

Derbyshire Mammal Group

News

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A Pine Marten at Eastmoor

by Roy Frost

It is pleasing to be able to report a definite record of Pine Marten *Martes martes* for Derbyshire, albeit in unfortunate circumstances. Some time ago a gamekeeper told me of one that had been accidentally killed and in December 2009 he brought the mounted specimen to show me.

It was thought to be an immature Fox *Vulpes vulpes* and shot in error by a gamekeeper (who has since left the area) whilst lamping after dark with an assistant in the Baslow area. The precise date was unrecorded but is believed to be July 2001.

The area is pasture bounded by dry stone walls at around 290m amsl, and is about one km from an area of extensive moorland. There is little woodland in the immediate vicinity.



Photograph by
Roy Frost

Recorders Report

Debbie Alston

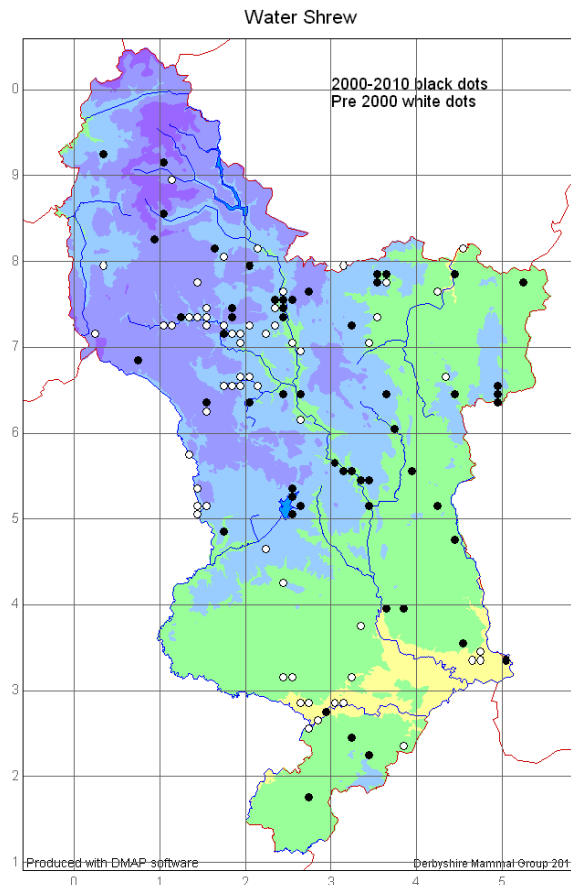
Work on the Atlas project has continued apace since my last update. The database at the beginning of April contained over 55,000 records with a further 22,000 from Derby Biological Records centre awaiting input. I did not think it possible when we began the project, but our records will soon exceed the number that can be held on a 2003 version of an excel spreadsheet (just over 64,000 records)!

Records, since September 2009, have been received from many DMG members and other volunteers including (in no particular order) Nici & Colin Bowler, Debbie & Dave Alston, Marion Bryce and the Long Eaton Natural History Society, Liz & Steve Lonsdale, Shirley Freeman, Dave Mallon, Shirley Cross, Mike Ashford, Mike & Jenny Ellis, Nick Law, Elmton and Creswell Wildlife Group, Chris Monk, Dot Morson, John Bland & Sue Jones, Steve Docker, Bill Underwood, Brian & Margaret Hobby, Malcolm Hopton, Helen Metcalf, Trevor Taylor, Jo Bissell & Ian Wildbur, Kate & Bryan Barnacle, Helen O'Brien, Pauline Mycock, Derek Yalden, Chris Burnett, John Millar and Moss Valley Wildlife Group. We have also continued to receive a steady stream of records from the public via the DMG on-line recording form.

A number of data sets have been received from different organisations and after a bit of re-formatting to the Derbyshire Mammal Group database style, have made large increases in our knowledge. We are very grateful to the Sorby Mammal Group for their continual support of the joint atlas project and for their records. I received over 20,000 mammal records from Nick Moyes at the Derby Biological Records Centre and about another 1,000 records on cards which needed typing into the database. These records, although mostly from before 1995, provide an interesting record of some of our declining species such as hedgehog and now extinct species like the red squirrel and a very intriguing record by Roy Frost of Coypu in 1964 in the Ogston area! Discussions are still ongoing with Derbyshire Wildlife Trust and the Derbyshire Bat Conservation Group to exchange records to enable the Atlas to include as much locally derived data as possible.

An Atlas meeting was held in early March, where format and style of the finished product were discussed at length. We have decided to continue to collect records right up until the end of 2010 and have the Atlas ready for publication by Easter 2011. Maps were discussed and we agreed to map at monad (1km grid square) level except for those species which have commercially sensitive data such as the bats and riparian species including water vole, mink and otter. We will also use the same topographical background that has been used in

