

Water Vole

Arvicola terrestris (Linnaeus, 1758)

Order: Rodentia

The water vole is a rodent with bright orange incisor teeth and is Britain's largest native vole. It has dark glossy chestnut-brown fur; a blunt nose and short furry rounded ears; small black beady eyes and a long hair-covered tail.

The head and body are 120-220mm long and the tail 95-140mm and they weigh up to 300g. Males are slightly bigger than females.

The water vole makes burrows (4 – 8cm in diameter) on bank sides close to the water's edge, often with entrances above and below the water. The characteristic tracks can be found in mud at the waters edge, identified by star shaped pattern of the four-toed forefeet. The hind foot has five toes with the first and fifth digits leaving prints almost at right angles

In the summer water voles mark their territories with latrines of cylindrical khaki/light green droppings about 1cm in length, often associated with food caches of neatly cut lengths of vegetation

Water voles are creatures of habit and vole runs can often be seen in the bank side vegetation, or leading to places where they enter or leave the water.

Water voles are often confused with the similarly sized brown rat, as both species found on, or near, water. However, the brown rat is generally, larger with more prominent eyes, large hairless ears and a pointed muzzle, a rat's tail is also longer and hairless



Photograph: Dave Chapman



Water vole hind foot print

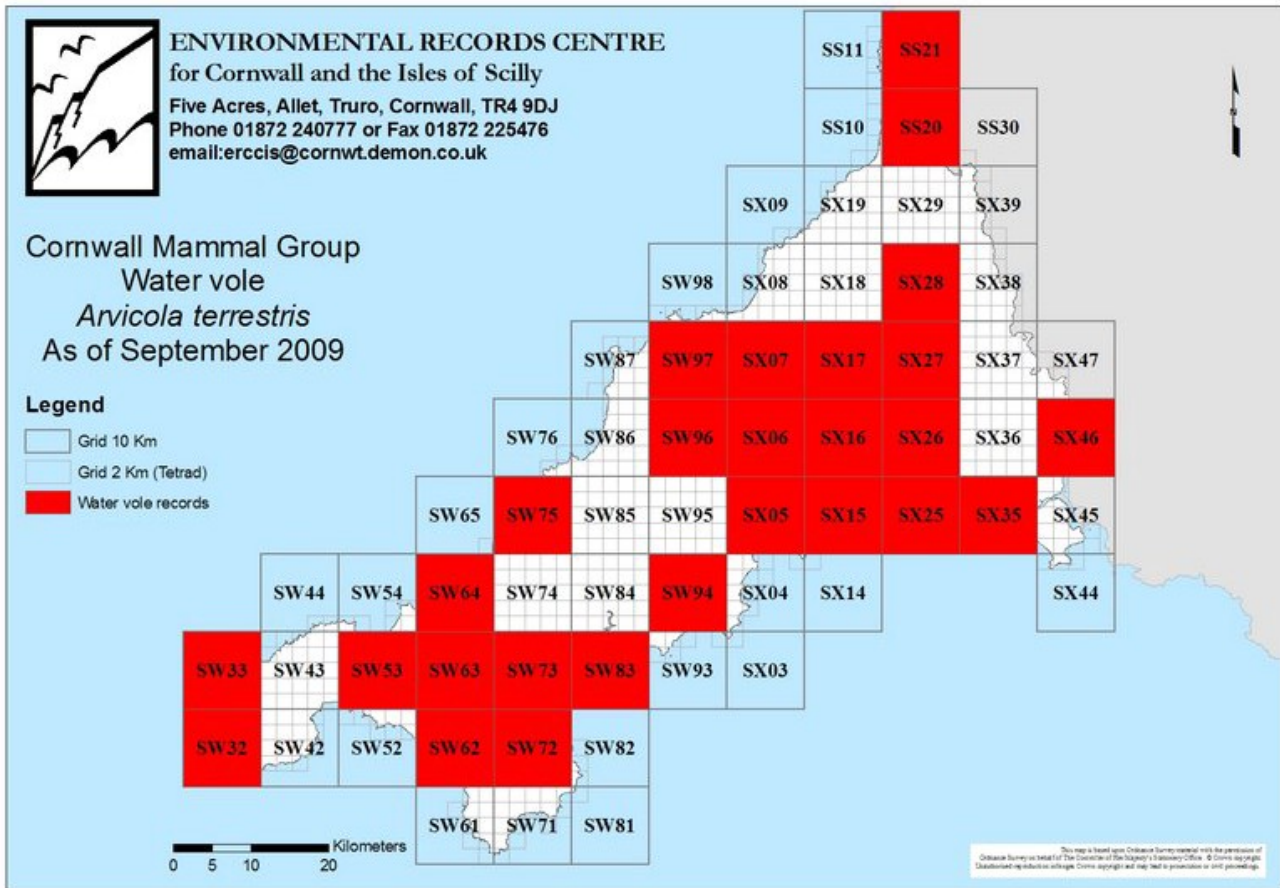
The female water vole occupies a territory about 70 meters of river bank and breeds after her first winter, from about March to September, having up to five litters per year. The litter consists of 2 to 9 blind and naked young which are born underground, being fully weaned at about 4 weeks. The male has a much larger territory, serving multiple females. Both male and female rarely live beyond 2 years and the average life expectancy is less than 6 months.

In Britain water voles live by waterways preferring slow flowing rivers, streams, ditches and even ponds. They use their large incisor teeth to burrow into the bank to create a tunnel system. The water provides them with a natural defence system, and they can sometimes be heard "plopping" into the water or seen kicking up a mud screen in the water to avoid predators

Water voles are opportunist herbivores, and have been recorded consuming a varied diet of over 200 plant species, eating grasses, rushes and sedge in the spring and summer, and roots, bark and fruit in the autumn and winter

Mink, otters, stoats, owls, herons and pike as well as domestic cats will all eat water voles.

The current dramatic national decline of the Water Vole seems to be the result of long term mismanagement of riverside habitats and the depredations of introduced American mink.



Local distribution and key sites

The last verified records of water voles in Cornwall were in 1998 from the River Hayle and Polmear Marshes—it is considered to be extinct in Cornwall

Number of records per date class

The water vole is found from Western Europe to the tundra of central Siberia. In central Europe it often lives in grassland burrows far from rivers and is considered a pest because of damage to root crops and banks.

Water voles are legally protected in Britain, and were included on Schedule 5, Section 9 (4) a & b of the Wildlife and Countryside Act 1981 (as amended) in 1998.

Survey Methods

Burrow surveys
Feeding signs and latrines
Prints- Mink Rafts, developed by the Game Conservancy Trust to survey and trap American Mink can also be used to monitor water voles. The plywood and polystyrene rafts incorporate a bed of wet clay within tunnel housing. Water voles and other semi-aquatic mammals entering the tunnel leave distinctive prints which remain identifiable for several weeks

Did you know?

Water voles are often mistaken for brown rats, and are actually known locally (and incorrectly) as water rats. 'Ratty' in Kenneth Grahame's *The Wind in the Willows* is actually a water vole! Control of other rodent species, especially brown rats, can also decimate water vole populations

Key references

Strachan, R. and Moorhouse, T. (2006). *Water Vole Conservation Handbook* (2nd edition). Wildlife Conservation Research Unit, University of Oxford.

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