellent insulation and whilst quite small seems perfectly adequate. The smooth inside of the trap is designed to avoid gnawing however animals do still manage to gnaw parts of the trap and the push-click fastening seems particularly vulnerable with one having been gnawed through completely by the end of the trapping season.





The big difference between the two traps is in cost, with Longworths at between £50-£60 per trap and Tube Traps at around £21 with a discount for bulk buys. For both the cost of carrying cases and carriage must be added.

Longworths are known to be durable and may last for up to 30 years, whilst the durability of Tube Traps is still unknown. The door mechanism of Tube Traps relies on rubber bands which need checking and adjusting regularly. Replacement bands are expensive however experimenting with other materials has shown that cheaper sheering elastic may be used instead and this is readily available from local shops.

A problem was encountered with Tube Trap doors sticking in wet weather but following feedback a new modified door has been produced and traps can be upgraded at a cost of £2.95 per door plus carriage. Other options would be to cover the traps or to add a plastic dimple to the door, purchasable at around 10p each.

Cleaning of Tube Traps proved more difficult than Longworths as debris from the nest box enters the door mechanism compartment, which is fiddly to open and clean. This process can also interfere with the door opening mechanism leading to further maintenance requirements.

Both types of trap can be pre-baited and can have the trip weight adjusted. Tube Traps are adjustable to min 3g – suitable for Pygmy Shrew, a species that was trapped on both days at one location.

Tube Traps are easier to transport than Longworths, which is beneficial when trapping some distance away from transport. Both allow for the tunnel to be placed inside the nest box for transportation.

False drops were felt to be less of an issue with the Tube Traps than Longworths. However, this may have been because the traps were new and the Longworths in use were old. Over the season, with trapping taking place in three different sites, some of the Tube Traps had a 100% success rate whilst others were as low as 70% on false drops. In one location slugs were the main cause of false drops and in another location it was possible local domestic animals or foxes were to blame. However, the clear numbering of traps and the changes in location indicate that there was an issue with individual traps, as may be seen in Table 1.

Table 1

Trap #	# False Drops	**Trap #**	# False Drops	**Trap #**	# False Drops
1	2	**11**	1	**21**	5
2	2	**12**	5	**22**	1
3	3	**13**	3	**23**	1
4	1	**14**	2	**24**	6
5	2	**15**	2	**25**	2
6	1	**16**	2	**26**	2
7	1	**17**	0	**27**	2
8	1	**18**	0	**28**	4
9	2	**19**	1	**29**	2
10	2	**20**	3	**30**	4

TOTAL 65 false drops out of possible 630 = 10.32%

Overall the statistics show that whilst the three old Longworths performed badly, the 11 borrowed Longworths had a better trap rate than the tube traps (Table 2). However, as noted before, FBOG did not perform a scientific comparison and differences could be due to location as well as traps. Certainly slugs were more of an issue with Tube Traps.

Table 2

Trap	# Sessions used		TOTAL	Percentage of possible traps
31 Tube Traps	21	False Drop	65	10.32%
		No Trap	59	9.37%
3 Longworth Traps	18	False Drop	16	29.63%
		No Trap	5	9.26%
Additional 11 Longworth Traps	6	False Drop	3	4.55%
		No Trap	7	10.61%

In summary, the FBOG Mammal Trapping Team was happy with the performance of the Tube Traps and will be using them again in 2015. Experience has led to regular checking of elastic bands for the door mechanism and an understanding of suitable conditions for their use. It is likely that future traps will be carried out with a combination of Tube Traps and Longworths.

References

Biological & Ecological Statistical Services (2015) The BioEcoSS Tube Trap. Online available from http://bioecoss.azurewebsites.net/Content/Products/TubeTrap/TubeTrap.aspx (Accessed 21/1/15)

Gurnell, J., Flowerdew, J.R. (2006) Live Trapping Small Mammals. London, The Mammal Society.

The Hoopoe (2010) Celebrating 60 years and Counting of the Longworth Mammal Trap (10 March 2010). Online available from http://blog.nhbs.com/wildlife_equipment/celebrating-60-years-and-counting-of-the-longworth-mammal-trap/ (Accessed 21/1/15)

Small mammal and bat surveys at Raikes Road Burial Ground, Skipton

Ann Hanson

Introduction

Raikes Road Burial Ground is located on the outskirts of Skipton in North Yorkshire (Grid ref. SD987520). The burial ground was in use between 1846 and 1876, with burials including Rudyard Kipling's grandparents, the father of one of the founders of M & S, and a veteran of the Battle of Waterloo, amongst others. After it closed, the burial ground remained undisturbed behind its boundary walls for over a century and became a haven for wildlife. More recently, a volunteer group, the Friends of Raikes Road Burial Ground, have started work with the help of Skipton Town Council restoring the burial ground and looking into both the people buried there and the wildlife using the site. YMG were asked to carry out small mammal and bat surveys of the burial ground so that wildlife can be taken into account during management decisions. In addition, the local RSPB Wildlife Explorers joined us to help with the mammal survey.

Small mammal survey – Methods

Fifty Longworth traps were placed in a variety of habitats within the burial ground, baited with wheat, peanuts, sunflower seeds, carrots and blowfly pupae, with a ball of hay for bedding.

Trap locations:

1. Long grass between gravestones in the centre of the site (10 traps).
2. Fairly open habitat around a small wall near the north-west boundary of the site (12 traps).
3. Long grass between gravestones in the north-west corner (8 traps).
4. Beneath mature trees alongside the south-west boundary wall adjacent to Raikes Road (5 traps).
5. Long grass under trees in the centre of the site (10 traps).
6. Under a dead tree and in a brash pile against the north-east boundary wall (5 traps).

Traps were set on the evening of Saturday 12th July and checked on Sunday 13th July from 10am onwards.

Results

Summary of small mammals captured at Raikes Road Burial Ground, Skipton, July 2014.

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
Bank vole	0	0	1	0	1	2
Field vole	1	0	2	1	2	0
Common shrew	2	0	3	1	0	0
Water shrew	0	0	0	0	2	0

Appendix I shows a comprehensive table of results for this trap.

Discussion and conclusions

Four species of small mammal were caught at Raikes Road Burial Ground, including bank vole (*Myodes glareolus*), field vole (*Microtus agrestis*), common shrew (*Sorex araneus*) and water shrew (*Neomys fodiens*). The three most commonly captured species in areas with a good ground cover of long, tussocky grass (Sites 1, 3, 4 and 5) were field vole, common shrew and bank vole. Only bank voles were caught under the dead tree and in the brash pile against the north-east boundary wall (Site 6) and no small mammals were caught at Site 2, an area with very little ground cover. The two juvenile water shrews caught at Site 5 were of special interest, as the nearest water is Springs Canal which is located about 200m to the south-east of the burial ground. However, there is a boggy area within the cemetery, probably caused by blocked land drains, which may provide suitable invertebrate prey for water shrews. In addition, juvenile water shrews are often found well away from water during the summer months when they are dispersing from their parents' territory. More surprising is the lack of wood mice (*Apodemus sylvaticus*) in the traps, as the habitat in the burial ground is suitable and a wood mouse was seen running into the brash pile when the traps were being checked. However, wood mice tend to be mainly nocturnal and the heavy overnight rain may have stopped them from exploring the traps, whereas the other species that were caught tend to be active during the day as well as at night. Other mammal signs located in the burial ground included a fox (*Vulpes vulpes*) scat and rabbit (*Oryctolagus cuniculus*) burrows.

The survey results show how valuable the long, un-managed, tussocky grass habitat within the burial ground is for small mammals and areas of this habitat should be retained wherever possible. These areas should

remain un-cut unless scrub starts to encroach. If cutting is required it should be carried out in late summer, and on a rotation to ensure that enough long grass remains each winter to provide a refuge for small mammals and invertebrates. The boggy patch in the burial ground should be retained if possible and would be a suitable area to plant native wild flowers such as snake's head fritillary (*Fritillaria meleagris*), cuckoo flower (*Cardamine pratensis*) and ragged robin (*Lychnis flos-cuculi*).

Bat survey – Methods

Two experienced bat surveyors with heterodyne and frequency division bat detectors surveyed the burial ground for bat activity on 23rd August 2014 from 8pm to 9.45pm (sunset was at 8.19pm). The weather was warm and dry with a slight breeze and there was a plentiful supply of midges under the trees in the cemetery.

Results

Bat activity at Raikes Road Burial Ground, Skipton, August 2014.

Time	Species	Activity
8.25pm	Soprano pipistrelle	Commuting from the north-west, possibly from a nearby roost, and foraging in the burial ground.
8.50pm	Common pipistrelle	Commuting from the south-west and foraging in the burial ground.
8.54pm	Noctule	Commuting over the burial ground from the south-west.
9.19pm	Brown long-eared	Foraging under mature trees near the north-east boundary.

Discussion and conclusions

Although no bat roosts were located in the burial ground during this one off survey, the site does contain several mature trees with potential for roosting bats and care should be taken when carrying out management work on the trees. Both common pipistrelles (*Pipistrellus pipistrellus*) and soprano pipistrelles (*Pipistrellus pygmaeus*) were recorded commuting to the burial ground to feed under the trees. In addition, a single noctule bat (*Nyctalus noctula*) commuted across the site and a brown long-eared bat (*Plecotus auritus*) was recorded feeding under mature trees near the north-east boundary. The site is obviously used for foraging by several species of

bats and the erection of some bat boxes on the mature trees within the burial ground may result in roosting bats. The Bat Conservation Trust website has details of bat boxes and where to site them.
See http://www.bats.org.uk/pages/bat_boxes.html

Thanks are due to Les Chandler of Skipton Town Council and the Friends of Raikes Road Burial Ground for inviting us to Skipton, and to the RSPB Wildlife Explorers for helping with the mammal survey. Many thanks to Rob Masheder for helping with both the mammal survey and the bat survey, and thanks to Les and Chris for the excellent fish and chips!

