

Cornish Hedges
 The Plight of the Hare
 The Rise of the Grey Squirrel
 Mammal Folklore
 Something Fishy Going On
 CMG Mammal Surveying Results
 Thoughts on the Mammal Society Symposium



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Cornwall Mammal Group

New Year reading list:

Christmas may have been and gone, but if you're looking to treat yourself to some good mammal related reading in 2019, the RSPB has published a number of mammal books in their Spotlight series over the last couple of years. I picked up the Otter volume by Nicola Chester a few months ago and was impressed.

Snappily written with a light touch it was very accessible, informative and entertaining and, more importantly, accurate. The text is extensively illustrated with some really excellent photographs. Chapters cover the otter family, habitat, food, and reproduction as well as the recent history of otters, their decline and recovery. There is a section on how to look for and watch otters and also otters on the coast (very relevant for us at the moment). The book concludes with a section on otters in literature and film. A great introduction to otters with lots of interesting snippets for the expert as well.

I've now become a convert and have tracked down the other mammal volumes on the internet – Badgers by James Lowen; Hedgehogs by James Lowen; Foxes by Mike Unwin and Bats by Nancy Jennings. All share the same easy writing style and great photographs. Pretty good value at £9.99 although even better if you search on line – I managed to pick them up new or nearly new for about £7 each including postage.

– Dave Groves



Events for Winter and Spring 2019:

Dates for CMG events are still being confirmed, however, please make a note of the following and we will send you full details soon.

17th January

- Septimus talk with Cornwall Seal Group, Fraddon.
 (Contact: Dave Groves)

21st January

- Small Mammal Trapping, Gweek.
 (Contact: Dave Groves)

CMG have a number of small mammal trapping events planned for around the county. The first of these will be held at Gweek, with further events planned on the Lizard, Seaton Valley and the ongoing monitoring of Bodwannick Farm, Bodmin.

We are looking for volunteers to assist with the Coastal Otter Project and Operation Hedgehog with training provided, and there are planned Dormouse Days and specialist wildlife talks with expert speakers this spring.

Notes from the chair:

I'm writing this watching the rain batter against the window and wondering if it will ever stop – amazing how short our weather memory is, I've pretty much forgotten all that sunshine!

We have started our year with a great AGM at Lanhydrock in October arranged by Kate and featuring as the main attraction the inimitable Johnny Birks bringing us up-to-date on pine martens. We elected our committee for the forthcoming year so thanks to everyone who has helped out over the previous 12 months and good luck to all the new arrivals. Our finances are in good shape despite supporting the preparation of the Seal Group's grey seal skeleton Septimus to the tune of £500. We will probably be spending some of our reserves on equipment this year, particularly our trail camera collection and survey kit for the hedgehog surveys but I hope that increased attendance at our events will help to offset this. Jane Simpson very generously donated half of the collection from Vic's funeral to CMG amounting to £1252. This will be used to support projects in keeping with Vic's interests.

We have kept our subs at £5/year which seems pretty good value to me – entry to our events, access to our newsletter, website and social media feeds, training and surveys, equipment loans and insurance.

We are trying to keep the events coming: the recent Naomi Sykes' talk at the university in November, the famous CMG Quiz in December and then in January our opportunity to meet Septimus the Seal at Fraddon and a chance to see where our support went. If you have any ideas for events then please let us know. Our next general meeting is in February (Date TBC) at Zelah and these meetings are usually held every 3 or 4 months and everyone is welcome to talk about all things mammal-y and help us organise the Group.

We have a couple of exciting 'hands on' projects this year: The Cornwall Coastal Otter Project currently links us with Newquay College and dozens of volunteers searching for otter spraint around the coastline. You can find more on the website and we are really keen to hear if you have seen any otters or signs within 1km (or so) from the coast. Operation Hedgehog is another project that has taken a little time to get off the ground but this year we will be working with CWT and Exeter University amongst others to survey for hedgehogs across the county. Alongside this we are working with another CMG member and Newquay student to try and collect more records on polecats and polecat/ferrets – looks like they have moved right down the county over the last 5 years or so as there was a record from Sennen earlier this year.

As if this isn't enough for our little group several members have been working to improve small mammal surveys across the county. Currently we are planning trapping events at Heligan, Seaton, the Seal Sanctuary at Gweek, and the Lizard in addition to our ongoing surveys at Gaia Trust sites and the Cornwall Beaver Project. We have 50 Longworth traps which members can borrow and there will be usually be someone with experience able to help out if you have a project you would like to develop.

I will be delivering several talks and training events over the coming year mainly around the Coastal Otter Project but also talking about our work and interests to a variety of local wildlife groups. Local groups of all persuasions are always keen to hear about wildlife so if you would like to help out or if you have a talk that might be of interest please let me know – it is always good practice for those heading into science careers! Don't forget that we have a small grants scheme that can support projects as well as attendance at meetings and conferences.

We are also trying to take a greater role in some of the regional conservation bodies to lobby for mammals in Cornwall – a good opportunity to find out more about how planners and ecologists come to decisions that affect nature in the county.

There are plenty of opportunities to get into wildlife and conservation projects in Cornwall which aim to improve our understanding of, and protect, our natural resources. We are very lucky to have so much to choose from and I hope the Cornwall Mammal Group can contribute something useful in the coming year.

I'll take this opportunity on behalf of the committee to wish you all a happy, healthy and prosperous New Year!

- Dave Groves

A tribute to Vic Simpson (18th February 1941 - 31st July 2018) by Kate Hills



Vic Simpson receives his 'Special Award' from the International Otter Survival Fund in 2017. Presented to him by Kate Hills.

Cornwall has lost an extraordinary man, with the death of Vic Simpson this summer. Around 300 people attended his funeral in Truro and I don't think I've seen so many tears or heard so much laughter at a funeral.

