

Management of urban animals - the Jervis Bay perspective

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ABSTRACT

Discussions about the ownership and management of urban animals often centres on pets in cities and towns, thus management strategies focus on heavily populated areas. Urban animals are also found and cause problems in small urban settlements where animal control legislation is similar to cities but where there are fewer people and the native wildlife is more diverse and abundant. In Jervis Bay Territory there has been recent controversy about the compatibility of resident dogs and cats with the surrounding National Park. Complaints about troublesome pets are also increasing. The Department of the Environment, Sport and Territories has plans to resolve these problems. The proposal is to create a Jervis Bay specific management approach to pet ownership in the Territory.

A radio tracking study has been undertaken in the area to determine the movements and home range of domestic cats and commensal dogs in the Territory. This paper presents a summary of the proposed plans to improve pet ownership in Jervis Bay Territory and gives some preliminary results of the radio tracking study currently being carried out on cats and dogs in the Territory.

INTRODUCTION

Jervis Bay Territory (JBT) is a relatively pristine peninsula (7000 ha) located 200 km south of Sydney on the eastern seaboard. The area is jointly managed by the Department of the Environment, Sport and Territories (DEST), Australian Nature Conservation Agency (ANCA), Wreck Bay Aboriginal Community Council and the Department of Defence (HMAS Creswell & Jervis Bay Range Facility). At the southern end of the peninsula there is a small community of lessees. All residential areas of JBT are surrounded by National Park. The human population is approximately 800 and 71 percent of these people own pets (Meek 1994a).

The majority of this land mass (86 percent) is managed by ANCA as Jervis Bay National Park. The Park has only recently been proclaimed and there are plans to manage this area as a 'centre of excellence' in conservation management. Other responsibilities including legislative services and urban animal management are the responsibility of DEST. The legal framework for Jervis Bay Territory is based on ACT and Commonwealth Legislation.

The primary goal of ANCA is to manage the area as a conservation zone which is biologically linked to the wider Shoalhaven River environment. A part of their mandate is to *protect and conserve natural terrestrial, marine and freshwater fauna and flora so as to maintain biodiversity in Australia*. This is implemented under the *National Parks and Wildlife Conservation Act 1975 (NPWC) and Regulations*. More specific legislation (*Endangered Species Protection Act 1992*) makes provision for management specific *Threat Abatement Plans (TAP)* to be prepared. In a recent workshop, plans were discussed for the development of a TAP for feral cats. One of the goals of this policy is to *achieve more uniform and effective legislation to facilitate the management of feral and domestic cats* (Carter 1994).

The role of the DEST is broad in Jervis Bay Territory. Their policy is to: *administer the JET in sympathy with the surrounding region; preserve the Territory's environmental and cultural heritage; provide appropriate Government services and implement legislation to protect and conserve the Territory's values*. Overall the land management theme in JBT is conservation and protection of endemic species biodiversity.

MANAGEMENT DILEMMA

The Jervis Bay Territory has the problematic blend of conservation, communities and companion animals. The management dilemma is to design a balanced combination of strategies that satisfies the legal and social demands of the area. On environmental and legal grounds (*NPWC Act 1975*), dogs and cats are not permitted in the National Park. However, the Territory includes four residential communities whose occupants have an ethical right to own pets. Unfortunately pets can not recognise legal and conservation boundaries and subsequently roam in the Park and in neighbouring back yards, where the controversy begins. The difficulty for administrators is that pets overlap the management boundaries between the National Park and their home domain.

Another problem in JBT is that the various residential communities have differing interpretations of their rights as pet owners in line with their chosen life style and culture. The aim of legislation is to overcome this issue and to provide some form of management over pet ownership and behaviour. Since cat ownership is not covered by any applied ACT legislation their management currently suffers from an inadequate legal framework in JBT. Without any form of registration system in place there is no way of educating and encouraging irresponsible owners to place greater control over their cats. The lack of registration and control also reduces the chance of returning lost or wandering animals to their owners (Murray and Penridge 1992).

