

Contents

Introduction to Imprint No. 32 2005	Jon Traill	2
Mammal Snippets		3
A small mammal survey of Brockadale nature reserve, near Kirk Smeaton	Ann Hanson	6
A small mammal survey at Sheriff Hutton, near York - the Park Pale Project	Ann Hanson	11
A small mammal trap at Filey Dams Nature Reserve – Filey	Ann Hanson	16
Mammal Society National Owl Pellet Survey	Jack Whitehead	19
National Mammal Week Event at Mount Grace Priory, North Yorkshire	Ann Hanson	23
Are Badgers Sett in their Ways?	Ann Hanson	27
Copmanthorpe Primary School Mammal Trap		29
Yorkshire's Incredible Shrinking Water Vole Population, sudden collapse or long term decline	Colin Howes	30
Water Shrew in North East Yorkshire	Derek Capes	36
Miller's water shrew – a mammal of the Steppes	Michael Thompson	42
Testing times: Second annual report on the West Tanfield dormice	Amy Beer	44
Hedgehogs in the Uist	Hugh Warwick	47
“Making Tracks” – a report of YMG mammal recording walks 2005	Ann Hanson	49
Donna Nook seal extravaganza	Ann Hanson	54

Introduction to IMPRINT No. 32 - 2005

Jon Traill -chair

Just a short note from your Chair to introduce you to the 2005 edition of the IMPRINT magazine. Firstly, as always a huge thank-you to all who have been on the committee over the past year (and to those who have helped out and got involved who may not be on the committee). Without their tireless work much of what goes on in the group would not happen.

The year has been as busy as previous ones with a varied mix of talks from local people and from others who have travelled from away, to let us know about native species such as pine martens and hedgehogs as well as more exotic species such as the Anoa (dwarf buffalo).

On the outdoor front the group has continued to be involved in the two Dormouse reintroductions, the first now entering its sixth year with the more recent one seeing its first full season of nestbox checks. Let's hope that the newest site can provide all that is needed for a successful colonisation.

The field trips took place at sites across the region with events in East and North Yorkshire, while the small mammal trapping continued to excite and inform all those who attended.

I hope that those who have attended an event or talk have found it enjoyable and informative and for those who have yet to do so here's to 2006.

Mammal snippets

Compiled by Mary Youngman

Eurasian lynx (*Lynx lynx*) in medieval Britain

Lynx bones found in a cave in North Yorkshire in the 1920s & 30s have been radiocarbon dated as 1,500 years old. (Hetherington, Lord & Jacobi, Journal of Quaternary Science, published online 10 Oct 2005). This evidence indicates that the lynx went extinct in Britain in early medieval times, not 4,000 years ago as



Lynx lynx *The Scotsman* 22/01/2005

previously thought. The cause of decline was not climate change but human clearance of forested land. Consequently according to the European Union Habitats & Species directive the Eurasian lynx qualifies for consideration as a candidate for reintroduction into the UK. However with so many reported 'big cat' sightings, maybe they are already here!

Ref: & www.bbc.co.uk & www.telegraph.co.uk

Long-distance flight of a lesser noctule (*Nyctalus leisleri*) after rehabilitation.

Wohlgemuth, R., Devrient, I., Garcia, A. & Hutterer, R. (2004) *Myotis* **41-42:** 69-73.

How do bats fare after rehabilitation? The case history of one adult female provides evidence that rehabilitation effort can be successful. This noctule was found in a poor condition after being trapped in a cellar in Northrhine Westphalia, Germany, she was rehabilitated and released. Ten months later the same bat was found in a classroom in Madrid, Spain having migrated 1534 km. A remarkable long-distance flight.

Indirect negative impacts of radio-collaring: sex ratio variation in water voles.

Moorhouse, T.P. and MacDonald, D.W. (2005) *Journal of Applied Ecology* **42:** 91-98.

Abbreviated summary.

Radio-tracking is used ubiquitously in studies of wild vertebrates, a fundamental assumption being that tagged animals do not significantly differ, behaviourally or otherwise, from untagged animals.

Moorhouse and MacDonald studied two populations of water voles (*Arvicola terrestris*) over a three year period, one population was live-trapped for two years and then concurrently radio-tracked and trapped in a third year. The second population was only trapped.

A substantial decline in female numbers in the radio-collared population was recorded in the third year.

Moorhouse & MacDonald conclude that the observed decline in female numbers resulted from male-skewed recruitment sex ratios due to the attachment of radio-collars to female water voles. These results question the assumption that the use of radio-collars does not fundamentally affect the biology of collared water voles.

Exposure of non-target small mammals to rodenticides: short-term effects, recovery and implications for secondary poisoning.

Brakes, C.R. & Smith, R.H. (2005) *Journal of Applied Ecology* **42**: 118-128.

Abbreviated summary.

Predators and scavengers of poisoned rats are at risk of secondary poisoning from anticoagulant rodenticides. However, several predatory species of conservation concern rarely eat rats, implicating non-target small mammals as the major route of exposure. Brakes and Smith carried out exposure studies of non-target small mammals alongside routine rat control at sites around agricultural buildings and feed hoppers for game birds.

Three non-target rodent species fed on rodenticide from bait boxes: woodmice (*Apodemus sylvaticus*), bank voles (*Clethrionomys glareolus*) and field voles (*Microtus agrestis*).

Local populations of non-target small mammals declined significantly following rodenticidal rat control, but their relative proportions did not change significantly.

Brakes and Smiths research demonstrates that routine rat control reduced local populations of non-target small mammals. This may limit the food supply of some specialist predators. Most importantly, this demonstrates a significant route of exposure of predators and scavengers of small mammals to secondary poisoning. Rodenticides are applied on farms and game estates across the UK. Hence the results of this study are indicative of non-target rodenticide exposure nationally.

A small mammal survey of Brockadale nature reserve, near Kirk Smeaton

Dennis Aspinall Memorial Trap 2005

Ann Hanson

Introduction

The Yorkshire Wildlife Trust reserve at Brockadale lies between the villages of Wentbridge and Kirk Smeaton on the southern edge of North Yorkshire, grid reference SE499176. The reserve is a steep-sided valley with the River Went winding along its bottom. Habitats are varied and include floodplain grassland and wet woodland down by the river, drier flower-rich grassland and scattered hawthorn scrub on the Magnesian limestone slopes, old quarry



Wood Mouse Photo: David Jakes

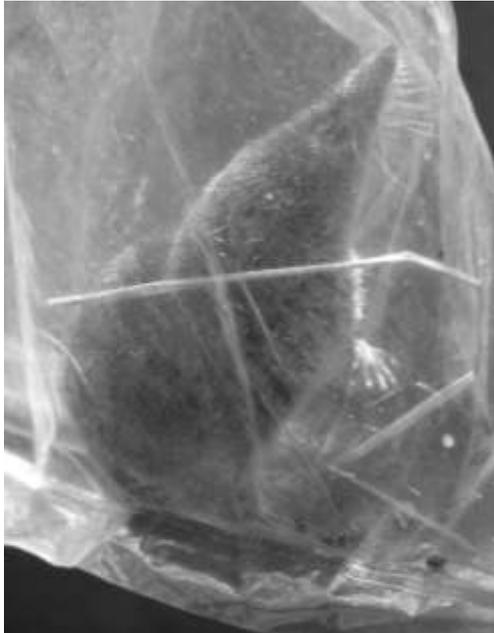
workings and even areas of ancient woodland. Historically the valley sides were too steep to plough so the slopes were grazed, instead of being cultivated like much of the surrounding area. Because of this more sympathetic regime, rare limestone-loving plants such as clustered bellflower, kidney vetch and autumn gentian are still to be found on the reserve. Well known for its impressive flora, our task was to investigate the small mammal community at Brockadale, aided by the reserve's own dedicated conservation volunteers.

Methods

Sixty 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. Dry grassy slope near to the car park (20 traps)
2. Dry grassy slope with scattered hawthorn scrub on the valley side (10 traps)
3. Ruderal vegetation in compartments 2 and 6 (10 traps)
4. Mature deciduous woodland adjacent to the butterfly ride (20 traps)



Pygmy shrew Photo: David Jakes

Traps were set on the evening of Friday 19 August and checked on Saturday 20 August from 9.30am onwards. They were reset on the Saturday evening and checked again on Sunday 21 August from 9.30am onwards. Eight water shrew (*Neomys fodiens*) bait tubes, baited with blowfly pupae, were also placed in dense vegetation (mostly yellow flag iris, greater willowherb and nettles) alongside the River Went. These were collected after a couple of weeks to examine for evidence of water shrew faeces.

Results

Summary of small mammals captured at Brockadale in August 2005.

	Dry grassy slope (1)		Dry grassy slope/scrub (2)		Ruderal area (3)		Mature woodland (4)	
	Sat	Sun	Sat	Sun	Sat	Sun	Sat	Sun
Common shrew	4	3			1	2		
Bank vole	2	5	1	3				
Pygmy shrew			1	1				
Wood mouse					2	2	7	11
Field vole					1	1		

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

Discussion and conclusions

In all, five different species of small mammals were caught at Brockadale over two nights, including wood mice (*Apodemus sylvaticus*), bank voles (*Clethrionomys glareolus*), field voles (*Microtus agrestis*), common shrews (*Sorex araneus*) and a pygmy shrew (*Sorex minutus*). This diversity of species reflects the varied habitats being sampled and also the quality of the reserve. The pygmy shrew was a real bonus, as these delightful little animals are not often caught in Longworth trapping surveys, partly because of their more localized distribution, but also due to their very small size. This particular pygmy shrew (assuming it was the same one on both nights as the animals were not marked on this occasion) weighed just 3g, with the largest wood mouse captured weighing in at a massive 31g, just to put things into perspective! The small mammals at Brockadale seemed to show a degree of habitat partitioning, with the almost exclusively nocturnal wood mice preferring the woodland where ground cover was sparse, whereas species like voles and shrews that tend to be active 24 hours a day seemed to prefer the denser cover afforded by the grassland and ruderal areas. This trap was also notable for the capture of two shrews in the same trap (luckily they seemed to have called a truce so no injuries were evident) and, later on, two bank voles sharing a trap. The latter pair was a male and female and seemed very well acquainted by the time we released them.

The water shrew bait tubes, which were placed in vegetation along the River Went, were only partly successful as a heavy rain storm caused the river to rise unexpectedly and several of the tubes were displaced and filled with sediment. However, several small mammal droppings were retrieved from the tubes, one of which turned out to be from a water shrew.

In addition to the above records, a harvest mouse (*Micromys minutus*) nest hunt carried out by the reserve volunteers in the autumn of 2005 revealed three harvest mouse nests in an area of tussocky grass down near the river. This brings the number of small mammal species found at Brockadale to seven, which is about as good as it gets in this part of the country!

Thanks are due to all Mammal Group and Yorkshire Wildlife Trust volunteers who helped with this survey, with special thanks to Joyce and Paul Simmons and the Brockadale conservation volunteers – keep up the good work!

Appendix I

Table of results: small mammal survey at Brockadale nature reserve, August 2005.

