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CONTENTS

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EDITOR'S REPORT

1992 has been a very active year for the Yorkshire Mammal Group, with a full indoor programme of talks, three traps and a "bottle survey" so far undertaken, and more to come in the autumn. This, together with some technical problems, has meant that this issue of IMPRINT is rather late - apologies for this.

This issue contains some very interesting articles - a fascinating account of the expedition to Africa to see mountain gorillas from Lorna Woodroffe, a piece on Orcadian mammals from Michael Thompson and a report form Tony Lane on his survey of brown hares. Thanks to all contributors and also to Andy Booth for the beautiful illustrations. I am also very grateful to Indru Nariani for help with production.

Kate Fuller

MAMMAL NEWS

CHERNOBYL ACCIDENT IMPACT ON SWEDISH VOLES

In a recent study, Cristaldi et al studied the effects of fallout from the Chernobyl accident on bank voles, *Clethrionomys glareolus*, in Sweden. Their experiment looked at levels of radioactive cesium in the animals' tissues and compared it with environmental levels and evidence of mutagenesis. The results showed a correlation between radionuclide levels in muscle and soil and evidence of mutagenesis. However, the estimated doses experienced by the voles were much lower than those required to produce similar effects in laboratory tests. The authors could find no explanation for this discrepancy.

Ref: Cristaldi, M. et al
Int. J. Radiat. Biol. 50 No. 1, 1991

TOTALLY WILD CATS?

Fernandez et al have attempted to determine the purity of the wildcat *(Felis sylvestris)* population in Iberia, and the extent to which hybridization with the domestic cat, *F. catus*, has occurred. Seventy skulls were analysed qualitatively and quantitatively and the results suggest that Iberian wild cats present a specific purity greater than that measured in cats from other parts of Europe. This is possibly due to the wildness of the country and relatively low hunting pressures on the population.
(See also Gordon Woodroffe's review of "Wildcats" by Mike Tomkies on page 10.)

Ref: Fernandez, E. et al
Mammalia 56 No. 2, 1992

BADGERS ON A STRING

Ecological studies of animals often require analysis of individuals' movements. Radio tracking is a popular technique for supplying this information, but it is expensive, and obtainig a sufficiently accurate radio 'fix' can be problematical.

In a recent paper, Hawkins and Macdonald describe a spool and line method for investigating the movements of badgers *(Meles meles)* which is relatively cheap and can provide very detailed information . Spools of thread encased in plastic cartons were attached to collars fastened around the badgers' necks. Fifteen animals were supplied with spools and, of these, seven left trails of thread. The trails revealed data on habitat use and latrine site locations.

Ref: Hawkins, [illegible] Macdonald, D.W.
Mammalia 56 [illegible] 1992

SMALL MAMMAL DISPERSAL

The dispersal of woodmice *(Apodemus sylvaticus)* and bank voles *(Clethrionomys glareolus)* between small woodlands in an agricultural landscape has been stuied by Zhang and Usher. The study site was near Escrick, just outside York, and was selected because it provided a mosaic of different habitat types, including fields, woodland, roads and farm buildings. The results showed that hedges are important for settlement and for dispersal of small mammals. The authors also found that the number of woodmice moving between woodlands was reduced by increasing distance and lack of hedgerows, and could also be influenced by the amount of cover provided by the arable crop. These findings are very interesting in the light of the YMG's current trapping programme at Leeds University Experimental Farm (see pages 4-6).

Ref: Zhang, Z. & Usher, M.
Acta Theriologica 36 (3-4) 1991

MOLECULAR BIOLOGICAL STUDIES OF RIGHT WHALE POPULATIONS

A team of scientists has been using molecular biological techniques to study the genetics and population structure of right whales in the north Atlantic. DNA is extracted from skin biopsy samples which can be collected from live, unrestrained whales without causing any harm to the animals. The DNA can then be used to ascertain the whales' sex and population genetics, including levels of inbreeding.

