

Biodiversity Links

The water vole is part of Scotland's biodiversity, (which means the variety of life, and includes plants and animals, and the places in which they live). To help children understand how everything links and review their understanding of biodiversity, photocopy the cards on the reverse of the water vole poster. Cut them out and group into the following categories:

1. **Mammals** (warm blooded, give birth to live young and feed them on milk)
2. **Birds** (warm blooded, have feathers, lay eggs, most can fly)
3. **Reptiles** (cold blooded, lay eggs on land, often have scaly skin)
4. **Amphibians** (cold blooded, lay eggs in water, but the adults can live on the land, soft skin)
5. **Fish** (cold blooded, have scales, breathe in water using gills)
6. **Invertebrates** (small creatures without a backbone)
7. **Plants** (have green leaves and use energy from sunlight to make food)

Can you add another one of your choice to each category?

Can you catch a water vole game

Water voles eyesight is not very good but it does have very good hearing. How good is your hearing – would you make a good water vole?

Game

- The one chosen to be the “water vole” sits blindfolded on the ground, other children are “predators” and sit scattered around.
- The leader picks a child to try and reach the “water vole” without being heard. If the “water vole” thinks he hears someone he points in that direction and shouts “predator!”. If correct – that child is “out”.
- If the “predator” manages to touch the “water vole” on the knee before being pointed at then the “water vole” is caught!



All about Water Voles



Water voles are the largest voles in Britain, and are often mistaken for rats. Sometimes they are called water rats and ‘Ratty’, in the story ‘Wind in the Willows’, by Kenneth Grahame, was actually a water vole, not a rat.

In and out the water

Water voles live close to water and spend a lot of time swimming and eating plants on the bankside. They dive into the water with a ‘plop’ when they are frightened.

Water voles have:

Very thick, special hair which traps air when they dive under the water. The trapped air keeps the cold water away from their body and so keeps them warm.

Small ears and inside the ears is a special flap of skin which closes when the water vole dives under the water.

Surprisingly, however, water voles are rather basic swimmers.

Otters live in water and have webbed toes - check the photo to see if water voles do too?

A vegetarian ‘rat’

The character ‘Ratty’ in the story ‘Wind in the Willows’, ate chicken sandwiches and went fishing, however water voles do not really eat fish (or chickens).

They eat stems, leaves, roots, bulbs, flowers and bark of lots of different waterside plants including grass. Water voles store food inside their burrows and are very fond of apples.

A water vole can find wind-fall apples in gardens or crab apples growing wild and float them across a river to its burrow!

Water Vole Facts

Water voles are rodents like mice, rats, gerbils and hamsters. This means that they have long front teeth which never stop growing yet are always being worn away by nibbling.

They are about the size of a large hamster (12-20cm long). Their fur is glossy brown or black (particularly in Scotland) and some water voles have small white patches of fur too. Unlike rats they have hairy tails.

Water voles live for about 2 years.

Females can have up to 5 litters a year between April and September with up to 6 babies in each litter. In Scotland, however, they usually have fewer babies.

(Can you work out how many baby water voles one water vole could have in a year?) This might sound like a lot but water voles also have a lot of predators such as owls, rats, stoats, herons, eagles, mink, cats and even large fish.



Biodiversity

What can we do to help? Looking after Scotland's wildlife and countryside is important if we want to keep water voles and the places where they live.

- Enjoy watching Scotland's wildlife and remember to be as quiet as you can – so that you do not disturb the animals
- Take your rubbish home – and recycle it
- Join or start a group that looks after your local area for wildlife

For further information and images

http://news.bbc.co.uk/cbbcnews/hi/newsid_6080000/newsid_6082800/6082848.stm

www.waterscape.com/features/wildlife/water_vole.html

www.abdn.ac.uk/mammal

www.arkive.org/species/ARK/mammals/Arvicola_terrestis

www.snh.org.uk/speciesactionframework

Glossary

Adapted – to change something to fit new circumstances

Burrow – a hole in the ground dug by an animal for shelter

Habitat – the natural home of an animal or plant

Predator – an animal that kills and eats other animals

Prey – an animal hunted as food for another animal

Rodent – belonging to the group of animals which includes rats, mice and squirrels

