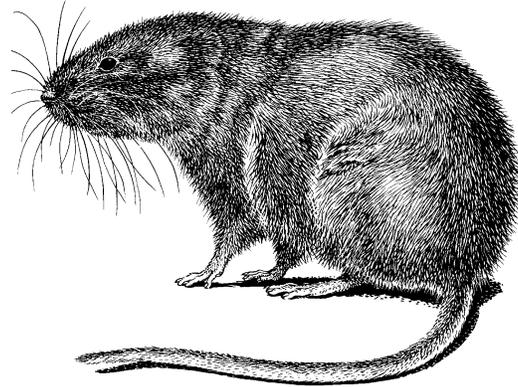


## Water Vole (*Arvicola terrestris*)

*The Water Vole was formerly common along the banks of rivers, streams, ditches, dykes, lakes and ponds throughout mainland Britain. Its decline is thought to be largely due to changing management of watercourses and predation by the introduced American mink.*



### **1 Definition**

Water Voles were once a familiar waterside animal, often known locally as a water rat. Their blunt faces and small ears, along with other characteristics readily distinguish them from common rats, which may also inhabit waterside habitat. Whilst it is relatively easy to observe Water Voles in the wild, they also leave distinctive field signs which form the basis of field surveys. These include distinctive small, blunt-ended droppings, frequently deposited in piles known as latrines, burrow systems with their distinctive holes on the river bank and characteristic neat piles of cut vegetation at feeding stations near the waters edge.

Water Voles are almost wholly vegetarian, feeding on a wide range of plants. They need luxurious bankside vegetation, particularly grasses and sedges, to provide food and cover from predators. They also favour steep bank angles of 35° or more to allow them to construct extensive burrow systems.

During the breeding season females hold exclusive territories and density will be dependent in part on food availability. Peak densities can vary from 20-114 animals per km of waterside habitat. Occasionally water voles have been reported living at high densities in ponds and moats in Suffolk and this can lead to bankside damage.

Although Water Voles are widely distributed in Britain, they are suffering from one of the most rapid and serious declines of any mammal in recent years. This decline is attributed to habitat loss, such as through river management and drainage, but this has been exacerbated by predation from American Mink. This species was originally brought to the UK in the 1920s and 1930s, but by the mid 1950s they were reported as breeding in the wild, following escapes from fur farms and they are now widespread. Predation by mink has led to localised extinctions and fragmentation of remaining populations of water vole, threatening their long-term viability.

## **2 Current status**

### **2.1 National**

A national survey in 1989-90 reported that there had been an overall loss of at least two thirds of Water Vole sites since 1900, with a marked loss in the 1980s. A further survey carried out between 1996-1998 showed a further loss of two thirds of the occupied sites and nine tenths of the remaining population in only seven years. In the Anglian Region, 72% of survey sites were found to be occupied in the first survey, but only 30% by the second survey. It is significant that the Anglian region holds over one third of England's (one fifth of Britain's) remaining Water Voles.

### **2.2 Local**

Surveys in 1997, undertaken by Suffolk Wildlife Trust and the Environment Agency showed that Water Voles were largely absent from the west and north of Suffolk, which could be correlated with the presence of mink in this area. Water voles were present in central and eastern areas of the county including populations along the River Gipping, upper reaches of the River Alde, Thorpeness Hundred, Sizewell Belts, River Fynn, River Deben and River Wang. Overall, signs of water vole were found at a third of sites surveyed and the River Deben was notable because three quarters of sites surveyed had Water Voles. As yet, this countywide survey has not been repeated, but a survey of the Deben catchment in 2003 showed a reduction in positive sites from 75% in 1997 to 46% in 2003.

Water Vole are also known to occur on non-riverine sites, such as reedbeds, dykes, ditches, ponds and moats. These habitats provide a valuable haven for them, particularly because the impacts of mink predation may be reduced.

## **3 Current factors affecting water voles in Suffolk**

- Habitat change through neglect, causing scrub encroachment and over-shading
- Overgrazing, causing poaching of watercourse, banks and denuding of vegetation.
- Insensitive watercourse dredging leading to habitat loss and fragmentation.
- The spread of American Mink (*Mustela vison*) in combination with previous factors leading to predation and local extinction throughout Suffolk
- Un-seasonal flooding especially during the nesting season
- The threat to reedbeds from sea-level rise

## **4 Current Action**

### **4.1 Legal Status**

Listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended 1998) in respect of Section 9 (4) only. This provides protection of Water Vole places of shelter only. In the 5 yearly review of the Act in 2002 it was recommend that protection should be extended to the Water Voles themselves. The outcome of the review is still awaited.

### **4.2 Management, research and guidance**

Survey work to identify new sites occupied by water vole, combined with monitoring of the remaining Water Vole populations is an essential element of the conservation effort.