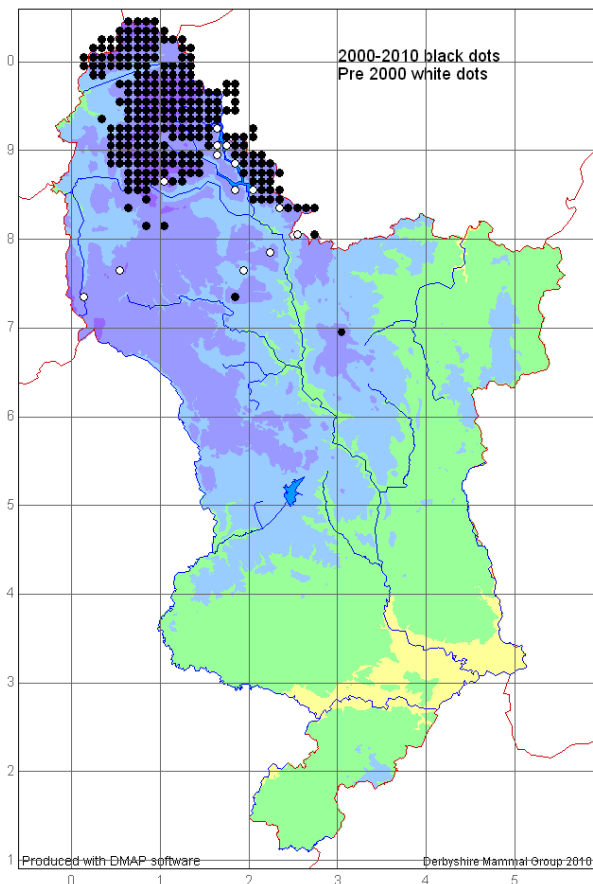
the on-line Flora maps, and rivers added where they help show the species distribution. Below are two examples where the background information helps to interpret the species distribution. These are best seen in colour (via the PDF newsletter on the DMG website). The dark purple shows land over 500m, light purple 300 – 500m, blue 150m – 300m, green 50 -150m and yellow under 50m above sea level.



We also took the opportunity to review the photographs we have collected from DMG members and other local photographers. We were impressed by the quality and variety of photos we have and now have a 'hit list' of species we still need. If you have some photographs of mammals that you would like to be considered for the Atlas, please send them to me.

To track the progress over the coming months, keep an eye on the species distribution maps on the DMG website, which are updated monthly. If you would like to know which species we are missing from a particular 1km grid square, such as where you live, work or walk regularly please get in touch and you can help to fill some gaps in our knowledge, especially the common species such as grey squirrel and mole which still have some significant gaps. Thank you for all your records. They all count. Please keep sending in your mammal records to help us have an Atlas which is both great and useful.

Mountain Hare



Please post records to 90, Over Lane, Belper, Derbyshire DE56 0HN or submit them on-line at www.derbyshiremammalgroup.com, e-mail to mammalrecorder@derbyshiremammalgroup.com

See call for up to date National Mammal Atlas on p8. Ed.

A population study of the edible dormouse (*Glis glis*)

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Data gathered during a 13-year nest box study reveals that the population biology is quite different from that of other small rodents, probably unique. There is only one litter per year and periodically the animals fail to breed at all. In good masting years, large numbers of young are present. In non-breeding years, up to 90% of the adults may be absent for an entire season, then reappear the following year. Where they go is a mystery. Litter sizes probably average 5-7 young, but up to 16 may be present as a result of forming creches. Individuals often live more than 5 years, sometimes up to 10 years. Hibernation lasts 6-7 months.

Abstract from The Mammal Society Easter Conference, Bangor University, 26th to 28th March 2010.

Joint venture between Ogston Bird Club and Derbyshire Bat Conservation Group

Bill Cove

The Jim Mart Reserve is a 2 acre area of grassland and ponds with a stream through it near to Clay Cross. It was donated to Ogston Bird Club (OBC) by Jim Mart 3 years ago and a group from the club has been busy creating habitat for a variety of wildlife. The sites former history had included use as an underground drinking water storage reservoir for Severn Trent Water. This underground bunker has been highlighted as an opportunity to create a hibernation site for roosting bats. Initial contact between Ian Wildbur (OBC) and Jim Alder of the Derbyshire Bat Conservation Group (DBCG) led to a meeting between some of the group members to discuss options available.

One of the first jobs was to clear the large amount of building rubble and mesh fencing that had been pushed into the hole to 'clear it up'. On the 17th April 2010 a small group from both clubs met on site to tackle the job. The task was made easier thanks to the provision of a generator and lighting from Andy Gudelajtis and a keenness to work brought on by it being a new different sort of task! The mesh wiring was well tangled but between us we managed to pass it back up through the access to the surface. The idea is to create a multitude of suitable roosting points within the area and this has now been started by stacking the brick and rubble into 2 piles along the walls either side of the steps, hopefully replicating the piles of stone work within mines and adits where we always think the bats could be. This was also more easily done than to pass it 10 ft to the surface and have to cart off site.

The visit to site was concluded with a walk around the rest of the reserve, finding water vole droppings, hearing my first blackcap of the year in full song and seeing 4 species of butterfly. The neighbouring fields are all in a Higher Level Stewardship agreement to achieve conservation benefits and the reserve could well be enhanced with the use of bat boxes both along the reserve boundary trees and on the neighbouring field edge and woodland.

The next stage will be to do some work to create roosting spaces on the smooth brickwork of the reservoir. A quick use of a hammer and chisel before we left showed that the smooth mortar could soon be removed, and voids in the brick work chopped out. The use of timber batons attached to the walls will also create small spaces for bats to enter and tuck behind. There is no limit really as to what could be done and while it can never be certain that bats will start to use it, the more suitable we can make it, the more options the bats will have.

