



Devon Mammal Group

March 2021 Newsletter

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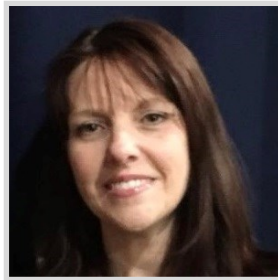
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Secretary: Charly Mead

charlymead91@gmail.com

07795 337409



Chair's Chat

Welcome to the Spring 2022 edition of the Devon Mammal Group Newsletter. The committee and I hope that you are all well.

We started the new year with a fantastic talk 'Bringing Pine Martens Back to the Westcountry: the benefits and challenges' by Ed Parr Ferris of the Devon Wildlife Trust.

We were delighted to have 65 of you log in for what was a fascinating insight into the pros and cons of reintroducing this species after such a long absence from this area. In February, Cornwall Mammal Group kindly opened their talk 'Acoustic Monitoring of Small Mammals' by Dr Stuart Newson to our members and we were pleased to see that many of you attended.

Many of you will have seen our wonderful harvest mouse project officer, Sarah Butcher, on Winterwatch in January - she really did us and herself proud. The project has been a huge success again this year with Sarah carrying out numerous training sessions and surveys. The 2021/2022 harvest mouse map shows lots of confirmed records throughout the county. We'd like to thank Sarah and all of those who have volunteered over the past 6 months for your dedication and commitment. We would also like to thank the Postcode Lottery Fund for the People's Local Trust funding for the project.

The Committee and I would also like to thank Mr & Mrs Woolcock for a very generous donation of £655 to Devon Mammal Group. Acts of kindness like this are very humbling and genuinely appreciated.

We are busy planning our spring and summer events so please keep an eye out for upcoming information on talks and the AGM. We hope to be able to see you in person again soon!

Best wishes

Helen (Chair of DMG)

Devon Bat Survey 2021 Results

By Elinor Parry (Devon Wildlife Trust)

Tuesday 26th April (TBC)

Final details will be sent out soon

Devon Bat Survey is a citizen science project that has been running through Devon Wildlife Trust since 2016. The aim is to give anyone the opportunity to find out what bats are about near them, by borrowing a bat detector which will record the ultrasonic calls the bats make and are used to identify them to species. The project was funded through Devon Greater Horseshoe Bat Project, which came to an end earlier this year, and has now been taken on by Devon Biodiversity Records Centre (supported by 'Saving Devon's Treescapes' and the 'Halpin Trust'). Find out how bats have been doing in Exeter, Seaton, Torbay and South Devon.



Harvest Mice Project - stars of BBC's Winterwatch



Just after Christmas, on a cold, wet winter's day, five hardy volunteers came out to search for Harvest Mice with the BBC Winterwatch film crew and Presenter Gillian Burke.

The weather was foul, there was quite a lot of waiting around and the survey took place in the boggiest area possible, but it was nonetheless a fun afternoon with a single nest found just as the light started to go.

My captive bred mice, Pop and her babies, put on a fantastic show and wowed Gillian and the film crew.

As always with five hours worth of filming reduced to five minutes of airtime a lot of lovely stuff was left out, but as a result, both in Devon and across the country, lots more people have been looking for nests and sending in records.

At a meeting last week, The Mammal Society reported a definite rise in interest following the broadcast. Thanks you to everyone who made it happen.



If you missed it you can still see it on: <https://www.bbc.co.uk/programmes/p0bkrr69> .

Supported by players of



Awarded funds from



Our thanks go to the Peoples postcode Lottery who awarded us sponsorship of £7378, which has made it possible for us to run the project for another year.

We now have a Devon Mammal Group Harvest Mouse Project Website

<https://devonharvestmouseproject.edublogs.org/>

Visit our site and find out all about the project.

Sarah Butcher (Harvest Mouse Project Officer)

Beaver Information Day

Beavers were hunted to extinction across most of their distribution in Eurasia. Views differ on when they became extinct in the British Isles, but they were certainly very scarce by 400 years ago. While many people find the prospect of bringing the beaver back to its former habitats attractive, others have serious concerns about the potential impact of this very large rodent and the major changes it can make to the landscape. In a previous life as a lecturer of ecology and conservation I would use beavers as an example of a “keystone species” because they are “ecosystem engineers”, but I had never seen the results of beaver activity first hand.



The Beaver was obviously bored by the whole event !

