

SNAKES IN BUCK WOOD

Almost every year, when the weather warms up, people go for walks in Buck Wood. And, almost every year, someone comes across a snake crossing a path or basking in a patch of sunlight, warming its cold blood up after a long winter spent hibernating in a well-hidden retreat. And sometimes people are scared, because snakes have a bad reputation. And then, when they put a post on Facebook or elsewhere, time and again there are replies that declare it's an adder, maybe as a warning (they think they will bite, especially a child or a dog), because it's better to be safe than sorry. But the descriptions of the snakes are unusual, although the snakes don't lie around waiting to be identified (or caught), and even if you find a picture of a grass snake online, it doesn't look quite like the one that was there on the ground. So here I want to try to answer some of the questions that are asked. I've spoken to researchers and read published articles, so I hope I can explain - partly - why we have these special reptiles in Buck Wood.

WHAT SORT OF SNAKE ARE THEY?

They are a species of grass snake, *Natrix natrix*, which is the Eastern European variety of grass snake. The common species of grass snake in this country is *Natrix helvetica*, sometimes known as a barred grass snake because of its markings. A few years ago grass snake species were reclassified, so some books or websites still use the old three-part names and call them sub-species, which can be confusing.



On the left is a native grass snake, not now found in Buck Wood, and on the right one showing the typical stripes of the snakes in this area

HOW DO THEY DIFFER FROM NATIVE GRASS SNAKES ?

The most striking difference is the two unmistakable pale stripes that extend from head to tail along the length of these non-native snakes. They also have a less distinct 'collar' round their neck although there are still similar markings there. They may also grow to a larger size than the native snakes, which can be up to around 1m.

The native "barred grass snake" (*Natrix helvetica*) is typically more grey-green, with the very distinctive collar of yellow and black. It has a pattern of dark markings or bars on its sides.

In 2011 a major research study on the snakes around Esholt was published. The author failed to find any native grass snakes in and around the site. There was no evidence of any historic interbreeding, and the present day *Natrix natrix* population here is genetically distinct from native *Natrix helvetica* snakes elsewhere in this country.

But both types vary greatly in their overall colouration; some are very dark with indistinct markings, others are much brighter. There are also variations according to how recently they have shed their skin, when they change from being dull and muted to having strikingly fresh and vivid coloration.



Both of these are Buck Wood's *Natrix natrix* grass snakes from Eastern Europe, showing how much their colour can vary - but the stripes are always distinctive

WHEN DID THEY COME HERE?

My first encounter with these snakes was well over 30 years ago, after coming across some sloughed skins, and finding that there were unusual snakes breeding there. But sightings have been reported much further back, although it's sometimes unclear about which type of grass snake was seen. According to one researcher the earliest sightings were in the 1920s, but the first authenticated case wasn't until 1990 when a dead snake was taken to the natural history unit at Cliffe Castle in Keighley. That, and another atypical specimen in 1997, came from the Esholt Sewage Treatment works area.

WHERE HAVE THEY COME FROM, AND WHY?

Initially the snakes were assumed to have come from Italy, but recent DNA analyses have narrowed their origin specifically to Eastern Romania (and therefore now correctly classified as *Natrix natrix*). But why are they here, in Esholt and Buck Wood, and rarely found elsewhere in this country?

One suggestion is based on the fact that there is one other recognised site for these snakes in England, near a former sewage works in Surrey. It is thought that the snakes were imported accidentally amongst vegetation from Romania, which was delivered to Surrey and then to Esholt. It perhaps contained live young, eggs, or pregnant females. It's an interesting theory, but no-one has explained why special material should need to have been brought from such a remote area, and how the snakes survived such a long journey as long ago as the 1920s.

Another possibility is that the snakes are escapees or were abandoned deliberately, fortuitously in an area which was near-ideal for them to survive and flourish. Esholt has a lot of water and wet or damp areas with plentiful food such as frogs, newts, and toads. The Leeds-Liverpool Canal, and the River Aire flow through the valley, and the canal has been one site where they are frequently seen. It's said that these Eastern European snakes were imported into the country in large numbers during the 1960s and 1970s for biological studies. I haven't found any explanation as to why they were needed for this purpose. But if they were set free either intentionally or accidentally, it is fortunate for the snakes that they were abandoned in such a suitable place, and were able to acclimatise to our northern temperatures.



These photos show the contrast between, on the left, a snake that is ready to shed its skin, including the eye covering which is almost opaque and on the right a snake looking bright and glossy in its nest

ARE THERE NATIVE GRASS SNAKES HERE STILL?

Although native grass snakes were reported quite commonly in this area in the 19th century, they were rarely seen after the beginning of the 20th century. By then Buck Woods and Esholt would have been traversed by many more people, especially after the opening of Buck Mill Bridge in 1890. This supports the suggestion in a study published in 1920 that the change in numbers could be put down to persecution. If a snake was seen, it was killed; unfortunately attitudes to snakes have not changed greatly since then, despite grass snakes being known to be harmless. If the native snakes were constantly attacked by local people, it is feasible that there were too few left for the species to survive here, leaving the area suitable for the Eastern European snakes to thrive and take their place, perhaps initially in the parts of the Esholt works where the public weren't allowed, with a gradual spread into Buck Wood which was not then open to the general public.

ARE THERE ADDERS IN THE AREA?

No adders have ever been identified or recorded, despite frequent but unsubstantiated claims that they have been seen. But the markings on adders, including the 'V' for viper pattern on the neck, are unmistakable, and the adder is also a different shape from the grass snake, with a much 'chunkier' shorter body. The habitat is not as suitable for adders either. And whilst Buck Wood is an area of interest to experts on snakes, none have seen any sign of adders, dead or alive.

'Our' snakes in Buck Wood are very special, and we ask that people don't interfere with them in any way. We know they are breeding at sites across the Wood, so if you find eggs or babies please don't touch or move them. Take photos if you can without disturbing them, and please don't tell people where you saw them, because many people really hate snakes for no reason at all. The snakes are fragile and harmless, and we are lucky to have them in our woods.