Vic was a distinguished veterinary pathologist who, after some 6 years in Africa, settled in Cornwall in the late 1970s. He worked at the Veterinary Laboratories Agency at Polwhele until he 'retired' in 2001 and set up Britain's first Wildlife Veterinary Investigation Centre (Wildlife VIC) in Chacewater.

Vic loved a good corpse - and he had a string of corpse carriers to bring them – the 'body line' he preferred to call it and many of these people were from CMG. I was delighted to join these wonderful people when I started at Cornwall Wildlife Trust in 1998, as a fledging Otters and Rivers Project Officer. Vic's pioneering work on otters included over 700 otter post mortems, more than any other individual.

Post mortem reports were eagerly awaited – would they contain information on ground breaking research such as aggressive conflict wounds on the genitals, the first (only known?) record of infanticide in otters in the wild, or details of what the otter had eaten.

Vic's work went beyond just otters. His investigations into stranded dolphins and porpoises identified the cause of death as drowning in fishing nets and mass seal deaths due to infections. First discoveries included parasites in pine martens and red squirrels, heartworm in stoats and bacteria in bats. He also carried out groundbreaking research on birds, including swan deaths in the 1970s resulting in banning the use of lead in anglers fishing weights; garden bird disease believed to be associated with summer feeding at bird tables and bone disease in buzzards.



Vic receives an otter through the 'body line'



Vic and Kate and 'Simpson Junior'.

Vic's wife Jane was an invaluable part of Vic's work. They both attended many CMG events including the Christmas quiz with their team the Autopsy Turveys. We were honoured that Vic chose to leave a legacy to CMG.

We may have lost Vic but his legacy lives on – in the vets he's trained around the world, the research that carries on and through 'Simpson Junior', the stuffed otter used by the Mammal Group and Trust for many events. His work has been inspirational and recognised by many awards. He received his last award in December 2017 when the Groves, Loveridges and I nominated him for the 'Special Award' from the International Otter Survival Fund. I emailed Vic about winning this award and my last words, will be his:

I consider it to have been a privilege to have worked with so many people, like you at the Trust, the many people in the Environment Agency, those at IOSF and also individuals like James Williams at the Somerset Otter Group, people who really got behind this project and supported it wholeheartedly for so long. The successes we have enjoyed were only possible due to others commitment.

Hedges playing a vital role in the Cornish landscape

Cornish hedges provide an important network link of habitats providing sanctuary and corridors for wildlife that might otherwise be isolated. They are also important habitats in their own right, but they are not protected, writes Laura Guy-Wilkinson, data officer for ERCCIS at the Cornwall Wildlife Trust.

Land has been bounded by hedges for over a thousand years and hedges are an intrinsic part of the Cornish landscape. Some hedges date to the Bronze Age when fields and commons were divided into small enclosures for livestock and they give a snapshot into the history of Cornwall.

But they are not all the same, and vary around the county depending upon climate, available materials and local farming practices. From the granite boulder walls of West Penwith to the coastal hedges lichen-dressed or carpeted by Thrift. The traditional Cornish hedges are topped with Hawthorn, while in east Cornwall the laid and coppiced Hazel hedges buzz with the sound of insects and birdsong.

Hedges are a very special part of Cornwall's landscape but unlike a hedgerow which is a row of trees and shrubs, the Cornish Hedge holds a wealth of importance in its construction and building it is still regarded a hugely valuable skill today. Built wide at the base, often with a verge or a ditch and narrow at the top and always with local materials, the Cornish hedge generally has a compacted soil middle with either stone or turf face with a grassy top that supports a shrubby hedgerow on top and often trees including oak, ash, sycamore or elm.

The way the middle earth is constructed ensures enriched soil that can provide self-sustaining nutrients for a huge range of species. The vertical hedge works in symbiosis with the damp ditch alongside the hedge, created from years of 'casting up' that fills back up the height of the hedge and recycles the wildflower seedbank.



Cornish coastal hedge. © Dave Thomas.

Hedges still fulfil their original purpose of marking boundaries between landowners. They are a valuable source of sustainable timber and firewood, enclosing grazing animals and providing shelter from the Cornish weather. They also intercept heavy downpours preventing flooding and soil erosion. They capture and filter fertilisers and pollutants and host pollinators vital to food production

But hedges are important habitats in their own right supporting up to six hundred native species of plants and shrubs which in turn support a varied population of insects, mammals and birds.

They link a network of habitats enabling otherwise isolated species to move freely among them. With ancient woodland habitats in decline, hedges provide sanctuary and act as wildlife corridors to areas that were once interlinked.

Hazel Dormouse, a species in decline, relies on edible flowers, insects and protein-rich hazelnuts to prepare for a winter in hibernation.



Hazel Dormouse, *Muscardinus avellanarius*.

© Danny Green.

Hedgehogs use this web of interlinked green corridors; of woody growth, hedge bases and sides, to navigate their way around and to keep them safe from predators.

Bats also use hedges as highways to navigate around the landscape, finding their way from the roost to important foraging areas and back again. Bats prefer not to fly over open ground, preferring to use hedges and hedgerows as shelter from the elements and from predators. The presence of veteran trees along hedges can provide roosting sites for many bat species.

Hedge-side ditches are home to a variety of wetland plants and animals, such as the damp-loving Marsh Marigold or Purple Loosestrife. Leaf-filled soggy ditches are also five-star residences for Hedgehogs and hibernating Common Toads alike.

The classic English Hedgerow is protected under UK law not only as a habitat but also for its function as a wildlife corridor. However, Cornish Hedges do not fall under this protection which means they are at risk from

destruction and development. This would be a huge loss to Cornwall where traditional hedge laying is deemed a hugely valuable and irreplaceable skill.

