



Devon Mammal Group

July 2021 Newsletter

www.devonmammalgroup.org

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We are always looking for new and enthusiastic committee members!
If you would like to join us contact

DMG Secretary

Charly Mead

charlymead91@gmail.com

Chair's Chat

Welcome to the 2021 Summer newsletter! We hope you are all well.

Thank you to all those who attended the AGM in April, when we were treated to a very interesting talk "The Walrus Whiskers and the Mouse's Moustache: why do animals have whiskers?" by Dr Robyn Grant. That was a super way to end our 2020/21 talk season.

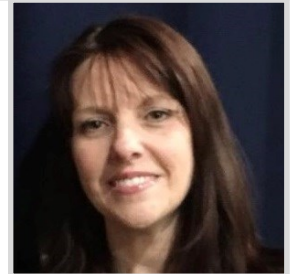
The committee is continuing to monitor Covid updates and hopes to be able to organise a few small, outdoor activities and events over the Summer months. Keep an eye out for emails and Facebook updates for more information. We are also busy planning talks for the Autumn and Winter. We intend to deliver a mix of face-to-face and online talks, to enable more of our members to attend. We are always happy to receive suggestions for speakers, so do please send us an email if anyone comes to mind.

We would also like to thank all of you who have chosen to make donations to DMG via Amazon Smile. Every penny helps to keep our amazing Harvest Mouse Project running, so if you shop with Amazon and would like to help DMG, do follow the link on our website homepage and please sign up.

The committee and I wish you all a happy, healthy Summer and look forward to seeing you all soon.

Best wishes

Helen



Do you fancy a day out with the kids this Sunday!

Sunday 18th July 10 am – 4 pm
Taw River Dairy Farm
(near Sampford Courtney, EX20 2SE)



Join us for a family day

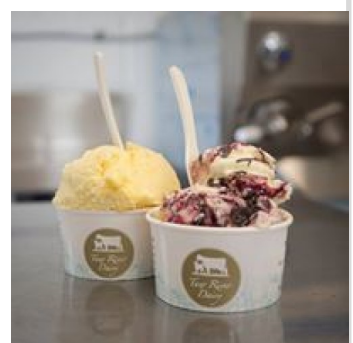
Meet the animals

Enjoy guided tours & tractor rides

Meet our wildlife experts

Browse local produce stalls

Indulge in our delicious ice cream



Where's Wally?

Wally the Walrus is a long way from his Arctic home and so far his adventure has taken in Ireland, Wales, Cornwall, France and Spain since March. At present he is still on the Isles of Scilly, where there is not only growing concern about the amount of disturbance by thoughtless members of the public, but also for his safety and potentially human safety.

As with our vulnerable seal populations, many people seem to behave very irresponsibly, and do not think about the consequences of their actions. Walruses are protected under Section 9

of the Wildlife and Countryside Act 1981 and the Isles of Scilly Offshore Fisheries Board are begging people to keep their distance and use binoculars and zoom lenses to give Wally space.

Initially, Wally had climbed on board a RIB (Rigid Inflatable Boat) and he and the boat were towed to a safer position, but Wally has now outstayed his welcome on the Isles of Scilly by damaging and even sinking boats in the area.

Wally is thought to be about four years old and must feel well out of his comfort zone. It's hoped that by discouraging him from being around the inhabited islands, he will choose a more secluded site and soon be rested enough to head back north to his native Arctic. Capture and relocation is not thought to be a solution, as it would be an extremely difficult and potentially dangerous option for the Walrus and the handlers involved.

Cornwall Seal Group Research Trust's Sue Sayer has spoken to an Alaskan Walrus expert Lori Quakenbush and whilst Pacific and Atlantic Walrus do vary, their behaviours are similar. Lori thinks the Walrus has come from Svalbard (north of Norway – over 3200km from the Isles of Scilly). This means that, in total, our visiting Walrus has swum an incredible 4000 km. This will have used up a lot of energy for this young marine mammal.

Why he's swum so far isn't known, but we do know climate change is melting the Arctic ice that Walruses haul out on, and that young male Walruses do wander and explore. Considering Wally's previous mobility and typical Walrus behaviour, Lori expects him to move on soon, but he will only be able to do so if he has the energy to make the 3200 km journey home. This means he needs to feed up (on invertebrates – clams are a favourite food) and rest peacefully without interruption. If he is continually distracted, he will not gain the weight and energy for the long journey home and will likely remain in Scilly longer. He is feeding well, but his rest is not consistently good.