Weather: Warm and dry throughout; some rain the previous week.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
20/8/05				
Dry grassy slope (1)	Common shrew	?	A	7.0
	Common shrew	?	A	7.0
	Bank vole	F	A	14.0
	Bank vole	M	A	17.0
	Common shrew	?	A	7.0
	Common shrew	?	A	7.0
Dry grassy slope/scrub (2)	Pygmy shrew	?	A	3.0
	Bank vole	F	A	21.0
Ruderal area (3)	Common shrew	?	A	7.0
	Wood mouse	M	SA	14.0
	Wood mouse	F	A	16.0
	Field vole	F	A	24.0
Mature woodland (4)	Wood mouse	M	SA	14.0
	Wood mouse	M	SA	19.0
	Wood mouse	M	SA	21.0
	Wood mouse	F	SA	15.0
	Wood mouse	F	SA	17.0
	Wood mouse**	?	SA	?
	Wood mouse	F	A	19.0
21/8/05				
Dry grassy slope (1)	Bank vole	F	A	20.5
	Common shrew	?	A	6.5
	Bank vole**	?	SA	?
	Common shrew	?	A	6.5
	Bank vole	M	A	16.0
	Common shrew	?	A	8.0
	Bank vole	F	A	22.0
	Bank vole	F	A	17.5

Dry grassy slope/scrub (2)	Pygmy shrew	?	A	3.0
	Bank vole	M	A	20.0
	Bank vole	F	SA	14.0
	Bank vole	F	A	21.0
Ruderal area (3)	Field vole	M	A	20.0
	Common shrew	?	A	8.0
	Wood mouse	M	SA	19.0
	Common shrew	?	A	7.0
	Wood mouse	M	SA	15.0
Mature woodland (4)	Wood mouse	M	SA	19.0
	Wood mouse	M	SA	15.5
	Wood mouse	M	A	31.0
	Wood mouse	F	J	11.0
	Wood mouse	M	SA	17.0
	Wood mouse**	?	?	?
	Wood mouse	M	SA	19.0
	Wood mouse	F	J	12.0
	Wood mouse**	M	?	?
	Wood mouse	M	SA	15.0
	Wood mouse	M	A	20.0

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

** Escaped during handling.

A small mammal survey at Sheriff Hutton, near York - the Park Pale Project

Ann Hanson

Introduction

The Park Pale Project was carried out during 2004/5 by the local community in Sheriff Hutton with an aim to look at the history and natural history of the area previously encompassed by the deer park belonging to Sheriff Hutton Hall. This area now contains the hall itself, three other farms and the castle moat adjacent to the castle ruins on the edge of the village. Early in 2005 the Mammal Group were put in touch with Mr Overton Wallace of Sheriff Hutton, who was helping to co-ordinate the natural history side of the project, with a view to carrying out a small mammal survey of the project area during the summer.

Methods

Eighty-six Longworth traps were placed in eight locations within the project area, baited with wheat, peanuts, sunflower seeds, carrots and blowfly pupae, and with a ball of hay for bedding.

Trap locations: (see fig. 1)

1. Oaks Farm – grassy banks with patches of gorse around a farm reservoir (20 traps) – grid ref: SE654654
2. Oaks Farm – grassy bank with scattered scrub adjacent to an overgrown old hedgerow (10 traps) – grid ref: SE654653
3. Park Farm – grassy bank side of wet ditch and beneath adjacent old hedgerow (10 traps) – grid ref: SE656646
4. Park Farm – hedgerow and dry ditch with arable on one side and pasture on the other (10 traps) – grid ref: SE659653
5. Lodge Farm – woodland edge with adjacent set aside (10 traps) – grid ref: SE668646
6. Lodge Farm – woodland surrounding farm pond (8 traps) – grid ref: SE667654

7. Lodge Farm – hedge bottom alongside pasture (10 traps) – grid ref: SE668655
8. Castle moat – damp grassy moat with areas of scrub, adjacent to castle ruins (8 traps) - grid ref: SE651662

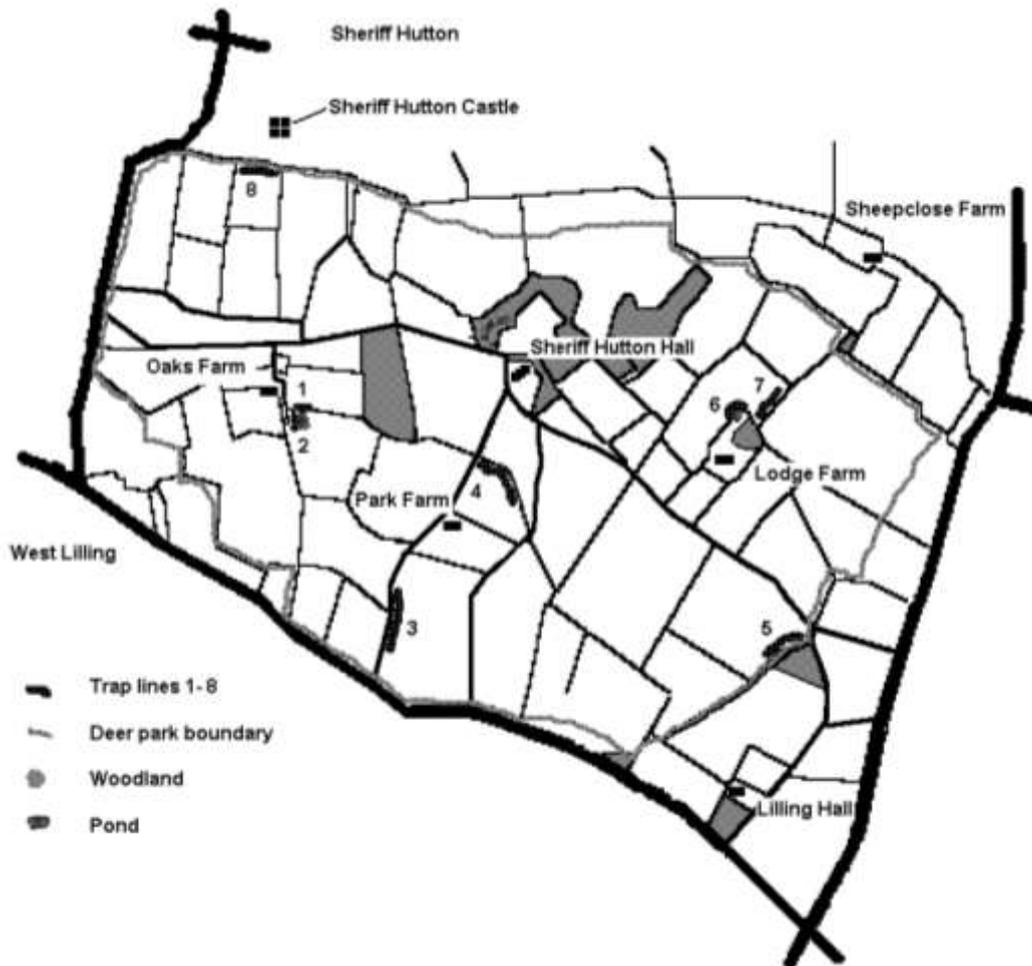


Figure 1: Map showing trap locations within Park Pale Project area, Sheriff Hutton.

Traps were set on the evening of Friday 17 June and checked on Saturday 18 June from 9.30am onwards. They were reset on the Saturday evening and checked again on Sunday 19 June from 9.30am onwards.

Results

Summary of small mammals captured at Sheriff Hutton in June 2005.

	Site 1		Site 2		Site 3		Site 4	
	Sat	Sun	Sat	Sun	Sat	Sun	Sat	Sun
Bank vole	2	2	2	3	1	2	1	2
Wood mouse		2				2		

	Site 5		Site 6		Site 7		Site 8	
	Sat	Sun	Sat	Sun	Sat	Sun	Sat	Sun
Bank vole	1	2			1	2	1	3
Wood mouse	1	1		1	1	2	1	1

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

Discussion and conclusions

Only two species were trapped over the weekend, bank vole (*Clethrionomys glareolus*) and wood mouse (*Apodemus sylvaticus*), and only in fairly small numbers at any one site. Most of the animals captured were adults, which could indicate that the breeding season was a little late in getting started in 2005. The diversity and quality of habitats sampled would generally produce a more diverse and abundant small mammal community. Perhaps this would have been the case if the survey had been carried out later in the summer. The absence of shrews in the traps was especially surprising, considering the excellent habitat available at several of the sites.

Other mammal records from within the project area over the weekend were mole hills in the pasture adjacent to the castle moat and near the pond at Lodge Farm and rabbits in the woodland edge at site 5 and near the reservoir at Oaks Farm. Hares were seen in the fields adjacent to site 7 at Lodge Farm, the reservoir at Oaks Farm and site 4 at Park Farm. A badger latrine was located alongside the track near site 4 at Park Farm and we had a lovely view of a fox enjoying the evening sunshine on the edge of woodland at Oaks Farm. One other interesting record was a rather large common toad who took up residence in a trap next to the wet ditch at site 3.



Thanks are due to all Mammal Group and Park Pale Project volunteers who helped with this trap, with special thanks to Overton Wallace for introducing us to the farmers and helping us locate suitable survey sites and Marion Shorter and Mary Youngman for their enthusiasm and dedication over the weekend! I would also like to thank Robin Barker at Oaks Farm, David Armitage at Park Farm and Dorothy and Mike Rickatson at Lodge Farm for giving us permission to carry out surveys on their farms.

Appendix I

Table of results: small mammal survey at Sheriff Hutton, June 2005.

Weather: Hot, sunny and dry throughout.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
18/6/05				
Reservoir Bank (1)	Bank vole	M	A	21.0
	Bank vole	F	A	30.0
Grass bank with scrub (2)	Bank vole	M	A	24.0
	Bank vole	F	A	25.0
Wet ditch and hedge (3)	Bank vole	M	J	15.0
Dry ditch and hedge (4)	Bank vole	M	A	23.0
Woodland edge (5)	Wood mouse	F	A	26.0

	Bank vole	M	SA	17.0
Hedge beside pasture (7)	Wood mouse**			
	Bank vole	M	A	23.0
Castle moat (8)	Bank vole	M	A	26.0
	Wood mouse**			
19/6/05				
Reservoir Bank (1)	Wood mouse	M	A	25.0
	Bank vole	M	A	24.0
	Wood mouse	M	A	25.0
	Bank vole	M	SA	20.0
Grass bank with scrub (2)	Bank vole	M	A	24.0
	Bank vole	F	A	26.0
	Bank vole	F	A	24.0
Wet ditch and hedge (3)	Bank vole	M	A	26.0
	Bank vole	M	SA	13.0
	Common toad			
	Wood mouse	F	A	25.0
	Wood mouse	M	SA	10.0
Dry ditch and hedge (4)	Bank vole	M	A	27.0
	Bank vole	F	SA	17.0
Woodland edge (5)	Wood mouse	F	A	23.0
	Bank vole	M	A	24.0
	Bank vole	M	A	21.0
Woodland with pond (6)	Wood mouse	M	A	24.0
Hedge beside pasture (7)	Wood mouse**			
	Bank vole	F	A	27.0
	Wood mouse	F	A	26.0
	Bank vole	F	A	27.0
Castle moat (8)	Bank vole	F	A	24.0
	Bank vole	M	A	24.0
	Bank vole	F	SA	17.0
	Wood mouse	F	A	28.0

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

** Escaped during handling.

A small mammal trap at Filey Dams Nature Reserve, Filey

Ann Hanson

Introduction

Filey Dams nature reserve, situated on the outskirts of Filey, is an area of ponds, reed beds and wet grassland managed by the Yorkshire Wildlife Trust, grid reference TA107807. The Mammal Group have trapped there several times over the years, always with excellent results and usually being treated to a close-up view of some of the water shrews who frequent the reserve. In July 2005 the Mammal Group ran a small mammal trap on the reserve as part of a course on monitoring mammals, organized by the North and East Yorkshire Ecological Data Centre (NEYEDC).

