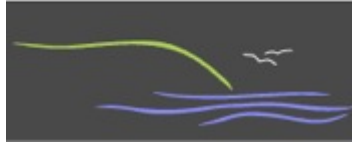


Scarborough Field Naturalists



FEBRUARY NEWSLETTER

Hello everyone.

Hope you have all managed to survive Christmas and the New Year and are coping with the current lockdown situation. This looks like it is going to continue until at least mid-March so it is unlikely we will get any indoor meetings before the autumn but hopefully we will be able to get the outdoor meetings going again before then.

As a result of the lockdown the February newsletter is going to be a bit thin as I have almost nothing from anyone to put in. Hopefully you have been able to get out and a bit locally so let me know what you have been up to please.

Nick Gibbons

REEVE'S MUNTJAC SIGHTING

On the 29th December 2020 Sandra Branfoot and I were walking in Southcliff Gardens and had a clear sighting of a Muntjac Deer. This was at the furthest area of the gardens where there is some rough ground that leads up to the hilly area out of the gardens.

I reported the sighting to Charles Smith-Jones who is the technical advisor at the British Deer Society.

Charles replied as follows:

Many thanks for reporting your sighting. This is the first sighting of muntjac in the Scarborough area for some years, so it is of particular value to our understanding of the species' distribution within the UK. I shall ensure that it is added to our records.



Of all our deer species muntjac seem the most content to live in close proximity to man as long as they are undisturbed and have some suitable cover to retreat into, and they are quite adept at going unseen by most people even when they exist close to built-up areas. If you are prepared to, perhaps you might consider downloading the BDS deer app which not only provides further information about deer but would enable you to report any future sightings <https://www.bds.org.uk/index.php/news-events/495-bds-launches-new-deer-app2819>

Sue Thompson

Eds Note Very familiar with them in my old county of Suffolk where they cause a lot of damage to much of our special ground flora such as Oxlips. They are relatively tame and can squeeze through vey small gaps in fences etc and were a common site in gardens around Thetford town where they created havoc for garden vegetables and flowers.

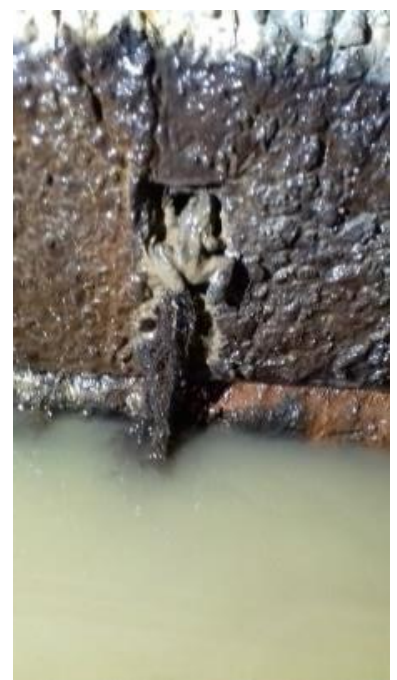
DALBY BAT HIBERNACULUM

The bat hibernaculum at Dalby was built in 1992 and has, as far as we know, only has a single bat in there for a short period in 2016. As long as I have known it (from 2016) the lower chamber has been flooded and the chambers generally very wet. Thanks to help from FC we managed to get the drain partially cleared from the lower chamber and the picture below is the first time I have seen the floor. Whilst checking the rest of the site while we cleared the drain a lot of footprints were found in the mud of the upper chamber which looks as though they may be by Otter rather than Mink. We have installed a trail camera in the entrance but sadly we are unable to access it at the moment to check it.

There is still some work to do in sorting out the air vents and trying to lower the water level in the main chamber but this will have to wait until we are able to move about more freely.