The latest news is that British Divers Marine Life Rescue and the Harbour Authority have constructed a customised pontoon replicating Wally's apparent need for physical contact. His scent has been used on it to encourage him to feel safe. The aim is to see if he will use it and to encourage him to choose this, rather than one of the many vessels he's tried out. It has been moored close to his preferred haul-out in the hope that he will choose this as a "better option".

Since the pontoon's deployment, Wally has discovered it and has returned to it on a number of occasions in between feeding excursions. The situation is being monitored and it may be possible to re-locate the pontoon outside the harbour area to reduce disturbance and to allow him to rest more effectively.

We can only hope that this extraordinary visitor's adventure will have a happy ending.



Taking the piss

Will an experimental dormouse survey method be as easy as pee?

Extraction of environmental-DNA, or e-DNA, whereby detection of animal DNA residues might be used to assess presence / absence, is an emerging survey method. It is apparently not yet 100% reliable, but is developing, and part of, for example, Natural England guidance for inferring Great crested newt populations from pond water samples. A recent experimental study explored whether such e-DNA techniques could be applied to Hazel dormice *Muscardinus avellanarius*.

In the last few years several new dormouse survey options have emerged: footprint tracking tubes, feeding table camera traps, even ultrasonic acoustic surveys using bat detectors. Dormouse e-DNA involves modifying the standard survey nest tubes with an insert of absorbent paper, to collect and retain dormouse urine. The question was: from this could e-DNA, or p-DNA, as I'll inevitably be referring to it, be identified, sufficient to be a practical method able to identify dormouse presence?

The National Environment Research Council (NERC) funded a project carried out by Victoria Priestley at Imperial College, University of London, and Thomson Environmental Consultants. Captive dormice, wood mice and house mice at the British Wildlife Centre, Lingfield (north east of Crawley) also participated, in preliminary comparative testing of different paper, species' urine, and sample collection intervals.

Urine contains chemicals which reflect ultraviolet light wavelengths; a UV torch shone on the paper revealed urine spots, which could then be sampled. Filter paper retained higher concentrations, but with a higher failure rate of DNA amplification and analysis, while standard forensic swabbing of standard 300 gsm paper had greater consistency. The amount of material needed for a viable sample was on average 10 - '4' nanograms per microlitre (that is 0.0001 billionths of a gram per millionth of a litre)

Field trials then took place, with 50 survey tubes placed near to nest boxes at a National Dormouse Monitoring Programme site in Surrey, on 22 September. Informed by the p-DNA decay rates from the captive animals at Lingfield, the 'p-tubes' were then checked after 8 days. Seven of the 50 paper inserts showed visible urine spots, with DNA



Photo - PTS

Footprint tunnel

successfully extracted, amplified and identified as hazel dormouse from three of these. In comparison, nest tube field evidence was first recorded on November 24th, day 63 (however, there was only one other check between these, on day 36, so the field sign nest may have been present earlier).

This was one site, which was also NDMP site with known presence, with both nestboxes and tubes, and in the autumn period when dormouse numbers and movements may be around their highest, with sub-adults of the year dispersing. There may then have been higher chances that the dormice would find and pass through the tubes, not necessarily the same as for every survey situation, or for marginal sites where definite presence / absence may be harder to establish. But extraction and amplification of p-DNA from the field, and subsequent species



Dormouse monitoring tube

identification, were shown to work.

Continued

There would need to be some more trials and survey replications, across different regions, habitats, and parts of the survey season. A surveyor or consultant would wish to know the practical ease of use and comparison with other methods, such as nest tubes or tracking tubes, or indeed whether p-DNA could be used concurrently to complement these. As for Great crested newt or Brown vs Grey long-eared bat DNA, it would come with lab time, expertise and costs, and strict survey timing to retrieve samples before they degrade: p-tube paper would need to be out in the field for no longer than 8 days, after collection be with the DNA extraction laboratory within 3 hours, and then the DNA amplification and analysis itself be carried out within a few days. Clean new nest tubes may be required each time, to avoid contamination.



In the study, noting at one site only, p-DNA gave quicker results after 8 days (not including lab time) vs 36-63 days for traditional field signs; conversely a low number of tubes, three from 50, yielded viable samples (or, one might say, 94% of p-tubes failed). But this isn't different than other survey current dormouse techniques, where absence of evidence cannot not be taken as evidence of outright absence (there was also found some risk that e-DNA from hazel dormouse and edible dormouse *Glis glis* might not be distinguishable). Nevertheless, it promises another possible survey method. With a caveat due to the low numbers, dormouse presence was proven by e-DNA in three times as many tubes than from field signs, and in a different area of the site.