Understanding the extent of the hedge network in Cornwall is vital to ensure their protection and sustainable management for years to come. With an estimated 30,000 miles of hedges in Cornwall creating a map of the entire network at county scale is a huge undertaking. Using advances in technology and satellite imagery, with a staff of two and twenty volunteers ERCCIS has identified hedge features across the Cornish landscape and mapped them in a project that took 20 months to complete.

The map will provide a wealth of information for research, conservation and sustainable management of our wildlife and habitats. It will give us an understanding about how different species use habitats and interact with the wider landscape. We can investigate how connected and interconnected these areas are in the hope that future management plans will help protect isolated populations. The map therefore will be of great value to landowners, researchers and professionals.

Part of Cornwall Wildlife Trust, ERCCIS is the official Local Environmental Records Centre for Cornwall and the Isles of Scilly, working to collate, manage and disseminate biological and geological information and working with local and national biological recorders and conservation organisations for the better conservation of the county. For more information or to request access to the ERCCIS Hedges Information, please contact the ERCCIS team at ercis@cornwallwildlifetrust.org.uk / 01872 302250

- **Laura Guy-Wilkinson**

Hares, to many, are incredibly sacred animals; a secretive creature that remains a symbol for spirituality, rebirth and hope. Dominating mythology for centuries with their mysterious heritage and claiming the gold medal in 'Britain's fastest-land-mammal' awards, these sensational creatures evade the public eye and common marketing and continue to lure the imaginations of many who are close to nature, giving these magnificent mammals a regal status within the countryside.

Growing up in the countryside, I have been privileged to see these majestic and somewhat captivating creatures many times in the wild; I can even recall witnessing the staggering courtship ritual of 'boxing' between two males one warm, spring evening. Long, summer evenings were spent sat in a field watching the hundreds of rabbits pottering about, and spotting the elusive odd European hare, *Lepus europaeus*, standing noble above everything else. When I was a child, these mammals, I believed, were untouchable.

As the fields and hedgerows grew older with myself, and the country sides gave way to development, I learnt that in fact hares weren't held so highly with people as I had originally assumed. Hares, although sacred to some, are considered a nuisance to others and are no match to the constant changing agricultural practices. The once prevalent grasslands, have been overcome by pesticides and habitat destruction in order to make way for our ever-increasing population and high demand for food produce. For hundreds of years, hunting has and continues to dominate the country side, and for all this time and for the foreseeable future, whether it be for food or for sport, hares have been and will be a strong contender in the hunting communities.

This has already seen a dramatic decline in the number of hare species amongst Britain

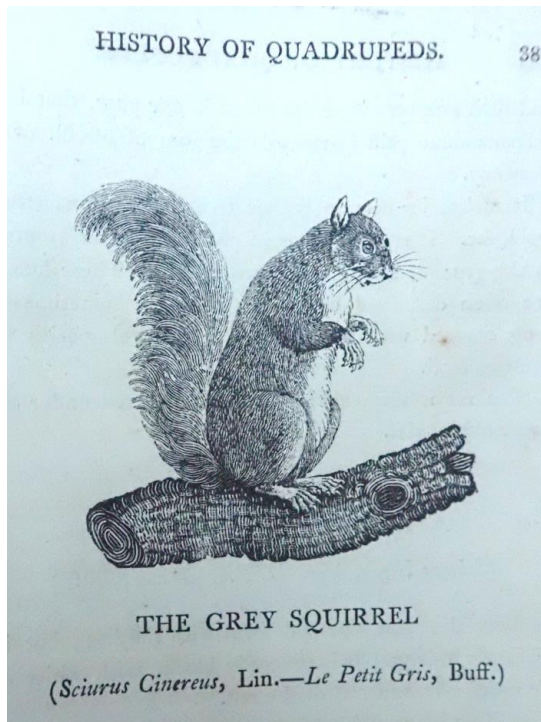
(Cornwall Wildlife Trust, 2018), and as our changing and increasingly demanding future approaches, it is a worrying reality that hares may well join some of our other beloved wildlife creatures such as the Red Squirrel *Sciurus vulgaris* on the threatened and endangered lists.

With this sadness already on my mind, you can imagine my horror when I recently heard on the local news that signs of Myxomatosis has possibly been discovered within the hare populations (BBC, 2018). Myxomatosis, a man-made disease introduced into the UK in the fifties, with only one intention – to control the wild rabbit population. Myxomatosis can kill a rabbit within ten days, causing respiratory conditions and swelling and discharge to the eyes, ears and genitalia. Once symptomatic, a rabbit with myxomatosis is easily recognisable; they will have swollen, weeping eyes and they will be slow and lethargic, not running away if you approach them, making them incredibly vulnerable. If the disease doesn't claim the rabbit's life, a predator usually will. This disease continues to be prevalent in rabbits, affecting no other wildlife, however, there have been reports of an increasing number of hares found dead or dying with what appears to be Myxomatosis. Although experts are still unclear as to whether the deaths are caused by Myxomatosis, it would appear that the disease has possibly 'bunny-hopped' from one descendant to another, with what could have disastrous affects.

So, what is in store for the future of Britain's hares? At this stage, it is sadly an uncertain future for them. One can only hope that with the arrival of this possible new threat, so too will come an evolutionary development to overcome and survive, before we lose the 'magic' of the hare for good.

The Rise of the Grey Squirrel

The grey squirrel, *Sciurus carolinensis* is native to the eastern and mid-western USA and south east Canada. It has been widely introduced as an exotic decoration to sites around the world where it has often established itself to the detriment of native species. In Australia and South Africa its spread was limited to urban and forested areas around the area of introduction and in Australia it was successfully eradicated in the 1920s, some 40 years after introduction. In the western USA, Ireland, mainland Europe and most significantly Great Britain the grey squirrel has become established at the expense of native squirrel species.