While much of the work can be achieved by 'labour' only funding is being sort from 'Greenwatch' for some of the expenses, and a decision is expected on this during May. The bat group is considering the best way to create an entrance that is suitable for bat access and also includes a secure access for people for monitoring.

The restoration and reintroduction of red squirrel populations on Anglesey

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Regional declines and extinctions of native red squirrel (*Sciurus vulgaris*) populations in the UK are largely attributed to direct and disease-mediated competition with the introduced North American Eastern grey squirrel (*Sciurus carolinensis*). However, although grey squirrel control is widely applied as a measure to conserve adjacent or sympatric red squirrel populations, there are currently few well-documented examples of control facilitating a geographical expansion of red squirrel distribution. The culling of grey squirrels on the island of Anglesey allowed a small remnant red squirrel population within Mynydd Llwydiarth conifer plantation to rise from 40 to 100 adults, with individuals eventually dispersing into adjacent broadleaved habitats. Elsewhere on the island, grey squirrel control has enabled red squirrels to be successfully reintroduced within a range of coniferous and deciduous habitats, including local parks and gardens. This paper will review the work to date, highlighting the significance of pathological disease, identifying the challenges posed by grey squirrel eradication, and outlining the lessons learned that can be applied to red squirrel conservation projects elsewhere in the UK.

Abstract from The Mammal Society Easter Conference, Bangor University, 26th to 28th March 2010.

Formby Squirrels

Steve Lonsdale

Previous newsletters have referred to the plight of the Red Squirrels in Formby (see numbers 6 (autumn 2005); 9 (spring 2007), and 12 (autumn 2008)).

Following an 85% decline from 2006 levels (down to a population estimate of 50-100), the 2009 breeding season saw a surge in numbers.

Likely reasons for the improvement include culling of Grey Squirrels, a mild winter in 2008/09, and the passing of the squirrel pox virus (SQPV).

Culling of Grey Squirrels in the area is controversial; however, a 'control zone' around the Formby site has been established, in which Greys are culled.

When Hippos Swam in the Derwent

by Bill Grange

In March 1895, a well for drinking water was being dug in the yard of the Crown Inn (now the Crown Hotel) at Allenton, then a country hamlet 3 miles south of Derby.

When it was partially bricked in, 'a strong unpleasant smell' was noticed and the well was, in consequence, abandoned, but not before several large bones had been discovered. These were brought to the attention of two local eminent geologists, H. H. Arnold Bemrose and R. M. Deeley, who were so excited by them that they organised a second excavation. The work commenced on April 8th when a hole 8x6 feet, was dug through the clay, the water in it rising to within 6 feet of the surface. On the second day the hole was deepened through clay and sand to the top of a gravel layer (9 feet 8 inches below the surface). One complete bone and twelve small pieces, probably from the head, were obtained.

On the third day the clay was tunnelled on the eastern and northern sides, the total area excavated at the bottom being about 11 by 9 feet. The tunnelling was necessary because of the small space available in that part of the yard, which was bounded by buildings on three sides and a wall on the fourth. The main difficulty was to contend with the water which rose from the gravel and caused the sides of the pit to fall in. Two large pumps were kept at work by relays of men during the second and third days but, in spite of this, of this most of the work had to be done in water. Under these circumstances it was impossible to recover further bones without breaking some of them. Eventually, 127 bones or fragments were found. These were numbered in the order obtained, and their relative positions noted as accurately as possible. Most of the bones were obtained during the latter half of the third day. No more discoveries being made, and with the water gaining rapidly upon the pumps, further work had to be abandoned.

The full account of the excavation and subsequent speculations, by Bemrose and Deeley, was published in the Quarterly Journal of the Geological Society for August 1896. The remains were identified as mainly belonging to a hippopotamus, with the breastbone of an elephant and the femur of a rhinoceros. Bemrose and Deeley were meticulous in their excavation, publishing a well presented report.

The sediment in and around the bones was also examined microscopically for plant remains. These indicated a "moist meadow or swampy ground and a temperate climate" at the time the hippo lived. The nature of the sediments from which the bones came indicated a silted-up river channel. Because the bones

were relatively undisturbed it was deduced that the animal died where it was found.

The bones were presented to the Borough museum, now Derby City Museum and the Allenton hippo skeleton forms a splendid exhibit in the Geology Gallery, 'On the Rocks', completed in 1991. Unfortunately, the skeleton is not intact. The skull was not recovered, together with three of the limbs. However, the re-assembled nine foot long skeleton is very impressive.



Photograph by
Bill Grange

Along with the skeleton are displayed a series of animal remains discovered a mile away from the Crown Inn site, at Boulton Moor, in July 1973, during excavations for a major sewerage pipeline. These included elephant, rhino, bear, deer, hyena, ox - and hippopotamus. All the remains from Boulton Moor are isolated fragments, but among them are two enormous teeth, a canine and an incisor, which are among the largest hippo teeth to be found in Britain. These are thought to belong to one or two old males which would have dwarfed the Allenton individual, thought to be a young specimen.

