



Cheshire
Wildlife Trust



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WATER VOLE

(Arvicola amphibius)
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**WATER VOLE
FACT SHEET**



**NATURE
GIFTS**

cheshirewildlifetrust.org.uk

ABOUT WATER VOLES

In spite of their name, water voles are not particularly well-adapted to aquatic life. They have evolved to live alongside water to aid their escape from predators. Their characteristic 'plop' is the sound of them diving into the water to escape any would be predator and to access the underwater entrance to their burrow. But they are clumsy swimmers without the rudder-like tail or webbed feet evolved by other water-loving creatures. Away from water – and where safe from predators, water voles can live completely fossorial (burrowing) lifestyles.

*"...A brown little face,
with whiskers. A grave
round face, with the
same twinkle in its
eye that had first
attracted his notice.
Small neat ears and
thick silky hair. It was
the Water Rat!"*

Kenneth Grahame,
Wind in the Willows

FAST FACTS

- Water voles are the UK's largest vole! They grow up to 20cm long with a tail around 12cm long. They weigh up to 350g.
- They have chestnut brown fur, a rounded nose, small ears and a furry tail.
- They need to eat up to 80% of their bodyweight every day! That's a lot of feasting on grasses and waterside plants.
- They're not fussy eaters though – they eat up to 220 different types of plant!
- They live along rivers, streams and ditches burrowing into the banks.
- Their burrows have underwater entrances so they can dive into the water and hide from danger.
- They're hard to see these days – they are one of our endangered species in the UK.
- Ratty from Wind in the Willows isn't actually a rat... he's a water vole!



BURROWING AND BREEDING

Water voles live in burrows that they build by biting into the banks with their very strong, enamel-coated orange teeth. These burrows can be very complex and consist of nesting and nursing chambers, with two entrances, one on the bank and one underwater. A water vole burrow is roughly the width of a balled-up fist or a tennis ball. During the winter months, water voles are tolerant of each other and live together in family groups in their burrows; but this all changes in the breeding season, when they become very territorial!

The breeding season begins in April and continues until October. Water voles are extremely successful breeders – they need to be to replenish the numbers lost during winter; when up to 80% of water voles perish, mainly as a result of starvation. Gestation for a female vole is only 23 days! Her babies (pups) leave the nest after three weeks and are themselves able to breed at 15 weeks old. One female water vole can have between five and six litters in a year, with between 3–5 pups per litter, meaning that one female water vole could have 25–30 babies in one breeding season! Water voles have a very short lifecycle and don't usually live for more than one winter.

HOW TO SPOT A WATER VOLE

The water vole has chestnut-brown fur, a blunt, rounded nose, small ears, and a furry tail. It is much bigger than other vole species. The similar brown rat is larger, with grey-brown fur, a pointed nose, large ears that protrude from its fur, and a long, scaly tail.

They can be elusive and hard to spot, however finding droppings is the water vole surveyor's dream! If you think you have water voles in your local patch of rivers or streams, have a look for their latrines, burrows and piles of vegetation or food stores, which are pieces of vegetation measuring between 4–10cm, bitten off with a 45° angle at their tip.



ALWAYS EATING

Water voles need to eat up to 80% of their own body weight every day in order to stay healthy. Their diet consists of mainly grasses and waterside plants, as well as twigs, bulbs, roots and fallen fruit. They aren't too picky and have been recorded feeding on up to 220 different plants. Although they are described as herbivorous, a female feeding young will eat a dead water snail or fish if she comes across one, to boost her protein levels.

WONDERFUL WATER VOLES – A 'KEystone' SPECIES.

Water voles play a critical role in maintaining the structure and health of wetland ecosystems. They are considered a keystone species because they create niches for other species by shaping their environment. Much like the Eurasian beaver, water voles alter their surroundings significantly, albeit on a much smaller scale. Their burrowing behaviour leads to the formation of complex habitats along riverbanks, ditches, and streams. These burrows provide shelter for various organisms, including insects, amphibians, and other small mammals. When water voles are present, there is a greater diversity of plants growing on the banks. They constantly "garden" by nipping and grazing on plants, which promotes healthier vegetation.

WATER VOLES IN DECLINE

Water voles were once a common sight in every waterway in Britain. Sadly, water voles are one of the UK's fastest declining mammals. Up to 90% of the population

has been lost since the 1970s; part of a longer-term decline stretching back to the Middle Ages. The reasons for this decline include habitat loss and fragmentation (their habitats being broken up into smaller, disconnected chunks). Examples of this include overgrazing and mowing of riverbanks and canalisation of streams.

It is well-known, however, that the American mink is the key driver behind the more recent decline of our water voles. Mink were introduced into the UK in the 1960s after fur farms were closed. In their native home of North America, muskrats form a major part of the mink's diet; in the UK, there are no muskrats and instead water voles, which resemble muskrats, form a major part of their diet.

Water voles are at the bottom of the food chain and have a great many predators. They are eaten by otters, buzzards, owls, and foxes to name just a few! But these are all native animals, and the water vole can cope with these natural predation pressures by breeding rapidly and escaping into their burrows. However, a female mink is slim enough to follow the water voles into their burrows and predate entire populations.

Without the control of American mink, the water vole faces the risk of extinction. In the absence of American mink, water vole populations can recover and disperse quickly. It is essential they have networks of connected good quality landscape scale.

River pollution and climate change events such as flooding and drought also pose a threat to water voles and their habitats.

OUR WORK TO PROTECT WATER VOLES

Water voles are a vital part of river ecosystems. Their burrowing, feeding and movements help create conditions for other animals and plants to thrive.

Gowry Meadows Nature Reserve, near Ellesmere Port, is our largest nature reserve. This 410-acre reserve provides an extensive network of wildlife-rich ditches, hedgerows, wet grassland, ponds and scrapes where over 150 bird species have been recorded! The River Gowry also runs through the reserve and is home to aquatic invertebrates, dragonflies, otters and water voles. If we are to prevent further losses, and even localised extinctions, we need to increase, improve and reconnect their habitat.

WORK TO SUPPORT WATER VOLES ALONG THE RIVER GOWRY INCLUDES:

- Creating ponds near ditches where water voles might be living. This allows for more aquatic plants to grow, providing food and shelter for water voles.
- Restoring networks of old river channels, connecting them to other watercourses to allow water voles to move more freely.
- Clearing invasive non-native plants like Himalayan balsam.
- Restoring and fencing off old ditches, vastly improving their condition for water voles.
- Avoiding work on sites throughout breeding season, to prevent disturbance to water voles.
- Coordinating mink control along the river.



WAYS YOU CAN HELP

- By adopting a water vole, you're already doing something amazing – thank you!
- Keep an eye out for volunteer days to help keep waterways clean.
- Tread carefully around rivers and streams. People should follow the Countryside Code and avoid disturbing water voles.
- Water voles need water. By minimising your use of water and avoiding wasting water you can help to keep 'Ratty's' natural habitats wet and water vole friendly.
- Keep cats indoors, particularly at night if you live near a watercourse.
- Keep dogs out of protected watercourses.
- Report any sightings of mink or Himalayan balsam to INNS Mapper. **www.innsmapper.org/home**
- Report any sightings of water voles to iRecord. **www.irecord.org.uk/**
- Write to your MP and share your concerns about your local water course.

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