CURRENT MANAGEMENT

Management of urban animals in JBT is administered by DEST under the *ACT Dog Control Act 1975*, *Animal Welfare Act 1990* and the *Rabbit Destruction Ordinance 1927*. Currently there are two Deputy Registrars and eight authorised Dog Inspectors to enforce the Act in JBT. All of these officials operate on a part-time or needs basis because these duties form only a small part of their normal daily duties, for example, as rangers or administration staff. Under the *ACT Dog Control Act 1975* all dogs must be registered in the Territory. Meek (1994a) reported that less than fifteen percent of the dogs were registered. There is no legal or resource provision for cats to be collected and impounded within the area. Jervis Bay Territory requires a policy and perhaps legislation that is specific to the local area based on the requirement of local residents and local management philosophies.

SURVEY OF JERVIS BAY PET OWNERS

Pet owners in Jervis Bay were recently surveyed by questionnaire (Meek 1994a) to collect information on numbers of owners, types of pets and general information about pet ownership. One hundred and nineteen households responded to the survey which represents 72 percent of the total population. Pets were owned by 71 percent of these residents. Dogs were the most commonly owned pet (84.5 percent), cats were owned in 26 percent of households. Table 1 describes the pet population in the Territory.

Table 1. Number of pets pet community

PET TYPE	VILLAGE	WRECK BAY	CRESSWELL	LESSEES	TERRITORY
Dogs	14	34	46	1	95
Cats	6	20	13	0	39
Caged birds	3	0	26	3	32
Fish	9	0	9	3	21
Chickens	4	0	3	0	7
Guinea pigs	4	0	0	0	4
Rabbits	0	1	1	1	3
Rats	0	0	2	0	2

Thirty nine percent of dogs and 41 percent of cats were de-sexed at the time of this survey and only 14 percent of dogs were registered. This survey shows that the majority of the population in Jervis Bay Territory owns pets, which has important management implications for future decision making in the Territory.

WHAT ARE THE PROBLEMS

Current management of urban animals in JBT is difficult to enforce under existing ACT legislation. The resulting lack of control and knowledge of pet ownership in the area creates management problems and is a source of many complaints from local residents. A report prepared by Wier and Wilson (1993) raised issues over the inadequacies of existing legislation pertaining to the ownership of pets in JBT and recommended prompt resolution. Results from the survey by Meek (1994a) also reported that local residents wanted tighter control over wandering cats and barking dogs.

There are three main areas of concern in terms of companion animal management in Jervis Bay Territory:

1. Public nuisance

The nuisance problems caused by dogs in cities has been described by Murray and Penridge (1992). Nattrass (1993) has discussed the nuisance caused by cats. Dogs are also a nuisance in farming communities causing loss of income of primary producers (Cameron 1993). The main concern in the residential areas of JBT arises from dogs wandering into yards and from dog attacks on people and wildlife. Regular complaints are made to Jervis Bay staff about free roaming cats fighting, caterwauling and intruding on private property. Murray and Penridge (1992) describe this experience as a 'feeling of intrusion' of personal space. Concerns are also expressed about the piles of feathers and animal remains deposited in public places, causing psychological stress to neighbours.

2. Disease transmission

Dogs and cats are known to carry many parasites of importance to human health (Stevenson and Hughes 1988). The potential for dogs and cats to transmit zoonoses is a concern, but is not a topic considered important by the general public. Cats are reservoirs and vectors of the parasite *Toxoplasma gondii* which causes toxoplasmosis (Speare 1985) and is fatal to native wildlife (Obendorf 1992). In the JBT pets harbour several zoonotic parasites (Jenkins and Andrew 1993; Jenkins et al. in press), including life threatening parasites such as the hydatid tapeworm *Echinococcus granulosus* (Jenkins and Andrew 1993). The role of free roaming dogs and cats, should a rabies epidemic occur in Australia, also poses threats to human health and would complicate the control of a disease outbreak.

3. Environmental concerns

Dogs and cats have been implicated in negative ecological impacts (Ebenhardt 1988; in Fitzgerald and Veitch 1985; Flavel 1992; Murray and Penridge 1992). There is no question that dogs and cats do prey on a number of native wildlife species (Nattrass 1992). The concern is that Australian based research has not determined the significance of these impacts on mainland species.