Methods

Sixty 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. Woodland edge (10 traps)
2. Hedge leading to East Pool Hide (10 traps)
3. East Pool waters edge (5 traps)
4. Wet grassland field centre (10 traps)
5. Sedge/reed bed edge (15 traps)
6. Bramble patches adjacent to gardens at reserve edge (10 traps)

Traps were put in place, with doors closed and bait scattered around them, on the evening of Thursday 28 July to give the animals a chance to get used to them being there. They were set to catch on the evening of Friday 29 July and checked on the morning of Saturday 30 July from 9.45am onwards.

Results

Summary of small mammals captured at Filey Dams in July 2005.

	Wood edge (1)	Hedge (2)	Waters edge (3)	Wet meadow (4)	Sedge & reed bed (5)	Bramble patch (6)
Wood mouse	5				2	2
Bank vole	4				1	2
Common shrew		2			1	1
Water shrew						1

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

Discussion and conclusions

Four species of small mammals were caught at Filey Dams, including wood mice (*Apodemus sylvaticus*), bank voles (*Clethrionomys glareolus*), common shrews (*Sorex araneus*) and a water shrew (*Neomys fodiens*). It was noticeable that animals were more numerous in the dryer areas, such as the woodland and bramble patches along the edges of the reserve, than in the wetter reed beds and wet meadows. There had been torrential rain for a few days prior to this trapping session and it may be that animals had moved to higher ground as the areas around the ponds became more waterlogged. The fact that the only water shrew captured was in a bramble patch, rather than down near the ponds, could also indicate that conditions were getting a bit wet for comfort on other parts of the reserve. This particular water shrew was so intent on investigating our traps that it had pushed its way in before the traps were even set to catch and was found already in residence on Friday evening, happily munching on blowfly pupae. It was rediscovered a couple of traps further down the row on Saturday morning, looking very plump and pleased with itself!

The results obtained during this trapping session can be compared to the results for barn owl pellets from Filey Dams recently analysed for the Mammal Society National Owl Pellet Survey (see article by Jack Whitehead on page 19). While the owls were mainly catching field voles (*Microtus agrestis*), indicating a good population of this species in the grassland at Filey Dams, we failed to catch any during our trapping session. This is a common problem with field voles, as they can initially be reluctant to leave their runs and burrows in the grass and enter Longworth traps. Species of secondary importance to the barn owls, such as wood mice, bank voles and common shrews, were however recorded in reasonable numbers during the trapping session. Finally, water shrews were only found in small numbers in owl pellets and Longworth traps, which was not surprising as they tend to occur at lower density than most other small mammals found in wetlands.

Thanks are due to the Yorkshire Wildlife Trust for allowing us to carry out this survey at Filey Dams and to Rob Masheder of YMG and Simon Pickles of NEYEDC for their help and good natured endurance of appalling weather conditions!

Appendix I

Table of results: small mammal survey at Filey Dams nature reserve, July 2005.

Weather: Cloud, mist and light rain; torrential rain during previous week.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
Woodland edge (1)	Bank vole	M	A	24.0
	Wood mouse**	M	SA	?
	Wood mouse	F	A	24.0
	Bank vole	M	A	25.0
	Bank vole	M	J	15.0
	Wood mouse	M	J	16.0
	Bank vole	M	A	20.0
	Wood mouse	F	A	27.0
	Wood mouse	F	A	26.0
Hedge (2)	Common shrew	?	A	9.0
	Common shrew	?	A	10.0

Sedge/reed bed edge (5)	Wood mouse	M	SA	20.0
	Bank vole	M	A	22.0
	Wood mouse	F	J	13.0
	Common shrew	?	A	8.0
Bramble patches (6)	Wood mouse	M	A	21.0
	Bank vole	M	A	19.0
	Common shrew	?	A	8.0
	Water shrew	?	A	14.0
	Bank vole	M	A	21.0
	Wood mouse	F	A	27.0

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

** Escaped during handling.

Mammal Society National Owl Pellet Survey

Jack Whitehead

The mammals of Filey Dams Nature Reserve have been recorded regularly since the reserve was established, using Longworth traps supplied by the Yorkshire Mammal Group. At the first trapping session, in 1985, a good number of water shrew *Neomys fodiens* were caught and a further five sessions (the last one in September 2000) have tracked the fortunes of this animal and the other species which live in the area. Harvest mouse *Micromys minutus* has never been trapped here but a dead adult was found in the reserve car park some years ago.

Barn owls *Tyto alba* were infrequent visitors to the reserve until 2004 when the erection of a nest box encouraged a pair to breed, raising one young bird in their first season. The box is occupied again this year. Owl pellets have been collected from the box in two batches and submitted to the Mammal Society National Owl Pellet Survey and the results so far are published here:

Report by R. Alasdair Love, Project Co-ordinator

Period of pellet production: 15 February 2004 – 2 January 2005

Location: Filey Dams. Location Code LQ, Batch LQ1

Results:

Species		Number of Prey Items	% Prey Items
Microtus agrestis	Field vole	71	56.3
Clethrionomys glareolus	Bank vole	11	8.7
Apodemus sylvaticus	Wood mouse	23	18.3
Micromys minutus	Harvest mouse	2	1.6
Rattus norvegicus	Brown rat	1	0.8
Sorex araneus	Common shrew	11	8.7
Sorex minutus	Pygmy shrew	4	3.2
Neomys fodiens	Water shrew	2	1.6
Very large bird sp		1	0.8
Total		126	
Number of Pellets		42	

Comments

The field vole was the primary prey species in this batch and by a large margin. Second in importance by numbers of prey items was the wood mouse, and it was followed by the common shrew and bank vole. The field vole, wood mouse and common shrew are generally the three main prey species of the barn owl, with the field vole being overall the most important. However, their proportions do vary seasonally, with the common shrew providing its main contributions in spring and early summer, the wood mouse in late summer and early autumn, and the field vole throughout the remainder of the year. There are also variations in their percentage contributions from year to year. The combined percentage contribution from these three species to the batch was 83.3%

The bank vole is typically a regular contributor to the barn owls diet – generally as a minor prey species as is the pygmy shrew. The harvest mouse and brown rat are much less regular in their appearance and rarely provide much more than a small proportion of the prey items. The water shrew is a nomadic species and hence can appear in pellet batches in a number of successive months and then be absent for months.

There was a single bird prey item. Birds are classified into 5 weight categories in this survey – the weight being estimated by humerus length. Such weight classification allows for the analysis of the dietary importance of the various prey types in pellet batches. The prey item in this batch was a very large bird. The small mammals provided 99.2% of the prey items, and the bird prey item provided the remaining 0.8%. Barn owls generally take very few bird prey.

Period of pellet production: 3 January 2005– 27 February 2005

Location: Filey Dams. Location Code LQ, Batch LQ2

Results:

Species		Number of Prey Items	% Prey Items
Microtus agrestis	Field vole	71	47.0
Clethrionomys glareolus	Bank vole	21	13.9
Apodemus sylvaticus	Wood mouse	14	9.3
Micromys minutus	Harvest mouse	4	2.6
Rattus norvegicus	Brown rat	1	0.7
Sorex araneus	Common shrew	26	17.2
Sorex minutus	Pygmy shrew	8	5.3
Neomys fodiens	Water shrew	4	2.6
Large bird sp		1	0.7
Amphibian sp		1	0.7
Total		151	
Number of Pellets		38	

Comments:

The field vole continued as the primary prey species in this batch although its percentage contribution suffered a reduction. The common shrew was second in importance by prey items, and it was followed by the bank vole.

The remaining species were all minor prey species – the most important of which being the wood mouse. Its percentage contribution suffered a large reduction since the previous batch. The pygmy shrew percentage contribution saw an increase. The other prey species provided small contributions to the batch. The harvest mouse and the water shrew were

each represented by four specimens, and there was a single brown rate specimen recovered from the batch.

There was a very large bird prey item and an amphibian prey item. Amphibia are generally taken in very small numbers and “in season” – i.e. when they are migrating to and from their breeding pools.

The small mammals thus provided 98.6% of the prey items, the bird prey provided 0.7% and the amphibian prey item provided the remaining 0.7%

Obviously the prey species found reflect the situation in the areas that the birds hunt over and not necessarily the immediate area of the nest site, though it is likely that the birds are taking prey within 1-2 kilometres of the nest box.

Late in 2004 a second nest box was erected on the Old Tip site, about 1 kilometre north of the Filey Dams nest box. This box is also occupied this year and the first batch of pellets has been collected. It would be interesting to carry out a Longworth trapping session while the owls are in residence to compare the results of the two techniques and I hope that this might be arranged for 2006.

Clearly the results of the National Owl Pellet Survey should be accessed by local mammal recorders as the barn owl may yet significantly redraw some of their mammal distribution maps.

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National Mammal Week Event at Mount Grace Priory, North Yorkshire

Ann Hanson

Introduction

Mount Grace Priory is located near Osmotherley in North Yorkshire, grid reference SE449985. It is a 14th century ruin, once inhabited by Carthusian monks, now owned by the National Trust and run by English Heritage. The property consists of a manor house and gardens, the priory ruins and large areas of grass, scrub and disused fishponds. It is a haven for wildlife and most well known for its highly visible stoats, which were featured in a BBC documentary several years ago.

The Yorkshire Mammal Group ran a very successful mammal weekend at Mount Grace Priory in 2003 and we were invited back for a similar event over the weekend of 2nd and 3rd July 2005 as part of National Mammal Week. Activities during the weekend once again included small mammal trapping in the grounds, owl pellet analysis, slide shows, a quiz and mammal displays.

Small mammal trapping

Fifty Longworth traps and twenty Swedish Ugglan traps were placed in a variety of habitats around the priory grounds, baited with wheat, peanuts, sunflower seeds, carrots and blowfly pupae, and with a ball of hay for bedding. Ugglan traps have a wire cage design, with a weight-controlled trapdoor catching mechanism and a separate metal roof attachment for keeping the rain off.

We also placed eight water shrew bait tubes at three different locations, all near to water, baited with blowfly pupae.