The results have shown that there are approximately equal numbers of males and females in the population, but of the estemated 150 females, only 59 are known to have bred. This may mean that some are non breeders, giving a possible clue as to why the population is taking so long to rebound. Mitochondrial DNA can be used to identify maternal lineages in the population. Studies using this principle have shown that the north Atlantic right whale population may be more inbred than that in the south Atlantic. This is consistent with the history of exploiation of the two stocks, which suggests that the north Atlantic population was reduced to a very few individuls by the early 20th century. Mitochondrial DNA studies have also indicated the possible existence of an as yet unknown nursery area in the north Atlantic. In conjunction with photo indentification of individual whales, molecular genetic analysis promises to reveal more exciting information on this enigmatic species over the next few years.

Ref: Brown, M.W.
Whalewatcher, Fall 1991

FIELDWORK UPDATE

YORK GREEN SITES MAMMAL SURVEY

23 February 1992

Participants:

Collection:
Rebecca Coswell
Charles Foster
Kate Fuller
Phil Grey
Ann Hanson
Jacqui
Jim
Geoff Oxford
Roma Oxford
Terry Sykes
Mary Youngman

Identification:

Ann Hanson
Geoff Oxford
Gordon Woodroffe
Lorna Woodroffe
Adrian

The objective of the excercise was to survey green sites within York for small mammal remains in bottles and cans. (A secondary objective was to remove litter and recycle it!)

Results:

HOLGATE BECK CORRIDOR

Milkbottle (27 mm neck width)	*Apodemus sylvaticus*
Beercan (17 x 26 mm)	*Apodemus sylvaticus*

HOB MOOR

Cider bottle (17 mm neck width)	*Microtus agrestis*

RAWCLIFFE MEADOWS

Milkbottle (27 mm neck width)	*Apodemus sylvaticus*
	Clethrionomys glareolus
Milkbottle (27 mm neck width)	*Clethrionomys glareolus*
Milkbottle (27 mm neck width)	*Microtus agrestis*

CLIFTON MOOR

Short eared owl pellets	14 *Microtus agrestis*

Also surveyed were: Bur Dyke, Clifton Backies, Derwent Valley Railway, New Earswick Meadows & St. Nicholas Field.

LONG TERM STUDY OF THE AGROFORESTRY SITE AT LEEDS UNIVERSITY FARM NEAR TADCASTER

For background information and results of initial traps, see IMPRINT No. 17, p 6-8.

The agroforestry treatment areas at Leeds University Experimental Farm consist of production hedges containing timber trees with an intermediate storey of hazel bushes. These are interspersed with arable strips 12m wide which are being cropped with a rotation of combinable crops. The site was planted in spring 1988 and, during 1990, grass was sown in the 2m production hedge strips.

Abutting onto the agroforestry treatment areas are forestry control plots, and surrounding the whole is a windbreak hedge.

The above planting is replicated four times. Near to each - but far enough away to minimise microclimatic interactions - are areas of arable control treatment.

The site is being monitored to compare arable yields, tree growth, microclimatic and soil moisture measurements in the experimental and control treatments. Extensive micro and macrofaunal monitoring is also underway and the YMG will be participating in small mammal studies over a long term period.

THIRD TRAP, 8 - 10 /5/92

Participants:

Paul Daly
Kate Fuller
Ann Hanson
Jeanetta Lambert
Geoff Oxford
Chris Wright

Report:

Traps were laid in two treatment blocks, with eight traps (4 x 2) in hedges, eight traps (4 x 2) in arable strips and eight traps each in the forestry control and arable control areas.

Eight traps were also laid in the originl hedge next to agroforestry block 2.

The traps were set on Friday and Saturday evenings and taken up on Saturday and Sunday mornings.

Results:

9/5/92

Site	Species	Sex	Weight
SURROUNDING HABITAT			
Original Hedge	*Clethrionomys glareolus*	M	17.5 g

10/5/92

BOCK II

Site	Species	Sex	Weight
Agroforestry Hedge 2	*Apodemus sylvatics*	M	24.5 g

FOURTH TRAP, 18 - 20/7/92

Participants:

Kate Fuller
Ann Hanson
Geoff Oxford
Gordon Woodroffe
Chris Wright
Mary Youngman

Report:

The experimental design was the same as the third trap. However, some of the traps were inadvertantly locked open on 17-18/7, so the trap was repeated on 19/2. The results for 18/7 are included for interest. The trap took place just before the arable crops were harvested.