Appendix I

Table of results: small mammal survey at Raikes Road Burial Ground, Skipton, July 2014.

Weather: Heavy rain overnight; warm, dry, cloudy morning.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
Long grass (1)	Field vole	F	A	32.0
Long grass (1)	Common shrew	?	A	8.0
Long grass (1)	Common shrew	?	A	8.0
Long grass (3)	Common shrew	?	A	9.0
Long grass (3)	Bank vole	M	A	25.0
Long grass (3)	Common shrew**	?	A	?
Long grass (3)	Common shrew	?	A	10.0
Long grass (3)	Field vole	F	A	35.0
Long grass (3)	Field vole	M	SA	25.0
Mature trees (4)	Common shrew	?	A	9.0
Mature trees (4)	Field vole	M	SA	24.0
Long grass/trees (5)	Water shrew	?	J	12.0
Long grass/trees (5)	Water shrew	?	J	12.0
Long grass/trees (5)	Field vole	F	A	33.0
Long grass/trees (5)	Field vole	M	A	34.0
Long grass/trees (5)	Bank vole	F	SA	16.0
Dead tree/brash (6)	Bank vole	M	J	13.0
Dead tree/brash (6)	Bank vole	F	SA	18.0

* M = male; F = female; A= adult; SA = subadult; J = juvenile
**Escaped during handling

Small mammal surveys at Three Hagges Jubilee Wood, Escrick

Ann Hanson

Introduction

Three Hagges Jubilee Wood consists of 25 acres of wood-meadow created on ex-arable land at Escrick Park Estate, near York (grid ref. SE626395). The area was sown with a wild flower meadow mix in May 2013, with 31 different species of native trees and shrubs being planted in various coups within the site during December 2012 and 2013. 40% of the area is to be managed as open meadow with annual cutting for hay. A pond has also been created as part of the project at the northern end of the site. The wood-meadow is managed by the Hagge Woods Trust (see www.haggewoodstrust.org.uk), with a considerable amount of research and monitoring being carried out on the site. YMG will contribute to the project by carrying out annual surveys of small mammals to see how their populations respond as the wood-meadow matures.

Methods

Fifty Longworth traps were placed in a variety of habitats across the site, baited with wheat, peanuts, sunflower seeds, carrots and blowfly pupae, with a ball of hay for bedding.

Trap locations (see map in **Appendix I**):

1. Coup 12 (downy birch and alder), with un-cut dense vegetation beneath the young trees (10 traps).
   Grid ref. SE6279939456 to SE6776939422
2. MG4 meadow, cut for hay July 2014 with light re-growth (10 traps).
   Grid ref. SE6273839477 to SE6269639464
3. Coup 9 (oak, hazel and wild orchard), cut for hay June 2014 with substantial re-growth (10 traps).
   Grid ref. SE6275039502 to SE6273439541
4. Coup 6 (oak, hazel, wych elm), with un-cut dense vegetation beneath the young trees (10 traps).Grid ref. SE6267239586 to SE6265239623
5. Pond edge. Pond constructed spring 2014. Area around pond cut July 2014. Dense un-cut vegetation at bank top (10 traps).
   Grid ref. SE6268139929 to SE6269439938

Traps were set on the evening of Friday 8th August and checked on Saturday 9th August from 9.30am onwards. Traps were re-set on the Saturday evening and checked on Sunday 10th August from 9.30am onwards.

Results

Summary of small mammals captured at Three Hagges Wood, Escrick, August 2014.

	Site 1		Site 2		Site 3		Site 4		Site 5	
	Sat	Sun	Sat	Sun	Sat	Sun	Sat	Sun	Sat	Sun
Wood mouse	2	2	0	0	2	1	1	2	4	3
Bank vole	2	0	1	1	3	1	2	0	2	0
Field vole	0	2	0	1	1	2	0	1	1	1
Common shrew	1	0	0	0	1	2	0	1	0	0
Water shrew	0	0	0	0	0	0	1	1	0	0

Appendix II shows a comprehensive table of results for this trap.

Discussion and conclusions

Five species of small mammal were caught at Three Hagges Wood, Escrick, including wood mouse (*Apodmus sylvaticus*), bank vole (*Myodes glareolus*), field vole (*Microtus agrestis*), common shrew (*Sorex araneus*) and water shrew (*Neomys fodiens*). The majority of captures were wood mice and bank voles, with moderate numbers of field voles, occasional common shrews and a single water shrew. The animals were not marked, so several individuals captured on the Sunday morning may well have been recaptures, including the water shrew (the increase in weight between Saturday and Sunday morning may have been due to the amount of pupae eaten whilst in the trap or could have been due to rain affecting the weighing balance and bag).

Small mammals were captured in reasonable numbers at all locations with dense vegetation (Sites 1, 3, 4 & 5), with just a couple of voles being caught at Site 2 where the meadow had been recently cut and the vegetation was still relatively short. This emphasises the importance of cutting grassland on a rotation to ensure that enough long, dense vegetation remains to maintain small mammal populations.

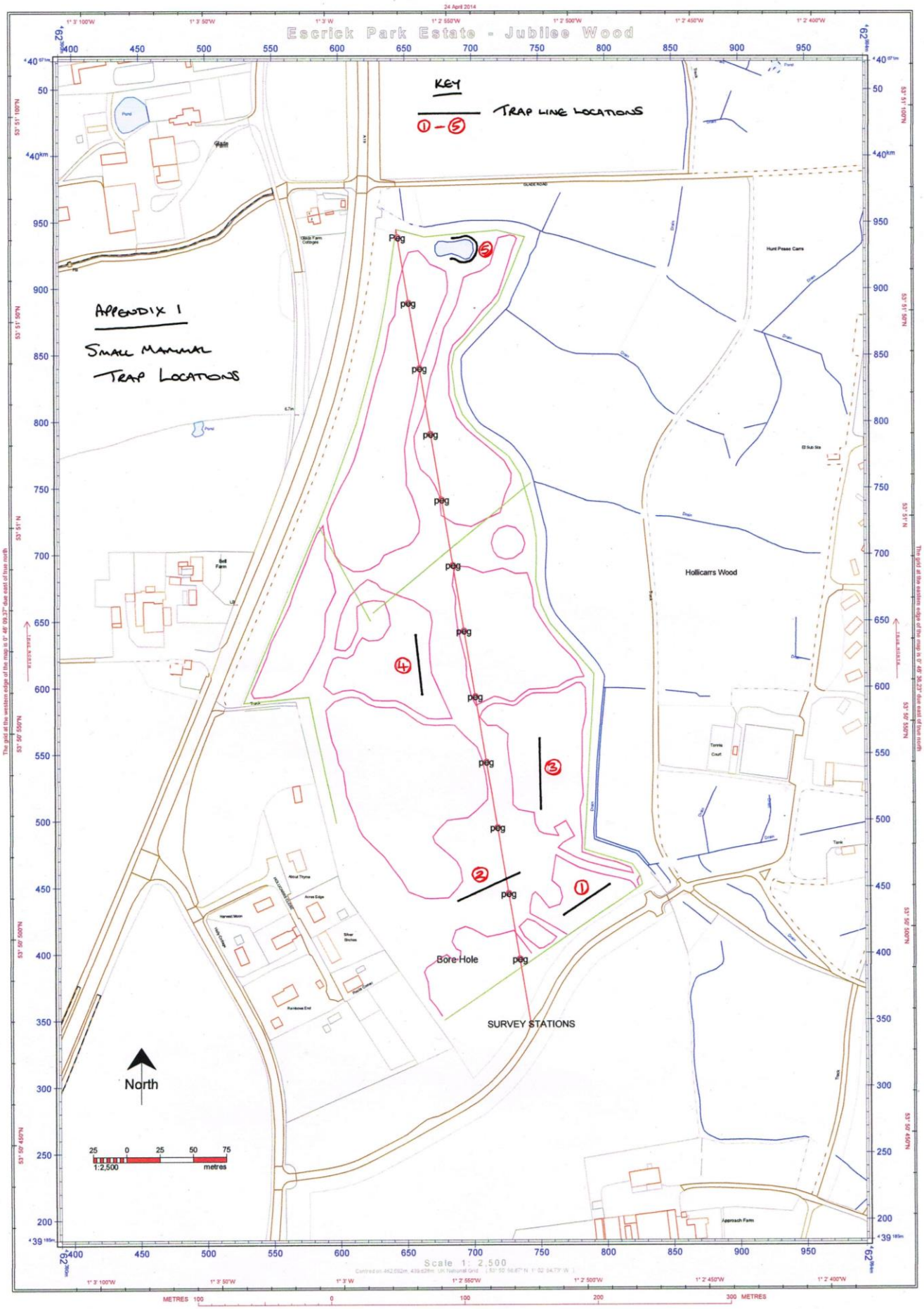
All the species of small mammals captured during the survey will already have been present in the arable field margins, woodland and ditches surrounding the site, but it is noticeable at this early stage in the development of the wood-meadow that the omnivores (wood mouse and bank vole) are most abundant, the herbivores (field vole) also relatively abundant, and the carnivores (common shrew and water shrew) less abundant. This is possibly because, although the vegetation has got off to a good start on the site, the invertebrate populations will take a while to colonise the various habitats, and it will be interesting to see how the shrew populations respond in future years. Another important factor to note is that field vole populations in the UK cycle, with peaks every three to five years, and 2014 was a peak year for this species. The water shrew was especially pleasing to find as this species is less well recorded and the pond on the site should provide excellent water shrew habitat once colonised with vegetation and invertebrates. The three bank voles that were born in a trap on the pond edge were left in situ with the trap locked open. The trap was removed after a couple of weeks when the female vole had taken both her babies and all the bedding to a more natural location!