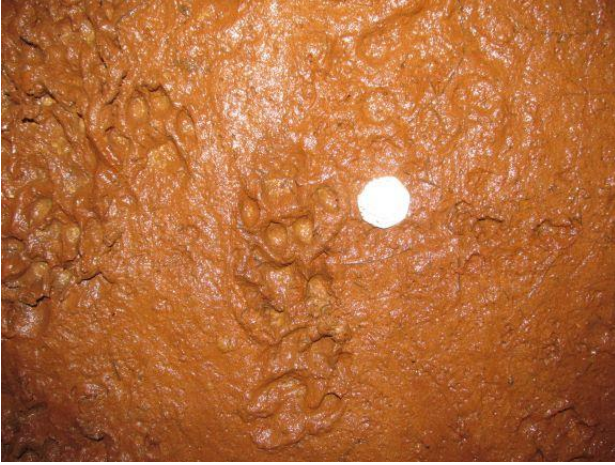


View of the entrance to the lower chamber before and after clearing the drain



Pressure clearing the drain outlet and one of 2 frogs found in the lower chamber.

This drain was one which Colin Keighly and I spent a day 'uncovering' in 2019 and which rodding would not clear, and in which we lost a set of rods!



Prints in the mud of the upper chamber, probably Otter

My thoughts are that if we cannot get it to work as a bat hibernaculum maybe we could produce a good Otter holt. Some recent trail cam pictures from the adjacent beck showed a family of 3 Otters present so they are definitely close by.

Nick Gibbons

WINTER BATS

The general impression is that bats hibernate in late autumn and re-appear again the following spring. This year a nationwide 'Winter bat' survey is under way and I have had a recorder out in the garden from mid-November to see if anything is moving. We are recording the number and species of bats and a range of weather features such as wind, rain and temperatures.

A typical summer night would produce me up to 100 or more files of bats, almost all Common pipistrelle but with the occasional Soprano pipistrelle, Myotis species and Noctule.

To date the second half of November produced 4 passes of Common pipistrelle. December was very similar with Common pipistrelle recorded on the 15th, 20th and 21st but with a surprise of a single Myotis on 1st December. January has started off well and, as of the 20th, I have 1 Common pipistrelle and 2 Soprano pipistrelle records.

I know from experience that many species such as Natterer's, Daubenton's and Barbastelle move hibernation sites to achieve their optimum hibernation conditions as counts in the hibernation tunnels we have built vary from month to month during the winter. Numbers build up during the winter and the peak count of bats normally occurs in the last count of the winter in February.

Nick Gibbons

HAIR ICE – THE HOW AND WHY

There have been a number of reports of hair ice from around Scarborough and Pickering in the last cold snap. Below is some information on the how and why this strange but pretty phenomena occur.

Alfred Wegener, famous for his continental drift theory, first identified and studied hair ice in 1918. At the time, he suspected the ice formation was linked to the presence of mycelium — the roots of a fungus that live on rotting wood and absorb nutrients, forming a pale, white, cobweblike coating. However, it wasn't until about 90 years later that researchers found evidence that the fungal roots were vital precursors to hair ice. The fungus helps the ice grow into thin hairs with diameters of just 0.01 millimeters (0.0004 inches), and helps to keep the strands in this shape over several hours at temperatures close to 0 degrees Celsius.

Although the hair ice typically melts the same day it forms, if the temperature stays below the freezing point and the air is humid, it can last longer, but then it fades away.

A new study looked at the wood pieces under a microscope and found 11 different species of fungi. One species — *Exidiopsis effuse* — appeared in every sample.

Lignin, makes up about 20 to 30 percent of dry wood and helps give wood its hardness and resistance to rotting. Tannin also occurs widely in vascular plants, and protects plants from herbivores, who dislike its astringent taste.

However, certain fungi and bacteria can secrete the enzyme lignase and break down the lignin, causing rot with moist, soft and spongy bark that looks white or yellow. White rot can enhance the fungi's effects — the brightness of hair ice on wood increases as the wood decomposes, because the decomposed wood is brighter.

Fungus also acts as a hairspray by shaping the fragile ice hairs and keeping the strands in place, while lignin likely prevents recrystallization. The hair ice is also influenced by the structure of the wood from which it radiates. Tufts can grow outward from a branch, forming a center part much like human hair and can extend straight or curl back toward the branch. The latter radial growth pattern is more common and seems to be an extension of the natural rays that radiate in wood. All the strands grow 10,000 times longer than they are thick.

The root of the hair ice — called a crystallization nucleus — is likely composed of lignin and tannin. When the air temperature drops sufficiently, water freezes into crystallization nuclei on the wood. Then, the nuclei create a passage for water to seep out of the pores of the wood and extend into ice hairs.

John Hume, Photos Ingrid Ashman