Vegetarian – a person or animal that doesn't eat meat

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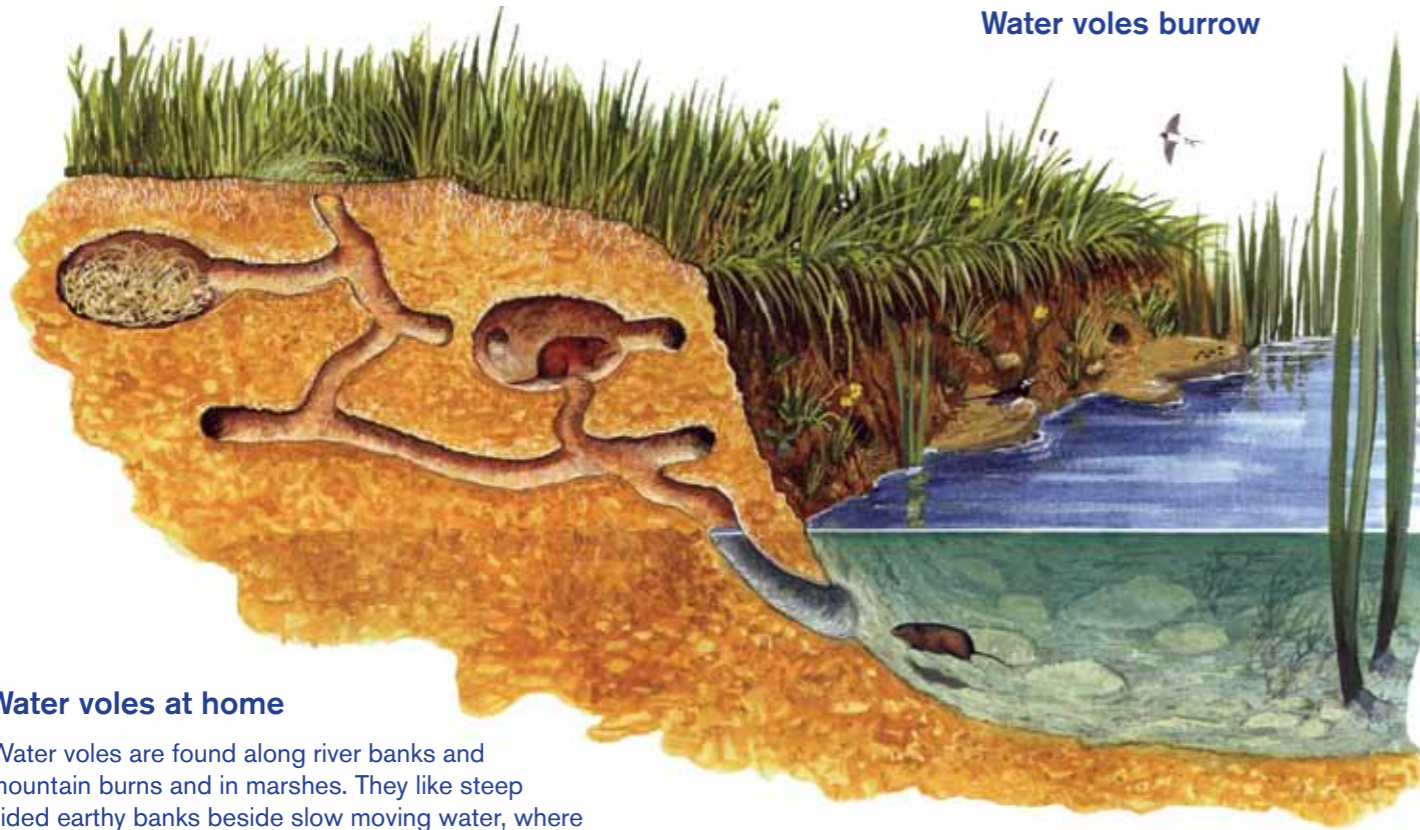
Also many thanks to all those who helped in the development of this fact sheet, in particular the teachers involved in this project, Highland Council Ranger Service, and SNH specialists.

There is a poster to go with this factsheet and other posters and factsheets in the ‘All About’ series. Download the poster from www.snh.org.uk/pdfs/education/poster/p-watervoles.pdf or contact SNH, Battleby, Redgorton, Perth, PH1 3EW



Scottish Natural Heritage
All of nature for all of Scotland

Water voles burrow



Water voles at home

Water voles are found along river banks and mountain burns and in marshes. They like steep sided earthy banks beside slow moving water, where they make lots of tunnels. These tunnels come out above and below the waterline. Their long strong front teeth can be used to take bites out of the earth as they dig out these burrows. They use their legs and feet to then push the earth out of the burrow. They also need to have lots of tall, thick, leafy and juicy plants growing along the edge of the water and in the water. The plants supply the water voles with food to eat and places to hide from predators.

Going Down!

Water voles used to be very common in lots of places in Scotland. They are now quite rare and numbers are still going down.

Why?

Any one or more of the following could have been the reason why water voles disappeared from YOUR neighbourhood.

1. Mink are really good at hunting water voles and female mink are small enough to get into water vole burrows
2. Water pollution
3. River bank plants were lost when banks were planted with commercial conifer trees
4. River bank plants are too short as they are grazed and trampled by farm animals
5. Earthy riverbanks were built over with stones and concrete.

How would you protect water vole habitats if you were a farmer or a forester?



Mink

American mink are a big problem for water voles.

Mink were brought to Britain and reared on fur farms particularly to make fur collars on coats.

Many mink escaped and they found the British countryside very much to their liking.

There were many, many water voles at that time, and they lived along rivers where mink like to live too. Unfortunately, water voles are the perfect size for mink to hunt and eat!



Describing a water vole

Read the description of the water vole on the first page and fill in the labels with a describing word or words for each one (for example 'small' ears)

Add in information about adaptations to life in the water if you can!



Words to help you: fur; whiskers; teeth; tail; ears; fingers/feet

The Watervole and me

Water vole, water vole come out to play
Here with me on the River Tay
Here I am on my little canoe
Won't you come out to play too?

Ssh! What was that I heard?
Ssh! Don't say a word!
A splash and a ripple just up ahead
A nose and a whisker, is that his head?

My, my Mr. Water vole how small you are!
Swimming along on the river so far
Oh no, you've heard me and I see you sink
Goodness me, there goes a mink!

Poor little water vole frightened so much
What a pity I couldn't just touch
As he looked so smooth with his lovely fur coat
I'd love him to come for a ride on my boat



Poem, Stories, Artwork and Drama

Read the poem opposite and the factsheet – make a list of words that could describe a water vole and where it lives

Use these words to write a simple story or poem about a water vole

Find out about the story 'Wind in the willows'

Discuss the information in the factsheet, make a list of the things which are important to water voles

Design a frieze showing a section view of a river, the riverbank and landscape

There is an activity for drama on the reverse of the Water vole poster

Can you draw and complete a food chain which includes a water vole?

Read the information in the factsheet to help you.