A bat survey of Three Hagges Wood was also carried out on the evening of Saturday 9th August, using heterodyne and frequency division bat detectors. Some common pipistrelles (*Pipistrellus pipistrellus*) were picked up flying across the site from the south-west just after sunset, which are assumed to have come from a known roost in a nearby building. A walk around the site recorded several further common pipistrelles foraging along the edges of the site, especially at the northern end near the new pond.

Other mammals recorded on the site during the survey weekend were roe deer (*Capreolus capreolus*), mole (*Talpa europaea*) and hedgehog (*Erinaceus europaeus*).

Thanks are due to the Hagge Woods Trust for inviting us to take part in this interesting project, especially to Lin Hawthorne for all her help both before and during the trapping sessions. Thanks also to Rob Masheder, Mary Youngman and Peter Franklin of YMG for helping with the survey and to everyone who gamely turned up and participated so enthusiastically on a very wet Sunday morning!

Appendix I


Escrick Park Estate - Jubilee Wood
KEY
TRAP LINE LOCATIONS
①-⑤
APPENDIX 1
SMALL MAMMAL
TRAP LOCATIONS
Peg
peg
Hollicarrs Wood
Bore Hole
SURVEY STATIONS
North
25 0 25 50 75
1:2,500
metres
Scale 1: 2,500

Field vole
(Photo: Lin Hawthorne)

Trapping at Three Hagges Wood
(Photo: Lin Hawthorne)

Appendix II

Table of results: small mammal survey at Three Hagges Wood, Escrick, August 2014.

Weather: Heavy rain Friday night; warm, dry and sunny Saturday morning; heavy rain Sunday morning.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
09/08/2014				
Coup 12 (Site 1)	Wood mouse	F	A	29.0
Coup 12 (Site 1)	Common shrew	?	A	7.0
Coup 12 (Site 1)	Wood mouse	M	A	24.0
Coup 12 (Site 1)	Bank vole	F	A	17.0
Coup 12 (Site 1)	Bank vole	M	A	26.0
MG4 meadow (Site 2)	Bank vole	F	SA	17.0
Coup 9 (Site 3)	Wood mouse**			
Coup 9 (Site 3)	Bank vole	F	A	31.0

Coup 9 (Site 3)	Wood mouse	M	SA	15.0
Coup 9 (Site 3)	Bank vole	M	SA	20.0
Coup 9 (Site 3)	Bank vole	M	A	24.0
Coup 9 (Site 3)	Common shrew	?	SA	6.0
Coup 9 (Site 3)	Field vole	M	A	34.0
Coup 6 (Site 4)	Bank vole	F	A	28.0
Coup 6 (Site 4)	Water shrew	?	A	17.0
Coup 6 (Site 4)	Bank vole	M	A	24.0
Coup 6 (Site 4)	Wood mouse	M	A	26.0
Pond edge (Site 5)	Field vole	F	A	29.0
Pond edge (Site 5)	Wood mouse	M	SA	24.0
Pond edge (Site 5)	Wood mouse	M	SA	22.0
Pond edge (Site 5)	Wood mouse	M	J	14.0
Pond edge (Site 5)	Bank vole***	F	A	23.0
Pond edge (Site 5)	Wood mouse	F	SA	21.0
Pond edge (Site 5)	Bank vole	M	SA	19.0
10/08/2014				
Coup 12 (Site 1)	Wood mouse	F	A	25.0
Coup 12 (Site 1)	Wood mouse	M	A	24.0
Coup 12 (Site 1)	Field vole	F	A	26.0
Coup 12 (Site 1)	Field vole	M	J	16.0
MG4 meadow (Site 2)	Field vole	M	SA	26.0
MG4 meadow (Site 2)	Bank vole	F	A	22.0
Coup 9 (Site 3)	Wood mouse	M	SA	16.0
Coup 9 (Site 3)	Bank vole	F	A	30.0
Coup 9 (Site 3)	Field vole	M	A	33.0
Coup 9 (Site 3)	Field vole	M	SA	20.0
Coup 9 (Site 3)	Common shrew	?	A	8.0
Coup 9 (Site 3)	Common shrew	?	A	10.0
Coup 6 (Site 4)	Field vole	M	A	36.0
Coup 6 (Site 4)	Wood mouse	F	A	27.0
Coup 6 (Site 4)	Wood mouse	M	SA	23.0
Coup 6 (Site 4)	Water shrew	?	A	19.0
Coup 6 (Site 4)	Common shrew	?	A	13.0
Pond edge (Site 5)	Wood mouse	M	SA	21.0
Pond edge (Site 5)	Field vole	F	A	30.0
Pond edge (Site 5)	Wood mouse	M	SA	25.0
Pond edge (Site 5)	Wood mouse	M	A	25.0

* M = male; F = female; A= adult; SA = subadult; J = juvenile

**Escaped during handling

***Plus 3 pinkies born in the trap

Small mammal survey with CIEEM at Askham Bog Nature Reserve, York

Ann Hanson

Introduction

YMG carried out a small mammal survey training session for members of the Chartered Institute of Ecology and Environmental Management (CIEEM) in August 2014. The training consisted of a Longworth live trapping survey and small mammal ID at Askham Bog YWT Reserve on the outskirts of York.

Askham Bog Nature Reserve comprises approximately 45 hectares of fen, bog, wet woodland, ponds and ditches located to the south-west of York (grid ref. SE575481), with excellent habitat for a range of small mammals, including less common species such as harvest mouse and water shrew. The reserve is a Site of Special Scientific Interest (SSSI), designated for its relict fen and bog flora and fauna.

Methods

Fifty Longworth traps were placed in a variety of habitats around the reserve, baited with wheat, peanuts, sunflower seeds, carrots and blowfly pupae, and with a ball of hay for bedding.

Trap locations:

1. Near Wood – large area of fen meadow with traps being placed around patches of bog myrtle and saw sedge (22 traps).
   Grid ref. SE57514817
2. Near Wood – vegetation along pond edge adjacent to boardwalk (10 traps).
   Grid ref. SE57444824
3. Middle Wood – area of rough grass, reed canary grass and scattered scrub near the northern boundary (15 traps).
   Grid ref. SE57194824
4. Middle Wood – beneath Royal fern adjacent to the west boardwalk (3 traps).
   Grid ref. SE57234811

Traps were set on the evening of Saturday 30 August and checked on Sunday 31 August from 10am onwards.

Results

Summary of small mammals captured at Askham Bog Nature Reserve, August 2014.

	Site 1	Site 2	Site 3	Site 4
Wood mouse	0	0	5	0
Bank vole	8	1	0	1
Field vole	2	0	7	0
Common shrew	1	1	0	1

Appendix I shows a comprehensive table of results for this trap.

Discussion and conclusions

Four different species of small mammal were caught at Askham Bog Nature Reserve, including wood mouse (*Apodmus sylvaticus*), bank vole (*Myodes glareolus*), field vole (*Microtus agrestis*) and common shrew (*Sorex araneus*). The most abundant species were bank vole and field vole, with smaller numbers of wood mouse and common shrew. Bank voles were most abundant in the fen meadow (Site 1), with field voles being more abundant in the drier rough grassland and scrub (Site 3). Wood mice were only captured in the rough grass and scrub (Site 3) on this occasion. The population structure showed a good range of adults, sub-adults and juveniles, as would be expected this far into the breeding season. Unfortunately, no water shrews (*Neomys fodiens*) or harvest mice (*Micromys minutus*) were caught on this occasion. Harvest mouse nests had been found in reed canary grass at Site 3 during December 2013, but the area had been grazed quite hard over the summer and the habitat was less suitable for harvest mice by August 2014.

Thanks are due to Andrew Halcro-Johnston (CIEEM/YMG) and Claire Burton (YWT) for help arranging this event and to Andrew, Mary Youngman and Rob Masheder (YMG) for helping on the day. Thanks also to all the course participants for their interest and enthusiasm.

Appendix I

Table of results: Small mammal survey at Askham Bog NR, 31 August 2014.

Weather: Warm and dry with no rain.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
Fen meadow (1)	Bank vole	M	SA	19.0
Fen meadow (1)	Bank vole	F	SA	17.0
Fen meadow (1)	Bank vole	M	SA	15.0
Fen meadow (1)	Bank vole	M	J	13.5
Fen meadow (1)	Common shrew	?	A	12.0
Fen meadow (1)	Bank vole***	M	A	?
Fen meadow (1)	Bank vole	F	SA	15.5
Fen meadow (1)	Field vole	F	J	14.0
Fen meadow (1)	Field vole	F	SA	17.0
Fen meadow (1)	Bank vole	M	SA	17.0
Fen meadow (1)	Bank vole	M	SA	16.0
Pond edge (2)	Common shrew	?	A	8.0
Pond edge (2)	Bank vole	M	SA	17.0
Rough grass/scrub (3)	Field vole	M	SA	16.0
Rough grass/scrub (3)	Field vole	M	SA	19.0
Rough grass/scrub (3)	Field vole	F	SA	17.0
Rough grass/scrub (3)	Field vole	M	SA	21.0
Rough grass/scrub (3)	Wood mouse	F	A	21.5
Rough grass/scrub (3)	Field vole	F	SA	17.0
Rough grass/scrub (3)	Wood mouse**	?	?	?
Rough grass/scrub (3)	Wood mouse	M	A	22.5
Rough grass/scrub (3)	Wood mouse	M	J	15.0
Rough grass/scrub (3)	Field vole	M	SA	17.0
Rough grass/scrub (3)	Wood mouse	F	A	22.0
Rough grass/scrub (3)	Field vole	M	A	30.0
Royal fern (4)	Common shrew	?	A	8.0
Royal fern (4)	Bank vole	M	A	21.0

* M = male; F = female; A= adult; SA = subadult; J = juvenile
** Escaped during handling *** Dead in trap

Small mammals at Ledston Luck Nature Reserve, Leeds

Ann Hanson

Introduction

Ledston Luck Nature Reserve is located in the Lower Aire Valley (Grid ref. SE432309) next to the village of Ledston Luck, near Leeds. The site is owned by Leeds City Council and is managed in partnership with Yorkshire Wildlife Trust. See www.ywt.org.uk/reserves/ledston-luck.