Beyond the immediate survey applications and logistics, it is not known whether dormice deposit urine randomly or use it for marking. It has been suggested they have glands on their feet with which to leave scent trails or marks around arboreal routeways; there may other DNA sources than urine. e-DNA effectiveness may depend on how long volatile chemical signatures would functionally persist in the environment, and as mediated by factors such as weather, temperature, territorial behaviour (*i.e.* individual animals' inclinations to visit the tubes), and the hungriness of local slugs. According to the level of resolution, e-DNA could be a non-invasive method to gain insights into, for example, sex ratios, individual ranges, abundance, population genetics, and interactions with other rodent species.

Closer to home, at Fingle Woods, the large Woodland Trust / National Trust restoration project between Dunsford and Drewsteignton, volunteers (including some DMG members), People's Trust for Endangered Species and Imperial College are trying out some further studies based on dormouse eDNA.x

Reference

Priestley V., Allen R., Binstead M., Arnold R., & Savolainen V. (2021) Quick detection of a rare species: forensic swabs of survey tubes for hazel dormouse *Muscardinus avellanarius* urine. *Methods in Ecology and Evolution*. 12: 818–827

<https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/2041-210X.13573>

<https://www.imperial.ac.uk/news/220453/researchers-have-devised-sampling-method-elusive/>

Stephen Carroll



Beached Bat



A fun day out at Dawlish Warren turned into full scale rescue for a little Pipistrelle Bat. The Shipp family found the bat in the sea and rescued it from a Herring Gull that fancied it for tea! The little bat was soaking wet, so they kept it warm while they rang the Bat Help Line.

The advice given was to put it in a shoe box with a tea towel - not the sort of thing you take to the beach - so they put it in a lunch box, snuggled up in their young son's spare pants, and took it home by train to South Brent.



Fred takes a look



Martha carries the bat



I received a phone call, as I volunteer as a bat ambulance, and went to pick up the bat next day. The family had managed to get hold of some live mealworms and it was still alive, but looking a bit the worse for wear. I drove it to Carla Dunne, the bat carer, but to our complete surprise the bat had given birth on the way! So far, mother and baby are doing fine. Fred and Martha are delighted and have called her Nigella.

Sue Smallshire



Harvest Mouse Project

Our Harvest Mouse Project Officer, Sarah, has continued with her research throughout the pandemic, putting out her amazing camera trap feeding stations and presenting on-line training sessions.

The data she has collected from the footage on these cameras has been very useful in establishing presence and absence of the species, as well as some interesting behavioural traits. During a period of torrential rain, she found a whole group of Harvest Mice sheltering in one of the feeding stations and at another site, where she had recorded lots of Harvest Mice, they all disappeared during a long dry period, leaving us to wonder if they just had to head away from the site to find water.

We know that Harvest Mice are very vulnerable to excessive wet weather, sudden cold periods and droughts, as well as their many predators, so it seems pretty amazing that they survive at all. We are now in year 5 of the Project and Sarah is sharing her findings with other mammal groups and the Mammal Society. The work she has done has given us an amazing overview of how the species is doing in Devon, how vulnerable their habitat is to grazing and over-management and to how vulnerable they appear to be to our changing weather patterns.

If you would like to get involved in the Harvest Mouse Project this winter, or to report nests you have found, contact Sarah Butcher: harvestmouse@devonmammalgroup.org

Thank you Sarah!



WILD ABOUT DEVON

Community Action for Wildlife

A Devon Local Nature Partnership initiative

At the end of June, Devon's Local Nature Partnership launched a new initiative, **Wild About Devon**, to help communities and Parish and Town Councils take action for wildlife and help tackle the Ecological and Climate Emergencies. It includes an online hub where communities can find a central resource of all the groups and help available to them for their wildlife projects. People often get in touch with Devon Mammal Group because mammals are one group of species that they want to know about for their wildlife project. *Wild About*

Devon also includes an online forum (via Facebook) and information for Parish and Town Councils who want to improve their areas for wildlife. From July, they will be running webinars on a variety of subjects from an array of speakers. Topics include individual species, species groups and habitats, as well as advice from groups who are already running successful wildlife projects. You can find out more about *Wild About Devon* on the Local Nature Partnership website here.:

Links <https://www.devonlnp.org.uk/take-action/communities/>

Community Toolkit: <https://www.devonlnp.org.uk/take-action/communities/community-toolkit/>

Webinars: <https://www.devonlnp.org.uk/wildlife-webinars/>

Jess Smallcombe

Invasive Mammals

We always encourage you to send in records of mammals, but we are also keen that you send in records of invasive non-native mammals.