Results:

18/7/92

BLOCK II

Site	Species	Sex	Weight(g)
Agroforestry Hedge 2	*Sorex araneus*		7.0

BLOCK IV

Agroforestry Hedge 1	*Clethrionomys glareolus*	M	19.5
Agroforestry Hedge 3	*Sorex araneus*		

19/7/92

BLOCK II

Agroforestry Strip 2	*Sorex araneus*		7.5
Agroforestry Hedge 3	*Mus musculus*	M (young)	12
Agroforestry Hedge 2	*Sorex araneus*		7.0
Arable Control	*Apodemus sylvatics*	M	25.0

BLOCK IV

Forestry Control	*Sorex araneus*		8.0
Agroforestry Hedge 3	*Sorex araneus*		7.0

SURROUNDING HABITAT

Original Hedge	*Sorex araneus*		7.0

20/7/92

BLOCK II			
Agroforestry Hedge 3	*Sorex araneus*		8.5
Forestry Control	*Sorex araneus*		9.0
Arable Control	*Apodemus sylvatics*	M	24.0
Arable Control	*Apodemus sylvatics*	M	22.0
SURROUNDING HABITAT			
Original Hedge	*Sorex araneus*		8.0
Original Hedge	*Sorex araneus*		8.0
Original Hedge	*Sorex araneus*		9.0
BLOCK IV			
Forestry Control	*Sorex araneus*		9.0
Agroforestry Hedge	*Apodemus sylvatics*		

Comments:

The third trap in May 1992 yielded a very low overall catch. The extremely cold and rainy weather on both trap nights probably contributed to this. Also, population levels may still have been low after the winter.

The results of the fourth trap were interesting for two reasons. Firstly, a house mouse (*Mus musculus*) was caught for the first time during the YMG's trapping on this site. Secondly, a high number of shrews (*Sorex araneus*) were caught in the agroforestry treatment areas compared to the arable controls. The only animals recorded from arable control blocks were woodmice (*Apodemus sylvaticus*), whereas shrews were caught in forestry control blocks and in the original hedge. Faunal monitoring studies have shown that insect numbers have been higher in the agroforestry treatment areas than in arable controls, which might account for the shrews' habitat preferences. A large number of shrews have also been inadvertently caught in insect pitfall traps from agroforestry treatment areas, another indication that shrews are making extensive use of this habitat. (The pitfall traps have now been redesigned to prevent shrews from entering them in the future).

GORILLA MOUNTAIN 1990

Gordon's fascination with gorillas began when he was seven years old and taken to Bristol Zoo to see the famous Alfred. For many years he read all he could find about gorillas, visited them in zoos at home and abroad and attended lectures when the subject was gorillas. For a long time we raised money for the mountain gorilla project and we always promised ourselves that one day we'd visit them in their natural habitat.

That opportunity came in July 1990 when we went to Rwanda and Zaire, a trip led by Ian Redmond whom we'd heard lecture and who had worked with the late Dian Fossey at the Visoke Research Station.

After some days of touring the country and seeing other wildlife as well as becoming acclimatised to the altitude, the first day of our gorilla visits arrived, Friday 13th. Although we're not superstitious it has to be said that the day didn't start too auspisciously. Up at 5.30 a.m. for brakfast at 6 a.m., six of us met at the dining room door to find it closed and all in darkness. Eventually a breakfast of sorts was served and, even more importantly, our picnic with essential drinks was produced. Then came Victor, our driver, with a worried look on his face. He'd had trouble starting the vehicle that morning so he'd left it running. However, we set off down the dusty track heading fodr the Parc des Volcans. Suddenly the vehicle started juddering - we'd a rear tyre puncture. Soon on our way again, we presented our passes at the Parc headquarters where we were joined by two rangers and set off for the starting point.

As the vehicle was parked, about twenty men and boys stood in a line and with pleading eyes asked us to choose them for our bearers. The ranger chose several and off we went. The climb started, through densely cultivated areas where crops were being tended by women with makeshift implements and some with their hands. After a while we reached the edge of the bamboo forest and were given instructions. We were to be very quiet, not use flash photography and, most important of all, should a gorilla charge we must on no account turn and run, just lie down and look submissive!

The going was hard now as we climbed further up to about 10,000 feet. The air was heavy with heat and moisture and the altitude difficult to cope with. Around us were the sounds and smells of the tropical forest, birds calling and insects whirring amongst the giant nettles and prolific goosegrass, whilst above lichens hung from the hagenia trees like some enchanted forest.