Trap locations:

1. Stream edge alongside drive to manor house (5 Longworths, 5 Ugglan, 3 bait tubes)
2. Tussock sedges and wetland alongside stream (5 Longworths, 5 Ugglan, 3 bait tubes)
3. Small fishpond edge (5 Longworths)
4. Large fishpond edge (10 Longworths)
5. Grassy bank (10 Longworths, 10 Ugglan)
6. Woodland edge by spring (5 Longworths, 2 bait tubes)
7. Woodland edge with bracken (5 Longworths)
8. Uncut grass inside priory ruins (5 Longworths)

Because of the way the programme of events for the weekend had been arranged, traps were set to catch during the day, rather than overnight, and the catch examined late in the afternoon. Traps were put in place, with doors closed and bait scattered around them, on the evening of Friday 1 July to give the animals a chance to get used to them being there. They were set to catch on the morning of Saturday 2 July and checked in the afternoon from 3.30pm onwards. They were set again on the morning of Sunday 3 July and checked again in the afternoon.

Results

Weather: Warm and sunny throughout.

Unfortunately, Saturday 2 July revealed no animals at all in the traps. The results for Sunday 3 July are shown below.

Site	Species	Sex M/F*	Age A/SA/J*	Weight (g)
Tussock sedges by stream (2)	Common shrew	?	A	8.0
	Bank vole	M	A	21.0
Small fishpond edge (3)	Bank vole	M	SA	16.0
Large fishpond edge (4)	Bank vole	F	A	24.0
Woodland edge by spring (6)	Bank vole	M	J	14.0
	Bank vole	M	A	21.0
Woodland edge with bracken (7)	Bank vole	M	A	21.0

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

Only two species of small mammal were caught at Mount Grace on this occasion, bank voles (*Clethrionomys glareolus*) and common shrews (*Sorex araneus*), both in quite small numbers. In 2003, trapping was carried out overnight and wood mice (*Apodemus sylvaticus*) were caught in large numbers, along with bank voles and common shrews again. Trapping during the day more or less excludes wood mice from the catch as they are largely nocturnal, so our catch of mainly bank voles with a token shrew was not unexpected. We had hoped to compare Longworth and Ugglan trap catches to see if they caught different species in different numbers, but the small catch meant that this was not possible. Perhaps a future overnight trapping session might provide us with the data to carry out such a comparison.

The water shrew bait tubes yielded no positive results over the weekend, although something had raided the two tubes placed under the boardwalk near to the spring. The tubes were left in place to be monitored for a bit longer by Becci Wright of English Heritage.

Owl pellet analysis

A large bag of barn owl (*Tyto alba*) pellets from Strensall Common, near York, were kindly supplied by Derek Capes. Twenty-nine pellets were analysed over the weekend and mammal skulls identified using a key from the Mammal Society book on “How to Find and Identify Mammals”. A collection of previously prepared small mammal skulls were also on hand for reference purposes.

Results

Table of results: barn owl pellet analysis.

Pellet no.	Field vole	Bank vole	Wood mouse	Common shrew	Pygmy shrew	Water shrew	Bird
1	3	3		1			
2	1			3			
3	1		1				
4	1		1	1	1		
5	2			2			1
6	3	1					
7	1	2					
8	1						

9	3				1		
10			2				
11			1	2			
12	2		1				1
13	4						
14		1	1				
15	2						
16	1						
17	3			1			
18	2						
19	1			1			
20	1		1	1			
21	3						
22	4			1			
23	2		1		1		
24	2						
25	2			1			
26	3			2			
27	1		1				
28						1	
29	3			1			
Total	52	7	10	17	3	1	2

This batch of barn owl pellets held an amazing number and diversity of small mammal remains, showing the usefulness of owl pellets for mapping the distribution of small mammals. The largest pellet contained seven different prey items – surely this must be a record! Six different species of small mammal had been taken by the owls, with field vole (*Microtus agrestis*) being the most common prey. Common shrew, wood mouse and bank vole were also popular, with pygmy shrew (*Sorex minutus*) and water shrew (*Neomys fodiens*) only being taken occasionally, along with small birds.

Conclusions

Although the daytime trapping was a bit of a disappointment, the excellent results from the barn owl pellets more than made up for this. Plenty of people came along to the weekend and hopefully had an enjoyable and informative time. The mammal quiz, featuring pots of skulls, droppings and nibbled nuts, certainly seemed to go down well!

Huge thanks are due to my willing assistants Rob Masheder and Derek Capes and to Becci Wright and all the English Heritage staff for helping make the weekend a success. And last but not least, thanks to the stoats who finally came out and played for us after all the visitors had left...

Are badgers sett in their ways?

Ann Hanson

In January 2005 I came across a large nest of dry grass in an abandoned chicken shed on our property and I started to wonder what sort of animal might have made such a nest. The nest was nearly a metre in diameter and contained no clues as to who might have built it. Several such old sheds exist on our land, covered in impenetrable brambles during the summer months,



Abandoned chicken shed Photo: Ann Hanson

they are used as nest sites by a variety of birds and even as places for foxes to rear their cubs. Foxes, however, don't gather bedding but just tend to curl up amongst the old nest boxes and chicken feeders. The only evidence of recent usage I could find in my grassy nest were several balls of white woolly fur – the owner of this fluff was soon identified as Thomas, our own large

fluffy cat, who had obviously been using the nest as a lying up site when out hunting rabbits.

I began to consider other possibilities and the fact that the chicken shed was only about 20m from a large, active badger sett led me to think that perhaps a

badger was the owner of the nest. But badgers don't nest above ground – or do they?

A search of the literature proved otherwise, as a study by Pavlacik et al (2004) in the Moravskoslezske Beskydy Mountains of the Czech Republic found badgers inhabiting wooden barns and sheds, abandoned stone buildings, wooden beehouses and the non-residential part of a house! The Czech badgers were using buildings mostly during the winter months, when their traditional setts may have been fairly wet and inhospitable. A quick question at a YMG meeting also revealed badgers using above-ground locations in North Yorkshire, including one female rearing cubs several metres up in a straw-filled barn (Chris Peacock pers. comm.). Unlike Pavlacik's badgers, our grassy nest seemed to have been used over the summer months, as it appeared abandoned by the time it was located in January.

By the spring of 2005 I thought I might have got to the bottom of the mystery, when a more thorough (and painful) search of the bramble patch behind the chicken shed revealed a fairly freshly dug hole surrounded by badger paw prints. The paw prints were fairly small, so my theory is that a young badger from the nearby sett was forced to de-camp at some point during the spring or summer of 2004, possibly when the dominant female gave birth and wanted more space for herself and her young. Not wanting to leave home completely, the young badger used the old chicken shed as a home over the summer and then dug itself a proper hole when the winter weather made its chicken shed retreat a bit parky.

There was evidence, in the form of fresh bedding, that the badger returned to its chicken shed nest during the summer of 2005. Perhaps the above-ground nest was more appealing during warm weather, even if it did have to be time-shared with a large woolly cat!

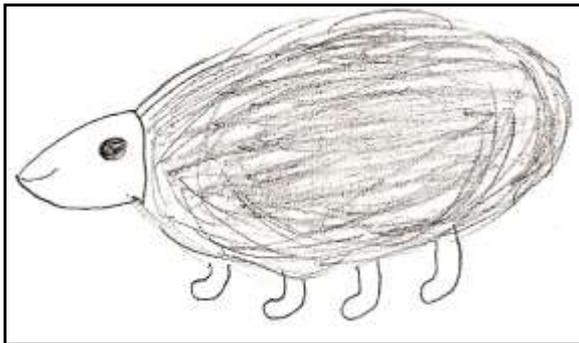
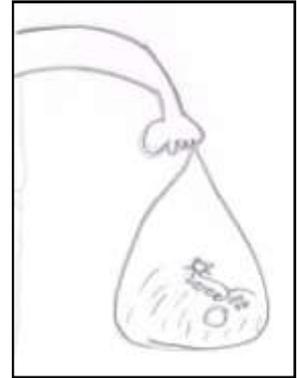
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Copmanthorpe Primary School mammal trap

On one hot June day this summer, Sian Abbey, a YMG member, introduced some of Copmanthorpe Primary School Year 3 children to the small mammals in the school nature area. Twenty five Longworth traps were set. The children helped open the traps and examined the contents. Later each child was asked to write a short report. Below are a few of those reports and some original illustrations!

Mrs Abbey set some traps in the wildlife area. She put them in the shade because it was so hot. We went back on the 21st she had set them the day biffor. We found two adult mice and two juveniles. Wood mice are nocturnal that means that they sleep all day and come out at night. That was what we found in the wildlife area. We also saw a hedgehog going across the feauled in front of us



June 21st 2005

On Monday evening Mrs Abbey put some metal traps out with some hay, wheat, peanuts, blowfly larvae, carrot for moisture for some small animals to eat and sleep on the hay. The next morning on Tuesday we went to the wildlife area to see if we had cort any animals. And we found three woodmouse and two adults and one worm and one cat.

Wildlife area traps

Mrs Abby went to the wild life area to set some traps in shady spots, if she put them in the warm the animals wouldn't survive. Inside the traps were straw for beds and wheat, peanuts, blowfly larva and carrots for food. Wherever some purple wool was thats where the traps were, the traps caught 5 wood mice, they were two adult mice and three juveniles, after that we let the go back to there home



Yorkshire's Incredible Shrinking Water Vole Population: Sudden collapse or long term decline.

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Monitoring the changes

Analysis of the huge literature archive generated by field workers of the Yorkshire Naturalists' Union and its affiliated societies (see Howes 2001) is proving to be an invaluable data source, with records dating back to the 1870s and anecdotes proclaiming the former abundance of water voles. For the purposes of the YNU conference on *'The Freshwater Ecology of Yorkshire'* (Harrogate, 24.2.2001) and the YNU/YMG/English Nature *'Yorkshire Water Vole Conference'* (York 19.5.2001), water vole records were collated and prepared for distribution mapping and analysis. Data was broadly from three data sets a) the YNU's accumulated records from the 1870s to 1974, b) anecdotal records and perceptions of water vole status in the wide range of local topographical and natural history literature (see Howes 2001) and c) the records generated by the surveys (1975-85) for the Yorkshire Mammal Atlases in (Howes 1983) and Delany (1985).

Distribution mapping, which is the purpose of much field recording and which usually gives a simplified overview of an otherwise complex situation, can in some situations lead to more confusion than clarification. Of the 78 10km squares for which there are 'historical' (pre-1975) records, 30 produced no records during the 1975-85 survey. Ah! is evidence of a 38% decline in range you might say (particularly in the light of the much publicised national decline). But no, the 1975-85 recording actually confirmed presence in 104 10km squares, so is this a 33% increase? Further, of these 104 10km squares, 55 were additional to the pre 1975 squares, so does this represent a 70% increase? But if we balance the 30 negative 'historical' squares with the 55 new squares, does this represent a mean increase in range of 25%? What are we to make of these figures, particularly since they are at such variance with the apocalyptic pronouncements of the national situation (Strachan & Jefferies 1993). The only thing we can say with confidence is that the

accumulated records from the YNU's two data sets (voles ancient and modern) come from some 133 10km squares entirely or partly within the five Watsonian vice counties of Yorkshire.

