

11 WATER VOLE SPECIES ACTION PLAN

11.1 INTRODUCTION

The former widespread distribution and numbers of the Water Vole *Arvicola terrestris* has meant that until recently it has attracted little or no conservation interest, but its accelerating decline in numbers and resulting fragmentation of its populations is now of great concern. The species has been little studied and little is known of its conservation management requirements.

However, the Water Vole is potentially an excellent indicator species whose presence reflects both healthy riverine habitats and plant communities. It is a well liked and familiar animal amongst the general public, and watercourse users in particular, as it is not overly sensitive to the presence of people and is easily seen during the day. This public profile presents opportunities to bring its plight to the attention of the public, to publicise the progress of its conservation, and to develop public participation.

11.2 CURRENT STATUS

The Water Vole was once an abundant inhabitant of riparian (river corridor) habitats throughout Britain. Anecdotal reports suggesting that the Water Vole had undergone a considerable decline in both population numbers and distribution prompted an inquiry into its status in Britain. This initial investigation conducted by Jefferies et al (1989), concluded that the Water Vole had suffered long term decline in Britain, probably since at least 1900.

The work of Jefferies prompted a national survey in 1989/90 which failed to find signs of voles in 67% of sites which were previously documented as positive. In addition, Strachan (1993), concludes that the total loss of formerly occupied water vole sites could be as high as 94% by the year 2000, making this the most dramatic population decline of any British mammal this century (Harris et al, 1995).

By 1996 a number of interest groups in Hertfordshire felt that Water Vole populations in the county had suffered further decline since the 1989 national survey. During 1996 HERC forwarded a proposal to conduct a further Water Vole census in Hertfordshire. Louise Molloy revisited stretches of river and the results estimated that the percentage of positive sites has declined by 72.9% since 1989 (Molloy, 1996).

11.3 CURRENT FACTORS CAUSING LOSS OR DECLINE

11.3.1 Fragmentation and Isolation of Habitats and Populations

This is viewed as being perhaps the major factor of concern for the County. In counties such as Yorkshire, where the majority of the research in this country has been carried out, there is a great deal more riverside terrestrial habitat than in Hertfordshire, which

the Water Vole can utilise for feeding and shelter. This facilitates their dispersal along watercourses (Woodroffe, 1988). Observation would appear to indicate that the level of marginal, emergent and in-stream vegetation has increased significance to Water Vole habitat in Hertfordshire as a consequence of the general paucity of the associated terrestrial wetland habitats.

11.3.2 Predation by Mink

Although it is now accepted that mink predation is a major threat to Water Voles in this country (the colonisation of an area by mink has been shown to have a direct negative impact on Water Vole populations) there is still a great deal that is not understood about the interaction between the two species. The level of mink predation is difficult to assess for particular sites but it appears certain that the effects of mink predation on a Water Vole population is influenced and exacerbated by other threats.

11.3.3 Disturbance of Riparian Habitats

In the past the most significant form of disturbance was caused by channelisation and subsequent dredging operations as part of flood defence management. These modifications have had a drastic effect on Water Vole habitat, with the destruction of burrows, emergent and in stream vegetation and the reprofiling of banks leaving them unsuitable for burrow formation. While the environmental standards of river engineering works have improved in recent times, they are still a potential threat if carried out insensitively.

Today, a major cause of habitat disturbance is from intensive livestock grazing, resulting in poaching of river banks and therefore loss of suitable habitat, though ploughing of fields to the edge of the riverbank is also detrimental.

Other forms of disturbance are caused by the moorings of riverboats and by the activities of anglers where vegetation is removed and alterations to banks made.

11.3.4 Deterioration of Water Quality and Reduction of Flow

Water Voles are relatively tolerant of low water quality but the full impacts of differing types of pollution such as biocides are unknown. Low flows and droughts such as those caused by over-abstraction of groundwater can lead to the loss of Water Voles from the stretches of watercourses affected. Conversely, high flows, flashy rivers and prolonged flooding can also be detrimental.

11.3.5 Rodenticides

The use of poisoned grain and similar rat and mouse poisons are not specific and will be taken by Water Vole when they are placed within their range.

It should be noted that none of the above factors operate in isolation. Acting together, they present a major threat to the Water Vole.

11.4 CURRENT ACTION

The Water Vole has been added to Schedule 5 of the Wildlife and Countryside Act (1981). This qualifies the species for consideration in Recovery Programs limited to other Scheduled species; and, ensure the consideration of the species before habitat is destroyed, eg. when planning permission is sought.

A national species action plan for Water Vole has been produced.

Research funded by Oxford University and the Environment Agency, is now underway on the relationship between mink and Water Vole, on movements, winter activity and on the management of habitats for Water Vole.

The Vincent Wildlife Trust is resurveying the 2970 sites that comprise the Water Vole Survey of Britain, over 1997-98.

The Wildlife Trusts have launched Water Volewatch, a national public participation survey.

The Hertfordshire Mammal Group are carrying out ongoing investigations into the status, habits and requirements of the Water Vole in the county. Key Sites are being identified for a constant effort monitoring to be implemented. Data is passed to HERC and will enable future standardised monitoring to be implemented.

A Water Vole habitat management and conservation handbook providing practical advice has been commissioned by EN/EA and should be available by January 1998.

11.5 WATER VOLE ACTION PLAN OBJECTIVES

To halt the decline of the Water Vole in the county and maintain it's current distribution and status.