In 1807 Thomas Bewick, in his book 'A general history of quadrupeds', described the grey squirrel as '*very numerous in North America, and does incredible damage to the plantations. Great flocks of them descend from the mountains, and lay waste the fields of maize, by eating the young ears. A reward of three pence per head was given for every one that was killed; and such numbers were destroyed in one year, that Pennsylvania alone paid in rewards the sum of 8000 l. of its currency.*'

Despite this, gentlemen seemed to think this decorative addition to their British estates would be a good idea.

Image from: Bewick, T. A general history of quadrupeds 1807

The earliest records of grey squirrels in the UK were from Montgomeryshire in North Wales when one was apparently shot in 1828. There were other possible records but it seems that this early colony died out. However in 1876 a silk manufacturer, Thomas Brocklehurst, released 4 squirrels at his estate at Henbury Park in Cheshire. Over the following 20 years other introductions occurred, the most successful being at Woburn Abbey when in 1890 the Duke of Bedford released 10 animals imported by Mr G.S. Page of New Jersey (who had already attempted to introduce the animals to Bushey Park in Hertfordshire). Animals from the Woburn stock were subsequently moved to at least 8 further locations. Grey squirrels became something of a fad and stocks continued to be supplemented by introductions (including animals from South Africa) and escapes (another American gentleman released his menagerie of over 100 animals in Richmond in 1902).

In 1905 the grey was apparently still a novelty and it does not credit a mention in J.G. Millais' comprehensive work 'The mammals of Great Britain and Ireland' beyond a passing comment that the skins (under the name *petit-gris*) are more valuable than those of the red squirrel.

Introductions of grey squirrels have been remarkably successful with over 80% resulting in established populations. In the UK only one of 31 introductions known to have taken place around the turn of the 20th Century failed. By the 1920s the various discrete populations in the home counties were beginning to merge and numbers were increasing. Although there were pauses in their progression in the early 1920s when a mange-like disease impacted populations, by 1930 greys occupied around 10% of the UK's land area. At about this time efforts were started to control greys as it became apparent the damage being done to forestry interests. Although control measures were not very effective this coincided with an outbreak of coccidiosis caused by a species of *Eimeria* which, possibly together with a failure of the beech mast crop, caused both grey and red populations to decline. Reds and greys were coexisting at this point and both species recovered but by 1937 the greys had doubled their range to 20% of the UK and this was almost doubled again by the end of the war. In the late 1940s records of dead or diseased red squirrels appeared in Devon and Dorset and at about this point greys began to oust reds rather than co-existing. It is possible that a range of diseases may have pushed reds over the edge whilst they were under competitive pressure from the advancing greys. The primary cause of current concern as a disease of red squirrels is squirrelpox virus which is lethal to reds but has relatively little impact on greys. This disease was not identified in the UK until 1980s.

The first greys in the southwest were released in 1915 in Exeter. As with other areas surrounded by less than ideal habitat, such as moorland or marsh, they did not spread widely. The wilds of Dartmoor and the River Tamar served as effective protection against natural spread along with the relative paucity of deciduous woodland, however it could not protect against deliberate introduction or the accidental release of pet squirrels. The 1945 survey found no greys in Cornwall but by 1951/52 they were across the



Grey Squirrel, *Sciurus carolinensis*. © Phil Burtonwood.

Tamar and it was recorded that 20 were shot. Once in the county the spread was rapid and by the 1960s recorders were already commenting that reds were rarely seen. The last confirmed red was from Tresillian in 1984.

The latest analysis of the Britain's grey squirrel population suggests a population of some 2.7 million animals extending across the country and into central Scotland. Both red and grey squirrel populations have been subject to ebb and flow in the past. Red squirrels became extinct from much of Scotland in the 1840s as the ancient forests were felled, whereas the Scottish forests now form the stronghold of British reds. Reds were successfully reintroduced to Scotland in the 1800s mainly from English or Welsh stock. Likewise reds died out in Ireland in the 1800s but reintroductions from England resulted in their return to every county by 1910. Genetic studies of red squirrels have shown the result of frequent translocations of animals within the UK and also the impact of introductions from Europe – in the 1830s tens of thousands of reds were imported from France as pets.

Reds were also considered a pest species by both game keepers and foresters causing significant damage to seedlings and young trees and taking eggs and young birds (activities for which the grey is condemned today). One Scottish estate recorded killing 14,123 reds over a period of 17 years. In the 1940s and 1950s grey squirrel clubs were set up with the support of the Ministry of Agriculture and the Forestry Commission to shoot greys. Despite more than £3 million paid in bounties (equivalent to about 100 times the bounty paid in Pennsylvania all those years ago) the scheme was abandoned in 1957 when it was acknowledged to have had virtually no effect. Concerted efforts to control both reds and greys have apparently had relatively little effect beyond local impacts. Populations have however crashed and burned in response to infectious disease, feed crop failure and removal of habitat. I wonder if the current Duke of Bedford has any helpful suggestions?

- Dave Groves

One aspect of nature that really fascinates me is our predecessor's relationships with the natural world and how they viewed and valued certain aspects of the animals we know and love today. Here is a small collection of some interesting historical beliefs, folklore and practices that involve some of our British mammals...

The Victorians valued hedgehogs due to their pest control abilities and would be kept in homes due to their insect heavy diet. Cockroaches were a particular issue during the Victorian era and hedgehogs would be deployed to eat both them and earwigs in cellars, larders and kitchens

Lagomorphs were important animals to the Celts due to their speed, strength and



European Hedgehog. Copyright Dave Lidstone.

nocturnal activity. Hares were so well respected, that after a rousing speech before a battle with the Romans, Boudicca is said to have raised her spear and let a hare escape from the folds of her dress. The hare ran in such a way that the warriors believed it was a message from the Gods that they would be successful on the battlefield, rousing their spirits on the eve of the conflict.