The reserve consists of 17.6 hectares of meadows, ponds and woodland, situated on the site of the former Ledston Luck coal mine which was closed in 1986. Most of the habitats on the site were created in the early 1990s as part of a landscape improvement scheme. The reserve is especially noteworthy for the thousands of common spotted orchids, southern marsh orchids and bee orchids that appear annually, but the small mammal population has not previously been surveyed.

Methods

Fifty Longworth traps were placed in a variety of habitats around the reserve, baited with wheat, peanuts, sunflower seeds, carrots and blowfly pupae, with a ball of hay for bedding.

Trap locations:

1. Around the edge of the main pond with dense bank-side vegetation consisting of rough grass and rush (25 traps).
2. In semi-mature woodland on the north-east edge of the reserve, with sparse ground flora consisting of nettle and herb bennett (10 traps).
3. Meadow area of long grass and wild flowers on the northern edge of the reserve, with traps placed on the boundary of meadow and young hawthorn scrub (15 traps).

Traps were set on the evening of Friday 19th September and checked on Saturday 20th September from 9.30am onwards.

Results

Summary of small mammals captured at Ledston Luck NR, September 2014.

	Site 1	Site 2	Site 3
Wood mouse	2	8	4
Bank vole	0	0	6
Field vole	2	0	0
Common shrew	4	0	1
Water shrew	1	0	0

Appendix I shows a comprehensive table of results for this trap.

Discussion and conclusions

Five species of small mammal were caught at Ledston Luck NR, including wood mouse (*Apodmus sylvaticus*), bank vole (*Myodes glareolus*), field vole (*Microtus agrestis*), common shrew (*Sorex araneus*) and water shrew (*Neomys fodiens*). The majority of the captures were wood mice, with lesser numbers of bank voles, field voles and common shrews and just a single water shrew. Wood mice were found at all three trap locations, but were most numerous and the only species captured at Site 2. This area of semi-mature woodland has very sparse ground flora, making it suitable for predominantly nocturnal wood mice, but less so for voles and shrews which tend to be active during the day as well as at night and require more ground cover. Sites 1 and 3 both have very dense ground cover, with voles and shrews being captured at both sites. The single sub-adult water shrew was captured on the edge of the main pond and there will undoubtedly be more in the ponds and wet ditches around the reserve.

Field vole (Photo: Mark Williams)

Thanks are due to Kate Phillips of YWT for help with organisation and to Kate, the reserve volunteers and members of YMG for helping with the survey.

Appendix I

Table of results: small mammal survey at Ledston Luck NR, September 2014.

Weather: Warm, overcast, light rain showers.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
Pond edge (1)	Wood mouse	F	SA	15.0
Pond edge (1)	Wood mouse	F	A	21.0
Pond edge (1)	Common shrew	?	A	7.0
Pond edge (1)	Common shrew	?	A	8.0
Pond edge (1)	Water shrew	?	SA	12.5
Pond edge (1)	Field vole	M	J	16.0
Pond edge (1)	Common shrew	?	A	7.5
Pond edge (1)	Common shrew	?	A	8.0
Pond edge (1)	Field vole	M	A	26.0
Woodland (2)	Wood mouse	M	SA	17.0
Woodland (2)	Wood mouse	M	SA	15.5
Woodland (2)	Wood mouse	F	A	23.0
Woodland (2)	Wood mouse	M	SA	16.0
Woodland (2)	Wood mouse	F	A	23.5
Woodland (2)	Wood mouse	M	SA	15.0
Woodland (2)	Wood mouse	M	A	20.0
Woodland (2)	Wood mouse	M	A	23.0
Grass and scrub (3)	Wood mouse	F	SA	15.5
Grass and scrub (3)	Wood mouse	F	SA	16.5
Grass and scrub (3)	Wood mouse	M	SA	18.0
Grass and scrub (3)	Bank vole	F	SA	15.0
Grass and scrub (3)	Bank vole	F	SA	15.5
Grass and scrub (3)	Bank vole	M	A	22.0
Grass and scrub (3)	Bank vole	F	SA	14.0
Grass and scrub (3)	Wood mouse	F	SA	16.0
Grass and scrub (3)	Bank vole	M	A	18.0
Grass and scrub (3)	Common shrew	?	A	8.0
Grass and scrub (3)	Bank vole	M	A	20.0

* M = male; F = female; A= adult; SA = subadult; J = juvenile

Small mammal surveys at Ivy Grange Farm and Tevant Farm Fishery, East Keswick

Ann Hanson

Introduction

YMG has carried out small mammal surveys previously with East Keswick Wildlife Trust in 2009, 2012 and 2013. East Keswick Wildlife Trust is a local group of wildlife enthusiasts who manage several sites within the parish of East Keswick, near Harewood, for their flora and fauna (see www.ekwt.org.uk). On this occasion we carried out surveys at Ivy Grange Farm and Tevant Farm Fishery, both off Moor Lane, East Keswick, in habitat close to East Keswick Beck. We were hoping for harvest mouse and water shrew, especially after the success of trapping a harvest mouse at East Keswick Marsh in October 2013.

Methods

Fifty Longworth traps were placed in a variety of habitats, baited with wheat, peanuts, sunflower seeds, carrots and blowfly pupae, with a ball of hay for bedding.

Trap locations:

1. Ivy House Farm – stands of reed canary grass adjacent to East Keswick Beck (SE35824398) (10 traps). NB: This location had suffered recent disturbance as two small ponds had been dug, so the reed canary grass was not as extensive as previously.
2. Ivy House Farm – long, dense grass along field edge with false oat grass and tufted hair grass dominant (SE35844399) (5 traps).
3. Tevant Farm Fishery – edge of small fishing pond with dense bank-side vegetation including bulrush and soft rush (SE35244390) (8 traps).
4. Tevant Farm Fishery – tall vegetation along path edge adjacent to small fishing pond with long grass, great willowherb and nettle (SE35264390) (12 traps).
5. Tevant Farm Fishery – ruderal vegetation alongside East Keswick Beck with nettle and Himalayan balsam dominant (SE35404400) (5 traps).

6. Tevant Farm Fishery – edge of large fishing pond with sparse bank-side vegetation including soft rush and willow scrub (SE35384399) (5 traps).
7. Tevant Farm Fishery – long grass and great willowherb adjacent to large fishing pond on the boundary between East Keswick and Bardsey Parishes (SE35384394) (5 traps).

Traps were set on the evening of Friday 3rd October and checked on Saturday 4th October from 9.30am onwards. Traps were re-set on the Saturday evening and checked on Sunday 5th October from 9.30am onwards.

Results

Summary of small mammals captured at Ivy Grange Farm and Tevant Farm Fishery, East Keswick, October 2014.

	Ivy Grange Farm				**Tevant Farm Fishery**									
	Site 1		**Site 2**		**Site 3**		**Site 4**		**Site 5**		**Site 6**		**Site 7**	
	Sat	**Sun**	**Sat**	**Sun**	**Sat**	**Sun**	**Sat**	**Sun**	**Sat**	**Sun**	**Sat**	**Sun**	**Sat**	**Sun**
Bank Vole	4	3		1	1		3	3	2	1				
Common Shrew		1		1				1						
Field Vole	1	1					1	1						1
Wood Mouse	4	4	1		2	2	1	5	2	4	1	1	1	1

Appendix I shows a comprehensive table of results for this trap.

Fig. 1: Total numbers of species captured at all sites.