Ecological impact can be considered from two perspectives: scientific impact and perceptual impact. The primary concern of the scientific fraternity is whether predation by pets causes or contributes to a negative effect on population dynamics. Paton (1991) has attempted to quantify the impact that cats are having on urban wildlife in Australia. His study is based on the prey items brought home by cats in Adelaide. However the use of dietary data in measuring the effect on populations is limited because the data only identify the species brought home and do not quantify consumed prey. Furthermore, the data are of limited value unless there is a clear understanding of variables such as prey species abundance and natural mortality factors. Recent research on the 'hunting behaviour' of domestic cats in Australia (Anon. 1994) suggests that cats prey more on introduced species (67 percent) than on native species (33 percent). These data were based on telephone interviews rather than on biological identification of captured prey and are of limited scientific value.

3a. Prey items collected from cats and dogs: A pilot investigation by this author on cat biology in JBT has provided some base line dietary information (Table 2). Owners of cats in the Territory were asked to keep records of prey items brought home by their pets during the study period. Records collected to date can only be used as indicators because they are based on a small sample size. Many owners were reluctant to participate in this survey. Prey collected by dogs has only been assessed on observed kills and not by survey.

The greater proportion of prey taken by cats, to date, was of native species (75 percent). Native birds were the largest group represented in the data. There were no introduced bird species recorded. This result would be expected since only a small number of introduced birds are found in the Park (Meek and Naser in press). Preliminary data show that the optimum hunting period for both dogs and cats is between midnight and early morning. Barratt (in press) found that cats in Canberra caught more birds during daylight hours and more mammals in the night. Similar results are being found in Jervis Bay.

The chance that native wildlife are caught by cats and dogs in Jervis Bay would be considerably higher than in city areas because the density and abundance of native species is higher in wilderness areas. Animals therefore only need to travel small distances to find native prey species. This has important implications for considering pet ownership.

The ecological consequences of the predatory impact of cats on native species in Jervis Bay has not been quantified at the population level. Two Ground Parrots (*Pezoporus wallicus*) were recently killed by cats. These birds are currently listed as endangered on *NSW NPWS Schedule 12*.

STATUS	SPECIES	CAT PREY (n=4)	DOG PREY (n=3)
Native Mammal	Brown Antechinus	2	
	Dusky Antechinus	2	
	Eastern Grey Kangaroo		3
	Sugar Glider		
	Ring Tail Possum*	1	
		2	
Bird	Ground Parrot*	2	
	Red Wattle Bird	1	
	Southern Emu Wren*		
	Grey Shrike Thrush	1	
	Crimson Rosella	1	
	Galah	2	
			1
<i>Total Native</i>		14	4
Introduced Mammal	House mouse	4	
<i>Total introduced</i>		4	

*killed by unknown animals, # dog prey data has not been collected by survey

The perception of ecological impact is a psychological and visual phenomena which varies in significance between individuals. To the keen naturalist or bird observer the loss of one animal can be of major importance. Similarly, the mere presence of a cat or dog stalking prey in a person's backyard may not be ecologically threatening to the species but has a significant impact on the observer .

Free roaming pets also cause a negative visual impact on visitors who travel to the Jervis Bay National Park to enjoy a wilderness experience. Rolston (1986) assesses the value of wild places through the use of twelve categories. Two of the categories which are becoming increasingly important in society today are aesthetic values and therapeutic values. Wilderness offers relief from the daily stress of living in cities. Rolston (1986) refers to wild places as a 'niche that meets deep-seated psychosomatic needs'. The serenity and solitude offered by wilderness areas can be marred by the presence of introduced species and scenes of predatory violence. Visitors to JBT have conveyed their distress at seeing a pack of dogs tear the throat from a terrorised kangaroo in the middle of a camping area. On this basis there is further policy impetus for confining dogs and cats in JBT .

MOVEMENTS OF CATS AND DOGS

Preliminary results of research conducted by this author have revealed some interesting data on the movements of domestic cats and commensal dogs in Jervis Bay Territory. Frequencies of forays into the Park by these animals have been measured during an ongoing radio telemetry study. Based on the data collected from a small number of dogs (n=10) and cats (n=11) it is evident that roads and roadside vegetation are used as routes to hunting grounds. Forays usually take place during the night and in the case of dogs can last for 8-10 hours. Anecdotal reports indicate that some of these dogs 'go hunting' for two days.

Dogs are known to travel to specific locations in search of macropods. Their hunting grounds are swamps, beaches, camping areas and the local airstrip. The dogs have been recorded covering distances of between 14-30 km in one foray. Packs of 2-4 are usual, although one particular dog travels alone.