The white winter coat of a stoat (known as ermine) has long been heralded as the clothing of the upper classes; adorning the robes of many royals. In France, it used to be believed that the stoat valued its white coat so much, that it would rather die than get it dirty. This belief is said to have derived from Anne de Bretagne (1477 – 1514), the wife of two successive French kings. She was observing a stoat in ermine being chased by hunters. Arriving at the edge of a mud swamp, Anne claimed that the stoat stopped and turned, admitting defeat and giving itself up. Anne claimed that this was because the stoat could not bear to muddy its beautiful pelt, instead choosing to end its life to preserve the pristine colour. In reality, it is likely that the stoat simply didn't think it could survive the swamp and turned in hope of some other potential escape. The story goes that it affected Anne so much that she rescued the animal and adopted its action as her motto: 'Plutot la mort que la souillue' meaning 'death rather than defiant'.

The stoat often finds itself entwined in country lore, and tales of hundreds of stoats gathered together in frightening packs is one story that arises fairly often. Most of the stories claim that this only occurs during bitterly cold winters, however one man, Sir Alfred Pease, claimed during a warm spring in the 1930's that he was attacked by such a pack, and despite "knocking six or eight flying into the ditches on either side and kicking two or three that had fastened their fangs into his legs", the stoats simply kept coming at him until he was forced to flee. Collective nouns for stoats include gang, pack and caravan.

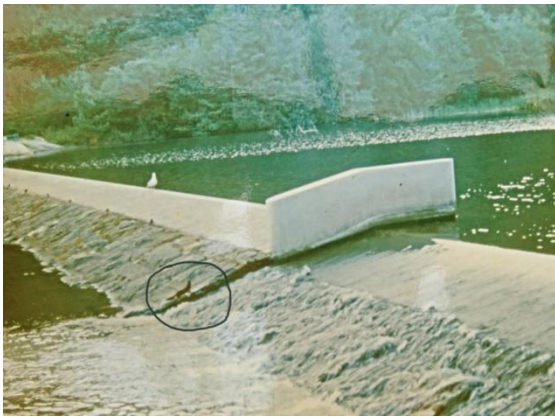
Many see otter fishing as a practice which happens overseas, but it is thought to have occurred in the UK too. Otter pups would be removed from their parents at a few months old to domesticate and train them. Otters would be muzzled to prevent them from eating the fish and would be taught to shepherd fish into an awaiting net. During the Middle Ages, otters were thought to be persecuted due to their reputation as 'fish killers', but they were often hunted for their pelts.

People in the Middle Ages would often weave stories into their literature about animals and the characteristics they would attribute to them. Foxes were described as being fast, never running in straight lines and slinking around, and were seen as being crafty, something illustrated by Chaucer in the Nun Priest's Tale, when Chanticleer is duped by a wily fox who exploits his gullibility and arrogance. Foxes were thought to play dead and dupe their prey into being eaten. Medieval manuscripts would depict foxes dressed as clergymen or knights, making satirical reference to corruption in court or church.

Something Fishy Going on...

Back in the days when I still had hair, well about the middle '70s, an unexpected visitor turned up at our place, with the obvious intention of parking himself on us for a few days. So I was fiercely whispered to, to get him and the two kids out of the way while the boss flew round the house with a vacuum, made up a bed, and re-thought the evening meal.

We took off to a local beauty spot, Lopwell Dam, where the tide reaches its limit in the Tavy estuary. It's an attractive place, with a relatively modern weir holding back the Tavy so that South West Water can draw off water. When the tide is out the water flowing over the dam crosses a causewayed ford, and pedestrians can walk across the stepping stones to the far side.



Mink at Lopwell Dam (circled). © Tony Atkinson, 1975.

Surveying this scene from the car park we spotted a mink out on the foot of the weir, apparently eating the moss at the side of the fish ramp. It took a while to dawn on me that mink don't eat moss! So after trying to snap him with my Kodak Instamatic I approached to see what he was eating. It was ELVERS. There were hundreds of them wriggling their way up

the side of the weir, on the moss growing on the base of the concrete guides of the spillway and in the pool at the base of the weir the water was almost churning with them.

I went back to the car park and rummaged through the litter bins until I found a suitable poly bag and went back and dipped up some of the elvers to take back to the others to show them, (I was the only one to take off my shoes and socks!) and we brought them home and emptied them in our garden pond.



A bag of elvers. © Tony Atkinson 1975.

Coming from Somerset I was familiar with elver runs on the Parret and in the rhines and "drains" of the Somerset Levels, and of the commercial fishing for them on the Severn and Wye, but I had never considered that other rivers, like the Tamar and the Tavy would have elver runs at the right state of the moon and the tide so this caught me by surprise. Presumably all rivers have an elver run. We just aren't there at the right time and place! It's sobering to think how much else goes on behind our backs!

- **Tony Atkinson**

Small Mammal Surveys - Lost Gardens of Heligan 16th & 17th November 2018



The finer points of weighing British mammals. © Mary Groves

After one false start when gale force winds caused the event to be cancelled in October, we eventually got out to Heligan on a very foggy Friday evening to set out 53 assorted small mammal traps to see what we could find. Half a dozen of us braved the dank and increasing dark afternoon to set the traps in areas close to the hide but ‘behind the scenes’. The next morning a mix of staff, volunteers and members of the public turned up to see what we had found. Lots of occupied traps – over 40% occupancy – predominantly very lively male wood mice but with a smattering of bank voles and a couple of field voles for variety. It was a great opportunity to add records from this area of the South coast and clear why owls do so well in this area. Plenty of participants got an opportunity to see some of our local rodents up close and also to take the opportunity to learn some ‘hands-on’ survey skills. Thanks to Claire at Heligan and to Rob from 3 Bays Wildlife for organising the event and to all those who turned up. I hope we can look forward to running more events with Heligan and 3BW in the future.