After some scrambling through dense undergrowth, the guide pointed.
"Crater." he said.
Yes, we understood, and marvelled at the beauty of this volcanic region.

"You don't think he means we have to go down there, do you?" said someone.
"Oh no," her husband replied, "he's just pointing it out to us."
He wasn't, and we were to climb down forty feet into the crater.

The porters made a rickety ladder from bamboo poles and the men started down. There was a gap of about four feet between each rung and, as I launched myself down so that the porters could grab my ankles, I began to wonder if I would ever see the gorillas. Eventually we were all down safely and we followed the two guides along the floor of the crater.

As if by special order, gorillas appeared all around us. First Mrithi, the great silver back and leader of the group, chewing a piece of goosegrass and all the while keeping his golden brown eyes on us and on his family. A mother with a baby clinging to her bck walked placidly by and several young black backs went about their business as usual. We were beckoned onto a small hillock and as we sat there we were surrounded by twelve mountain gorillas. Camera shutters were working overtime, but after a while Gordon and I just sat and looked. We smiled at each other, almost moved to tears by the privelege of being allowed to share these moments with such magnificent creatures. Their proud and majestic bearing, the playfulness of the babies and all the time a careful eye kept on us. We felt that they welcomed us and were just as busy studying us as we were them. All too soon our hour was up and with great reluctance and many a backward glance we re-joined the porters and climbed back out of the crater. At the top we flopped down, all exhilarated by our experience. At no time had we felt threatened or frightened in any way, we just felt enormously happy and all the more determined to try and help these magnificent animals to survive.

A few weeks after our return, civil war broke out and this has led to more poaching and great disturbance for the gorillas. The latest news from people still working out there is that most of the gorillas have survived, but the veterinary clinic has been destroyed, as have severel of the villages within the Parc. Though great progress has been made in an attempt to conserve the habitat, there is still a great deal to be done.

Lorna Woodroffe

MAMMALS OF ORKNEY

According to Professor R.J. Berry (1985), only fourteen mammals are listed for Orkney, but some of these are of considerable interest. Unaware, initially, of this paucity of species, Patricia and myself, during our eight days stay on Orkney, tried to see what mammals we could in the time available to us. The major part of our visit was to mainland Orkney, but we spent one day on Hoy, with Michael Hartley, on one of his minibus wildabout forays, to explore the wildest island of the archipelago. It was on this trip that we learnt a great deal about the mammals of Orkney, such as that there are no foxes *Vulpes vulpes* on the islands.

I suppose our first encounter with an Orcadian mammal was the rabbit *Oryctolagus cuniculus* which was numerous in parts of Mainland such as Marwick Head, where the local population was still heavily infested with myxomatosis. Often we saw dead or dying rabbits being eaten or preyed upon by hooded crows *Corvus corone cornix*. On the Marwick Head RSPB reserve the numerous rabbit burrows provide nesting sites for the breeding puffins *Fratercula arctica*, which, by September, had dispersed out to sea. Occasionally we saw a brown hare *Lepus capensis* on Mainland, and Patricia sighted a mountain hare *Lepus timidus* on Hoy, the only island that supports a population of this lagomorph.

Rodentia is represented by five species, of which we only saw one, namely the brown rat *Rattus norvegicus*, which we usually saw crossing the road at night, caught in our car's headlights. Berry states that the brown rat is becoming more common on the islands, whereas the black ship rat *Rattus rattus* is now only found on the southern end of Westray. Other than the long-tailed field mouse *Apodemus sylvaticus* and the house mouse *Mus domesticus*, both of which we did not see, the only other rodent species on Orkney is its famous vole *Microtus arvalis*.

We did not see a live Orkney vole during our stay, although some of those rodents crossing the roads at night, which we supposed were brown rats, could have been voles. However, we were shown a prepared skin by Michael Hartley. On Mainland, when walking south from Marwick Head, we came across extnsive Orkney vole tunnel systems beneath the dense matted grass. In the same area, often lying on the ground, we came across the pellets of the short-eared owl *Asio flammeus*, containing bony remains of either the Orkney vole or the long-tailed field mouse. The field mouse on Orkney is predominantly an animal of the hills and moors. The hen harrier *Circus cyaneus*, a common resident bird of prey on Orkney, also predates on the Orkney vole.