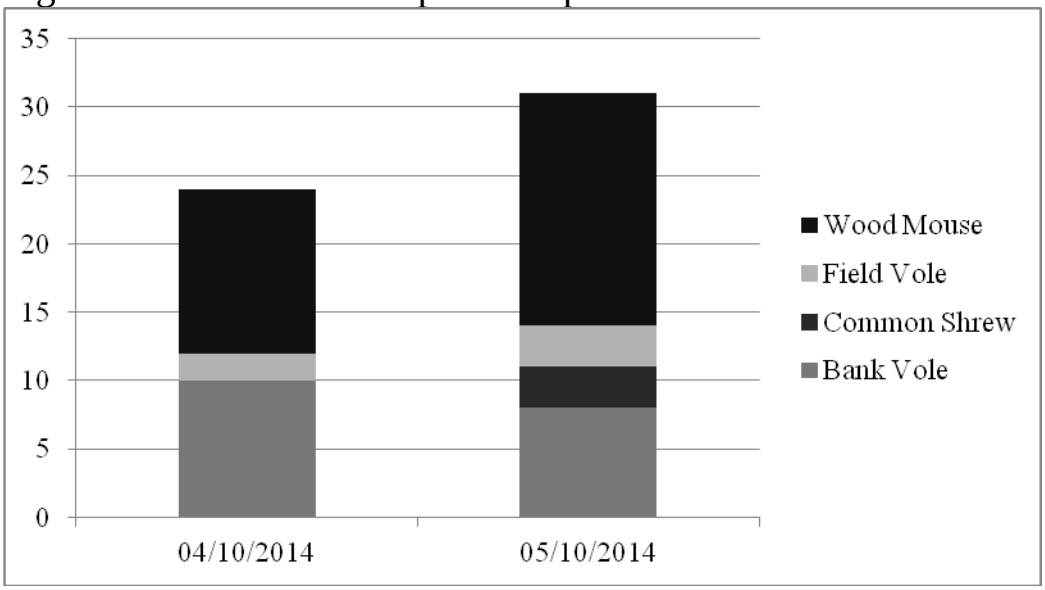
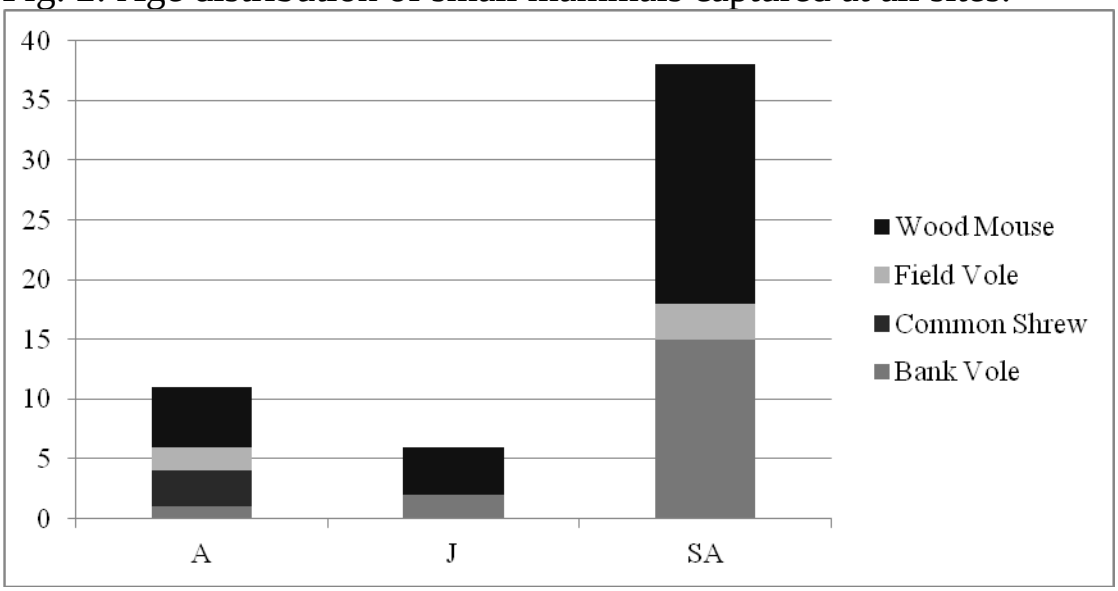
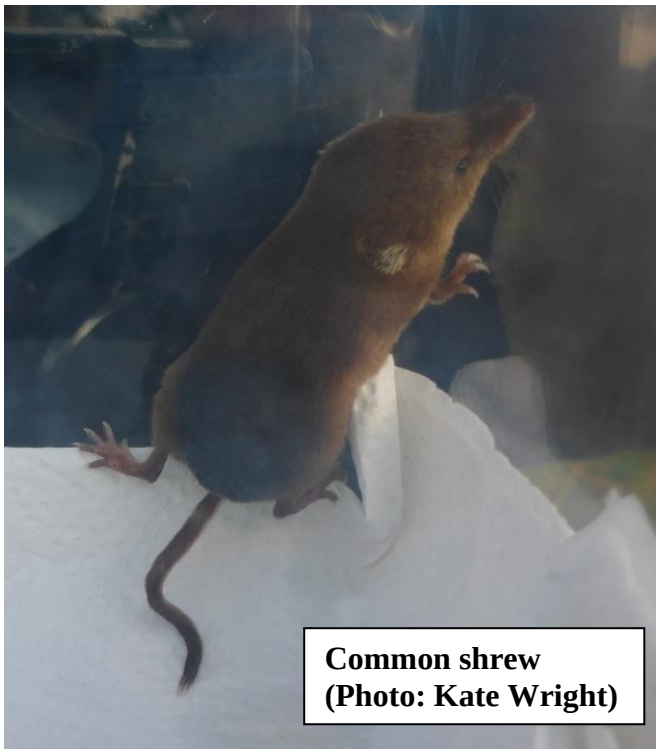


Fig. 2: Age distribution of small mammals captured at all sites.



Discussion and conclusions

Four species of small mammal were caught at Ivy Grange Farm and Tevant Farm Fishery, East Keswick, including wood mouse (*Apodmus sylvaticus*), bank vole (*Myodes glareolus*), field vole (*Microtus agrestis*) and common shrew (*Sorex araneus*). The majority of captures were wood mice and bank voles, with just a few field voles and common shrews (Fig. 1). Most captures at Ivy Grange Farm were in the reed canary grass (Site 1), with most captures at Tevant Farm Fishery being in the tall vegetation along the path edge adjacent to the small fishing pond (Site 4) and the ruderal vegetation alongside East Keswick Beck (Site 5). These were the three sites with the most dense vegetation cover. The least number of captures were on the edge of the large fishing pond (Site 6) which had very sparse bank-side vegetation, with only a single wood mouse being caught at each trapping session. The age distribution charts (Fig. 2) show that sub-adult animals were dominant in the populations, as would be expected towards the end of the breeding season. Unfortunately, no harvest mice (*Micromys*



Common shrew (Photo: Kate Wright)

minutus) or water shrews (*Neomys fodiens*) were caught at either Ivy Grange Farm or Tevant Farm Fishery, although the habitat at both sites would appear to be suitable and future surveys would be appropriate.

Thanks are due to the members of East Keswick Wildlife Trust and YMG for their help and enthusiasm. Many thanks also to Kate Wright for helping with the surveys and for compiling the tables and charts for this report.

Appendix I

Table of results: small mammal surveys at Ivy Grange Farm and Tevant Farm Fishery, East Keswick, October 2014.

Weather: Warm and cloudy, occasional rain showers.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
04/10/2014				
Reed canary grass (1)	Wood mouse	F	SA	19.5
Reed canary grass (1)	Wood mouse	M	SA	19.0
Reed canary grass (1)	Wood mouse	M	SA	19.0
Reed canary grass (1)	Bank vole	F	SA	17.0
Reed canary grass (1)	Wood mouse	F	SA	18.0
Reed canary grass (1)	Bank vole	F	SA	18.0
Reed canary grass (1)	Bank vole	F	SA	18.5
Reed canary grass (1)	Bank vole	M	SA	17.0
Reed canary grass (1)	Field vole	M	SA	18.0
Field edge (2)	Wood mouse	F	SA	23.0
Small pond edge (3)	Bank vole	F	SA	15.5
Small pond edge (3)	Wood mouse	M	SA	18.0
Small pond edge (3)	Wood mouse	M	SA	16.5
Edge of path (4)	Bank vole	F	SA	16.0
Edge of path (4)	Wood mouse	M	SA	15.5
Edge of path (4)	Bank vole	F	SA	15.5
Edge of path (4)	Field vole	M	A	25.0
Edge of path (4)	Bank vole	M	J	14.0
Stream margin (5)	Bank vole	F	SA	16.0
Stream margin (5)	Wood mouse	M	A	20.5
Stream margin (5)	Wood mouse	F	SA	16.0
Stream margin (5)	Bank vole	F	SA	16.5

Large pond edge (6)	Wood mouse	F	SA	16.0
Bardsey boundary (7)	Wood mouse	F	SA	17.0
05/10/2014				
Reed canary grass (1)	Wood mouse	M	SA	18.0
Reed canary grass (1)	Bank vole	M	SA	15.0
Reed canary grass (1)	Wood mouse	M	SA	21.0
Reed canary grass (1)	Wood mouse	M	A	29.0
Reed canary grass (1)	Wood mouse	M	SA	19.0
Reed canary grass (1)	Common shrew	?	A	8.0
Reed canary grass (1)	Bank vole	M	SA	15.0
Reed canary grass (1)	Field vole	M	SA	16.5
Reed canary grass (1)	Bank vole	F	SA	14.5
Field edge (2)	Bank vole	M	A	18.0
Field edge (2)	Common shrew	?	A	7.0
Small pond edge (3)	Wood mouse	F	J	13.0
Small pond edge (3)	Wood mouse	F	J	14.5
Edge of path (4)	Wood mouse	F	A	18.0
Edge of path (4)	Wood mouse	M	SA	15.0
Edge of path (4)	Wood mouse	F	J	12.0
Edge of path (4)	Bank vole	F	SA	16.0
Edge of path (4)	Bank vole	F	SA	15.0
Edge of path (4)	Wood mouse	M	J	9.5
Edge of path (4)	Bank vole	M	J	14.0
Edge of path (4)	Common shrew	?	A	8.0
Edge of path (4)	Field vole	M	A	23.0
Edge of path (4)	Wood mouse	F	A	23.5
Stream margin (5)	Wood mouse	M	SA	19.0
Stream margin (5)	Wood mouse	F	SA	19.0
Stream margin (5)	Wood mouse	F	SA	16.0
Stream margin (5)	Wood mouse	F	A	18.0
Stream margin (5)	Bank vole	F	SA	15.0
Large pond edge (6)	Wood mouse	F	SA	17.0
Bardsey boundary (7)	Wood mouse	F	SA	17.0
Bardsey boundary (7)	Field vole	F	SA	19.5

* M = male; F = female; A= adult; SA = subadult; J = juvenile

"Up the hill and down the dale" – a report of YMG mammal recording walks 2014

Ann Hanson & Rob Masheder

Our first walk of the year was from **Ripley near Harrogate on 12th January**. Heading west we found some molehills and a grey squirrel in woodland alongside Ripley Beck, followed by rabbit burrows at Sadler Carr. Moving on to Park Lodge we discovered more molehills and some possible bank vole burrows, followed by the distinct smell of a fox in a hollow tree near Broxholme. Moving on to the hamlet of Bedlam we recorded more molehills and rabbit burrows, then across the fields to Low Kettle Spring where we found some otter spraint on a stone by the footbridge over a small stream. Walking back down Scarah Bank we came across a roadkill grey squirrel, a dead common shrew in a discarded Red Bull can, and some roe deer slots on a track near Ten Acre Plantation. Following the Nidderdale Way to Cayton Gill, we recorded rabbits, a roe deer track up the bank, a badger sett and a very lively hare! In a lovely area of fen near High Cayton we recorded field vole runs, piles of nibbled grass stalks in the tussocky grass, and a field vole itself, as well as a rather interesting rock carving. A fresh fox scat near Cayton Gill Farm was followed by molehills on the adjoining bridleway. Heading back down to Ripley we recorded several dead brown rats and a dead mole beside a wall at Birthwaite Farm, probably the victims of poison. Last records of the day were rabbit burrows and molehills on the track back to Ripley, just in time for a quick trip to the Castle tearooms.