This provides information about the types of habitats occupied by Water Voles as well as assessing population changes and the impacts of management and predation by Mink. Three Key Areas for Water Vole have been identified on the eastern coast of Suffolk through a National research programme, but other large, viable populations are designated as Local Key Areas.

The Anglian Otters and Rivers Project (AORP) (1999-2002) undertook an evaluation of Water Voles in grazing marsh managed through the Suffolk River Valley and Essex Coast ESA schemes. This habitat was found to support good populations (three quarters of sites surveyed had Water Voles) and this was attributed to favourable management regimes. A conservation strategy was developed for both these schemes to ensure that best practices are implemented during future habitat management. This project also carried out a survey of ponds and moats and 30 new sites were recorded. However, this study also observed that occasionally Water Voles can cause damage to plants and bank erosion.

The AORP also initiated a pro-active approach towards Mink control by targeting river catchments (Stour, Alde and Fynn (Deben)) where earlier surveys had indicated a good population of Water Vole and where there was an increasing Mink presence. Training and guidance on appropriate methods was provided and some traps made available for loan. This work has been continued by the Water for Wildlife Project (WFWP), which has followed on from the AORP.

As well as ensuring that the Environment Agency's Flood Defence Programme is carried out with minimal impact upon Water Voles, there are also opportunities for habitat enhancement and creation. The Water for Wildlife Project works closely with the Environment Agency to develop this.

## **5 Action Plan Objectives and Targets**

- 1 Halt the decline and possible extinction of Water Vole in Suffolk.*
- 2 Ensure management of watercourses and wetlands which facilitate the above.*
- 3 Promote appropriate Mink control methods throughout Suffolk, but particularly where Water Vole populations still occur.*
- 4 Investigate post-extraction management of gravel workings and flood-plain restoration schemes, to develop new reedbeds and broad reed-dominated pool margins, as a means of developing new populations away from the coast.*

## 6 Water vole: Proposed Action with Lead Agencies

Action	Date	Partners
<b>POLICY AND LEGISLATION</b>		
Ensure compliance with Schedule 5 of the Wildlife and Countryside Act (1981).	2004 2005 2006 2007	<b>ALL</b>
Ensure management needs of Water Vole are incorporated in relevant agri-environment schemes, Water Level Management Plans and other relevant policy at consultation.	2004 2005 2006 2007	<b>EA, SWT, DEFRA</b>
<b>SITE SAFEGUARD AND MANAGEMENT</b>		
Continue to identify large, viable populations of the Water Vole in Suffolk. Designate these as 'key areas' (Riverine County Wildlife Sites) and ensure management and monitoring.	2004 2005 2006 2007	<b>SWT, EA, SCC</b>
Promote Water Voles habitats into all wetland conservation initiatives and work with landowners to promote good habitat management practices.	2004 2005 2006 2007	<b>SWT, EA, DEFRA, EN, IDBs, LAs, Landowners</b>
Ensure that development schemes in Suffolk do not affect the integrity of Water Vole populations.	2004 2005 2006 2007	<b>LAs, SWT, EA</b>
Using survey and research information, identify sites in Suffolk which are suitable for re-establishing populations.	2004 2005 2006 2007	<b>SBRC, EA, SWT</b>
<b>SPECIES MANAGEMENT AND PROTECTION</b>		
Implement a strategy for effective and appropriate mink control in Suffolk (particularly in designated key areas). Advise landowners on appropriate methods and reasons for control.	2004 2005 2006 2007	<b>SWT, EA, DEFRA, FWAG</b>
Co-ordinate a programme of translocation and re-introductions of Water voles in Suffolk where it is deemed appropriate and effective.	2006 2007	<b>SWT, EN</b>

<b>RESEARCH AND MONITORING</b>		
Participate in national monitoring scheme. Carry out surveys of Suffolk.	2004 2005 2006 2007	<b>SWT, EA</b>
Encourage submission of data collated locally to BRCs for incorporation into a national database and to facilitate easier access to information.	2004 2005 2006 2007	<b>SBRC, EA, SWT</b>
<b>ADVISORY</b>		
Provide advice conservation and management advice to managers and landowners of habitats with Water vole.	2004 2005 2006 2007	<b>EA, SWT, DEFRA, FWAG, BAP Wetland Working Group</b>
<b>COMMUNICATIONS AND PUBLICITY</b>		
Produce co-ordinated publicity programme for Water voles and raise awareness of the range of habitats that can support them-	2005 2006 2007	<b>EA, SWT, FWAG, Defra, BAP Wetland Working Group</b>
Distribute nationally and locally prepared material on Water vole conservation.	2004 2005 2006 2007	<b>EA, SWT, LAs, DEFRA BAP Wetland Working Group</b>