Cats in Jervis Bay use roadside vegetation and service tracks as thoroughfares, occupying small linear ranges of within 450 metres. A few cats are travelling distances of between 2-4 km each foray. Cats seem to use the same range each foray, whereas the destinations of dogs vary greatly. On many occasions dogs and cats in JBT have suffered injuries while hunting; some never return.

Keeping pets confined has benefits for the welfare of both the pet and native species. Confining pets can reduce injuries inflicted during road accidents and fights, and prevents unwanted mating. The welfare of native species is an issue rarely associated with urban animal management. In particular, the potential pain and suffering experienced by hunted, injured or mis-mothered wildlife during predation by cats and dogs. This inhumane and unnecessary injuring and killing of native wildlife should be considered as equally as important as the welfare of pets. Better control of urban pets in Jervis Bay will benefit the welfare of all animals. It will also ensure that pets do not contribute to the growing number of feral dogs and cats in the region which become strays or mate with feral populations as described by Natrass (1993).

MANAGEMENT SOLUTION

In 1993 DEST began a review of the management of urban animals in JET that has resulted, to date, in the preparation of a discussion paper to review existing procedures and problems. The terms of reference for the discussion paper were to review companion animal management, identify the problems, and propose balanced strategies and options for improving future management of pets (Meek 1994b). The document discussed a range of potential management scenarios, which were:

1. Prohibition of all pets;
2. Prohibit potentially threatening species and allow less predatory species;
3. Allow pets to reside in the Territory under existing arrangements;
4. Allow all pets to reside in the Territory under a new policy which aims to enforce responsible ownership practices and better welfare of pets.

The document recommended that Jervis Bay Administration develop legislation in the form of a Companion Animal Ordinance which could include:

- the introduction of an electronic animal registration system for all pets;
- compulsory registration and de-sexing of all pets;
- the provision of a designated pet walking area;
- improvement and up-date of animal handling and holding pounds to include a cattery;
- the ability to issue Public Infringement Notices to irresponsible owners with a history of offences (this has since been implemented);
- confinement of pets at all times except when being walked on a leash.

This Ordinance could serve as an umbrella document that bridges the gap between existing pieces of legislation and aims to rectify inadequacies in existing legislation, in particular the management and control of cats.

THE NEXT STEP

Community involvement in the decision making process is an integral part of urban animal management. A major component of the proposed changes to urban animal management in JBT is the preparation of an education and interpretation program specific to Jervis Bay which encourages responsible pet ownership. This would include the introduction of 'PET PEP' to the primary school curriculum. There is also scope for the distribution of a monthly pet care newsletter and the compilation of a companion animal ownership induction package. The package could be distributed to new and existing pet owners in the Territory and could include pertinent information on pet ownership in the Territory .

Following the initiation of the education program it is planned to consult with local residents about the proposed plans, and to seek comments on the discussion paper recommendations.

CONCLUSION

Jervis Bay Territory is an ideal location in which to implement an urban animal management strategy that is compatible with the theme of a 'centre of excellence' in National Park management, where the aspirations and rights of pet owners and non pet owners can be satisfied and where urban animals can coexist with native wildlife. The current management dilemma in JBT illustrates that broad scale national management strategies are not always appropriate at the local level. It is essential that future urban animal management strategies consider the needs of local areas and communities when developing state or national policies.

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Paul is currently researching the biology and ecology of foxes, domestic cats and commensal dogs in Jervis Bay Territory. He is also a post graduate student with the Applied Ecology Research Group at the University of Canberra. Paul graduated with a Degree in Applied Science (Resource Management) from Roseworthy Agricultural CAE in 1987. After short periods with SA National Parks and Wildlife Service and as a vertebrate pest control consultant he held a position as a District Officer with the W A Agricultural Protection Board. In 1989 he moved to Canberra as a Science Officer with the Bureau of Resource Science where he worked on feral pig management and in the Aboriginal Employment and Development Policy section of the Department. Since 1991 Paul has lived and worked in Jervis Bay where he initially studied dog parasites and their control in a population of dogs from the Wreck Bay Aboriginal Community. Paul is also implementing a Black Rat (*Rattus rattus*) control program on Bowen Island (JBT). He is the consultant to the Department of the Environment, Sport and Territories on issues of companion animal management and is an authorised ACT Dog Inspector .

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