Both sets of remains were excavated from a geological feature known as the Allenton Terrace. This is a deposit of river-deposited 'gravels', now some 18 feet (6m) above existing river level. It formed the floor of the river floodplain well before the Derwent cut down to its present level. The age of the channel deposits within the Allenton terrace have been dated to 120 thousand years ago, the time of the so-called Ipswichian Interglacial within the what is popularly known as the Ice Age. The climate then would have been warmer than it is now, though far from tropical, as borne out by the remains of temperate plants found with the Allenton remains.

Most authorities regard the British hippo as belonging to the living species *Hippopotamus amphibious*. It would seem that, although the climate was warmer than now, it resembled that of central France of today, rather than tropical Africa. The hippo is, therefore, more adaptable to climatic variation than we might suppose when looking at the distribution of the hippo today.



River Scene
Photograph by Bill Grange

Modified from an article first published in 'Observations', the annual journal of the Derby Natural History Society, 1995.

Hippos by John Bland

It seems that hippopotamuses
Mostly feed on grass,
A diet vegetarian
Supports their awesome mass.
They don't go in for greasy meat
Or sticky chocolate cake,
But they're still big lumps of blubber
As they wallow in their lake.
Most dieticians will insist
It is the healthy way,
To eat your fruits and vegetables,
Five portions every day.
They say if I eat lettuces
And celery and that
I will be much more healthy
And I will not put on fat.
I query their assertions,
So far as I can see
It doesn't work for hippos,
Why should it work for me?

Otters in Derbyshire: some historical perspectives

Dave Mallon

At the end of the 1970s there cannot have been many people in Derbyshire who imagined a future where otters would once again be a feature of the county's mammal fauna. By then otters had disappeared from across the Midlands and most of the rest of England as a result of pollution, declining water quality, and persecution. The biggest culprit in this decline was organochlorine poisoning, especially in the form of aldrin and dieldrin, persistent chemicals that accumulate in the food chain with lethal effects on top predators like the otter. More than 80% of dead otters analysed were shown to contain dieldrin, which was banned in 1975, followed by DDT in 1984. In between these dates, otter hunting was finally outlawed in 1978.

These legal measures, plus nation-wide improvements in river water quality and initiation of the National Otter Recovery Programme, began to reverse the trend and otters slowly expanded from their remaining strongholds back into former haunts. Subsequent recolonisation has been impressive - its extent is clearly demonstrated by the number of sites with otter signs found during the first four national otter surveys. A fifth national otter survey was carried out in 2009. The results have not yet been formally announced, but reportedly show a further increase.

National Otter Survey Results	
Years	Percentage of sites positive
1977-79	5.8%
1984-86	9.6%
1991-94	23.4%
2000-02	36.3%

Information on the former abundance and distribution of otters in the county is sparse and mostly general in nature, but a few insights can be gleaned from the small number of reports published around the turn of the 20th century. By far the most useful source is the account of the mammals of Derbyshire by the Rev. F. C. R. Jourdain in the *Victoria County History* (1905) and notes by the same author in the *Derbyshire Archaeological and Natural History Society Journal* for 1905 and 1910.

Glover (1829) said otters were "frequent in the Trent, Derwent and tributaries" but by 1863, numbers had reportedly decreased significantly in South Derbyshire. Jourdain considered that otters were comparatively scarce on the Derwent and its tributaries, but that there were more on the Dove than for many years, due to protection or tolerance by some landowners. This applied at least to the stretch of river between Ashbourne and

Rocester. Jourdain added that otters were so numerous here that a keeper saw eight in one day, an almost unimaginable event now. The situation was very different on the upper Dove, as otters were "relentlessly trapped and shot" with nine killed in three years, four of them from Christmas 1899 to April 1900 between Alstonefield and Okeover. The extent of casual persecution is striking: Sir Oswald Mosley shot two on the Trent in 1863, one was shot by a keeper in 1898, one chased near Burton weir in 1899, two caught on the Goyt near New Mills in 1905 and sent to Belle Vue Zoo in Manchester; one trapped in Monsal Dale in 1909 and another killed by a stone-throw at Burton in the same year. The Dove Valley Otter Hounds were in existence until 1978 (and are now the Dove Valley Mink Hounds). A white otter from the Trent was said to be on display in Rolleston Hall Museum.

It was the 1990s before otters were recorded in Derbyshire again. They are now recorded most frequently on the Trent and Dove and their tributaries, and are also known on parts of the Derwent, Wye, and Amber. Otters are regularly recorded in the centre of Ashbourne and their signs have been found on small streams as well as along major rivers. Derbyshire Wildlife Trust's Water for Wildlife Project carries out monitoring, surveys, training and habitat improvement work along river corridors and artificial otter holts have been constructed at several localities. The increasing number of positive sites on national otter surveys has been matched locally and further spread and consolidation can be expected. Road-killed otters were found in 2003 just over the county boundary in Cheshire and very close to the Peak District National Park boundary in West Yorkshire, raising the possibility of future recolonisation of the county from both north-west and north-east, as well as from the south.

Spraints (otter droppings) are found regularly at some monitoring points and breeding has been confirmed, but it is difficult to assess the current status overall. Only a handful of people have actually seen an otter in Derbyshire, though at least one fortunate person has watched an adult with young, and no-one has yet managed to take a photo of a wild otter in Derbyshire.