- **Dave Groves**



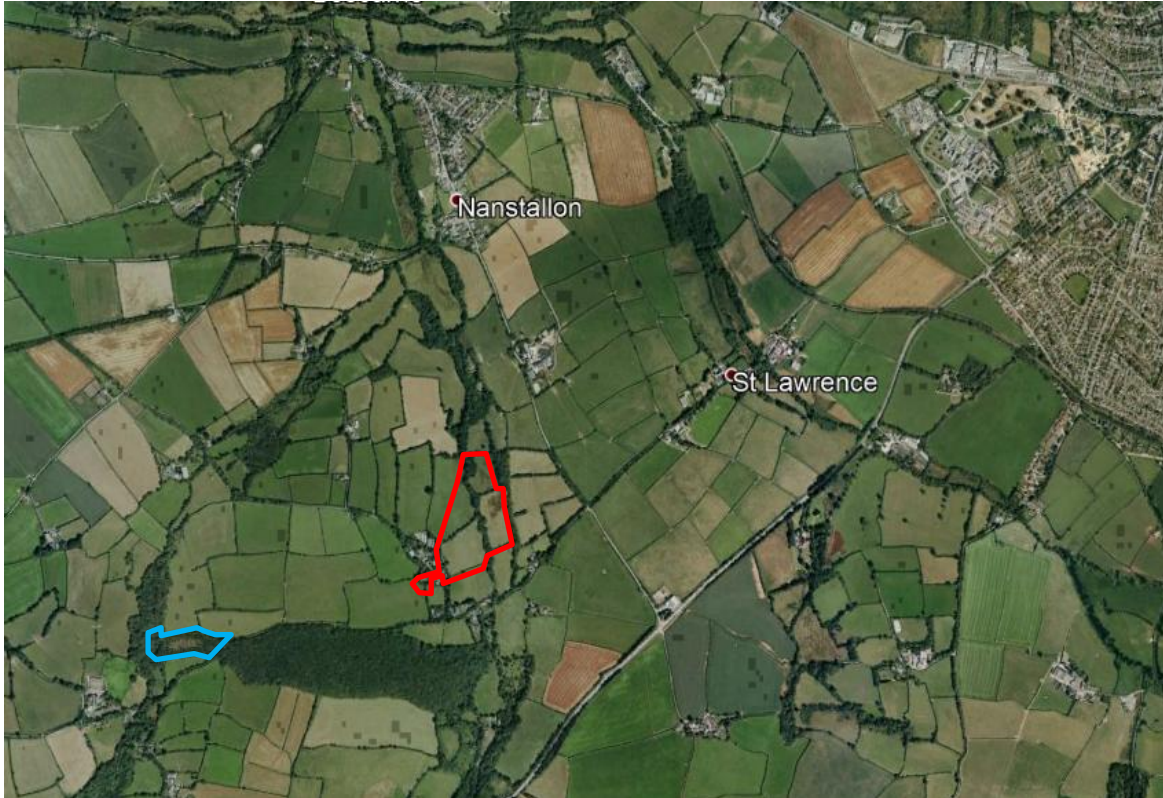
Bank vole, *Myodes glareolus*. © Jackie Peters.



Wood mouse, *Apodemus sylvaticus*. © Jackie Peters.

Bodwannick House Winter Mammal Surveys 2018

Cornwall Mammal Group has carried out a couple of surveying events at the Gaia Trust site Bodwannick to the south-west of Bodmin in the past couple of years, always in mid-winter. The surveys have been concentrated around the farmhouse and the fields to the east, including a stream corridor. Surveying techniques have included looking for mammal signs, Longworth traps, hedgehog tunnels, camera traps and remote bat detector. So far this has produced a good number of records.



Bodwannick area of surveys in 2017 -2018 (red) while the dormouse tubes have been set out in the woodland to the west (blue).

With the Longworth traps we've got woodmice in the garden and hedges and bank vole in the hedges. Whilst we've hoped to get stoats and weasels in the hedgehog tunnels, we've only had small mammals and a newt. The camera traps have caught badgers and foxes (the cows don't really count) and although the remote bat detector was out in January it still recorded common pipistrelle and daubenton's.

There has also been lots of evidence of mammals. Field voles in the rushy field have left short cut sections of soft rush, woodmice and bank voles sign from chewed hazelnuts and sloe stones in the hedges and woodland, mole hills, deer droppings, otter spraints and a badger sett.

Bodwannick is only a few kilometres from Bodmin where there have been recent records of dormice on development sites within hedges. Here there is a large area of woodland, although we only have access to a small area of it, so last year we also set up some dormouse nest tubes in a woodland in the west of the site. These have been checked in

May and November this year, but as yet no dormice. However, it can take several couple of years before getting positive results with nest tubes.

Next year the survey will be based around the woodland area in the west of the site and take place in April/May so that we can check the dormouse tubes. The Longworth traps will also be in the woodland while camera traps will be set out on the badger sett and hopefully there will be a remote bat detector as it will be the bat active season. We will also carry out a nut search to find hazel nuts that have been eaten by small mammals and identify which animal has eaten them.

I hope to see some of you there.

- **Steve Adams**

Cornwall Coastal Otter Project update November 2018

The CCOP is making some serious progress – we now have over 20 volunteers out looking for otter spraint around the coast from Bude to Saltash. Most of our current volunteers have experience with otter surveys but we are also organising two surveyors training days in January/February. One will be held at The Lost Gardens of Heligan and another further west. These are aimed at introducing novice surveyors to spraint collection and analysis.