In this case we are attempting to compare the product of a hundred year marathon of generalised recording with that of a relatively focussed ten year sprint. What seems to emerge from this conundrum is that Yorkshire is too vast and the efforts of its field naturalists are too polarised to 'home ranges' or favourite recording 'territories' to provide comprehensive and consistent monitoring. We are just as likely to be monitoring naturalist effort as water vole presence.

True, there is evidence to show that some water vole populations have vanished after mink have moved in, as on the North York Moors (Woodroffe et.al. 1989) and at Tophill Low Reservoir (Crowther 1996); barn owl and fox predation rates increase after water courses are dredged or de-vegetated as at Armthorpe Colliery and Thorne Moors (Howes 1979); and that populations decline after riparian vegetation is perpetually grazed short by increasing sheep stocking levels, as in the Peak district (Yalden 1997). For meaningful monitoring work in future, effort needs to be focused on periodically repeated field surveys of nominated sites, using the nationally accepted methodology and undertaken by experienced field surveyors (Strachan 1998).

Making use of YNU excursion data

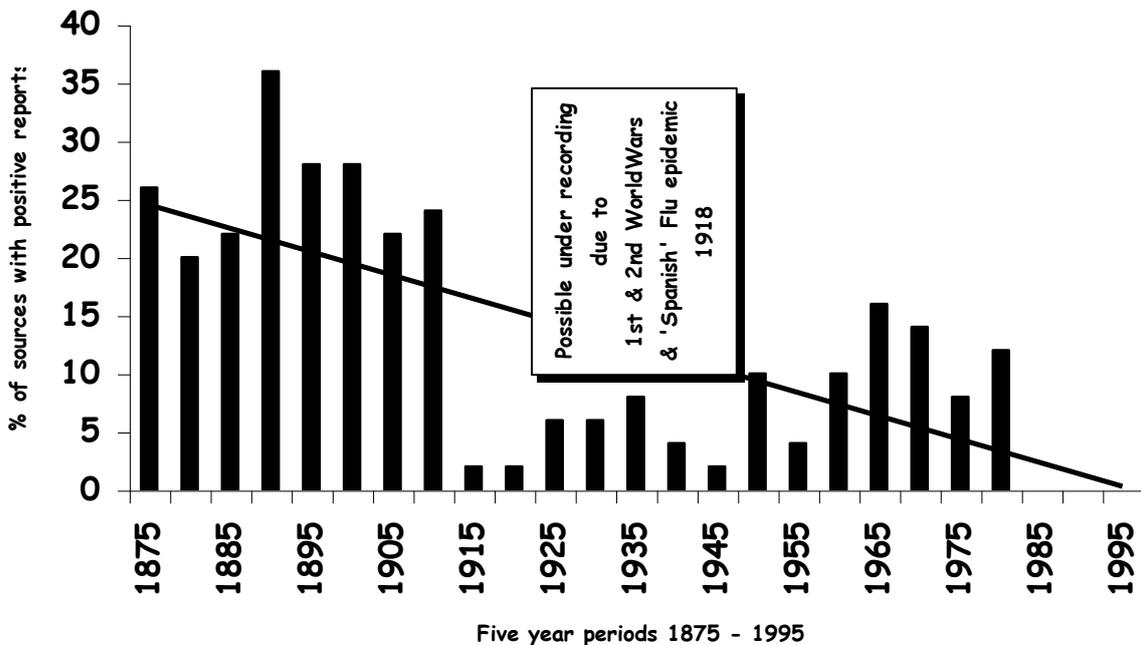
Field records and studies of the past, though fundamentally different to Strachan (1998), are none the less an invaluable resource and can be used to indicate changes in status. Since 1877 the Yorkshire Naturalists' Union has annually undertaken a standard five site surveys (general field meetings or excursions), one in each of the Yorkshire vice counties. Each 'excursion' is preceded by an information circular which usually reviews the known flora, fauna and geography of the area to be visited. This is normally followed by a published report noting the species actually encountered in the field. This archive gives a potential of ten data points per year from the 1870s to the present. This study uses these field meetings as the equivalent of random quadrats, sampling the biodiversity of Yorkshire's varied landscapes with roughly even effort over time.

This system can at its crudest, provide dated and provenanced records and has already been used to monitor the demise of such species as polecat,

dormouse and red squirrel and the rise of the mink, roe deer and grey squirrel (Howes 1984).

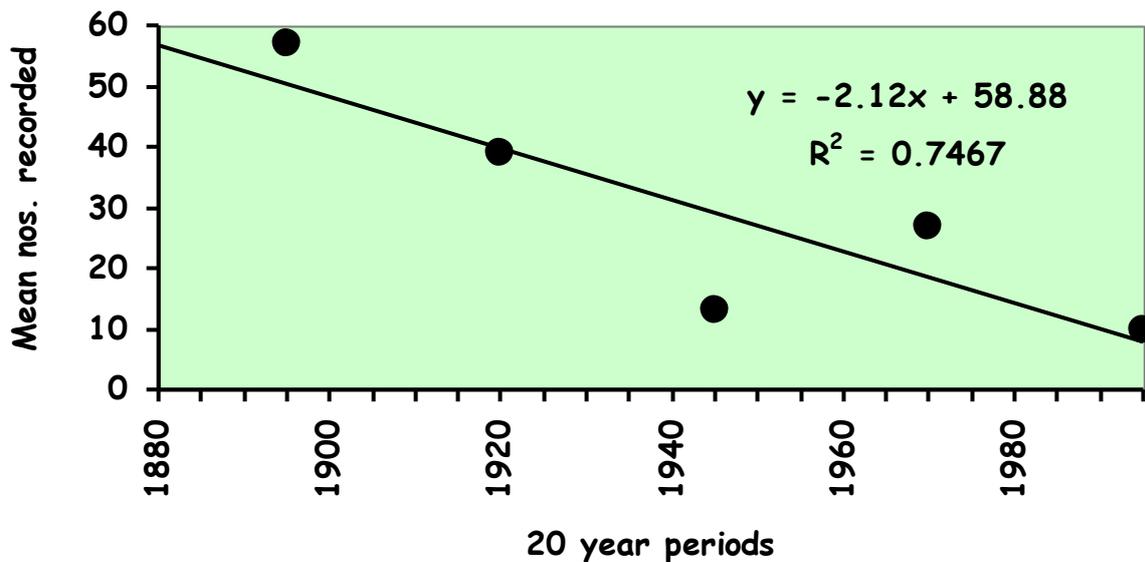
By collating water vole records from this reasonably consistent source it has been possible, by aggregating records for five year periods, to express these as a % of the total number of data points per quinquennium. Figure 1 shows the quinquennial results from 1875 to 1975 indicate fluctuating though generally declining occurrences of references and encounters. The pronounced decline in references between 1915 and 1945 is common to other species and is deemed to be a reduction in recorder effort (through recorder mortality) as a result of Spanish flu of 1918 and the two world wars (1914-18 & 1939-45). After the commencement of recording during the 1960s there has been a continued decline in water vole encounters, the absence of records since the mid 1980s possibly reflecting the sudden national decline thought to be in response to mink predation. This generally coincides with the findings of Stachan & Jefferies (1993).

Figure 1.
Changes in % of YNU field meeting circulars and reports
where water voles were reported 1875 - 1995



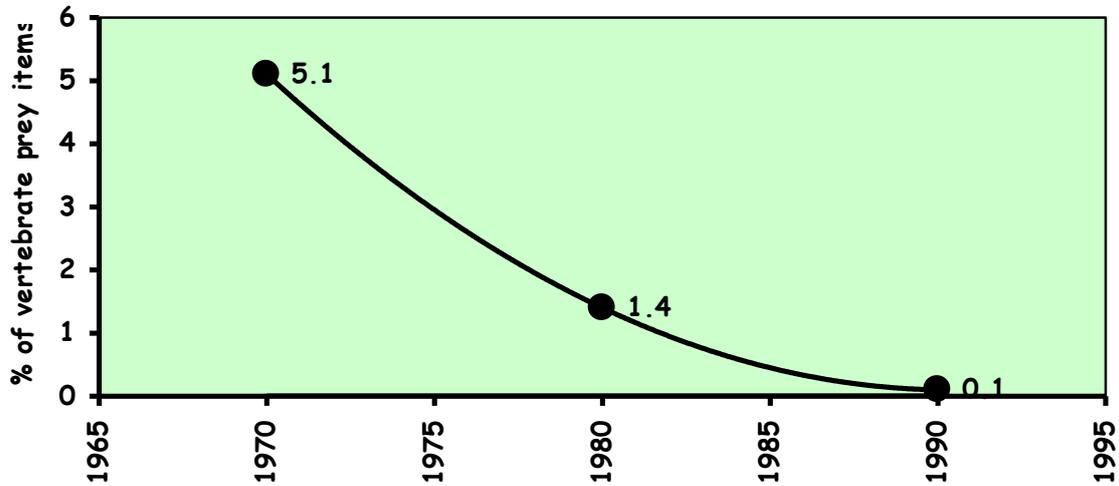
To examine this trend and smooth the graph, 20 year mean figures have been calculated from 1880 to 1980 and plotted in Figure 2

Figure 2. Twenty Year Mean numbers of Water Voles referred to in YNU Circulars or recorded in YNU Excursion Reports 1880 to 1995



An examination of the % frequency of water voles as prey items in the diets of (mainly) barn owls (*Tyto alba*) in Yorkshire has been analysed from pooled data in sources listed in Howes (1998). This shows that using an entirely different data source a similar pattern of decline from the 1970s to the 1990s is indicated.

Figure 3. Water Voles as % of prey items taken by Owls in Yorkshire



Certainly, the general trends shown by these preliminary analyses appear to echo the findings of the national surveys, giving the sad impression that all may be lost for the water vole. This indeed seems to be the situations for the main rivers and Environment Agency water courses but it is by no means the whole story. In certain landscapes and aquatic situations within the Yorkshire and Humber regions water vole populations are still present and apparently thriving. These sites (in my own experience across the Humberhead Levels and the Holderness Plain) tend to be in the fens, bogs and mires of the Hatfield Chase and the networks of Internal Drainage Board (IDB) drains and even farmers drains. Here in the flat lowland so-called 'agri-deserts', the aquatic vole habitats are usually unseen and quite unsuspected by the casual observer since they are often metres below landscape level. Where present, they are often quite luxuriant and surprisingly species-rich. The problems here include a) drain desiccation brought about by falling water tables, b) summer use of drain water for crop irrigation, c) unsympathetic bank profiles and d) unsympathetic cycles of mechanical ditch dredging and de-vegetation. Problems of this nature need to be critically researched and addressed in local or corporate Biodiversity Action Plans.

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Water Shrews in North East Yorkshire.

Derek Capes

Introduction

For the past two years, the Mammal Society has been undertaking a national survey of the distribution of the Water Shrew (*Neomys fodiens*). I decided to take part having encountered the animal at three different sites around Great Ayton while carrying out Longworth trapping for small mammals (Table 1).