Evidence suggests that the Orkney vole arrived on Orkney with the coming of Neolithic man some 5,000 years ago. Remains of the vole have been found in the Neolithic village excavations at Skara Brae. However, how the vole got there still remains a mystery, for although it is not found elsewhere in Britain except Guernsey, the vole is very similar to the continental vole *Microtus arvalis*. Both have similar chromosomes and freely

hybridize. Due to prolonged isolation, five subspecies were originally listed on six of the Orcadian islands. Now, however, according to the Handbook of British Mammals, only two are listed. The Orkney vole is darker and larger than its continental cousin.

The only mustelid on Orkney is the otter, *Lutra lutra*. Although quite common, we found no evidence of otters except for a road crossing sign just like the one outside Kirkwall! We saw no hedgehogs *Erinaceus europeus*, a species introduced to the islands this century, except for a dead one on the road on mainland Scotland juar west of Thurso. Neither did we see the pygmy shrew, *Sorex minutus* or the water shrew *Neomys fodiens*, both listed for the islands. There are no bats listed as resident mammals for Orkney, but pipistrelles *Pipistrellus pipistrellus*. the noctule *Nyctalus noctula* and the brown long-eared bat have all been recorded there. It is considered that these bats are brought on southerly winds from mainland Scotland (Berry 1985). Anyhow, during our stay the weather conditions were far too inclement in the evenings, with high winds and driving rain, to see bats flying around St. Magnus' Cathedral in the centre of Kirkwall, one of the places which they frequent.

Of the seals, we only saw the common seal, *Phoca vitulina*, on two occasions. They were hauled up on beach sand bars at low tide in Deer Sound, Mainland Orkney. This species of seal is common, but probably less so than the gray or Atlantic seal *Halichoerus grypus*. Both species can often be seen together at low tide on Orkney.

At several coastal sites, especially remote beaches or rockey cliff surrounded coves, we watched grey seals. Standing on a vertical cliff, some 50 feet above the water overlooking a rocky cove on the southern tip of South Ronaldsy, we counted fifteen seals. Some were in playful mood, rolling around or chasing one another. Their outlines could clearly be seen in the shallow water. We had just emerged from inspecting a chambered Neolithic tomb, known as the Tomb of the eagles, which was close to the cove. Like other experiences on Orkney, there was a timelessness about the tomb and the seals.

Michael J. A. Thompson

References:

Berry, R. J. (1985) The Natural History of Orkney. Collins, London

Gorman, M.L. (1991) Orkney and Guernsey voles in Corbet, G. B. & Harris, H. (Eds) Handbook of British Mammals 3rd Edition. Blackwell, Oxford

A WINTER SURVEY OF BROWN HARES (*LEPUS EUROPAEUS*) AT RIPLINGHAM AND BISHOP BURTON

A HARE RAISING EXPERIENCE.

The survey was undertaken as part of a National Hare Survey of Great Britain organised by Dr. Stephen Harris of the Zoology Department at Bristol University. The author accepted an invitation to participate during the winter of 1991/92. Two pre-selected one kilometre squares were allotted by the survey organisers. The squares happen to be in intensively cultivated habitats on the Yorkshire Wolds. The aim of the survey was to observe hares either lying in or being flushed from their forms (depressions scraped in the ground) and to record the positions of the hares as accurately as possible. The cooperation of the relevant landowners was readily obtained and is gratefully acknowledged.

A preliminary visit to each square enabled habitat details such as hedgerows, grassland and crop types to be recorded for correlation with the hare observations. Wherever possible, the ideal transect was followed around the kilometre square, which involved walking about 150 yards within its boundary in as straight a line as possible (a hare-line decision!). Thus, on starting from a convenient corner, the square was walked turning through three right angles to return to the point of origin. The same starting point and route was followed three times in all during the stipulated periods, which were October 14th to November 14th, November 15th to December 14th and December 15th to January 14th. The time taken for each walk was approximately 1 hour, walking at a slow pace. (The organisers did not suggest that making a noise whilst walking would help flush any hares - perhaps a harebell would have been appropriate?). Each walk was designed to commence between 10.00 and 12.30 GMT. It was considered that during these times hares were more likely to be found in their forms. For the purpose of the survey, inclement weather restricting visibility such as thick fog, strong winds or driving rain, which is likely to drive hares into cover, were avoided (hare-brained schemes were frowned upon).