Rebecca Smith at Newquay College has been working on the analysis of samples and we are beginning to realise what a serious task we have taken on! Once the samples have been cleaned up we are left with a selection of tiny bones and pieces of otter lunch which then have to be compared with images of known fish, amphibian, mammal, bird or invertebrate bits and pieces. There are keys and guides for some of these but we are trying to come up with a list of likely species and then possibly having to prepare samples for comparison – a major project in itself. Fortunately we have made some useful connections with Prof. Naomi Sykes at the Department of Archaeology of Exeter University. Naomi spends a lot of her time trying to identify bone scraps from archaeological sites so we are pooling resources and aiming to organise a fish bone identification workshop in February.

Our volunteers are heading out to check out the potential spraint sites and we are beginning to get reports and samples returned. The project will continue throughout 2018 so there are still opportunities to get involved – you can contact the project through the website email if you would like to help out or if you have come across otters or otter signs (spraint or prints) near the coast recently.

By the next newsletter we should have begun to get some results and some indications about how Cornwall's otters are using our coastline.

- **Dave Groves**

Thoughts on the Mammal Society Autumn Symposium: Non-Native Mammals in Great Britain

On Friday the 9th and 10th of November 2018, I had the pleasure of attending the Mammal Society Autumn Symposium in London. This year's theme was 'Non-native Mammals in Great Britain', and it did not disappoint. Discussion topics included a range of mammal reintroduction efforts and control of invasive mammal control with the focus this year being mink. The event brought together academics, policy makers and practitioners to discuss this topic and its associated controversial issues. As a student in my last year of Zoology at university, it was a great opportunity to meet and discuss the people who are conducting current field research about subjects that hopefully will be my career in the future. The two-day event covered a wide range of topics with a review of the current UK status of invasive mammals and their impact on native mammals, as well as horizon scanning, biosecurity in place, and new developing methods of control that will be implemented with the potential arrival of new species from Europe. The final session of the symposium finished with a discussion panel about the future of current and proposed environmental invasive mammal management in Britain.

Friday the 9th November 2018

The day started off with registration and tea and coffee; this was a great time to meet and introduce yourself to academics and guest speakers. I got to talk to Johnny Birks who I originally met when he gave a talk about his research on pine martens at the Annual General Meeting for the Cornwall Mammal group.

In the morning the symposium started off with research on non-native mammals' status: horizon scanning and a wider perspective. The first speaker was Olaf Booy from the GB Non-Native Species Secretariat who spoke about strategies for non-native species. He mentioned that although mammals are only a small proportion of the non-native species in Great Britain, they have a disproportionately large impact on the environment. Included in the presentation was a strategic approach being used to tackle them as well as the recently adopted EU invasive Alien Species regulation and how this is going to be implicated into Great Britain.

The morning continued with a presentation from Professor Fiona Mathews about the conservation status review of invasive mammals in Great Britain. The presentation highlighted the important data deficiencies that exist in monitoring and data sharing, and how citizen science and ecology practitioners can address this problem. Finishing off the morning was Dr Dick Shaw and Dr Arne Witt from CABI (Centre for Agriculture and Bioscience International) who briefly strayed away from the GB invasive non-mammal overview and instead spoke about how invasive plants cause detrimental harm to developing countries.

Trevor Renalds spoke of the importance of enhancing biosecurity and detecting pathways of spread. It was fascinating to listen to, and it surprised me how much researchers rely on citizen science to contribute to their work. Next was the work of emerging diseases in introduced species by Alex Barlow. Key species mentioned were the European rabbit and the emerging RDHV1 and RDHV2 virus, wild boar, and the European beaver tapeworm which is a severe zoonotic parasite. The day continued with other researchers about new invasive metabarcoding techniques and native animals that are known to be former natives, such as the hedgehog which is causing problems in the Orkney islands. Friday continued with talks from the Essex wildlife trust about water vole conservation, which tied in nicely to the next speaker, Johnny Birks, about mink in Britain and the evidence of a decline. By the end of the day I felt exhausted, however I really enjoyed it and was very excited for day two.

Saturday 10th November and Discussion Panel

I was very excited to start the new day at the conference; it continued with talks on invasive deer, and the effect that Edible dormice (*Glis glis*) are having on homes in the UK and how they can hibernate for up to 20 months. I hadn't realised all the preventative measures that are conducted in GB; it is completely different learning and reading it in research papers, compared to hearing it from the lead researcher. It was a completely new experience. The day finished off with a discussion panel where general questions were asked to speakers and researchers mostly concerning red squirrel conservation management. Students were encouraged to speak up about questions they had about future interest in conservation and future careers. One person spoke about how students are an effective source to researchers and the importance of paying students to conduct research, as they are provided with a large amount of training in order to become highly employable. A conversation broke out and the speakers emphasised the importance of volunteering and how that is a key factor in job applications and people that they hire.