One of the first recent records was also a road casualty close to the River Amber. Other otters have been killed in this way since, including two in 2008, one at Bradwell and the other at Burbage, on the south-west side of Buxton. Both the latter two cases occurred far from an obvious water course, showing just how far dispersing otters can move overland and the dangers they face while doing so. Great improvements in river quality and associated increases in fish populations are positive factors favouring the return of the otter, but these may be counterbalanced to some extent by more intensive recreational use of river corridors and disturbance by people and dogs.

Otter Watching on Mull

by Tim Stenton

I was fortunate to spend the week before Christmas on Mull. The primary intention being to see and photograph otters. The trip got off to an un-auspicious start on the first night with an earthquake, measuring 2.3 on the Richter scale, the epicentre being where I was staying. It would certainly have been interesting to view the effects on the wildlife had it occurred during the day.

Apparently the previous few weeks had been poor weather with rain and gales. I was fortunate in that the week I was there we had only a short period of rain - the days being clear, cold and bright with some snow.

What of the otters? Observers have reported (though I've not seen any supporting evidence) that otters tend to be more active in the winter. The justification being that they need more food to keep warm. An otter's coat is very thick providing excellent insulation so how much more frequently would they need to eat?

Based in the middle of the island close to Salen and Loch na Keal I covered most of the island with the exception of the Ross of Mull. I saw otters every day having a minimum of two separate sightings on each day. This is far higher than I'd expect in spring or summer. Certainly the weather conditions and particularly the calm seas helped, as did the absence of other visitors. You could stop wherever you wanted without fear of creating a jam - not something that could be said in summer! I didn't see anyone else wildlife watching.



I got very close i.e. within a few feet on several occasions including a memorable experience at Loch Spelve where a mother and cub were running around my feet. Too close for the big lens with its minimum focusing distance of 4.5m. For the record I had sightings at Loch na Keal, Loch Spelve, Calgary and Tostary on NW coast but then I didn't really look anywhere else. Unfortunately I missed a group of bottlenose dolphins by a day but had good views of white tailed eagles flying overhead. Golden's were also seen at a distance. Another highlight was seeing thin pack ice on the shore of a sea loch.



Is Mull worth a visit out of season? Certainly. The short day length is a disadvantage and there are fewer birds but for otters and landscapes the superb winter light and lack of visitors is a real bonus. You just need to hope for good weather though.



All photographs by Tim Stenton. For more pictures see flickr.com under Tim Stenton. Another interesting site is: <http://shetlandotterwatching.blogspot.com/>

Otter (*Lutra lutra*) activity on the open coast and islands within the Pembrokeshire Marine Special Area of Conservation

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Otters use Pembrokeshire's coastal streams to access the sea for foraging, but use of the coastline itself (mainly high cliffs) was unknown. Otter activity along cliffs was assessed by searching for otter signs at 48 potential haul out sites likely to be accessible to otters only from the sea. Surveyors swam to sites from a small boat. Spraints were found at 15 of 48 mainland and 3 of 8 island sites searched. Distances between positive sites and coastal watercourses ranged from a few hundred to several thousand metres. Fresh water (for drinking and washing fur) at 7 of the 15 positive sites, and potential lying up features (e.g. rock cavities, dense scrub) suggests that otters could lie up during the day along the coast. Spraint analysis was carried out on 102 spraints. Crustacean traps were recorded close to cliffs and are likely to pose a threat to otters.

Abstract from The Mammal Society Easter Conference, Bangor University, 26th to 28th March 2010.

The Mammal Society Easter Conference A Selection of Abstracts

The Mammal Society has produced a very useful Abstracts Booklet for all of the presentations from this years Easter Conference held at Bangor University, 26th to 28th March 2010. I've included a selection here that I thought might be of interest. Ed.

Atlasing for mammals in the British Isles (all of them!)

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The first mammal atlas at hectad scale for the British Isles was published in 1971; it was the first animal atlas to be produced (though the botanists were first). Subsequent updates followed in 1978 and 1984, with a "definitive" atlas in 1993, which failed to include Irish mammals (though it extended to Manx and Channel Islands records). An Irish provisional atlas was published in 1979, but has not been updated. Even the 1993 atlas relied heavily on records accumulated in the 1960s-1970s. So available mammal atlases are out of date, incomplete and do not adequately summarise current knowledge, let alone current status. Meantime, 2 butterfly atlases, 3 bird atlases (with two more underway) and many on other groups have been published. We as the mammalogical community need to do better. This talk explores the possibilities.

See Derbyshire Mammal Atlas update on pp2-3. Ed.

Conserving upland water voles

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We present a theory that water voles have always been present in the uplands of Snowdonia and that these areas may have acted as source populations for the more classic, lowland areas. There are a number of local, regional and national key sites for water voles in Snowdonia, many being managed for their biodiversity interest within the Biodiversity Action Planning framework. We use the Migneint SAC, a large area of upland bog and recommended national water vole key

site, as a case study for management conundrums. Here the competing objectives of managing for the ground nesting birds, flora and invertebrate fauna, as well as water voles, make for some difficult decisions. Monitoring has shown this site to be perhaps the last stronghold for water vole in Snowdonia, but mink have recently also been recorded here. Is there a long-term future for the voles?