In some fields covered by the transect the crops (cereals) were low to the ground and it was relatively easy to spot forms by the raised pile of earth at one end. Some of the forms seen were not occupied, but showed signs of more or less recent occupancy (easily determined from only a haresbreadth away). All of the hares flushed were brown hares *(Lepus europaeus)* and readily distinguishable from the rabbit *(Oryctolagus cuniculus)*. It can be seen from the results that the number of observations from the two squares were roughly comparable. In general, hares favoured the same fields of either winter barley or freshly ploughed land. No forms were found amongst oil seed rape, the second most important crop encountered. In general, hares bolted from their forms away from the approaching surveyor, towards the nearest cover usually provided by a hedgerow.

HARE SURVEY RESULTS, WINTER 1991-2

Riplingham (SE9631) Date	Total	Bishop Burton (SE9638) Date	Total
09/11/91	3	10/11/91	4
08/12/91	1	01/12/91	0
11/01/92	5	12/01/92	3

The brown hare is widely distributed in Yorkshire, having been recorded from 83% of the 10 km squares. However, there is ample scope for recording the brown hare wherever it is encountered since it is only recorded from 20% of the county tetrads (Delany, 1985). Estimates from the analysis of game bags by Tapper & Parsons (1984) suggest that hares were shot at the rate of 2-4/ km^2 in south east Yorkshire. By assuming that no more than half of the population were shot each winter, it may be inferred that the peak summer population is in the range of 4-8/km^2. The observations in this study are consistent with the lower figure of the estimate.

At the completion of the survey the farmers over whose land the survey was conducted were asked questions relating to land management practices and attitudes towards hares. All of the farmers concerned were aware of the hare status on their land and liked to see hares roaming around, but not in large numbers. In general, hare shoots had from time to time been a feature of control on their land. However, due to reductions in numbers, a hare shoot had not been necessary for a few years.

Objectives of the National Hare Survey include the following:

1. To provide a standard and repeatable survey method.

2. To provide an estimate of the current population of brown hare and mountain hare *(Lepus timidus)*.

3. To provide a means of assessing the effects of land use on population levels.

4. To estimate current population pressures on hares and to predict any changes in numbers.

This study demonstrates that the survey method can easily be repeated and can be used to estimate hare numbers in a given habitat. The National Hare Survey is funded by the Joint Nature Conservation Committee and is scheduled to run for one further winter.

Tony Lane

References:

Delany, M. J. (1985) Brown hare, *Lepus europaeus*. Yorkshire Mammals. University of Bradford, Highham Press.

Tapper, S. C. & Parsons, N. (1984) The changing status of the brown hare *(Lepus capensis* L.) in Britain. Mammal Rev 14, 57-70.

WHAT'S IN A LOFT?

I read with interest Tony Lane and Colin Howes' article in the last edition of IMPRINT entitled "Weasel scats found in a bungalow loft at Lowthorpe". In the article the authors suggest that the weasel may have been foraging for mice under the fibreglass insulation.

Since the beginning of this year, we have had a rodent problem in our insulated loft space. This, in a way, is not surprising as we live next door to a farm with a large straw-baled rick and have experienced a series of relatively mild winters. On the occasion of a previous infestation, I was told by a local authority rodent control officer that attempts at control would be pointless. given the position of the house. So this time, at the request of my long suffering wife, I decided to remove them myself using both Longworth and snapper traps.

I was expecting these uninvited visitors to be the long-tailed field mice *Apodemus sylvaticus*, but, to my surprise, I also trapped the bank vole *Clethrionomys glareolus* and the house mouse *Mus domesticus*.

Apodemus sylvaticus has the reputation of coming into houses in country districts, especially in the winter. According to the Handbook of British Mammals, house mouse populations can increase eight-fold during the breeding season and in the wild they survive for up to two years. Widespread throughout Britain, their numbers seem to fluctuate according to the level of rodent control activities and the severity of winters. Berry (1991) describes a decline in numbers in England.