On 22nd January the Tamar Beaver Management Group ran an Information Day at Cookworthy Forest for members of the Devon and Cornwall Mammal Groups. In the morning Mark Elliott and Jake Chant gave excellent talks on various aspects of beaver ecology, conservation, management and survey techniques. After lunch we visited an Enclosed Beaver Site to see for ourselves how beavers modify their environment and what the consequences of reintroduction are likely to be. The site is a fenced off area of carr woodland along a small stream. The enclosure is divided into two compartments, one of which has housed a family of beavers for ten years, while the other had been kept beaver-free until quite recently. The beavers themselves were nowhere to be seen, as they are largely nocturnal in winter, but the sharp contrast between the two compartments clearly showed how much these large

rodents had transformed the vegetation and the water course. Beavers feed on leaves and shoots when they are available, and we saw trees of >20 cm diameter felled by the beavers so they could reach the tasty greenery. In the winter when no foliage is available they eat mostly bark, and there was evidence of gnawed stems, branches and even twigs throughout the occupied compartment. As well as the main dam and the lodge behind it, the beavers had built several smaller dams that created an impressive series of terraced pools. They had also dug canals that they use to float freshly cut branches to store in a winter larder near the lodge. The overall effect of their feat of ecosystem engineering has been to open up the woodland canopy and recreate a wetland that provides ideal habitat for a great variety of insects, amphibians, birds and bats.



Impressive work on this Birch tree



Mark demonstrating a Beaver trap

Before my visit I had been slightly sceptical about the value of species reintroduction as a tool for conservation. Now I appreciate how bringing back this one keystone species can recreate whole ecosystems and enhance local biodiversity.

David Hill

Digging for Devon

Significant Ice Age fossil mammal remains discovered near Plymouth

Some of the oldest residents of Devon's newest town have been uncovered during construction of Sherford, a planned settlement near Plymouth. An underground cave system in proximity to lime kilns and Sherford Quarry, exposed during building works, contains a nationally significant assemblage of fossil mammals, including woolly mammoth, woolly rhinoceros, hyena and wolf.

Over 200 clusters of bones have been found, with rare complete and semi-complete individual animals, so far comprising:

- partial remains of a woolly mammoth, including a tusk, molar tooth and other bones (woolly mammoth lived between 800,000 4,000 years ago)
- partial remains of a woolly rhinoceros, including an incomplete skull and lower jaw
- a virtually complete wolf skeleton
- partial remains of hyena, horse, reindeer, mountain hare and red fox
- various small mammal bones such as from bats and shrews.

Further bones of small mammals are expected to be identified during post-excavation laboratory analysis.



Woolly Mammoth molar



Part of a woolly Mammoth tusk recovered from the cave system

The remains date from around 30,000 – 60,000 years ago, during the middle of the last Ice Age, the Devensian, which lasted until around 11,700 BCE. Devensian Sherford and Plymouth were a bitterly cold dry tundra landscape of extensive grasslands, prone to huge flood events, with glaciers reaching as far as south at the edge of an icebound midlands and north of England. Alongside the fossil bones discovered, environmental samples taken from the caves will help deduce the flora, habitats, ecosystems and climate prevailing at that time.

The timing and agency of the accumulation of bones are unclear, whether rapidly, such as if animals fell to their deaths in a pit, which then attracted scavengers to a similar fate, or over a longer timespan, for example, if washed and collected into a subterranean pinch point, or moved by predators, over the course of decades or centuries.

Sherford Consortium, developers of the new town, have said that the area where the remains were found would be conserved, and that there would be no construction built on top, but however the entrance to the cave will be closed to protect the site and for safety reasons. Caving organisation Devon and Cornwall Underground Council are currently petitioning for the cave not to be sealed. In due course, the fossil finds are likely to be kept and displayed at The Box, Plymouth Museum.



Stephen Carroll



Mandible of a Woolly Rhinoceros, with teeth still attached



Fossil items found in the cave system

Sources:

RH Univ. of London press release <https://www.royalholloway.ac.uk/about-us/news/new-discovery-of-ice-age-fossils-in-devon/>

<https://www.bbc.co.uk/news/uk-england-devon-60234766>

<https://www.bbc.co.uk/news/uk-england-devon-60042700>

Other living mammals may also use the caves. If not already done so, someone needs to ask a question about whether the cave system forms a bat hibernaculum.