Method

The method employed was devised by Dr. Sara Churchfield (1), and uses 200mm lengths of approximately 38mm diameter plastic drainage pipe with a net baffle attached to one end, the other end being left open. The tubes are baited with about two dozen blowfly pupae, and four baited tubes are positioned at approximately 10m intervals at ground level amongst the waterside vegetation at each site under investigation. After a period of two weeks the tubes are collected, and the contents dried and examined for any scats deposited. The bait may be taken by rodents, terrestrial or water shrews and close examination of the scats is necessary to distinguish the presence of aquatic invertebrate remains which would confirm water shrew identity. After personal examination, all scats were forwarded to The Mammal Society for official confirmation of identity.

In each of the two years, surveying was carried out in two periods, December to April and July to September.

Survey Sites

The survey sites are shown in Fig. I and listed in Table 2, together with the results. It will be noted that due to time constraints, little surveying was done in 2004 and the sites chosen were generally close to Great Ayton to minimize traveling time. For 2005, horizons were spread a little wider to take in streams rising on the North York Moors, in the west near Osmotherly, several flowing east into the North Sea coast and a number flowing into the River Esk, ie the northern part of the North York Moors. In addition, five areas of still water were included, four of which were used for angling, the other being a small pond created some 10 years ago as a conservation measure by a local farmer. A total of 32 sites were surveyed and for each one, details of the

site characteristics were recorded. These included data relating to water depth, width, flow, the nature of the substrate and banks, and aquatic and bankside vegetation, and adjacent land use and human use.

Results

On collection, the contents of the four tubes were amalgamated into one sample to represent a site. Scats with aquatic invertebrate remains were found in samples from 6 of the 32 sites (18.8%) and can be taken as evidence of water shrew presence. All were from sites with running water. Scats of terrestrial shrews and rodents were found in 11 (34.3%) and 6 (18.8%) of samples respectively. The results are shown in Table 2.

Discussion

The survey has been successful in identifying sites where water shrews were present. However, the fact that water shrew scats were not obtained does not necessarily rule out the possibility that they may occur. The number of sites where water shrew presence was confirmed may have been greater, had the bait not been taken first by the more abundant terrestrial shrews and rodents. Recommendations for placing the tubes were to locate them within 2-3m of the waters edge and ideally as close as possible to it. It was anticipated that this would leave little latitude for increases in water levels which can often rapidly occur on streams draining wide upland areas. Surveying in the five month winter period was therefore, confined to April to avoid the worst of the winter weather. In the event, no tubes were lost on the stream sites due to anchorage of the tubes with wire loops, stones and twigs on steep bank sides. A tube was lost however, from the relatively level sides at each of two fishing lakes. Inundation of odd tubes did occur on several occasions, with loss of the tube contents, but never to all four tubes from a given site. Nevertheless, positive evidence may have been lost.

The sites from where the water shrew scats were taken using tubes would all appear to be generally similar in character; shallow streams with rocks, stones and gravel beds and deeper pools. Aquatic vegetation was absent. They were all in narrow wooded valleys at altitudes ranging from 10m to 170m. No account was taken of water quality although it may be assumed to be of a relatively high quality.

One of the three sites where water shrew had previously been caught with Longworth traps would broadly fit the above category, but the other two were

quite different. One was a small pond excavated some 10 years ago near to a shallow stream in a conservation corner in a large area of flat arable land. The other was a small lake of a similar age, developed from low lying pasture land and allowed to fill with water for angling. This latter site did not however, generate water shrew scats when surveyed with the tube method. There were several sites which appeared to have similar characteristics of those which gave positive results yet did not provide evidence of water shrew activity. It seems likely that water shrew distribution along a stream is localized and possibly outside the chosen survey site. Clearly a more structured study would be required to provide more data on this aspect. No attempt was made to identify the invertebrates upon which the water shrews were feeding but this would open up another useful avenue of investigation. The size and number of scats taken during the last session, i.e., Summer 2005, were noted and these values would suggest that a shortage of food has not been a problem this season. Indeed, the number of scats taken from the four tubes one site was the highest that both the Project Coordinator, Phoebe Carter and Sarah Churchfield had seen (2).

Conclusion.

It is reasonable to say that the survey has added a little to the knowledge about the distribution of the water shrew in North East Yorkshire. There is no doubt however, that the survey has raised more queries about water shrews in this part of Yorkshire and although the field work for the Mammal Society National Survey is now completed (for the time being at least), there is no reason why more investigative work should not continue locally.

Footnote: For reasons of confidentiality the Mammal Society felt unable to provide me with names or contact details of anyone locally who might also be participating in the Survey, so if anyone out there has done, it might be interesting to compare notes.

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- 1) Churchfield, S., Barber, J. & Quinn, C. (2000) A new survey for water shrews (*Neomys fodiens*) using baited tubes. *Mammal Review*, **30**: 249-254
- 2) Carter, P. Personal Comment Oct. 2005

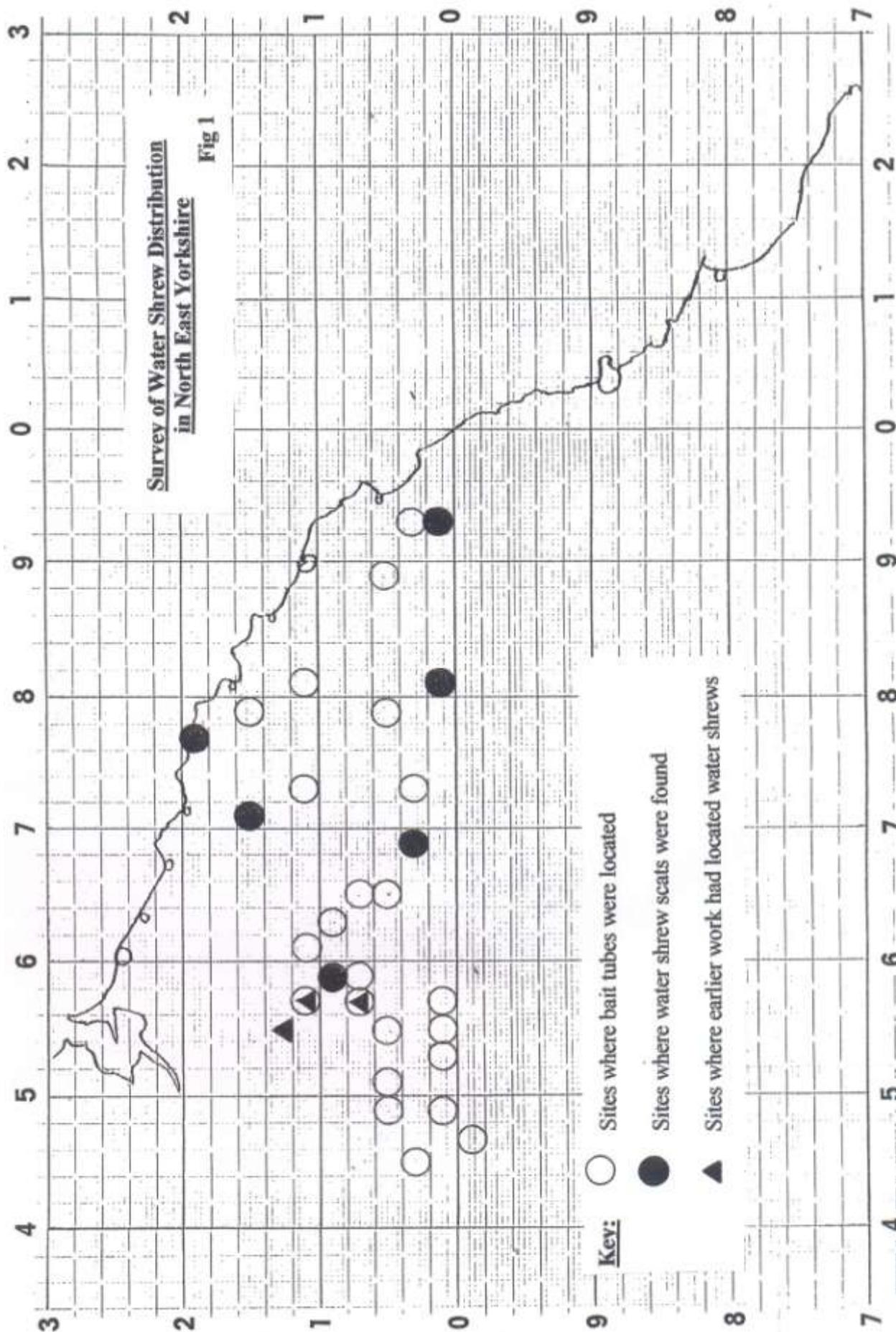
Table 1: Water shrew records from Longworth Trapping and a single Scat Analysis

Date	Site	Map Ref	Alt (m)	Method
26.6.2002	Great Ayton	NZ 577 110	100	Longworth
3.9.2002	Nunthorpe (S)	NZ 551 132	85	Longworth
16.9.2003	Great Ayton (S)	NZ 579 105	125	Longworth
29.9.2004	Ingleby Greenhow	NZ 579 065	115	Scat Analysis (not tube method)

Key; (S) Still water

**Table 2: Details of scats obtained in blowfly pupae baited tubes,
North East Yorkshrie, 2004 & 2005**

<u>Date</u>	<u>Site</u>	<u>Map Ref</u>	<u>Alt (m)</u>	<u>Result</u>
<u>2004</u>				
23.4	Greaty Ayton (S)	NZ579 105	130	-
23.4	Ingleby Greenhow	NZ 578 065	120	Rodent
25.4	Kildale, Dundale Beck	NZ 593 082	130	Terrestrial Shrew
23.4	Kildale, River Leven	NZ 599 097	140	Water shrew
25.4	Sleddale Beck	NZ 637 099	180	-
25.4	Baysdale Beck	NZ 651 074	160	Terrestrial Shrew
19.7	Battersby	NZ 598 077	135	-
22.7	Seave Green, Bilsdale	NZ 573 001	270	-
<u>2005</u>				
25.4	Ingleby Arnecliffe	NZ 452 004	75	Terrestrial shrew
25.4	Oakdale, Osmotherly	SE 475 961	190	T. shrew & Rodent
25.4	Scugdale, Swainby	NZ 491 005	130	Terrestrial shrew
25.4	Alum Beck, Carlton	NZ 496 061	70	Rodent
25.4	Carlton (S)	NZ 503 061	70	-
25.4	Faceby (S)	NZ 497 021	140	Terrestrial shrew
22.7	Littlebeck	NZ 897 049	60	Terrestrial shrew
22.7	Fylingthorpe, Ramsdale Beck	NZ942 038	40	Terrestrial shrew
22.7	Fylingthorpe, Stoupe Beck	NZ 937 019	80	Water shrew
9.8	Liverton, Mill Beck	NZ 701 154	100	Water shrew
9.8	Staithe, Easington Beck	NZ770 181	10	Water shrew
9,8	Newton Mulgrave	NZ 789 157	70	Terrestrial shrew
9.8	West Barnby, East row Beck	NZ821 112	70	-
9.8	Scaling, Boghouse Beck	NZ 741 119	180	-
17.9	Goathland, West Beck	NZ 814 004	130	Water shrew
17.9	Glaisdale	NZ 786 062	80	Terrestrial shrew
17.9	Great Fryup Dale	NZ 729 047	140	Terrestrial shrew
17.9	Danby Dale	NZ693 046	170	Water shrew
17.9	Westerdale	NZ 663 061	150	Rodent
19.9	Ingleby Greenhow	NZ 581 063	120	-
19.9	Seave Green, Bilsdale	NZ 563 003	165	Rodent
19.9	Raisdale	NZ 540 006	185	-
19.9	Kildale, New Row (S)	NZ 614 102	170	Rodent
24.9	Great Broughton (S)	NZ 556 069	85	-



Miller's water shrew – a mammal of the Steppe?