Final Thoughts

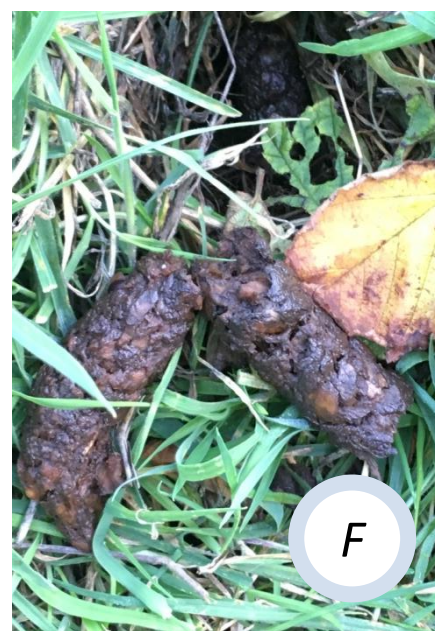
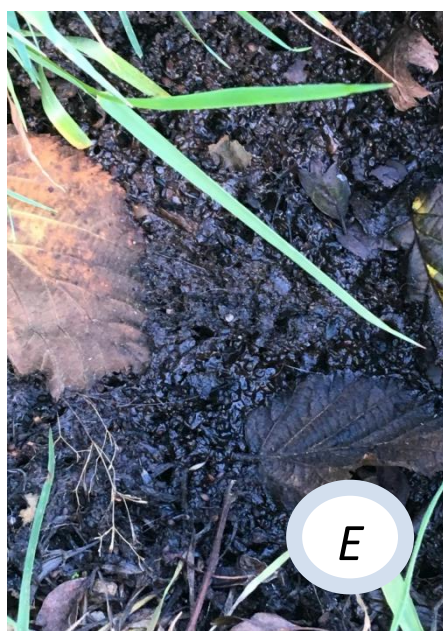
To conclude, whether you are a student or are interested in all things mammal, I highly recommend the conference. I have made numerous contacts that I never would have made without attending. If you are a student, you definitely want to attend; it can give you a number of contacts and knowing how hard it is to get a paid job in this career path you definitely need people who know you are dedicated.

- **Tyler Young**

Whose Poo are you?

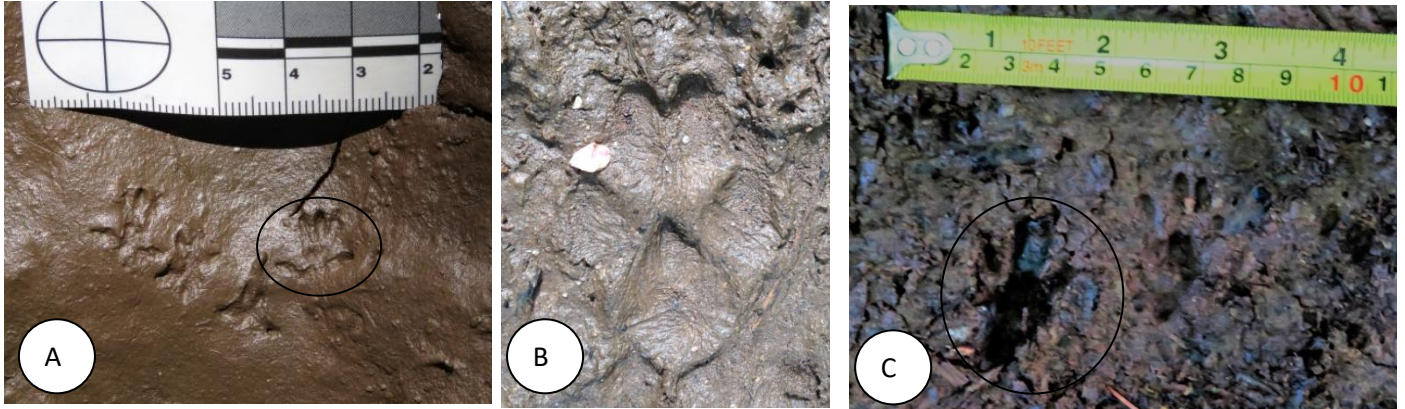
I like to finish the newsletter with some tracks and signs for you to try and identify. For this edition, I've included some examples of our European badger, *Meles meles* diet. Each of these latrines was found within a ten metre stretch of each other and really highlights the diversity in the badgers omnivore diet during late summer/ early autumn. Can you determine what delicacies were available at the 'all you can buffet' for this group?

Answers will be in the next newsletter, but if you want to hazard a guess then please use our Facebook page to share your thoughts with others.



Answers for Spring/Summer 2018 questions:

The following answers are for tracks that appeared in our summer newsletter 2018. How well did you get on?



All images ©Angie Nash

A – The track circled shows the clear five toes of the right hind foot of a rodent. Rodents hind tracks will often appear as three clear middle toes grouped in a line with the first and fifth digit at almost right angles to them. The other tracks in this image are more typical of the front foot registering only four toes. The size narrows this down to either vole or mouse, but it is not possible to determine species.

B – This track clearly has four toes which automatically makes one consider canine, feline or lagomorphs as most likely options (mustelids will register five toes in mud this soft). Lagomorphs (rabbits and hares) rarely leave pad tracks this clear, as their feet are covered in hair. Felines have a distinct 'm' shape at the bottom of their heel pad and their toes aren't symmetrical, i.e. the second toe tends to be higher than the rest unlike the image above which shows the two middle toes in line with each other. This distinguishes the track above as canine. It can be difficult to determine dog from fox (the only canines we have in the UK) but there are a few pointers that can help. The overall shape of the entire track – in this case it is diamond which indicates fox. Dogs tend to be more circular in shape. The heel pad in foxes is also similar in size to the toe pads unlike many dog species which will have a much larger heel pad (dogs built for speed, e.g. lurchers can show similar characteristics to fox). There are several other characteristics but one that really stands out in this image is the impression of the hair in each pad. Foxes have much hairier feet than dogs.

C – In this image, it is the track that is circled that can assist us the most in determining the species. The ruler scale in this case really helps us, showing us that the track is in the region of 1.5 inches. Far too big for any of our small rodents. Only four toes are registering in the soft mud so it is unlikely to be a mustelid (such as weasel, stoat or mink) which would register five toes. The third toe from the left is slightly higher than the other toes and this is very distinctive for squirrels, showing in this case a left front foot. The equivalent of the second toe (from the thumb) on the foot is the toe that is elongated.