

The Water Vole

(*Arvicola terrestris*)

Habitat, Population and Legal status

Herts &
Middlesex



Photo: Rick Wylie 2006

Recognition

Head/body length: 140-220mm; tail: 95-140mm; weight: 150-300g.

Water voles are a similar size to rats and can often be mistaken for them. However, water voles have very small ears that are hidden in their chestnut coloured fur, rather than prominent ears like the brown rat. Water voles also have a much more rounded body than rats, a blunter face and a shorter, hairy tail. Rats have long, bald scaly tails.

Habitat Preferences

Water voles are generally found where channel conditions favour slow-flowing water that does not show extreme fluctuations in water level, and where channel widths and depths are around 2-5 metres and 1 metre respectively. Banks suitable for burrowing are usually made up of earth or clay, and have a gradient of between 45 and 90 degrees. Vegetation should cover at least 60% of the banks and vegetation structure will ideally be layered. Important plant species include tall grasses, aquatic plants and herbs, and banks should be fringed by stands of sedges and/or reeds. Typical grass species are meadow grasses e.g. false oat-grass and tufted hair-grass. Suitable bank-side vegetation includes stands of willowherbs, purple loosestrife meadowsweet and common nettle. The tree canopy should be open to allow these typical riparian (river bank) plant species to establish. However, both tree roots and bark provide an important alternative food source over winter, particularly willows.

Population status

Water vole populations have undergone a dramatic decline within the UK during the last few decades. A national survey in 1989 (by the Vincent Wildlife Trust) revealed that they were absent from 67% of sites where they had been previously recorded earlier in the century. From this it was predicted that the loss of sites could increase to 94% by the year 2000 (Jefferies, Morris & Mulleneux, 1989). Detailed surveys in Hertfordshire have also reported a decline in water vole populations, though to a lesser extent. Jones & Molloy (1997) reported a 72.9% decline in the number of occupied sites between 1989 and 1996.

The cause of these declines is likely to be a combination of factors. Initial declines were probably due to fragmentation and disturbance of riparian habitats, deterioration in water quality, and the fragmentation and subsequent isolation of suitable habitats. However, in recent years, the establishment of American mink *Mustela vison* (escaped from fur farms), has exacerbated these factors, due to predation. Research has shown that water vole can account for 32% of mink diet in May and June and form a significant component of the diet throughout the early part of the year when water vole populations are at their lowest (Strachan & Jefferies, 1993).

Legal Protection

From April 2008 the water vole received full protection under Schedule 5 of the Wildlife and Countryside Act. This means that it is an offence to intentionally kill a water vole, or to intentionally damage, destroy or obstruct access to any structure or place that is used for shelter by water vole, as well as to disturb them while they are using such a place.