

## Water vole (*Arvicola terrestris*) SAP



### Objectives

1. To increase the range of the water vole within the National Park
2. To increase the population density of the water vole within the National Park

### Introduction

Surveys in Yorkshire during the 1950s and 1960s showed water vole numbers to be high, but by 1985 they had undergone a dramatic decline. The highest vole densities in the National Park were recorded on the upper Derwent, Scalby Beck and Burniston Beck area. Signs were also noted on the Rivers Rye and Seph. Studies on the River Esk between 1992 and 1997 revealed few signs and in the period between 1998 and 2000 none were found. Surveys were also carried out on the stretches of the Derwent that lie within the National Park boundary between 1999 and 2000 and these also turned up very few signs of vole activity.

Although the species is now rare in the National Park, it is thought to be present on all of the major river catchments. Although lowland rivers and wetlands were once the water vole's stronghold, many of the colonies in these habitats have disappeared. The healthiest known water vole populations in the North York Moors are found in the uplands at the head of catchments, often in habitat that might usually be considered sub-optimal. In these upland areas, the voles maintain clusters of small colonies, moving around in response to climatic pressures. The importance of these more nomadic water vole populations has been recognized. Conservation strategies in the uplands must therefore take account of all suitable habitat (whether currently inhabited or not), to allow for migration.

### Progress (2008-2012)

- The Langdale Forest Project started in 2011, funded by the Water Framework Directive (WFD), to enhance wetlands within the forest by funding scrub and tree removal along watercourses. The funding objective was to improve water courses for fish, but this did not prevent targeting wetlands where water voles and small pearl-bordered fritillary butterflies are present, or could colonise.
- Landowners, farmers and game keepers in the Langdale area have been contacted (by email and letters) informing them of the presence of water voles, the potential for water voles on their land and advice on mink trapping and appropriate land management to benefit water vole habitat.
- Habitat improvement works included; conifer removal from the riparian zone to create 2 - 5m buffer zones either side of water-courses, the control of tree saplings and scrub to prevent succession of vulnerable riparian habitats to woodland, whilst maintaining some winter cover. Small dams were also constructed using local logs to slow water flow.
- Work commenced on Hipperley & Langdale Becks in 2009. By the end of 2012 around 3 km of occupied water vole territory has had extensive conifer natural

regeneration removed whilst creating and maintaining natural woody dams and other good habitat features.

- Wildlife monitoring was carried out using specialized rafts, with targeted Mink control based on the information gathered. 41 mini rafts were set up in 2008/2009. In 2010 monitoring, maintenance and repair work was carried out along with replacing those in need. No mink signs were detected in 2010. In late 2010 around 15 rafts and 14 mini rafts were being regularly monitored.
- In 2011 the main raft sites to be regularly monitored were all in the Fylingdales general area, such as Derwent Head pond, stretches of Eller Beck and Little Eller Beck, some rafts on Burn Howe Moor plus Needle Eye in Newtondale.
- In 2012 there were around 15 regularly monitored rafts, as well as extra mini rafts. Keeping the original 41 rafts maintained and monitored was an unrealistic aim. The figures above show the realistic number of rafts that the volunteers could manage.
- A target of surveying 50 sites for water voles to obtain baseline information of the area was set at the start of the SAP. In 2008 and 2009 raft sites were monitored by volunteers. Thanks to committed volunteers, in particular Laura Winter, monitoring of many sites has continued. In 2010, 58 sites were monitored and in 2012 90 sites were monitored, plus an additional 17 surveys were carried out.
- Original goals were to fence around; water courses to improve riparian habitat for water voles where these are currently over-grazed, ponds to protect them from grazing pressure to allow the development of tall peripheral vegetation to benefit water voles, and wetlands to develop appropriate grazing regimes that result in a better vegetation structure to benefit water voles. Over the course of this action plan NP staff never became aware of any requirement for fencing and without demand, unnecessary work would have been costly and unbeneficial.
- Resources were not available to fully promote the importance of water voles and their habitat, yet this has been incorporated into several different projects such as within our Improving Habitat Connectivity Programme.
- It is key that the Conservation Department liaise with planners to protect and enhance the species through the planning system. To date no potential conflicts have been perceived. Any planning applications potentially affecting water vole habitats would always be assessed by a NYMNPA ecologist.

## Case Study

### Monitoring

One of the major achievements of this period has been the setting up of regular monitoring of known water vole sites by volunteers, following a training day for them in May 2009. The current programme has been organised by Laura Winter, aquatic mammal specialist, who has also implemented a major proportion. The initial aim was for the sites in the Fylingdales/Langdale Forest area, where 'mink rafts' had been put out, to be monitored monthly. However this proved too time-consuming and mainly generated negative results, so a revised scheme was adopted in 2011. A proportion of mink raft sites (nine) plus selected bridges (20), confluences (four) and other prominent sites (two) were also inspected on a monthly basis whenever possible. The water vole areas monitored covered 11 sites on Eller Beck and tributaries upstream of Eller Beck Bridge; Pickering Beck in Newton Dale and Long Grain at Ton Hill in Langdale Forest.

With some refinement, depending on volunteer availability, regular monitoring for water voles (and also mink and otters) has continued since then. Thanks to the volunteers' efforts, this is generating invaluable detail about the continuing fortunes of many of the water vole colonies in this central part of the National Park.