Evidence of pine martens in England and Wales 1996-2007: analysis and foundations for the future

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The Vincent Wildlife Trust has been collecting and evaluating evidence of pine martens in England and Wales for many years. The nature, volume, and geographic spread of evidence gathered between 1996 and 2007 will be presented, along with an evaluation of the benefits and risks of using ad hoc sightings reports. These data will shortly be published as a report, and suggest that martens have survived into the 21st century in core areas in England and Wales. The future prospects for pine martens in these regions will also be briefly discussed.

See 'A Pine marten at Eastmoor' on front page. Ed.

Combination of radiotelemetry and genotyping to look at pine marten (*Martes martes*) ecology in a small woodland site

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Gardenmorris wood is a small site (90ha) containing a mixture of commercial conifer and mixed woodland. Based on its size and isolation it was not predicted to hold resident pine marten. In 2007 the Irish Pine Marten Survey revealed the unexpected presence of pine marten in the area. A genetic census was carried out in 2008 using hair tubes and scat searches, this was repeated in 2009. The census revealed the presence of two pine marten. During the spring/summer of 2009 the animals were tracked by radiotelemetry. Data on territory size and habitat selection will be presented and the possibility of replacing radiotelemetry with non-invasive, DNA based, methodology will be considered.

Mammals in Winter

Steve Lonsdale

Some of our mammals have had a tough time of it during the winter. Temperatures were at or below freezing for long periods from December through to February, and in some instances this has had a significant effect on wild populations.

The main issue is probably not the cold, for which most of our mammals are well prepared, but lack of, or inability to find, food. While Liz and I noted more dead rabbits than we would normally expect, this is more likely to be due to starvation than freezing to death.

In Scotland, there have been higher than normal mortality rates on deer estates. With grass and heather buried under snow and ice, up to 30 per cent of animals have perished on some estates and many more are expected to die before spring is over. Deer can normally cope with snow, but frost, resulting in ice, can stop them getting at their food.

Although deer are associated with harsh landscapes, they have little fat, leaving them with few energy reserves to draw on in a prolonged cold snap. Stags, worn out after the exertions of the rutting season, are particularly vulnerable.

As well as cold, freezing temperatures can turn water to ice, so making drinking more difficult.

Preparation

Mammals grow thicker coats and lay down food reserves. Small mammals make underground nests, as it is generally warmer below ground. Moles dig deeper, and will move tunnels lower in cold weather (as the worms have moved lower) – hence the sight of fresh molehills after snow.

Mice and voles will sleep through cold spells, and squirrels and badgers are much less active in winter (squirrels move their feeding pattern to once a day from two).

Mammals are warm-blooded, and their internal temperature of

around 37°C is maintained either by breakdown of food or extraction from fat reserves within the body. Greater reserves are used during cold spells, so during this time growth generally slows or stops.

Some mammals avoid the problem through hibernation (this particularly applies to insect eaters, as insect numbers are much reduced). The only native mammals to hibernate in the UK are bats, the hedgehog and hazel (common) dormouse (non-native fat dormice also hibernate). However, in order to survive the winter they do need to lay down large stores of fat during the autumn.

During hibernation, body temperature drops well below the normal, and the metabolism slows, so less energy is consumed. However, hedgehogs and bats may wake on warmer days, and may even be seen foraging; however, if little or no food is found then more energy is likely to be consumed than gained. If the weather is very cold, hibernating animals may shiver to increase their core temperature, but this does use more energy. In general, a consistent, cold but not too cold temperature is the optimum for hibernating mammals, as they are able to sleep through the winter without waking, and thus lose less energy.

Animals under snow have an advantage in that the temperature rarely falls below freezing, as air is trapped within the snow providing insulation. In addition, the snow itself acts as an insulating blanket, reducing heat loss. Mice and voles can thus survive in their tunnel networks as long as food is available (many small mammals use caches).

And in Sweden ...

... another way of keeping warm. Thousands of rabbits are culled every year from parks in the Swedish capital's Kungsholmen area, in an effort to protect the trees and shrubs.

The bodies of the dead rabbits are frozen, before being sent to a bioenergy plant in Karlskoga, central Sweden. There they are burned to provide heat for homes in the surrounding area.

Mountain Hare Counts

by Derek Yalden

Now the snow/camouflage has mostly gone, I've been able to complete my five Mountain hare counts. With the severity of the winter, I feared we might get the crash I've been expecting for a decade but this was not the case. I did find some old corpses (in winter fur) along Derwent Edge but they looked as though they were juveniles, and the spring was just too late. Live ones were more numerous than last year - 168, cf. 145.

	Crowden	Dowstone	Kinder	Crowstones	Derwent Edge	Total
2003	18	21	11	78	45	173
2004	26	43	19	40	30	158
2005	17	34	20	49	24	144
2006	16	37	39	51	46	189
2007	11	40	65	33	21	170
2008	8	25	25	31	29	118
2009	12	27	53	29	24	145
2010	6	32	43	32	55	168

Be careful... the countryside can seriously damage your health!