February 16th found us at Goldsborough near Knaresborough, with the obligatory molehills as we headed south out of the village on the Knaresborough Round. The tracks and field edges around Great Wood yielded several records including two hares, molehills, roe deer slots, rabbit and stoat footprints, some squirreled hazel nuts and the distinct smell of a fox. A bit further along near High Wood, a fox scat next to an old well confirmed the smell! Walking through Ribston Park we found an otter spraint on a log alongside the River Nidd, as well as numerous molehills, rabbits and more fox scats. In the fields to the west of Little Ribston we recorded more rabbits, fox scats and some badger footprints. Roe deer slots were found on the edge of Braham Wood, and then brown rat tracks in the mud at Plompton High Grange. At Plumpton Hall we recorded molehills, roe deer slots and more badger footprints, with field vole runs in long grass

Stoat footprints

adjacent to Great Harbour Wood. On the way back to Goldsborough, Birkham Wood yielded some grey squirrel nibbled hazel nuts to end the day.

A walk from the West Gate car park at **Fountains Abbey near Ripon on 16th March** found us recording molehills and rabbits just about everywhere. Then at Green Bank Wood we came across some roe deer slots and squirreled hazel nuts. Following the Ripon Rowal Walk from Sawley, we arrived at the enchanting Eavestone Lake where we discovered several otter spraints on rocks beside the lake and grey squirrel dreys in the adjacent woodland. Bank vole nibbled hazel nuts were located near Eavestone Grange, followed by further otter spraint and a wood mouse skull from a discarded bottle near the bridge at the confluence of Hungate Dike and the River Skell. A discarded tin can near the poorly named Badger's Holt yielded the remains of two common shrews, a wood mouse and a field vole – good for mammal records but lethal to small mammals. Finally, a walk back along the River Skell through Spa Gill Wood allowed us to record roe deer slots on the path and otter spraint under bridges and on rocks in several locations along the river.

13th April found us in Farndale in the North York Moors National Park admiring the wild daffodils. After meeting in the small car park at Lowna near Gillamoor we walked into Woodend Plantation and quickly located some fresh otter spraint on a rock at the confluence of Harland Beck and the River Dove. This was followed by squirreled hazel nuts and roe deer slots, and then another otter spraint on a log hanging over the river near Birch Hagg House. Upstream, at Dale End Bridge, we found yet more otter spraint on a rock in the river, some rabbit droppings on the footpath and a squirrel drey. Signs of rabbits and moles were evident at Park Farm and Cross Farm, followed by brown rat burrows, footprints and droppings alongside the foot bridge over the River Dove. A bit further up the river, at the confluence with a small stream, we found another otter spraint . Heading east to Underhill Farm we recorded molehills and rabbit burrows, followed by bank vole nibbled hazel nuts in the woodland edge near Bee Stone Farm. Molehills near Hagg End Farm and a rather sad dead grey squirrel near Lowna were the last records of the day before we retired to a tea shop in Hutton-le-Hole.

Pateley Bridge in North Yorkshire was the location for our walk on 11th May, with the first record being some otter spraint on a rock next to the weir in the River Nidd. Further otter spraint was found under the bridge near Harewell Caravan Park and on a rock in Ashfold Side Beck near Brigg House. Rabbit droppings and burrows were recorded near Brigg House and in the old lead mine workings near Ash Fold Beck and North Side. Roe deer slots and molehills were also noted on North Side, with further molehills near Brandstone Dub Bridge, Low Hole Bottom and Riggs House on the Nidderdale Way. Last record of the day was a dead rabbit near Eagle Hall on the way back to Pateley Bridge and a well earned cup of tea.

An evening walk along the **River Wharfe from Tadcaster on the 3rd June** quickly had us recording some very fresh otter footprints in mud under the A64 road bridge and an old spraint. This was followed by molehills next to the football pitch on the ings and a shrew squeaking in the undergrowth beside the river. Mud at the confluence of the Cock Beck and the River Wharfe contained more otter prints and some fox footprints, swiftly followed by a return to Tadcaster and a splendid meal in the local Indian restaurant.

After a summer break in recording walks, we had a trip to **Wensley in the Yorkshire Dales National Park on 9th November**. Leaving the village and crossing the River Ure we recorded molehills near the bridge and squirreled fir cones in the woods at Wensley Ings. We also recorded molehills pretty much everywhere on the rest of this walk. Much more interesting was our first otter spraint and a glob of anal jelly on a tree beside the river just before Scaw Bottom. A bit further along we discovered another very fresh otter spraint on a rock under some tree roots and footprints in the mud nearby. Crossing back over the river at Lords Bridge, we recorded rabbit burrows and roe deer slots near Bolton Hall. Badger footprints were noted on a track running through West Wood, along with more rabbit burrows. In the fields beyond West Wood we found a stoat scat on a rock and a dead rabbit – possibly the two were related.

Heading back via Preston-under-Scar we recorded a dead brown rat on the road near Stoneham Cottage and a roadkill hedgehog a bit further along. Walking back across Wensley Park we recorded our last molehills and a very lively field vole, before heading over to Leyburn for another well earned cuppa.

Our last walk of 2014 on a beautiful sunny winter's day was from **Hovingham in the Howardian Hills on 28th December**. The whole area was rampant with molehills and rabbits, but our first record was a very strong smell of fox on the Ebor Way to the south of the village. In South Wood we recorded roe deer slots and a grey squirrel drey, followed by some possible fallow deer slots, a field vole nest and a fox scat on a molehill at Hollin Hill Bogs. Continuing along the Ebor Way to Howthorpe Farm we recorded badger footprints and an obvious badger track, followed by a cheeky grey squirrel sitting on a farm gate. Heading back towards Hovingham through Hollin Hill Wood, we recorded a grey squirrel drey and the final strong smell of a fox. We ended the year's walks with a very posh cup of tea at Castle Howard!

Thanks once again to everyone who joined us on our walks in 2014. Quite a few new faces came along and hopefully had a good time as well as improving their knowledge of mammal tracks and signs.

Ann Hanson (Expedition Leader) and Rob Masheder (Navigator)

An overview of the West Tanfield dormouse reintroduction project 2004 to 2014

Mary Youngman

2004 saw the soft release of sixty dormice in a woodland at West Tanfield, the beginning of the second Yorkshire dormouse reintroduction project. Shortly before the release a team of volunteers attached about four hundred wooden dormouse boxes to trees ready for the dormice to use. The captive bred dormice were placed into their new temporary homes – twenty eight release cages (it should have been thirty but two cages were 'lost' in the woodland). With the dormice in residence a regime of feeding began; daily whilst the dormice were still held in the cages, and then after an exit hole had been cut into each cage the feeding frequency was gradually reduced

and finally stopped. The grapes, nuts and digestive biscuits that we had been provisioning the dormice with must also have been enjoyed by the local woodmice. Plus the sudden appearance of so many new nesting cavities (boxes) was surely appreciated by the wrens and blue tits that made full use of the new resource.

We checked the boxes for dormice three times a year until 2014 when we decided to reduce the checks to just twice. Below is a table summarising the numbers of dormice we have found.

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	61	8	14	8	7	9	9	6	6	2	0

Dormouse tube full of green leaves

By the third year many of the wooden boxes were starting to deteriorate, with the wood becoming damp and rotten and frass accumulating in the bottom, they were probably not very appealing to dormice. In 2007 tree clearance in part of the woodland resulted in several of our boxes being damaged. Therefore in 2009 we began a gradual replacement of the lost and most rotten boxes. In 2009 and 2011 we added dormouse tubes to some of the surrounding hedgerows hoping to detect any dormouse activity. The tubes have been checked each autumn with very little indication of dormouse use, except in 2011 one tube contained green leaves – a characteristic of dormouse nests. Another area of woodland was felled in 2012, on this occasion we were able to remove the affected boxes and relocate them. A dormouse nest was spotted in a clump of tufted hair grass in 2013, our first evidence of nest building outside the boxes. Last year, 2014, the boxes were checked in May and September; disappointingly no dormice were found on either visit. We did however find 8 nests in May and 17 nests in September that were tentatively identified as dormouse nests. Each year we record other mammal occupants of the boxes, the tally for last year was 2 common shrews, 2 pygmy shrews, 4 pipistrelle bats and 99 woodmice. Perhaps there was no room in the boxes this year for our dormice.

Thanks to all the volunteers who have helped over the years. We will be back in the wood again in the spring hoping to find conclusive evidence that our dormouse population is still present. If you would like to join us contact Ann Hanson: fieldwork@yorkshiremammalgroup.org.uk or Amy-Jane Beer: amy@wildstory.co.uk.

Dormouse monitoring in Freeholders' Wood 2014

Ian Court[1] & Ian White[2]

[1]Wildlife Conservation Officer, Yorkshire Dales National Park Authority and [2]People's Trust for Endangered Species

The summary report on the Dormouse monitoring work that has been undertaken in Freeholders' Wood in 2014 is reproduced as follows. For more details on this, and a wide range of other species and habitat information please visit the Nature in the Dales website http://www.natureinthedales.org.uk/ Regular updates on some of the conservation work and current nature conservation issues in the Yorkshire Dales National Park are on the Nature in the Dales Facebook page https://www.facebook.com/natureinthedales?ref=bookmarks

Introduction

A reintroduction of 35 captive bred Hazel Dormouse *Muscardinus avellanarius* into Freeholders' Wood, Aysgarth was undertaken in 2008 and has previously been documented by White and Court (2012). Dormouse monitoring data from local sites across the country is usually collated at the end of the monitoring season which, at most sites, is in November or December when the Dormice have started to hibernate. The deadline for the submission of this local data to Peoples Trust for Endangered Species (PTES) to contribute to the national dataset is February the following year and so, there is a year's delay in being able to compare local site data with the national dataset.