To restore Water Vole to its former widespread distribution (1970's levels) in Hertfordshire by 2010.

To enhance river habitat quality through a programme of river enhancement schemes with at least three schemes completed annually for the next 10 years (to overlap with Otter and White-clawed Crayfish Action Plans, Chapters 14 and 23).

11.6 PROPOSED ACTIONS

11.6.1 Policy and Legislation

WV1. Lobby for Water Vole conservation measures to be incorporated into relevant policies and agricultural schemes. In particular, seek a statutory requirement for an uncultivated strip in rural areas and a development free band in urban areas, along all river corridors, allowing the planned management of unbroken river corridor habitats. This should be included in all Local Environment Action Plans and Local Plans, at the next review.

Action: EA, LA's, HMWT, RSPB.

11.6.2 Site Safeguard and Management

WV2. Water Vole Wildlife Sites to be recognised in Local Plans, LEAPs and other relevant water environment policies, at next review.

Action: LA's, EA, BW, TWU, TVW, HERC.

WV3. Target advice on the management of rivers and riparian habitats to all landowners and managers of Water Vole Wildlife Sites through the Wildlife Sites Project. All owners to have been contacted by 2001.

Action: HMWT, CMS, EA, FWAG.

WV4. Implement at least 1 enhancement scheme specific to Water Voles each year for the next 10 years. The strategic expansion of habitat from Wildlife Sites will help to alleviate problems associated with fragmentation and isolation of populations.

Action: EA.

WV5. Ensure development schemes do not affect the integrity of Water Vole populations. River and canal engineering and dredging should only be implemented when absolutely unavoidable at Water Vole Wildlife Sites. If necessary, undisturbed areas should be left, either as one bank, sections of bank or small channels and side ditches. Where unavoidable damage to habitat is done, remedial work such as re-planting vegetation along the waters edge and profiling banks to suit burrowing should be carried out to assist re-colonisation.

Action: EA, BW.

WV6. Build the creation of suitable Water Vole habitat into all suitable future river and canal engineering schemes, including establishment of bankside and emergent vegetation and the creation of backwaters and drainage channels.

Action: EA, BW, TWU, TVW, LA's.

WV7. On navigable waterways control the siting, design and use of mooring sites to minimise the impact on water voles. No new moorings should be created where Water Vole Wildlife Sites would be adversely affected.

Action: BW, EA, LA's.

WV8. Encourage riparian owners to leave an uncultivated strip along and adjacent to occupied watercourses to provide habitat and to act as a buffer to run-off of agricultural chemicals into the watercourse (see action WE19).

Action: EA, FRCA, TWU, TVW, HMWT, CMS, FWAG, CLA, NFU.

WV9. Where riparian land is grazed, encourage owners to prevent over-grazing and trampling damage to all riverbanks, if necessary by fencing off sections of river bank alongside or close to Water Vole sites. Target: 1 scheme annually.

Action: HMWT, CMS, FWAG, EA, CLA, NFU.

11.6.3 Species Management and Protection

WV10. Using guidelines within the Water Vole Conservation Handbook, draw up a strategy for mink control by riparian owners, fisheries managers and angler's organisations, where this is needed to protect Water Vole Wildlife Sites, by 2000.

Action: EA, CLA, Angling Groups.

WV11. If necessary, undertake re-introduction / translocation programmes to suitable stretches of river, to agreed scientific procedures. Draw up feasibility study by 2002.

Action: EA, HMG, HMWT.

WV12. Discourage the illegal use of rodenticides in areas supporting Water Voles and ensure all offenders are prosecuted.

Action: EA, MAFF.

11.6.4 Advisory

WV13. Make the Water Vole conservation handbook available to all advisory organisations, by 1998, to ensure appropriate advice is available to landowners and managers.

Action: EA, EN.

WV14. Disseminate the results of the national research into Water Vole movements, winter activity, the relationship between Water Vole and Mink, and the effectiveness of regular trapping of mink within nature reserves and key sites, by 2000.

Action: EA.

11.6.5 Research and Monitoring

WV15. Carry out regular surveys for the presence of Water Vole and mink along water courses and still waters to provide up to date status and distribution information. Update the Wildlife Sites list as necessary. In 1997, 100 stretches of river will be designated as key monitoring areas to be resurveyed every 5 years.

Action: HERC, HMG, HMWT.

WV16. Initiate further research, by 1999, to identify the full ecological requirements of the Water Vole in Hertfordshire, particularly the winter habits of Water Voles and their use of habitats such as reedbeds and urban watercourses.

Action: HMG, UH.

WV17. Promote Water VoleWatch during 1998, to gather survey information on Water Voles and river habitats and to feed into national and local research effort.

Action: HMWT.

WV18. Establish a Water Vole monitoring project with angling clubs by 2000. This may also include monitoring of mink activity.

Action: HERC, EA, Angling Groups, HMG, HMWT.

11.6.6 Communication and Publicity

WV19. Produce a leaflet during 1998 to inform the public, landowners and key user groups such as anglers, of the plight of the Water Vole; give relevant details of its ecology and augment survey work by appealing for information and records on the species.

Action: HERC.

WV20. Publicise Water VoleWatch and encourage surveying by the general public.

Action: HMWT, HMG.

WV21. Publicise the statutory protection now given to Water Vole habitat and the implications of this.

Action: EN, EA.