From Derbyshire Biodiversity News, Apr 2009, Volume 5, Issue 2, Page 11

Did you know that working or walking in the countryside can seriously damage your health? During the past 12 months, two Derbyshire countryside workers have found this out to their cost. One contracted Weil's disease whilst carrying out a water vole survey and was seriously ill in hospital for a couple of months, the other caught Lyme disease whilst on holiday abroad and was laid low for a few weeks. Both officers want to spread the word to make sure others don't fall victim through ignorance and have asked for this article to be published to warn others.

Weil's Disease

Weil's disease, or Leptospirosis, is a bacterial infection carried in rat urine, which contaminates water and wet banks. Infection may occur through cuts, abrasions and through the lining of the eyes and mouth. Symptoms are a flu-like illness, with a fever, headaches and often a red pinpoint skin rash. The symptoms usually develop a few days after the initial contact with infection, although they can develop in as little as three days, or as long as 30 days. In mild cases it lasts a few days, following a pattern similar to flu but often in two phases - a period of illness lasting a few days, then a slight recovery, then a second period of illness. In mild cases the second phase lasts a short time and the patient recovers, but in severe types the illness develops and progresses rapidly, leading to organ failure and often death if not treated with intervention and support. If following contact with potentially 'dirty water' you develop symptoms that concern you, should seek medical advice, explaining to your GP that you may have been in contact with 'dirty water'. You can reduce the risk of infection by:

- covering cuts with waterproof plasters, and avoiding further contact with water until healed.
- washing thoroughly before eating or smoking.
- wearing boots if working in water to reduce risk of water getting into cuts.

For more information visit the Leptospirosis Information Centre website www.leptospirosis.org.

Lyme Disease

In the United Kingdom, Lyme disease is carried by the sheep tick. This tick can also feed on deer and other wild mammals and birds. The tick prefers to live in woods, heath and moorland, although it does not occur exclusively in these habitats. The tick needs moist and fairly warm conditions to survive between blood feeds, and tall vegetation such as long grass, bracken, scrub and trees to climb to find a host. Symptoms follow after an incubation period of anything between two and

thirty days. Lyme disease can affect any part of the body and cause many different symptoms. The commonest symptoms relate to the person feeling unwell, having flu-like symptoms, extreme tiredness, muscle pain, muscle weakness, joint pain, upset digestive system, headache, disturbances of the central nervous system and a poor sleep pattern. In about 50% of cases a characteristically shaped, expanding 'bull's eye' rash appears on the skin. If you are concerned you should seek urgent medical attention. Lyme disease is increasing in the UK, but many doctors are unfamiliar with its symptoms. You are advised to tell your doctor that you think you may have been in contact with sheep ticks. You can reduce the risk of infection by:

- keep arms and legs covered as much as possible.
- remove and squash any ticks found on the skin. If the tick has attached itself, gently withdraw the mouthparts using tweezers. Surgical spirit or liquid antiseptic may be helpful. If the tick or mouthparts cannot be removed, seek medical help.
- check clothes and skin for ticks, and shake clothes after work.

For more information on Lyme disease visit www.lymediseaseaction.org.uk.

The greater white-toothed shrew (*Crocidura russula*) in Ireland, and its impacts on avian predators

John Lusby^{1,3}, David Tosh², David Watson¹, Marc Ruddock², Julie Grant², John O'Halloran³ and Ian Montgomery²

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In 2008 the skeletal remains of the greater white-toothed shrew (*Crocidura russula*) were discovered in barn owl pellets collected from a roost in county Tipperary. This was the first Irish record of this species. This study aims to establish the current distribution of the greater white-toothed shrew (GWTS), and to determine the potential impacts of its introduction on the ecology of two small mammal specialists, the barn owl (*Tyto alba*) and kestrel (*Falco tinniculus*). Diet was investigated via the analysis of kestrel and barn owl pellets and revealed that the GWTS now constitutes 68% of the barn owls diet and 7% of the kestrels. Infra red nest recording equipment, radio telemetry and monitoring of breeding success revealed the impacts of the GWTS on barn owl breeding ecology to be significant. We also discuss the potential impacts of the introduction of the GWTS on other species in Ireland.

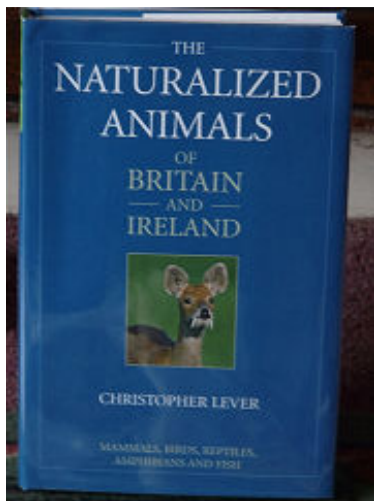
Abstract from The Mammal Society Easter Conference, Bangor University, 26th to 28th March 2010.

Book review: *The Naturalized Animals of Britain and Ireland* by Christopher Lever.

by Roy Frost

Some 30 years ago I bought the first edition of this book in paperback form, and was very surprised to learn just how many alien species were at large in the UK. I was equally impressed by the thoroughness of the author's research.

The same author, Christopher Lever, has now written a revised 424 page edition, published by New Holland, and retailing at £35.