Michael Thompson

Stretching over hundreds of miles from eastern Europe is the Steppe Country. Eastern Hungary is part of that Steppe. To the north and west of the Hungarian steppe are the Zempleni and Bukk Hills, covered, in the most part, by extensive mixed deciduous woodland; to the south east, Romania and the Carpathian mountains. Much of the steppe is featureless, but yet, it has a rich mammalian fauna. On a recent visit in October, I, along with the party I was traveling with, saw only a small fraction of that fauna. We were searching unsuccessfully for migrating dotterel *Eudromias morinellus* in a vast area of flat steppe with not a tree or shrub in sight. The ground was either bare or covered with low cropped grass, for there were cattle in the area. In this uninviting habitat, one of our party stumbled on a dead shrew lying on some soil. Close examination of the shrew indicated that it was water shrew, but what species of water shrew? It seemed different to me. The nearest eutrophic small pond, surrounded by dense aquatic vegetation, was a hundred yards away and, besides that pond, there did not seem to be any other standing water in the immediate area. To begin with it was fully grown, but lighter and slightly smaller than the water shrew *Neomys fodiens* we find in Yorkshire. The demarcation line between its upper dark grey-black pelage and pure white underside was very distinct. The hairs on its feet and the keel of its tail were less developed or even absent. These morphological features suggested to me subsequently that I had been examining a Miller's water shrew *Neomys anomalus*, which I was unable to sex. The mammalian field guide book state the *N. fodiens* weighs between 8 - 23 g., whereas *N. anomalus* 7.5 - 16 g.

The distribution maps in Poyser's *Atlas of European Mammals* (1999) indicated that *N. fodiens* is mostly found in the hilly western part of Hungary, whereas *N. anomalus* is located more in lowland east Hungary, although there is some overlap. It seems that where the water shrew is less common, then Miller's water shrew is the more dominant species and is more adapted to a terrestrial habitat when food is scarce. This would probably account for us finding it where we did.

A few days later, walking along a forest ride in the Zempleni Hills, I came across a dead common shrew *Sorex araneus*, which is found throughout central Europe. Our Hungarian guide, Gabor, had never seen shrews, either

dead or alive, in the wild before and, therefore, each specimen was of considerable interest to him. Another dead Insectivora we found was an eastern hedgehog *Erinaceus concolor*, distinguished in the field from western hedgehog *Erinaceus europaeus* by its throat and underside being a lighter colour. Like some of its western counterpart, this eastern hedgehog was dead on the road.

Other mammals seen on tour were brown hares *Lepus europaeus*, a dead bank vole *Clethrionomys glareolus*, a common hamster *Cricetus cricetus* (also dead on a road), the European souslik *Spermophilus* and a stoat *Mustela erminea* carrying a small rodent. Several red foxes *Vulpes vulpes* were sighted, often in the open fields containing crops; one unconcerned, poor specimen of a fox crossed the road in front of our minibus riddled with mange. Roe deer *Capreolus capreolus* seemed to be everywhere. On one day we counted 20 in small parties, often in open fields. Signs of other mammals were found, such as fraying of rowan in the forest by red deer *Cervus elaphus*, along with their slots in soft earth. Wild boar *Sus scrofa* grubbing up of soil, along with their foot prints, abounded along the forest rides. Runs in long matted grass of some species of vole were found on the steppe, for they must have been very common to support so many species.

Testing times: Second annual report on the West Tanfield dormice

Amy Beer, with additional bits by Ann Hanson

In June 2004 YMG volunteers helped restore hazel dormice to a site near West Tanfield as part of a national programme of reintroductions coordinated by Dr Paul Bright of Royal Holloway University of London and funded by the Mammals Trust UK. Such reintroductions are not done lightly, and the wood had been specially selected for its suitability and the willingness of the landowner to manage it in a dormouse-friendly manner. The mice themselves had passed health checks and were known to be in excellent physical condition. Even so, for those of us that were closely involved, the responsibility of exposing 60 naïve captive bred dormice to the rigours of 'real life' in the wild weighed rather heavily. So, in September 2004, it was with great relief that we discovered 16 healthy adults using some of the nearly 400 nest boxes installed for their benefit. The boxes contained a further 45 juveniles, and we went into winter 2004-5 confident in the knowledge that not only were there now dormice where there had been none, but that there were actually more than there had been on the day of the release.

From September 2004, however, the dormice really were on their own. The feeding rounds stopped, the mast season came to a natural end, and then it was winter. An unusually dry, mild winter at that, with a particularly mild spell in February giving real cause for concern. Lovely for humans – we were wandering around in shirt sleeves – but potentially disastrous for dormice. Warm weather early in the year can bring them out of hibernation before there is any food available. Having woken up and searched in vain for something resembling breakfast, they would be forced to go back to sleep having wasted precious energy.

In January, Amy Beer visited the reintroduction site with MTUK's Jennie Caddick, who is compiling a report on the potential for dispersal from various dormouse centres around the country. Because dormice tend not to travel long distances on the ground, it is important that sites are connected to other areas of habitat by suitable habitat corridors. Jennie's view was that the Tanfield site had reasonable potential for dispersal, provided the owners of

neighbouring estates were willing to make dormice welcome on their land. It was exciting to think of 'our' dormice as pioneers in a gradual recolonisation of a whole region. Grand ambitions indeed!

The first nestbox check of the year took place in May. By this time the dormice should have been active for a month or two. Ann Hanson and Rob Masheder, armed with dormouse handling licenses newly issued by English Nature, lead a group of eager volunteers out to the site. The first news wasn't great. The estate gamekeeper reported having found three decomposing dormouse carcasses cached among a number of pheasant poults and wood mice in a stoat lair on the edge of one of the woods. It seems likely that they were either taken on the ground during hibernation or in a groggy state just after having woken up. The stoats in question, needless to say, were no more, but if three dormice had been taken by one, how many others might have been lost elsewhere?



Dormouse Photo: Robert Masheder

All in all, the May check yielded seven empty dormouse nests and three healthy-looking adult dormice, one male, one female and one that was vigorous enough to evade capture completely. It wasn't as many as we hoped, but perhaps now the rest of the population were finding natural alternatives to the nest boxes. This box check

also revealed one common shrew, 33 wood mouse nests and no less than 196 bird nests (mainly wrens, blue tits and great tits). Less appealingly, three boxes contained wasp nests and a couple had been colonised by bees. It seemed the boxes were providing shelter for a plethora of woodland life, even if the dormice hadn't quite got the idea yet.

The second box check came in July. This time we found only three nests, one of which contained a lone female dormouse and a litter of pink babies.

This female was quickly christened Mrs Angry, as she managed to bite both Ann and Rob, showing no respect at all for their dormouse handling licenses. So who said that dormice don't bite! While this evidence of breeding was undoubtedly a good thing, the overall low dormouse count was a cause for concern. Where were all the others? As far as other species were concerned, we found two lively wood mice, while wood mouse nests had declined to nine, bird nests to five and the bees had disappeared. Unfortunately, the wasps had increased to five nests, including one that was so large it was actually protruding from the hole in the back of the nest box!

Undaunted, two months later we were back again. Expectations had been tempered by the two previous low counts and this time we planned to complete the entire check in just one session. But by the end of the day we had recorded seven nests and four adult dormice – the best result of the year. Once again we had the odd handling issue – one dormouse escaped before we could sex or weigh it, but no-one ever said dormouse wrangling was easy and we're still very much on a learning curve. Other records on this occasion were two wood mice, five wood mouse nests and three common shrews, all living in old bird nests. And, yes, the wasps were still in residence.

Apart from the disappointingly sparse nature of this year's records, one other thing stands out from our results. Three out of the seven adults we found were in a box in what seemed like a rather unlikely area of the wood, dominated by sycamore. In its favour, there is a bit of bramble, but it doesn't really look like prime dormouse habitat, lacking any dense three dimensional shrub cover and being some distance from the closest stand of hazel coppice. The nearest release cage was one from which the captive bred dormice escaped prematurely though a small hole in the first week of the acclimatisation period in June 2004. Perhaps these early pioneers did better than we feared they might at the time – hard to say, as our electronic tag readers failed to get results from any of the dormice we found this year.

Having submitted our results to the National Dormouse Monitoring Programme run by MTUK we hear that our low counts were by no means unusual. Full results are not yet available, but all in all, it seems to have been a bad year for dormice nationwide. MTUK's Susan Sharafi reports that numbers were especially low in the summer and early autumn, but that sites that performed a late check in October found them picking up again. Susan tentatively attributes this to what was in many places a rather dry summer. It has been noted in the past that dormice tend not to use nest boxes in dry

conditions, so it could be that the box monitoring was not accurately reflecting the true dormouse population sizes in 2005.

If you would like to be kept up to date on the national picture, please apply to MTUK to be put on the mailing list for the National Dormouse Monitoring Programme's biannual newsletter, *Dormouse Monitor* (visit www.mtuk.org or call Susan Sharafi on 020 7498 5262). Better still, get involved hands on and join in next year's next box checks with YMG – contact Amy Beer (amy@mtuk.org 01904 634227) or Ann Hanson (goodgnus@tiscali.co.uk 01132 811286) for more information.

It just leaves us to say a big thank you to all the people that turned up to help with the checks this year. We hope you all managed to see at least one dormouse – and if you didn't, well there's always next year!

Hedgehogs on the Uist

Hugh Warwick

To kill or to translocate? That is the unpalatable question that returns to face the conservation authorities in the Uists as they move into the fourth year of hedgehog control. Scottish National Heritage have taken a tough stance, claiming that the only way to improve the breeding success of dunlin, ringed plover and other waders is to kill the prickly predator on the islands in the Outer Hebrides. They have to contend with a very vocal opposition, not just from the public, but also from volunteers who have instigated their own rescue, translocating live hedgehogs to the mainland.

So why are SNH so set against this apparently more humane course for dealing with the hedgehogs? After all, it is hardly the hedgehogs' fault that they were introduced to South Uist around 30 years ago.

