The R-word: Busy as a ...



You may have read in the media at the start of the year about the escapades of Twiggy and Woody, the two beavers who escaped from their enclosure in the Mapperton Estate near Beaminster. It seems that rather than doing a major disappearing act, they chose a gentle exploration of their surroundings because a few days later, signs of busy beavering were spotted a few km downstream from the enclosure in the 'wilds' of the upper Mangerton Brook. They had found a pleasant spot, munched on a few willows, and generally were having a great holiday until, with the help of apples and parsnips, they were carefully captured and taken back home.

The 'escape' was headline news—well, page 11 of the Independent—but the response was fascinating, divided amongst those who think beavers are the best things since sliced bread, and those who perhaps see them as burnt toast. You see, the reintroduction of beavers is 'new' and as with many objects, ideas, opinions or activities that are seen as 'new', they can often polarise debate. Some people think the way beavers adapt their ecosystem to create wetlands, bring back biodiversity, reduce flooding and drought and improve water quality is just a remarkable example of nature at work. Others think that that they are going to eat their trees, burrow under riverbanks, block drainage ditches, eat 'their' fish and flood their land or houses.

Well yes, beavers can do all of that (except eat fish), but I thought it would be helpful to explain a bit more, and to put it in the context of the r-word, rewilding. You see, beavers are native species, a fact that our government has only just deigned to recognise in law. They were wiped out in the UK and much of Europe some 400 years ago by hunting for their fur and castoreum, a secretion which was used for making scents and was also believed to have medicinal properties. Oh, sadly they also suffered from indiscriminate hunting for 'sport'.

They are nocturnal animals and completely vegetarian, eating pretty much anything green. They love riverside plants and tubers, with a particular favourite being young sallow branches (a type of willow), and the bark of some trees. They don't eat fish! They have orange iron enriched front teeth which they use to scrape off bark and gnaw their way through bigger trees which they cut down mainly to open up the canopy. The increased light that result stimulates new growth of vegetation in the understory, which of course provides them with food. They don't tend to eat the dry hard wood when they chop down trees and leave that on the ground in the form of beaver chips—considered lucky by some! Oh, and just in case you missed it, they don't eat fish!

Their behaviour is all about safety and food—much like all of us! They build dams to raise the water level which then gives them safer access throughout their territory, away from harmful predators—not that the wolf lives in Dorset, but otters and badgers can kill baby beavers, called 'kits'. They live in 'lodges' which are normally dug into the side of riverbanks and accessed below the raised water level, but which have 'escape' tunnels into the riverbank above, normally cunningly disguised as a pile of sticks! The tree felling not only allows new plant growth, but allows them to eat the bank and young branches all the way up the branch, and can help with dams.

Crucially, beavers are a 'keystone species'—an animal that is so important in shaping the ecosystem that it has a disproportionately positive impact for nature. Their dams make wetlands which not only provide an uplift in the diversity and abundance of wildlife, but can prevent downstream flooding of property, hold water for the dryer months and filter all the bad gack that comes from fields and drains into our river. Oh, and wetlands store carbon, helping with climate change.



Beavers 'shaping the ecosystem'. Right: Tree being felled by a beaver to open up the canopy. Below: A beaver lodge, and below that, a beaver dam. Images © Dr Sam Rose.

Surely it is a win-win? Well, the impact on people from this wonderful ecosystem engineering is that sometimes the dams flood parts of fields, sticks they cut can block road culverts, and they might cut down or ring-bark your favourite apple tree. But all of this can be managed, with the judicious use of chicken wire around trees, and devices called 'beaver deceivers' in dams. These approaches have all been used successfully in Devon's Otter valley, the first legal wild trial in the UK, and whilst there is still a certain degree of scepticism amongst some landowners there, most are accepting that the beavers are here to stay. The wellbeing benefits of knowing that these animals are back in nature has also been seen as a real positive.

So what have beavers got to do with rewilding? Well, rewilding is about allowing natural processes to take place for the benefit of nature. The work beavers do is entirely natural, and they have been missing from our countryside for 400 years and boy has it suffered as a result. To reintroduce them—or any missing species—is to kickstart a missing ecosystem process, and is one of a range of approaches used in rewilding.

So, from studies in the UK and overseas, we know what a positive impact they can have for nature, for water quality, and flood and drought prevention. Given the shocking state of our nature (even in glorious West Dorset), and the increasing flood and drought events, maybe now is the time to turn our focus back to how nature works and allow it to take the lead, with help of this very busy, and extremely cute animal. Woody and Twiggy, enjoy your enclosed home for now, but maybe in the future you will be able to roam free in the rivers of Dorset, and make up for 400 years of lost ground.

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