How the bank voles got into the loft space is a mystery. Some medium sized trees overhang one of the house's single storey roofs, and, as *Clethrionomys* are known to climb trees, this was presumably their method of entry.

Other rodents in the garden are the grey squirrel, *Sciurus carolinensis* and the brown rat *Rattus norvegicus*. The latter species occasionally invades the garage!

This report is a description of how a keen mammalogist deals with a rodent problem. Unfortunately, after a while I realised that the rodents were becoming Longworth trap shy for although we could hear them scurrying about in the loft, I was not catching any. Those caught alive were subsequently released well away from the house. Thus, in the end, I had to revert to using snapper traps, which proved more effective in dealing with the invasion.

Michael J. A. Thompson

References:

Berry, R.J. (1991) in Corbet, G. B. & Harris, S. (Eds), Handbook of British Mammals. Blackwell, London
Lane, T. & Howes, C. A. (1992) IMPRINT 18, 15-16

BOOK REVIEWS

Wildcats by Mike Tomkies
Whittet Books. £6.95

There is nothing pretentious about the Whittet wildlife series. All the books are well researched, most readable and have good black and white drawings. Each is written by an expert in the field, and Mike Tomkies is no exception to this rule. When he returned in 1974 to his remote highland home in north west Scotland, he kept and bred wildcats as well as studying them in the wild, so he is well qualified to write about them.

The differences between wildcats and domestic ones are explained; the former are generally bigger and rounder than the domestic tabby, and their most distinctive feature is a thick body and black ringed tail which ends in a very blunt black tip. Their tendency to roundness may perhaps link wildcats with the "big" cats like lions, tigers and pumas. Like the latter and unlike domestic cats, the pupils of their eyes do not contract to vertical slits.

Tomkies traces the history of wildcats in Britain from their co-existence with cave lions, mammoths etc. to their extinction throughout England and Wales. He points out that although there has been a considerable extension of their range in Scotland since the turn of the century, the wildcat still only occupies a small part of its original range. This expansion, however, is partly due to hybridization, a subject which has a chapter to itself. Indeed, it was thought that the "pure" form of wildcat was virtually extinct until a recent examination of skulls showed that it still exists.

In view of recent interest in "large cats" in the correspondence column of the Mammal Society Newsletter, I was interested to read Mike's theories on subjects such as the Exmoor Beast and the mysterious black cats. With so few publications on wildcats, this volume is a welcome and timely addition to the literature.

Gordon Woodroffe

The Mole by R. David Stone
Shire Natural History Series 1992
Price £1.95

David Stone, together with Martyn Gorman, wrote the excellent, recently published, monograph on moles in the Christopher Helm series. The present volume is aimed at a very different market. As with other Shire Natural History books the remit is to produce for the lay-person an interesting and factual account of the structure, habits and life cycles of particular organisms. There can be few people who have not pondered on at least some aspects of the lives of moles; the farmer with ruined silage, the green keeper with pock marked grass or the observer of a strange body lying squashed on the road.

David Stone's book will put an end to such ponderings. It is very well written and beautifully illustrated with colour and monochrome photographs and useful line drawings. The European mole *(Talpa europea)* is the star of the book, but other members of the Talpidae, including the bizzare American star-nosed mole and desmans, are mentioned in passing. Adaptations to underground existence, the burrow system, diet and feeding, activity and behaviour and relations with man are all covered in satisfying depth in just 24 pages. I very much enjoyed reading this slim volume and can thoroughly recommend it as a first introduction to this mysterious denizen of the suberranean world.

The book is available from booksellers or post from Shire Publications Ltd., Cromwell House, Church Street, Princes Risborough, Bucks. HP17 9AJ. A free catalogue of all Shire publications is available from the same address.

Geoff Oxford

YMG 1992 PROGRAMME

INDOOR MEETINGS

October 1st	Austin Brackenbury "The natural history of a signal box."
November 5th	Lesley Helliwell "Animals of Senegal"
December 3rd	A.G.M. and quiz.

Meetings held at Garforth House, 54 Micklegate, York.
Starting time 7.30 p.m.

FIELDWORK

September 12/13	Denis Aspinall Memorial Trap 1992 Ashberry Pastures Nature Reserve Organiser - Geoff Oxford
October	Leeds University Experimemtal Farm (Details to be arranged)