Skull from nearly complete Wolf skeleton



Forever Chemicals

Toxic "forever chemicals" used in non-stick saucepans and food packaging have been found in Otters across England and Wales, according to a study.

The substances, called PFASs, are also used in waterproof clothing, stain resistant products and fire retardants. The chemicals are linked to pregnancy complications, liver disease, cancer and other illnesses and scientists say concentrations of these compounds in Otters are a guide to levels of pollution in the environment.

The substances can leach out from products, getting into drains and sewage treatment works - from which they can then escape and contaminate the environment more widely. PFAS substances are present in farmland sludge, which can wash from fields into rivers. Factories and landfill sites are another source for the chemicals.

Denmark recently banned their use in food packaging paper. Used since the late 1940s, PFAS chemicals - which are divided into compounds called perfluoroalkyls and polyfluoroalkyls - help to make products water, grease and stain resistant.

They are known as "forever chemicals" because they don't break down easily in the environment. They contaminate fish, which can then be ingested by animals and humans.



The [study led by Cardiff University's Otter Project](#) analysed historical data and found perfluoroalkyl and polyfluoroalkyl substances (PFASs), which have been linked to health problems in both humans and wildlife, in Eurasian otters and concludes this suggests “widespread pollution” of British freshwaters today.

The study found most PFASs in otters were associated with wastewater treatment works or use of sewage sludge in farming, suggesting this was a “significant and concerning” route into rivers. The Cardiff researchers said studying contaminants in otters was vital to understanding potential health risks. Their study was published just days before a [parliamentary report](#) said no English river was free from pollution.

Emily O’Rourke, a PhD student and lead author of the study, said: “PFASs are a large family of synthetic chemicals used in consumer products for their oil and water-repelling properties, in food packaging, non-stick cookware, waterproof clothing, stain resistant products, paints and fire retardants, amongst other things.

Eurasian otters are top predators of British freshwaters and can act as strong indicators of the levels of these chemicals in the environment. In this study, analysis of livers from otters across England and Wales found PFASs in all 50 sampled. In more than 80%, 12 different types of PFASs were found.

The study sampled otters that died in 2007-09 and looked at where they were found, along with land use, from that time. The researchers chose this period because it coincided with changes in legislation and use of PFASs – the two most widely used were being phased out but replacements were emerging. The findings of their latest study are supported by separate [Otter Project research on more recent samples](#), collected in 2015-18, which found PFASs in otters and other wildlife.

“In the study, higher concentrations of one type of PFAS (perfluorooctanoic acid, PFOA) were associated with proximity to a factory on the north-west coast of England which had previously used this chemical in its manufacturing processes. It found higher concentrations of PFASs in otters close to wastewater treatment works, suggesting domestic and industrial wastewater was an important source. Concentrations were also higher in otters from arable areas, which might reflect the use of sewage sludge on agricultural land.

“Our study provides further evidence to support the conclusion of the recent Environmental Audit Committee’s report which highlighted a ‘chemical cocktail’ of contaminants in our waterways,” said Ms O’Rourke.

“The report recommended an independent evaluation of the risks to human health and the environment of spreading sewage sludge – our study provides important evidence that PFASs should be included in that evaluation.”

Dr Elizabeth Chadwick, Principal Investigator on the Otter Project, said: “Our research was possible though the ongoing collection of otters found dead from across Britain. Our archive has samples from more 4,000 individuals collected since 1992; it is a unique and important resource for understanding this protected species, and for understanding environmental contamination and health.

“By studying chemical contaminants found in otters we can understand the relative levels in the environment and the potential health risks to both wildlife and humans. We encourage the public to continue reporting otters found dead so that our research can continue.”

Further information on the Cardiff University Otter Project, and how to report dead otters, can be found on the [project website](#).

The latest study was carried out by the Otter Project in collaboration with the Centre for Environment, Fisheries and Aquaculture Science and the UK Centre for Ecology and Hydrology.



Found a dead Otter

Contact:

<https://www.cardiff.ac.uk/otter-project/found-an-otter>



Hazel Dormouse consultation

DMG members who are ecological consultants or who are involved in Dormouse projects may have been contacted recently for their thoughts on the current licensing and safeguarding processes in place to protect Hazel Dormouse *Muscardinus avellanarius* populations during building development and vegetation clearance works.