This report provides a comparison between the results from Freeholders' Wood in 2013 and the national dataset. It also includes details of the monitoring work undertaken at Freeholders' Wood in 2014 and compares it with the 2014 data from Briddlesford Woods, a 160ha semi ancient natural woodland on the Isle of Wight that is owned by PTES and is one of the key sites in the National Dormouse Monitoring Programme (NDMP).

Methodology

The monitoring work was undertaken in accordance with the NDMP survey guidelines (PTES, 2011), with licensed fieldworkers checking nest boxes once each month from May to October. The numbers of boxes that contained distinctive Dormouse nests but where no Dormice were present were recorded. Where Dormice were found, the sex, weight, breeding condition and whether the animal was active or in torpor were also recorded. The Dormice were also aged as an adult (i.e. an animal that has survived at least one winter) by the orange-brown colour of the fur, or as a juvenile (i.e. independent young in their first year with a weight of >10g) with more brownish fur than an adult. The number of young were counted, weighed where appropriate, and classed as pink (no fur), grey (grey fur and eyes still closed) or eyes open (grey-brown fur and eyes open).

A summary of weather conditions during the season has been derived from national monthly summary data provided by the Met Office (2014).

The 2013 NDMP results at Freeholders' Wood have been compared to the results from elsewhere in the UK and the national totals.

Photo: © Meghann Hull YDNPA

Results

A comparison between the results of the 2013 NDMP at Freeholders' Wood and sites in the Northern Counties, Wales, the Midlands and nationally are shown in Table 1.

The monthly national weather summary for 2014 was as follows:

May – was generally a dry and warm month resulting in above average temperatures, primarily due to mild nights that will have been particularly important for a nocturnal mammal just coming out of hibernation. There were, however, a number of heavy, thundery showers, with the north-east of England experiencing one of its wettest Mays since 1979 and resulting in 143% of average rainfall across the UK.

Table 1. The number of Hazel Dormice found per 50 boxes checked in Freeholders' Wood, the Northern Counties (Cumbria, North Yorks), Wales, the Midlands (Cheshire, Derbyshire, Shropshire, Warwickshire, Staffordshire and Nottinghamshire) and nationally as part of the NDMP in 2013.

No. of Dormice per 50 boxes in wood or area recorded for the National Dormouse Monitoring Programme (NDMP) in 2013					
	Freeholders Wood	**Northern England**	**Wales**	**Midlands**	**National**
Max. no. sites checked	1	11	36	12	299
Total no. boxes checked	1016	3501	9721	4759	75,910
Month					
May	0.6	0.53	0.66	0.31	1.05
June	2.36	0.91	1.86	0.44	1.76
Sept	0.39	1.78	3.73	1.58	4.47
Oct	3.94	1.46	4.19	2.15	5.14

June – temperatures were above average for most of the month resulting in the equal ninth warmest June since 1910. Although there were some warm days and mild nights, there were no prolonged spells of exceptional warm weather. Overall, the UK received 76% of average rainfall.

July – there were above daytime temperatures during the month but night-time temperatures were closer to average, resulting in the equal eighth warmest July since 1910. Rainfall was below average overall, but there were some localised thunderstorms resulting in heavy rain in places.

August – was an unsettled month with some unseasonably wet and windy weather. There were some very cool days and nights, particularly during the latter half of the month. Overall it was the coolest August in the UK since 1993, with above average rainfall.

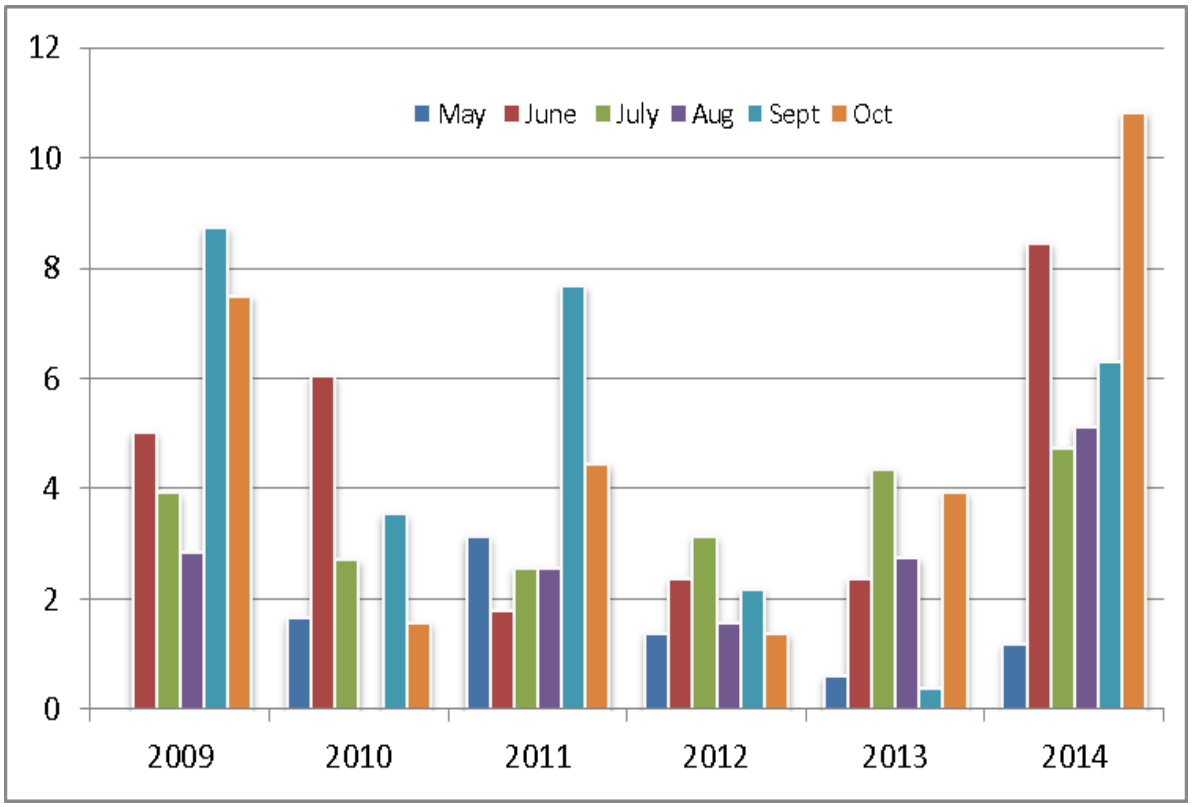
September – the month was dominated by high pressure that brought prolonged periods of fine and settled weather, with temperatures generally above average resulting in the equal-fourth warmest September for the UK since 1910, and only the fifth time that the UK mean temperature for September has equalled or exceeded that for August. It was also the driest

September since 1910, with less than 20% of the long-term average rainfall in many areas of the country.

October – unlike previous months the weather was very unsettled but remained warm, resulting in the equal warmest October in the UK in since 1910, being only marginally cooler than the Octobers of 2011 and 2013. Rainfall was, however, above average in most areas.

The number of Dormice and empty Dormice nests found during monitoring work between 2008 and 2014 are shown Figure 1.

Figure 1. The number of Dormice found per 50 boxes checked at Freeholders' Wood, Aysgarth between 2008 and 2014.



The total number of Dormice found at Freeholders' Wood during monthly counts in 2013 and, selected monthly counts from Briddlesford Wood are shown in Table 2.

Discussion

There are very few known Dormouse sites in Northern England and the Midlands, with Freeholders' wood contributing approximately a third of the data for Northern England to the NDMP. The June records in 2013 suggest that winter survival, or early breeding at Freeholders' Wood was

better than in the other areas shown in Table 1. The October figures give an indication of post breeding success and show that Freeholders' Wood was comparable to Wales and close to the national average.

Table 2. The number of Dormice and empty Dormice nests found during monthly monitoring work at Freeholders' Wood and selected months from Briddlesford Wood in 2014.

Freeholders' Wood				
Survey date	Total no. of Dormice	No. of empty nests	No. of boxes checked	No. Dormice per 50 boxes checked
19/05/2014	9	4	254	1.77
16/06/2014	43	7	254	8.46
21/07/2014	24	20	254	4.72
18/08/2014	26	23	254	5.12
22/09/2014	32	43	254	6.30
22/10/2014	55	34	254	10.83
Briddlesford Wood				
17/05/2014	32	13	534	3.00
24/06/2014	22	13	538	2.04
13/09/2014	61	44	544	5.60
18/10/2014	56	135	502	5.58

The results show that there was a significant increase in the Dormouse population in Freeholders' Wood in 2014, with the counts in October the highest since the re-introduction in 2008. It was a very good breeding season with litters and/or juveniles recorded in 21 boxes during the year. This includes one box (no. 1) with an adult female weighing 18g with six young (grey, eyes closed) on the 16 June monitoring date. There were also notable records on the 22 October when one box (no. 124) had an adult female, five juveniles and four inactive young (known as 'pinks'). It is possible that this is may be a second litter for the maternal Dormouse, or it may be a crèche, but unfortunately it is unlikely that the young will survive the winter. Females are known to aggregate their young into a crèche, as recorded in one box (no. 171) that held an adult female and 11 young (grey, eyes open) also on 22 October.

The May and June records from the NDMP are considered to be a measure of the post hibernation, pre-breeding Dormouse population. Nationally, only 7.8% of female animals recorded in June are found with litters in that

month. No litters were recorded at the Briddlesford reserve in June 2014 but, with 77.8% of the females recorded at Freeholders' Wood in June found with a litter, breeding started earlier at Freeholders' Wood than at a site in the south of the country. In addition, the number of adult animals recorded at Freeholders' Wood in June (i.e. the number of adult dormice per 50 boxes) was higher than at Briddlesford, suggesting that over winter survival could also have been higher.

