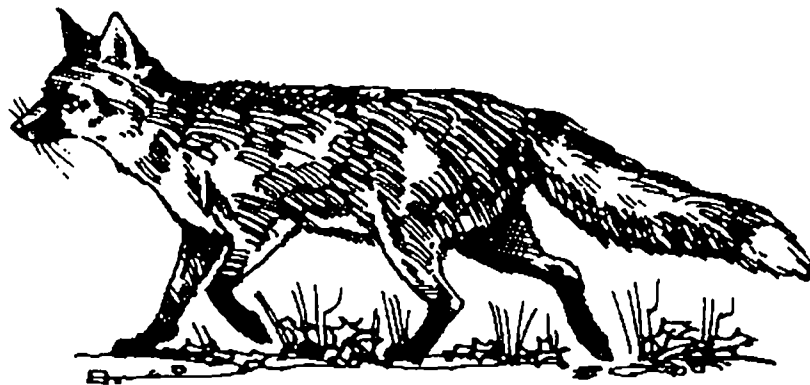


The Biology of the European Red Fox and the Free
Roaming Dog on Bherwerre Peninsula, Jervis Bay.



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iii. Abstract

This thesis provides an insight into the biology and ecology of foxes *Vulpes vulpes* from a coastal habitat and free roaming dogs *Canis lupus familiaris* from an Aboriginal community, both in SE NSW. In particular, the study examines the home range and movement patterns of both canids from a view point of population and disease control. Additional base line information was collected for these species on diet, parasites and population biology.

A total of 14 foxes and 10 dogs were collared and radio tracked to determine the home range and movement patterns of the animals. The data collected provides information on the behaviour of foxes in coastal habitat and represents the first detailed biological study of free-roaming dogs in Australia. The results provide a better understanding of dog movements, particularly the differences in behaviour between wandering and sedentary dogs. Home range sizes varied greatly between the dog groups from 1 ha to 2451 ha. There was evidence that dog forays were influenced by prey availability, particularly medium sized macropods. Occasional sallies, size and shape of fox and dog home range is discussed in relation to the richness of habitat at Jervis Bay with comparisons being made with other studies from the literature. Foxes in Jervis Bay had home ranges between 60-270 ha which is comparable to foxes living in the forests of Germany and in coastal habitat in the Netherlands

This study also provides data on the diet of foxes and dogs presenting quantitative and qualitative data on food preferences. Foxes tended to be opportunistic in food selection although critical weight range mammals ie. ringtail possums were favoured. The high prevalence of the parasite *Spirometra* spp. in foxes indicated that considerable numbers of amphibians and reptiles are consumed by this species. A comprehensive inventory of the parasites of the two canid species showed a high proportion of hookworm in foxes and dogs

and *Spirometra* spp in foxes. These results are discussed in light of the potential health implications for local Aboriginal people.

Analysis of fox scats revealed that they have the potential to spread the seeds of bitou bush. A more detailed pilot study revealed the potential impact of foxes on the environment through the spread of weed seeds. Germination trials recorded high viability of seeds that were eaten and deposited by foxes. The management implications of this behaviour are discussed in context to weed control.

This thesis has provided new information on foxes and dogs in Australia. Discussion on these species in the thesis has been framed around the benefits of this information for population and disease control.

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