Invasive mammals have been moved from their place of origin and brought into Britain by humans and have a negative impact on the environment, the economy or health. For example:

- **Environmental impacts** – predation on native species e.g. the American Mink on Water Voles, or the spread of disease e.g. American Grey Squirrel spreading the squirrel pox virus to native Red Squirrels.
- **Economic impacts** – agricultural or forestry damage, e.g. by Rabbit or deer grazing, or Grey Squirrel bark damage.
- **Human health** – causing illness or injury to humans, e.g. the spread of disease by rats or road traffic accidents caused by collision with deer.

To find out more about invasive mammals, see which of our mammals are considered invasive non-native species (INNS), which new invasive mammals to look out for (like the Raccoon Dog), what impacts they have and what the relevant legislation is, check out the Mammal Society's new position statement at:

<https://www.mammal.org.uk/2021/05/mammal-society-position-statement-on-invasive-mammals/>

We would love your records – please send them to DBRC: <https://www.dbrc.org.uk/wildlife-sightings/>

Kate Hills

American Mink with Brown Rat - Steve Jellett





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River Otter Beavers

Annual Beaver survey

A survey carried out in February, plus more recent evidence of Beaver activity during the spring, suggest there are around 20 beaver territories within the Otter catchment, around five more than last year. Many of these new territories are within headwater streams and ponds where

Beavers can deliver huge benefits to biodiversity and help to create more flood-resilient landscapes.

Beaver rescued

A sick, exhausted and disoriented Beaver has been rehabilitated and re-released on the River Otter after being found stuck in the mud of the Exe Estuary. The youngster, presumably looking to set up a new territory in the lower part of the River Otter, must have spent some time at sea before washing ashore near Exmouth.

Rescued by Wild Woodbury and cared for by an experienced vet at the RSPCA's West Hatch centre, the Beaver was reintroduced by DWT to an enclosure on a tributary of the River Otter, supplied with easy-to-reach food and monitored until the animal appeared strong enough to return to the wild. With the fence removed, the Beaver was free to roam the river once more.

beavers@devonwildlifetrust.org



Small Grants Scheme

Have you ever wanted to carry out research into mammals but have been prohibited due to costs? The Devon Mammal Group Small Grant Scheme was set up to enable members to carry out research into mammals in Devon. Grants of up to £500 can be awarded to help cover research costs, e.g. cameras, traps and other equipment.

Examples of successful applications include:

Dormice in Devon Gardens, a Red Squirrel education pack, Dormouse tubes for the Avon Valley Project, the loan of small mammal traps for a University of Exeter project, and the purchase of bat detectors for Chudleigh Wild's community bat training scheme.



Sue Smallshire

We award up to £500 to successful project applications, so don't miss out!

If you would like to apply for a grant, please complete the application form at:

<http://devonmammalgroup.org/small-grants-scheme.html>

and return it to: charlymead91@gmail.com

Beavers bring beetle's return



A new invertebrate record for England! Beaver fur can play host to an ectoparasitic beetle, known colloquially as 'Beaver Beetle' and to entomologists as *Platypyllus castoris*. During their health screening prior to the start of the River Otter Beaver Trial in early 2015, no trace of Beaver Beetle was found. However, there are records of this species among the Beaver population in Scotland, and now this beetle has been found on a River Otter Beaver following the introduction of three Beavers from Scotland in 2019.



Copyright - Marlin E. Rice

Feeding on flakes of loose skin trapped in the Beaver's fur, the beetle has no effect on the health of its host. Yet another addition to biodiversity in England from the amazing Beaver!



Devon
Wildlife Trust

For more about Beavers
and where to see them:

<https://www.devonwildlifetrust.org/what-we-do/our-projects/river-otter-beaver-trial>



Mammal
SOCIETY

The Mammal Society's
*Red List for British
Mammals* has been
shortlisted for a
prestigious CIEEM award.



(c) Peter Cairns

Through the *Red List for British Mammals*, The Mammal Society collated all of the available information on the population of each British mammal, assessed their status and current threats and applied internationally accepted criteria in a rigorous manner never previously carried out for Britain's mammal fauna. The Red List showed that 11 of the 47 mammals native to Britain are classified as being at imminent risk of extinction.

We wait with bated breath to hear if they win!

For more news from The Mammal Society, or to join, visit: <https://www.mammal.org.uk/>



For more information about Devon Mammal Group or how to join us

visit our website:

<http://devonmammalgroup.org/index.html>