

Wheatfen's Wetland Mammals

David Nobbs, 2005

In last year's newsletter I wrote about the woodland mammals of Wheatfen. This year I will look at the mammals that can be seen in the fen, dykes and carr. These habitat types, which extend over 40 hectares to the adjoining River Yare, are linked to the waterways of the Fen Channel, Wheatfen Broad and Deep Waters through to Rockland Broad.

From the 1940s there was little management and the fens were invaded by willow, and the open waters became silted up. Pollution from the 1950s produced a dramatic decline in water quality and it is only since the early 1990s that this process has been reversed. In the 1930s the dykes held clear water and open reed beds flourished.

This species is no longer with us! Some I know regret its demise. I refer to the coypu which was an accidental escape from fur farms and was introduced into Broadland in the late 1930s. It increased rapidly in numbers and the first record from Wheatfen occurred in 1946. There are various records in Ted Ellis's writings about coypu at Wheatfen: 'An 18lb female on Home Marsh 1961.' 'Coypus have eaten a large patch of sweet flag (*Acorus calamus*) previously unscathed in the backwaters. This follows a widespread attack on yellow flag (*Iris pseudacorus*) this spring.' (March 1960). 'At their highest densities, over 2000 were trapped and killed in the fens at Wheatfen in a year.'

Otters have been at Wheatfen for some time. The first record we can trace was in 1936 (Ted Ellis). 'An otter form on top of a floating mat (*Carex paniculata*) tussock on which was growing a young alder. Several runs noted, one in particular crossing the Avenue. Otters were heard whistling in the Pool swamp at low tide.' In January 1948 Ted Ellis and Russell Sewell reconnoitred Pool Marsh from the North Channel to the Avenues where in the latter they found otter holts. In April 1955 two otter holts made of grasses and sedges amongst the roots of an old alder tree were discovered in the same area. These holts contained fish scales which suggests that the otters were in the habit of taking at least some of their food home. The last record was in January 1969 (Ted Ellis), 'Two otters racing about, apparently making over and round a fallen ivy-covered tree trunk at the back of the Island.' With the increasing problems of pollution affecting water quality and vegetation in the Yare river valley the otters disappeared from Wheatfen until the 1990s. The recent programmes of improvement in water quality and availability of food has resulted in their return and there are early signs that otters are recolonizing the River Yare, its fens and carrs. As of the new millennium otters began to return to Wheatfen. They have been heard whistling in the carrs and fens behind the Island and have been sighted swimming in the Fen Channel and Deep Waters.

Chinese water deer are in their natural habitat amongst reed and sedge beds where they spend most of their time feeding and resting. Being solitary animals, they try to avoid their fellow deer except during mating and to defend territories. They are not a species which herd together. They can be seen at high tides as they move to the drier pathways. Their diet on this part of the reserve consists mainly of sedges, willow shoots and various herbs. The best signs of their presence includes droppings, which are relatively distinctive being pointed at one end and rounded at the other, hair from fighting, grazing of ivy as foliage and at certain times by their barking calls. The Wheatfen population ranges from 18-40 per square kilometre and they appear to have a steady mortality rate with some drowning in dykes (they can swim but they can succumb to cold damp winters). So the population is regulated naturally to a point. There are probably four rutting territories at Wheatfen. They make an attractive addition to the fauna of Wheatfen and cause little damage on the reserve.

A surprising mammal to find in the fens is the mole. It has dug its way into the path system and mole fortresses can be seen along such pathways. They act as breeding chambers and food stores. Also surprising is the fox with many sightings along the paths and in the fens. Casualties to deer or the odd dead swan leave a carcass to be dragged off into the reeds and the remains found a few days later.

Mink at Wheatfen is still an unknown factor in the ecological balance. Since 1999 there have been only a few reported sightings. Since no trapping of mink has occurred in the reserve numbers are difficult to estimate. I understand that trapping regularly takes place at Strumpshaw on the other

side of the river with up to eleven caught in one week. This is a worrying threat to the bank vole populations of the reserve.

The smaller mammals living in the fens and carrs of Wheatfen were investigated during November 1994 through a trapping programme. The data at the bottom of the opposite page is indicative of the species and numbers trapped in two of the habitats.

The harvest mouse is Europe's smallest mouse and being an expert climber, it lives amongst tall grass, reeds and sedges along the edges of dykes and pathways. They are nocturnal by nature in summer but are active in winter. Their diet consists of insects, seeds, grass shoots and in autumn berries. Their presence is confirmed by finding their small spherical nests in the autumn and their numbers clearly indicate good populations at Wheatfen. The nests are made of shredded and interwoven grass and sedge blades. 3-8 young are born from May to September. In winter the harvest mouse lives in nests close to or below ground.

Water shrews are the largest shrews native to Britain. They have very distinct black dorsal surfaces and silver-white undersides. They live in extensive burrows in banks alongside dykes. They are solitary animals outside the breeding season. They hunt for worms, crustaceans, aquatic insect larvae, small fish and amphibians. Ted Ellis observed shells of the freshwater snail *Lymnaea peregra* nibbled by water shrews at Wheatfen Broad. Sightings are rare and the main signs are rising bubbles to the surface of a dyke. The habitats are ideal at Wheatfen and numbers remain good.

This also goes for our other aquatic small mammal, the water vole. At Wheatfen the habitat is ideal, and this species has increased in numbers and range as the dykes have been dug out in recent years and the whole mosaic of waterways re-instated. Water voles need unpolluted waters and with the greatly improved quality of the last decade the numbers remain good. Their presence, other than by trapping, is recognised by the diving plop in the water and their swimming across the surface. They excavate burrows along the banks with some of the entrances below water level. Other signs are bare patches of soil with piled chopped reed, sedges and grass blades ready for eating. These are feeding stations. They also gnaw bark of any willow to a height of 80cms. The main diet consists of aquatic plants. 4-6 young are born in grass and root woven, rounded chambers. These nests can be above or below ground from March to October.

As you can see the reserve is the home for most of our common mammals as a site where they continue to flourish. There is a need for regular monitoring of all species and population levels and help with this work will be most appreciated. Ted Ellis started such studies many decades ago and we wish to see this continued into the future.