This initial information gathering is part of first steps towards producing Species Conservation Strategies for national priority species, one of the key actions under the new Environment Act 2021, which passed into law in November last year. Natural England, the statutory agency for nature conservation in England, plans to set up three

exploratory trials in three pilot areas: for Water Voles possibly in Essex, reptiles in Hampshire, and Hazel Dormouse in Devon and Dorset.

An analysis by the People's Trust for Endangered Species (PTES), who organise the long running National Dormouse Monitoring Programme, revealed an ongoing national decline in Hazel Dormouse of 72% between 1993 and 2014, despite high profile and levels of legal protection. A Dormouse Species Conservation Strategy would intend to reverse this trend, and establish and secure a defined 'Favourable Conservation Status'.

For immediate purposes, the two county Dormouse co-pilot has two elements: modelling of habitats (carried out by University of Exeter), and a consultation and review on the planning/licensing system, in a region where Dormice are widespread and often encountered in development situations. This latter is led by combined Devon and Dorset County Councils, with a brief from Natural England to gather the experiences and ideas of consultant and conservation agency practitioners, exploring whether the administration and granting of permissions can be streamlined to allow resources to be used more effectively, and how or what is needed for these to contribute to and support Dormouse favourable conservation status.

Some common themes and questions raised so far have included monitoring the effectiveness of mitigation measures, the impacts of lighting disturbance, financial compensation to be used for off-site conservation, limitations of resources within Natural England and planning authorities, the importance of habitat connectivity, and, beyond focusing on woodlands, gaining more understanding of Dormouse populations in hedges and scrub. The co-pilot project is to run until March 2022, with results to be reported upon later in 2022.



References

C. Goodwin, D. Hodgson, N. Al-Fulaij, S. Bailey, S. Langton and R.A. McDonald (2017) Voluntary recording scheme reveals ongoing decline in the United Kingdom hazel Dormouse *Muscardinus avellanarius* population. *Mammal Review* 47 (3): 183-197.

K. Morris / Natural England 2021 RP2951 – Edition 1: Definition of Favourable Conservation Status for Hazel or Common Dormouse, *Muscardinus avellanarius*.

<http://publications.naturalengland.org.uk/publication/5761754719322112>

Stephen Carroll

Dormice in hedgerows and scrub/young woodland – volunteers needed

Hi Everyone! My name is Ellie Scopes, I'm a PhD student at the University of Exeter researching Dormouse populations and habitat use. This spring and summer I'm running a project looking at how Dormice use hedges and patches of scrub or young woodland. Although hedgerows are likely vital corridors between woodland for Dormice, we know very little about how much they are used or what makes a good hedge for Dormice (such as hedge height, species etc.). We also need to know more about Dormouse presence in scrub and young trees, especially with the current focus of forest regeneration and tree planting.

I'm looking for volunteers to help survey for Dormice between April and October 2022 – not the whole time but some point in this period! Volunteers will use Dormouse footprint tunnels to assess the presence of Dormice by looking for their unique footprint pattern. This doesn't require any licences, so anyone is welcome to take part. Volunteers will be given a site, with the landowner's permissions in place, to check 20 tunnels every 2 weeks over a 2 month period (4 checks). I will help to set-up the site, so I can help with placing the tubes. A training pack will be provided, but I can also discuss checks and how to ID footprints when the site is set-up.

If you would like to volunteer or if you have any further questions, please email me at es713@exeter.ac.uk

Ellie Scopes



Photo: PTES



Josh Twining

New research shows that current national Red Squirrel conservation strategies are likely to undermine the species survival in future

The research, funded by the British Ecological Society, shows that native predators in native woodland, and not conifer plantations, are the key ingredients for Red Squirrel survival in Britain and Ireland. This contradicts existing red squirrel conservation strategies that promote

non-native conifer planting.

Current conifer plantation focused afforestation strategies in the UK and Ireland are sold as a nature-based solution for tackling climate change and the biodiversity crisis, particularly that of the threatened flagship species the Red Squirrel. However, new research from Queen's University Belfast and the University of St Andrew's challenges this approach. Together with Ulster Wildlife and citizen scientists, they used camera traps to survey over 700 sites across Northern Ireland over a five-year period for Red Squirrels, Grey Squirrels and Pine Martens. The results show that with the recovery of the Pine Marten, conifer plantations planted under the guise of protecting the Red Squirrel are likely to have a damaging impact on the species survival.