Bright *et al.* (2006) indicate that juveniles need to reach a minimum weight of 15g by late October in order to survive hibernation. Of the 16 juveniles present on the 22 October monitoring date, six were over 15g; four were between 10 and 14.5g with six less than 10g. Given the abundance of food and relatively warm temperatures in late October and early November, it is likely that a number of potentially low weight juveniles will have reached the required weight by the time they were forced into hibernation.

The results from other reintroduction schemes show that there is normally a drop in Dormouse numbers in year two after a release, followed by stabilisation, and then a gradual increase in subsequent years. The Dormouse population at Freeholders' Wood has followed this pattern, albeit with a slight decrease in numbers in 2012 due to the poor weather during the spring and summer (YDNPA and PTES, 2012). The monitoring work to date shows that the Freeholders' Wood population is at least stable, and may be slowly increasing, conforming to the trend shown by other re-introduced populations.

Acknowledgements
The monitoring work was undertaken by licensed fieldworkers Roger Gaynor, David Preston and Paul Sheehan, with assistance from Suzannah Barningham and Meghann Hull. We would also like to thank Ann Williams for proof-reading this report.

References
Bright, P., Morris, P. and Mitchell-Jones, T. (2006). *The Dormouse Conservation Handbook.* Second Edition. Natural England, Peterborough.

PTES. (2011) National Dormouse Monitoring Programme Survey Guidelines and Recording Forms 2011. London.

Met Office (2014). UK Climate. http://www.metoffice.gov.uk/climate/uk/summaries. Accessed 17 Dec 2014.

White, I. and Court, I.R. (2012). The Hazel Dormouse release project at Freeholders' Wood in the Yorkshire Dales National Park. *The Naturalist* 137: 82-88.

YDNPA and PTES (2012). Dormouse Monitoring in Freeholders' Wood 2012. Yorkshire Dales National Park Authority, Grassington.

Ferreting in the fog! Do smelly *Stapelia* flowers mimic the bottoms of extinct southern African Carnivores?

Colin A. Howes

As an obsessive, compulsive youngster made rich from my newspaper round on an income of 5 shillings [25p] a week, I lavished this wealth on an interest in cacti and succulents. My small windowsill collection included the curious genera *Lithops* [Living stones] and *Stapelia* [Carrion plants].

The flowers of *Stapelia* are rather ghoulish, being constructed of five fleshy petals forming a star shape with a circular rectum-like central disc. Further, brown blotchy markings, reminiscent of liver-spots on the backs of the hands of aged relatives (and now myself) add to the rather unhealthy appearance of the flowers, particularly of *S. variegata*.

Although the flower's characteristic foetid odour attracts blow-flies of the family Calliophoridae, the design of the central disc possibly enhances this attraction by seeming to visually mimic the anal sphincters of small members of the mammalian order Carnivora, notably the families Felidae and Canidae.

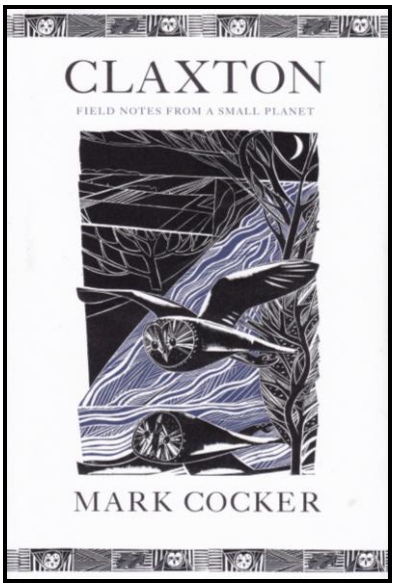
Whereas other flowers employ ultraviolet stripes, dots and intensities of colour as devices to attract pollinating insects to their nectar rewards. The anal disc mimicry would potentially focus flies, initially attracted by the foetid odour, to transfer pollen to the stigmas situated at the centre of the pseudo-anal disc.

If this is the case, since the great period of carnivora development and differentiation took place during the Eocene and the Oligocene periods, the flowers are likely to have evolved this intriguing mimicry between 56 and 23 million years ago. Since most of the carnivore species of those eras now no longer exist, these plants may give evidence of the anal designs of now extinct carnivores.

Appropriate then that the restricted world range of the genus *Stapelia* includes the southern African country of Botswana.

Incidentally, returning to the celebrated Leonardo painting 'Lady with an ermine' (*IMPRINT* **38** (2012): 39-49) where the alleged ermine is clearly an albino ferret, an examination of tapestries of the late 15th and early 16th centuries shows that ferreting was definitely a pastime enjoyed by courtly ladies. Art historians really need to reassess the title of that celebrated artwork.

Perhaps Ferreting in the Fog should be issued on 1st April!



Claxton – Field Notes from a Small Planet by Mark Cocker. 2014. 238 pp. £14.99. Jonathan Cape, London. ISBN 9780224099653.

Some nature writers have the enviable gift of being able to paint a complex and vibrant landscape in words, but the best can transmit something more intangible – the very spirit of the scene before them. Mark Cocker is definitely one of the latter. Mark is best known for his prize-winning *Crow Country* and the more recent, much acclaimed, *Birds and People*, but much of his bread and butter is earned by writing regular pieces for national newspapers.

In August 2001 he moved to the rural village of Claxton, to the east of Norwich and bordering the Yare valley. The immediacy of the countryside around Claxton, the 'small planet' of the subtitle, provided material for numerous columns, some of which are drawn together in this book. The vignettes were written across a number of years but are here presented as though charting nature's trajectory over a single 12 months.

While birds are at the forefront of his observations, other creatures do have walk-on parts, including mammals and spiders. He describes the thrill of sharing moments of intimacy watching badgers groom one another, and of shadowing an otter as it zig-zags a passage along the darkening Yare unbelieving that it hasn't spotted him. Fieldworkers will all have their own indelible memories of similar occasions when they became one with nature. In one passage, the author reflects that the tiny bodies of swallows, scything through the skies, are built of insects garnered thousands of miles away in tropical Africa, and wonders whether insects from different climes taste the same. He ponders on how the essence of plant life is riding the breeze embodied in a distant silhouette, via the food chain of plant to insect to hobby.
For those who enjoy and appreciate the very best in natural history 'portraiture' this is one for you. The language is beautiful, poetic even, and the stark black and white woodcuts illustrating the start of each chapter (month) capture well the way animals and landscape meld into one experience. Several times through the book I was reminded of the final lines of Thomas Hardy's glorious poem *An August Midnight*, where he is visited by a gaggle of insects drawn to his light:

"God's humblest, they!" I muse. Yet why?
They know Earth-secrets that know not I.

My one and only negative comment is that the book ends with a species list for the village and surrounding area. I'm not sure really what it is for because it is woefully incomplete. Are there really no pygmy or water shrews in this part of Norfolk?

Geoff Oxford

RSPB spotlight: Otters by Nicola Chester**.** Bloomsbury Publishing, 2014
Paperback £9.99. ISBN 9781472903860 **Gordon Woodroffe**

Otters, is part of a new series by the RSPB introducing readers to the natural history of our British fauna. Nicola Chester, the author, won the BBC Wildlife nature writing competition and has been a columnist for the RSPB's magazine since 2006. Apart from a snapshot of the world's otters this book is mainly concerned with the natural history of the Eurasian otter. Of the 13 otter species worldwide there are descriptions and photographs of the Asian short-clawed, Smooth-coated, Sea and Giant otters but the remainder are confined to a few sentences. This section of the book would have been better organised by listing the various species by country. It would also have benefitted from more detailed descriptions, inclusion of photographs of each species and maps of their geographical ranges.

Nicola's prose comes alive when she describes her encounters with otters. There are good tips on watching otters and where to find them. The importance of field signs, footprints and spraints (faeces) is well documented and illustrated, particularly the photographs comparing otter footprints with those of other mammals which may be found in a riparian habitat. As pointed out, otter spraints are the most common field signs and have been the basis of numerous otter surveys, diet and genetic studies. Observations on sprainting made by Hans Kruuk (1995)* suggest that their role in scent marking is consistent with the idea that sprainting means advertising the use of a resource and is not necessarily a 'keep out' sign as suggested in the text. For example, in a Shetland study, four territorial boundaries were known and when the sprainting rates in the sections of coast at either side of these boundaries were quantified they proved to be no different from sprainting rates elsewhere. In fact, this spraint marking showed a pattern which was quite different to the ones that Kruuk had observed in badgers and hyaenas, where latrines were thickly crammed along the territorial limits. There are good, general descriptions of the natural history of freshwater and coastal otters; their diets, habitats, holts and the threats they still face. Nonetheless, there is still much to learn about otter behaviour in freshwater systems. Consequently, there is a danger in making too many assumptions on scant evidence. Otters are described as having long linear territories of 20-40km or more in length but these are better defined as home ranges. Indeed, the difference between ranges and territories should have been explained with the other otter terminology in the glossary and I would have liked to see far more scientific references in the text.

The final pages are devoted to 'the otter in writing'. Henry Williamson's classic book, Tarka the Otter, which has been one of the pleasures of growing up for countless children, takes pride of place. The book was published in 1927 while Henry was recovering from his traumatic experiences in the First World War; certainly not the Second World War as written! Gavin Maxwell's autobiographies recording his experiences with captive otters are also included. It is puzzling why they are they classed as fiction in the list of books recommended for further reading? The book is nicely produced with numerous photographs. However, I found the anthropomorphic nature of many of the picture captions and section headings undermined the text and left me wondering who exactly the book was intended for.

*Kruuk, H. (1995). *Wild Otters: Predation and Populations*. Oxford University Press.