SNH are in a peculiar position for a conservation organisation. They have determined that they should be arbiters of animal welfare (not something that bothers them when confronting other pest species such as mink, rats and rabbits). They are concerned that translocating hedgehogs would condemn them to “slow and lingering deaths” and that they would also have a

detrimental impact on any resident population into which they were moved. At its heart, the argument is based around the idea that the hedgehog population of the UK is density dependent, i.e. there are as many hedgehogs in the UK as the UK can tolerate, therefore any additions will either die or cause the death of other hedgehogs. However, the world's leading hedgehog experts contest this fundamental idea and point out that the controlling factor of hedgehog population success is hibernation.

There are many questions that this position raises. How many hedgehogs have to survive translocation for it to be considered a success? How many resident hedgehogs need to be affected for it to be deemed a failure? And how can we measure these data?

Groups who oppose the cull, including the British Hedgehog Preservation Society (BHPS), proposed various studies to see whether a translocation would work. Each proposal was rejected by SNH as not being rigorous enough, and as the success criteria were ramped up, so was the cost. The final proposal would have costs £160,000 to carry out, and as SNH were not willing to contribute anything to the study, this would have had to be borne by the animal welfare organisations.

But the continual questioning of whether translocated hedgehogs survived had another impact, raising uncertainty among the thousands of people who take in, rehabilitate and release hedgehogs every year. So the BHPS determined that a smaller, more affordable, trial should be undertaken that at the very least would satisfy the hedgehog translocators that they were doing no harm.

I was fortunate enough to end up spending a month radio-tracking 20 hedgehogs around Eglinton Country Park in North Ayrshire. The study was quite simple, to see whether these hedgehogs did survive translocation from the Uists. They were all radio-tagged and followed every night, having their weight monitored.

The results are still on their way through the peer review process, but the news is good. While there were a number of casualties, only one of them was from a general decline. The others were from predation, accident and cancer. Surprisingly, given the proximity of the study site to two very busy roads, none of my hedgehogs were squashed. This is particularly interesting when

you look at another radio-tracking study I undertook in Devon where two of the twelve met their end on the very quiet country lane.

While all the evidence I had read, and the experiments I had already taken part in, indicated that the release would be successful, it was reassuring to have such a positive outcome. The big question now is whether it will influence those at SNH who have to decide whether to conduct another cull. If they decide to halt the cull and work with the rescuers there is a chance that some headway might be made in assisting the birds (who are at risk of being forgotten in the tussle over the hedgehogs). So far the number of hedgehogs removed has been lamentable – in three years the combined efforts of the cullers and the rescuers have not even caused a reduction in total population. In fact it has continued to increase as breeding success out performs eradication by quite a margin.

What is needed is a more sensible approach that uses the skills and energies of both teams. And there needs to be more lateral thinking, rather than the focus on removal. Perhaps some areas could be temporarily fenced during the breeding season? Perhaps other pressures on the birds could be investigated as throughout the islands there have been catastrophic breeding failures caused by climate change. It is important to remember that it is not all down to the hedgehog – it is just easier to blame the ‘illegal immigrant’.

“Making tracks” – a report of YMG mammal recording walks 2005

Ann Hanson

The Nidd at Knaresborough – 16th January 2005

Our first walk of the year started off well with a grey squirrel in the car park near Conyngham Hall on the outskirts of Knaresborough. As we slid our way through the woodland down Scotton Banks we saw roe deer, badger and fox tracks in the plentiful mud. On reaching the river we began to hunt for signs of otters, but instead found some interesting footprints in the sand – definitely mustelid, possibly mink. Further along there were molehills in the woodland edge and more of the same after crossing the river to Bilton Banks.

Finally our perseverance was rewarded by some fairly fresh otter spraint on a rock by the river, just as we left the woods heading for the Nidd Gorge. Further along near the old mill race we found more roe deer slots and saw a couple of deer bouncing off into the woods on the opposite side of the river. Chunks of rabbit fur were found in the meadow by the river and squirrel eaten pinecones in the woods as we left the river and climbed up Bilton Banks. Last sighting of the day was another grey squirrel along Bilton Lane before we all fell into a welcome teashop in Knaresborough.

Snow in the Wolds – 20th February 2005



Hare tracks Photo: Ann Hanson

Three intrepid mammal enthusiasts made their way through the snow to Wharram le Street in East Yorkshire, determined to have a walk on the wolds whatever the weather. We set off with several inches of snow underfoot but blue skies above and headed for the Yorkshire Wildlife Trust reserve at Wharram Quarry. Here we were treated to the mad antics of a couple of brown hares and even measured the length of their bounds in the snow – 230cm in one bound was quite impressive! We also found fox tracks in the snow near the quarry, so the hares may need to move quickly. We carried on along the old railway to the site of the medieval village

of Wharram Percy where molehills were poking through the snow. A short blizzard and a quick stop for lunch in the ruined church at Wharram Percy and we headed up hill to walk along the top of Deep Dale. It was here that we encountered the real find of the day – a giant snow hare, standing 3ft high on its haunches, only ever seen in the exact weather conditions we were experiencing. An impressive beast indeed! And finally, as we trekked back to Wharram le Street, six more conventional brown hares were sighted in the fields above the quarry, standing out well in the snow.



Giant snow hare Photo: Ann Hanson

Ambling around Aberford – 20th March 2005

Starting out from the Arabian Horse pub on Aberford main street, near Leeds, we headed up Green Hill to the footbridge over the A1(M). A grey squirrel was spotted just before the footbridge and numerous rabbits living in the earth bank adjacent to the sewage works just across the bridge. As we made our way through the countryside towards the Cock Beck, we spotted fox scats, a squirrel drey, more rabbits and countless molehills. Along the beck itself we found numerous vole holes, but probably only large enough to be field or bank voles rather than water voles. A badger latrine was located in the edge of Hayton Wood, which contains a large sett, and numerous field vole runs and burrows in the meadow next to the wood. We crossed the beck to South Dyke earthworks and found more fox scats, rabbits, roe deer slots and several badger tracks and latrines. Returning to follow the Cock Beck towards Lead Hall Farm we discovered an impressive mole fortress alongside the beck. Finally, as we made our way back to Aberford along the Rein earthworks, we found the remains of a dead badger next to the road and had a look at the enormous badger sett in the earthworks themselves. Last sighting of the day was yet more rabbits in the fields on the outskirts of the village.

Forging along the valley – 17th April 2005



Badger hair Photo: Rob Mashedor

This walk along the Forge Valley near Scarborough began with the squeaking of a shrew from beneath the boardwalk alongside the River Derwent. Further along the river we found fox scat and molehills in a field. Our next finds were some badger footprints on a muddy track and badger fur on a barbed wire fence, followed by the discovery of a sett in gorse bushes near the river. A squirrel's hazelnut hoard in a

meadow near the Sea Cut was followed by more fox scat and what appeared to be a mustelid footprint. A little further on a trail leading down to the river revealed some fox fur caught on barbed wire and more badger prints. As we climbed up into the woodland above Hackness Hall we found signs of rabbits and yet more badger tracks. There were also plentiful molehills, one with a fox scat on top, and what appeared to be a mustelid dropping alongside the track. Finally, as we headed back towards the Forge Valley, we found more rabbits and roe deer slots in the woodland near the Sea Cut.

An evening on the Foss – 2nd June 2005

On a fine summer's evening in June, Mary Youngman led us on a walk along the River Foss at Strensall, looking for water voles and otters. Our first mammal sign was as ever molehills behind the old tannery, but shortly after that we found signs of one of our target species in the form of otter spraint on a ledge under the road bridge. Further along we located what looked like water vole holes and droppings alongside the river, followed by the sighting of two water voles by various members of our party. Quite a success for a short evening walk!

To the Dales and beyond – 16th October 2005

A cold, misty morning found us in the northern most reaches of North Yorkshire for a walk along the Arkle Beck in Arkengarthdale. First we headed up onto the moor above Langthwaite, where we found molehills, fox

scat and a rabbit skull, followed by numerous spoil heaps which seemed to mesmerize certain members of our party. The sun came out as we came down from the hills and we searched in vain for signs of otters along the Arkle Beck. A roadkill hedgehog was located by smell near Stang Bridge and rabbits abounded in the woods behind Scar House. These same woods yielded a dead bank vole on the path and a good supply of squirrel and wood mouse nibbled hazelnuts. Later that same afternoon, a teashop in Reeth provided much needed refreshments for the intrepid mammal hunters.

Red squirrels in Widdale – 4th December 2005



*Red squirrel, just like the ones seen in Widdale
Photo: Ann Hanson*

What was originally billed as a trip to Langstrothdale actually turned into a trip to Widdale, near Hawes, after some timely advice from an informed source as to where we might actually see some genuine Yorkshire red squirrels. Accompanied by several members of Wharfedale Naturalists, we set off across the boggy moor from High Houses plantation and first mammal sign of the day was some otter spraint next to the bridge over Snaizeholme Beck. Next were molehills in the field

beside the beck. On entering Tow Hill plantation we had our first sighting of red squirrels and such an excellent view. Two squirrels were eating from peanut feeders at a house on the edge of the wood and a third leapt across the footpath on its way back from breakfast. We watched their antics in the rain for some time before retiring into the dry of the conifer plantation for lunch, surprising a juvenile squirrel caching food as we did so. After lunch we walked around the edge of the plantation and back along Snaizeholme Road where a roe deer bounded off into the woods. As we turned back through the woods towards Mirk Pot we spotted a squirrel feeder attached to a tree with two red squirrels quarrelling over its contents. We watched this pair for a

while, then decided to head back as the rain began again. Rabbits were sighted by Mirk Pot and finally yet another red squirrel eating peanuts on the windowsill of Green Farm. The owner of the farm informed us that the squirrels were so tame that they came into his kitchen and sat on the table! The squirrels we saw may well have been eating from purpose-made feeders, but they are truly wild red squirrels and apparently they're doing just fine in Widdale.

All that remains is to say a big thank you to everyone who came out on mammal walks this year. Your company was much appreciated and hopefully the rewards made it all worthwhile!

Donna Nook seal extravaganza

Ann Hanson

On Saturday 20 November 2004 a small group from the YMG met up at Donna Nook NNR in Lincolnshire to watch the annual spectacle of breeding grey seals on the sand banks of the RAF bombing range. Not the best of places for seals to breed you might think, but the RAF are very kind to the seals and don't bomb during the short breeding season, even moving seals to safety if they stray on to the range at other times of the year.

Donna Nook is about 15 miles down the east coast from Cleethorpes, near to the village of North Somercotes. The site is a huge area of mud, sand banks and dunes, owned by the Ministry of Defence and managed by Lincolnshire Wildlife Trust. Every year in November and December a large colony of grey seals gather up near the dunes to have their pups and an equally large number of people come to see and photograph the seals. Lincolnshire Wildlife Trust wardens manage the whole affair, keeping seals and people a safe distance apart, although the seals seem generally undisturbed by all this activity!

Grey seals have one pup a year and the female suckles her fluffy white (or grey if they happen to be on the mud) offspring for 2 to 3 weeks before heading off to sea to mate again. The young seal then sheds its fluffy coat,

becomes sleek and waterproof and makes its way down to the sea to start out on its own.



Grey Seals
Photos: Ann Hanson

