WATER MAMMALS IN THE NORTH YORKSHIRE MOORS NATIONAL PARK

With its 1667km of waterways , the North Yorkshire Moors National Park offered an exciting place for an ecological study of our four principal waterside mammals the water vole (*Arvicola terrestris*), water shrew (*Neomys fodiens*), mink (*Mustela vison*) and the otter (*Lutra lutra*). There is little published data on their status in the National Park,which immedaiately raises questions on their distribution, preferred habitats, numbers and possible impact of feral mink.

Answering questions such as these about any British mammal is time-consuming and difficult, but the difficulties are compounded with waterside species, because (the waster vole apart) they are rarely seen. Studies therefore rely heavily on looking for and interpreting field signs such as the tracks and droppings they leave and then backing these up with live trapping, marking and releasing animals.

For my work on my M.Phil thesis I surveyed 41 sites with the widest possible range of habitats on 5 of the main rivers, namely the Esk, Dove, Seph/Rye, Seven and Upper Derwent.

The water shrew was virtually absent from all the study sites and this is probably due to the fact that fast flowing upland rivers are a hostile environment for this species. In the main it would appear to prefer more slowly flowing or standing water, for example streams, ponds and marshy areas.

The water vole, commonly misnamed water rat, was the most abundant of all the riverside mammals with clear tracks being found on all the study rivers. Nonetheless, the species was not as prolific as the initial surveys indicated and it was found to have a very patchy distribution. Live trappings showed that water voles occupied 'core' and 'peripheral' sites.

Core sites were marked by latrines and held breeding colonies of voles. Furthermore, water voles at core site were readily caught in live traps. Peripheral sites, on the other hand, were not marked by latrines and showed erratic water vole activity. It was never possible to catch water voles at these peripheral sites and there was no evidence of breeding at them. The appearance of water vole latrines coincides with the start of the breeding season, and while they are maintained latrines provide a useful guide to the number of animals in the area.

Water voles were rarely seen in the winter months; however, radio-tracking showed that they did not leave the river but were less active, spending more time in their burrows. When the rivers were in high spate, water voles moved to burrows in the steepest parts of the bank where they had nest chambers at different levels depending on the level of the river.

All the feral mink in Britain today are descendants of escapees from mink farms. They are now well established on many of the main rivers and slowly extended their distribution within the National Park during 1984-1988. Among the more interesting findings from the water vole and mink activity patterns was the suggestion that the mink were depressing water vole colonies. Final proof of this happening was provided when I was radio-tracking water voles. One site held a thriving colony of voles in 1985, which declined quite dramatically after mink started moving into it during 1987. Indeed, the remaining three radio-tagged water voles were all killed by mink in 1988. I was even able to witness a mink hunt and kill a water vole which it did with great efficiency, having grabbed the animal as it dived for safety in the river. Thus mink pose a serious threat to the long-term survival of water vole populations on the study river.

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