You can read more here: www.britishecologicalsociety.org/new-research-shows-that-current-national-red-squirrel-conservation-strategies-likely-to-undermine-species-survival-in-future/

To read Josh's paper: [Habitat mediates coevolved but not novel species interactions | Proceedings of the Royal Society B: Biological Sciences \(royalsocietypublishing.org\)](https://royalsocietypublishing.org/journal/rsos/1000000)

The State of Britain's Hedgehogs 2022



people's
trust for
endangered
species

David Wembridge, Grace Johnson, Nida Al-Fulajj & Steve Langton

The population of European Hedgehog in rural Britain continues to be in "steep decline", according to the *State of Britain's Hedgehogs* report. Numbers in rural areas have declined by between 30% and 75% since 2000, driven, it is suggested, by loss of hedgerows and field margins. This is in "stark contrast" to the situation in towns and cities, where the data showed that Hedgehog populations may be starting to recover.

The report, by wildlife charities the People's Trust for Endangered Species (PTES) and The British Hedgehog Preservation Society (BHPS), used data gathered between 1981 and 2020 from five ongoing surveys. It showed that hedgehogs have undergone a long historic decline, but that there are now "vast differences" between urban and rural populations.

Fay Vass, chief executive of BHPS, said that urgent action was needed to understand why rural areas no longer provide suitable hedgehog habitat. "They have lived here for at least half a million years," she said. "So we need to understand how conservationists, farmers and land managers can work together to prevent hedgehogs from becoming extinct in the countryside."

The charities say that the picture in cities, towns and villages is, perhaps surprisingly, much more positive. While road mortality is highest around urban areas, well managed, wildlife-friendly gardens and parks can provide refuges for the animals.



You can access the full and detailed report here:

<https://www.hedgehogstreet.org/wp-content/uploads/2022/02/SoBH-2022-Final.pdf>

South West Marine Ecosystems Webinars Programme 2022

The State of the South West's Seas

The dates for eight SWME spring webinars are listed below, with more dates to follow. The links and timings for the events will be appearing in our weekly emails. SRT's or SWME's institutional partners, Exeter University (Penryn), the Marine Biological Association and Plymouth University will be hosting the webinars. Most of the webinars are scheduled for lunchtime slots. The webinars will be recorded and posted on the SWME Youtube channel shortly afterwards.

Wednesday 16th March 12:00 - 14:30 | Seals webinar

Speaker: Sue Sayer, Exeter-Penryn

Five Presentations with:

- Coastal round up of the SW: Sue Sayer SRT
- Starting your own Seal Group: Gareth Richards – Gower Seal Group
- People Protecting Precious Places Project Report summary: Sue Sayer SRT
- Challenging 'seal' case studies: Walrus; hand fed wild seals; G7: Dan Jarvis BDMLR
- National context – changed legislative seascape for seals: Sue Sayer SRT

[Click here to register](#)

Thursday March 17th 12.00 - 14.00 | South-West Fisheries in 2021 webinar

Hosted by Plymouth University

[Click here to join the webinar](#)

Five 10 minute Presentations with:

- Libby West – Natural England – National policy & implications for the south-west
- Matt Slater – CWT, The Cornish Seafood Guide
- Jeroen Van Der Kooij - Cefas – PELTIC surveys
- Peter Wills - The Cornish Fisheries Stakeholder Group, Cornwall County Council
- Nevin Hunter – A sea anglers perspective - The Marine Co-ordinator, Angling Trust

Friday March 18th 13:00 | Marine & Coastal Birds

Speakers: Alex Banks, Mark Grantham, Ruth Porter, Paul St Pierre

Hosted by the MBA

[Click here to join the webinar](#)

Here are the webinar dates for your diary – the meeting links will be posted nearer the time:

Tuesday 22nd March 13:00 | [Fish & turtles](#) | Douglas Herdson & Simon Thomas, hosted by the MBA

Wednesday 23rd March 13:00 | [Oceanography & Plankton](#) | Tim Smyth & Angus Atkinson, hosted by the MBA

Wednesday 30th March 12:00 | [Seashore & seabed](#) | Keith Hiscock, hosted by the MBA

Tuesday 5th April 10:00 | [Water Quality](#) | Steven Guilbert, hosted by DMF/University of Exeter

Thursday 7th April | [Marine Protected Areas](#) | Sian Rees, hosted by Plymouth University

Sue Sayer

Cornwall Seal Group Research Trust (Charity number: 1162936)

www.cornwallsealgroup.co.uk