The vignettes of the first edition are superseded by good quality colour photographs. The book deals with mammals, birds, reptiles, amphibians and fish. The criteria for inclusion is that a species should have been accidentally or deliberately imported here by man from its natural range, and that it should have wild populations which are being maintained without human assistance or interference. There are also chapters dealing with feral domesticated species, such as Ferret and re-introductions [e.g. Wild Boar and Red Kite]. Finally there is a chapter on ephemerals—those species that tried but failed: I especially enjoyed reading about the Crested Porcupines in Staffordshire in this latter section. And why does Yorkshire have a near-monopoly on records of Mongolian Gerbils?

For each species there is a history of when, where, how and why the introduction took place, with well-researched, and often thought-provoking details of the ecological and economic impacts caused. The mammals include such abundant species as Rabbit, Brown Hare and Brown Rat. The book seems pretty much up to date: for example, I was surprised to learn that one of the Red-necked Wallabies on the Staffordshire Moors survived

until 2006. I thought that Reeves' Muntjac was a relatively recent addition to the county list but the first record was as long ago as 1948 [at Matlock]. And an interesting question that caught my eye was why the Edible Dormouse, which has been at liberty in The Chilterns for nearly a century, has spread so little when it is common in many places there?

The birds range from the ubiquitous, such as Canada Goose and Pheasant, to Lady Amherst's Pheasant, which is all but gone. Derbyshire is doing well, if that is the right word, for alien birds with Egyptian Goose and Ring-necked Parakeet recent additions to our breeders, though there is no mention in the account of Monk Parakeet of a pair that bred successfully in suburban Chesterfield in 1988 [and published in the county bird report]. Both sides of the Ruddy Duck debate are extensively aired. It looks as if Carsington Water will have the unwanted distinction of sporting the last three-figure flock of this species in the UK [in January 2008].

Regarding reptiles and amphibians, it was a surprise to find that there have been no breeding records of Red-eared Terrapins, which were widely released following the 'Ninja Turtles' craze, though Lever believes that this could yet happen, given favourable climatic conditions. This is potentially bad news in view of the harm they can cause to wildfowl; there were reports of predation of Coots in Clumber Park, Nottinghamshire a few years ago. One small disappointment was the lack of up to date information on the Midwife Toads near Worksop, which were stated to be 'possibly still present': they were certainly doing well in April 2009! Looking at the fish, Sturgeon have been released in at least one site in the Trent catchment and Topmouth Gudgeon at a pool in Buxton but there were others [e.g. Sunbleak] that I confess I had never previously heard of.

This is a timely, authentic and very attractively produced book. Highly recommended.

ISBN 978 1 84773 454 9

Small Mammal Trapping Sessions 2010

Jo, Ian, Liz and I will be carrying out small mammal live trapping surveys through the summer in support of the Atlas project, primarily on the eastern side of the county between Chesterfield and south Derby. If you wish to come to learn the process, see some animals, or just for the experience, please let me know. Also, a reminder that the group has 40 or so Longworth traps that can be loaned out to trained members – please contact me if you wish to use them this year.

Steve Lonsdale (Lons57@googlemail.com)

Badger Trust Annual Conference 2010

13th to 15th August 2010

The Badger Trust conference will be held at Ardingly College, Ardingly, West Sussex, from 13th to 15th August 2010. It will be hosted by Badger Trust – Sussex. Booking forms can be downloaded from the Badger Trust website:
www.badgertrust.org.uk

The Mammal Society Autumn Symposium 2010

‘New Techniques in Mammalogy’
26th and 27th November 2010
London Zoo

The Mammal Society Easter Conference & AGM 2011

15th to 17th April 2011
University of Nottingham

The Down on the Farm Quiz

The Secretary of the Derby Natural History Society has compiled a quiz sheet to raise funds to help Derbyshire Wildlife Trust. **The Down on the Farm Quiz** features general knowledge questions, puzzles and clues linked by a theme of farming, though the questions relate to sport, music, TV, literature etc. There are monetary prizes to be won. The closing date is Thursday 2nd September 2010.

To obtain a copy please send s.a.e. and cheque for £1 payable to “The Wild Ones” to The Wild Ones, 12 Chertsey Road, Mickleover. Derby, DE3 0RA.

Would you like to help the Trust more? The money we raise from this quiz can be used to release funds from the Landfill Tax Communities Fund on a 9 to 1 basis. Every hundred pounds we raise can become a thousand pounds for the Trust to spend on work on sites. If you give a fiver it can become fifty pounds. It’s not magic but it feels like it. Your support and any donations will be gratefully received.

The Ogston Quiz

This quiz sheet is raising funds for Ogston Bird Club to create new reedbed habitat on their reserve. There are monetary prizes to be won. The closing date is 31st July 2010. To obtain a copy send s.a.e. and cheque for £1 made payable to Ogston Bird Club to I. Wildbur, The Bungalow, Brookfield Park, Old Tupton, Chesterfield, Derbyshire, S42 6AF

**A colour copy of this newsletter may be
downloaded from our website
www.derbyshiremammalgroup.com**

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Please send material, details of forthcoming events, comments etc to Steve Docker: Tel: 01335 345253 or email:
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Whilst every effort is made to ensure that material is factually correct opinions expressed are those of individual authors and may not represent the views of the Derbyshire Mammal Group.

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