Water vole

Our objective for this species is to:

arrest the water vole decline, maintain the current distribution and abundance and to restore water voles to their former (pre 1970s) distribution by the year 2015.

Water Vole (D Sykes)

Introduction

The water vole, the largest of the British voles, is perhaps better known as 'Ratty' in 'Wind in the Willows'. The species was once common along vegetated banks of rivers, streams, canals, ditches, dykes, lakes and ponds throughout mainland Britain. However, nationally the water vole is now our fastest declining mammal, primarily due to predation by American Mink. The water vole is vegetarian, feeding on a wide range of plants found in and beside fresh water. They breed prolifically in the summer months, though mortality during the winter is high. The water vole is a UK BAP priority species, with the Environment Agency (EA) identified as the lead partner.

National status

The water vole population has declined significantly in numbers and distribution throughout the 20th century due to habitat destruction and agricultural intensification. The decline has been greatly accelerated in the last 25 years due to predation by feral American mink which has left populations scarce and fragmented in the north and west, though stronger and more widespread in southern and eastern Britain. Two national surveys carried out by the Vincent Wildlife Trust (VWT) in 1989-1990 and 1996-1998 have shown that this decline has now developed into a serious population 'crash' with a further loss of 66 per cent of the occupied sites and 90 per cent of the remaining population number in only seven years.

Regional status

The population loss has been most severe in the north and south-west of England, especially in Yorkshire with only three per cent of past populations remaining, according to the national surveys, though the detailed picture may be slightly more positive. Recent records indicate that water voles sometimes reappear from undiscovered remnant populations, and may quickly re-establish colonies where conditions allow. The EA and YWT now concentrate survey and habitat improvement efforts on locally identified population 'hubs' mostly in the Vales of York and Mowbray and in East Yorkshire.

Local status

Water voles used to be plentiful in the district, the rivers Nidd and Crimple having been noted for them, but most are now thought to be lost. Though a few recent records exist on parts of the Ure and Nidd catchments, they are assumed to be highly vulnerable remnant colonies. These may be ephemeral, disappearing from one stretch and appearing in another neighbouring area in subsequent years. Surveys of the top of the Nidd catchment in 2004 and of the Rivers Tutt and Holbeck (tributaries of the River Ure) in 2005 proved negative except for one upland outlier population near Greenhow which may be beyond the usual range of mink. Harrogate district appears to have suffered the full extent of the national population crash.

Legal status

In 2008 the limited protection that the water vole had received under Schedule 5 of the Wildlife and Countryside Act 1981 was extended to full protection under section 9. It is now an offence to kill or take or possess water voles as well as to intentionally or recklessly: damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection; or to disturb water voles while they are using such a place.

Requirements

Though water voles can be found in sub-optimal habitat, conditions preferred include:

- Slow flowing watercourses, less than 3m wide, around 1m in depth and without extreme fluctuations in water level.
- Banks suitable for burrowing, preferably earth or clay with a stepped or steep bank of 45° or more (usually vegetated rather than bare).
- Dry areas to retreat to in times of flooding, secure from predators.
- Permanent water throughout the year.
- Cover and food provided by tall riparian and water plants. Sites excessively shaded by shrubs or trees are less suitable, though some willow is valuable, with the flowers providing an important food source for pregnant females in early spring.

- Adequate autumn food supplies to store for use over the winter months when they do not hibernate although they do spend most of their time in their burrows.
- Connections between colonies to allow the functioning of meta-populations across a wide area.
- Reedbeds, water meadows and expanses of wetland with tussocks of grass, sedge, rush or reed can provide a more secure habitat than linear features in terms of refuge from predators. Ponds can also provide good habitat, isolated from American mink.
- Water voles are found up to high altitudes, where they are most likely to be found in peat lined streams. They may also be present away from watercourses in rush or sedge beds, where they build above ground nests in the tussocks.

Threats

- Predation by the American mink can have a devastating impact on water voles, particularly where populations are already fragmented. Water voles are also predated by cats, dogs, stoats and owls.
- Loss of suitable habitat, as a result of over-zealous bank management, re-grading, vegetation or erosion control, inappropriate spoil disposal leading to dominance of nettle and Himalayan balsam on banks, livestock grazing, river engineering, development (see 'Mitigation Measures for Water Voles' Association of Drainage Authorities, 2007 www.ada.org.uk/downloads_guidance.php?fs=)
- Excessive scrub development on banks, shading out herbaceous vegetation.
- Isolation of colonies through fragmentation of suitable habitat and loss of corridors for re colonisation, as a result of habitat loss, roads, etc. This results in unviable populations which are also particularly vulnerable to predation.
- Sub-optimum water levels: both flooding and drying of watercourses and wetlands leave water voles even more vulnerable to predation.
- Poisoning: indirect poisoning, sometimes following mis-identification of water voles as brown rats.
- Persecution, particularly in urban areas, by deliberate shooting or poisoning by rodenticides.
- The impact of water pollution on water voles is not clear.

Current action

- Requests for and collation of records by North and East Yorkshire Ecological Data Centre (NEYEDC).
- Targeted surveying by YWT and EA.
- YWT gives advice on habitat enhancement; advising and commenting on water vole and wetland related issues; carrying out surveys; point of contact for issues affecting water voles.
- Some conservation management undertaken by organisations including YWT, EA, Yorkshire Water (YW), Yorkshire Farming and Wildlife Partnership, Internal Drainage Boards (IDB) and landowners.
- National research on interaction between mink and water vole by Wildcru/EA.
- The Water Vole Conservation Handbook has been updated in the light of new water vole research and conservation experience.
- YW engages water vole surveys in advance of any work where they may be present.
- Water vole issues raised by Natural England, North Yorkshire County Council, Harrogate Borough Council and YWT in relation to planning applications.
- American mink controlled by some landowners, fisheries managers and gamekeepers.
- The Government has recommended full protection in the Wildlife and Countryside Act review.

Opportunities

- Huge potential opportunities through incentives for sympathetic ditch management, which are available under the Entry Level Scheme of the Environmental Stewardship Scheme.
- Further opportunities under the Higher Level Scheme, including capital works.
- Habitat creation opportunities as part of flood alleviation schemes and gravel pit restoration schemes, especially where there may also be the opportunity to control mink (possibly in partnership with local sporting estates).
- The best opportunities for water voles are likely to be on agricultural ditches, ponds and wetlands, rather than the main rivers.

There is some evidence that the recovery of otter populations to near-natural levels may suppress the mink population. There is anecdotal evidence that this may now be occurring on the River Ure.

LINKS WITH OTHER HDBAP PLANS:

Flowing Water HAP **Reedbed HAP**
Standing Water HAP **Fens HAP**

The UK BAP Objectives are:

- Maintain the current distribution in order to arrest the decline of the species in Britain.
- Maintain the current abundance in order to arrest the decline of the species in Britain.
- Restore water voles to their former widespread distribution, using the Vincent Wildlife Trust Survey of 1989/90 as a baseline, by the year 2015.