

WILD SIDE

Newsletter of the AVCB

A Special Interest Group of the Australian Veterinary Association

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National Feral Cat Management

by

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Introduction

Feral cats became established in the Australian environment after European settlement and modelling based on historical records indicates they were across the entire continent by the 1890s (Abbott 2008). In 2015, Australian Government interest in the problems of predation, competition and disease transmission by feral cats took a step up. This is reflected in the joint hosting of a National Feral Cat Management Workshop, the release of a revised Threat Abatement Plan for predation by feral cats, the agreement of all

Australian governments to declare feral cats as a pest and feral cat specific targets announced in the Threatened Species Strategy. Here, I will provide some context as to why feral cats are of high interest and what this means for their management.

The problem

Feral cats are recognised as a potential threat to 74 mammal species and subspecies (Woinarski et al. 2014), 40 birds, 21 reptiles and four amphibians. While mammals tend to be the dominant prey item, feral

cats will take pretty much anything that is available up to 3-4 kg (typically <220g). Some cats can become specialists in particular prey items which can be catastrophic when this is a threatened species (Dickson and Newsome 2014). Predation by feral cats is recognised as a key threatening process under the national *Environment Protection and Biodiversity Conservation Act*.

Feral cat management and legislation is highly variable across Australia, and investment in research to seek longer term solutions has been *ad hoc* with limited national coordination. This has been in part due to the very few options available to land managers to control cats. While trapping and shooting can be effective with skilled operators feral cats are cryptic and smart often eluding capture. Also trapping and shooting is too resource intensive to implement across large areas. Continued p2



Night Camera : Feral Cat with Bandicoot. Cape Arid, Western Australia. Photo courtesy of Dave Algar





AVCB General Meeting

Where: AVA Conference Venue, Adelaide

When: Tuesday 24th May 2016 at 6PM

This year is important to AVCB as decisions will be made regarding the future and structure of our SIG. It is important that as many members as possible attend the meeting and those who cannot use the Proxies to express their wishes.

Nomination Forms for executive positions and the official Notice of Meeting will be forwarded separately.

National Feral Cat Management *continued*

Management strategies

The 2015 National Feral Cat Management Workshop (Tracey et al. 2015) provided an opportunity to gather people together working on feral cats and to collectively identify priorities for future work. The detail can be seen in the proceedings of the workshop and includes better quantifying the impacts of feral cats, development of improved control tools and building a collaborative approach with the community. Improved links between researchers at the workshop has seen the development of some exciting new research projects.

Broad-scale control of feral cats will be easier in the future with the 2014 approval of a bait for

feral cats for use in Western Australia – Eradicat® – and the completion of R&D for the Curiosity® bait for southern areas of the continent. Finally, a third bait variation – called Hisstory – is being field trialled in northern Australia. Feral cat control in strategic locations will also be helped by the development of a cat-specific grooming trap that sprays a toxin onto the fur of the feral cat.

The humane treatment of feral cats is an important element in management programs for feral cats. Standard Operating Procedures (Sharp 2012) have been developed for control tools to ensure best practice is undertaken. A toxin, para-aminopropiophenone (PAPP) has been adapted for use on

feral cats and, while it will not replace the need to use 1080 completely, it is believed it provides a more humane death.

The action plan associated with the Threatened Species Strategy sets ambitious targets for feral cat control. The four targets are to eradicate feral cats from five islands; establish 10 cat-free mainland exclosures; establish best practice feral cat control across 10 million hectares of open landscapes and implement best practice feral cat control in two million hectares of Commonwealth land. These targets are the focus of the Threatened Species Commissioner who assists in focusing projects and linking investments.Continued p 3

National Feral Cat Management continued

Interface to domestic cats

Improvement in the management of domestic and stray cats is seen as a necessary step to help reduce their impacts on native wildlife and the potential avenues to increase feral cat populations. In acknowledgement of this, Commonwealth, state and territory environment ministers agreed to pursue the development of a national best

practice approach to the keeping of domestic cats in July 2015. It is recognised that discussions on best practice domestic cat-keeping are likely to be complex and will involve many different groups.

To prevent stray and domestic cat impacts on wildlife, the Australian Government is promoting the key messages of taking on full ownership of stray cats, and the containment of

domestic cats. Both of these actions improve the welfare of the animals. One of the four objectives of the *Threat abatement plan for predation by feral cats* (Department of the Environment 2015) is to increase public support for feral cat management and promote responsible cat ownership.



Feral Ginger Tabby on Christmas Island. Photo courtesy of Michael Johnston

References

Department of the Environment 2015. *Threat abatement plan for predation by feral cats*. Commonwealth of Australia. Available at: <http://www.environment.gov.au/biodiversity/threatened/publications/tap/threat-abatement-plan-feral-cats>

Dickson C & Newsome TM. 2014. *Individual hunting behaviour and prey specialisation in the house cat Felis catus: Implications for conservation and management*. Applied Animal Behaviour Science.

Sharp T, 2012. Standard Operating Procedure CAT001: Ground shooting of feral cats. Available at: <http://www.pestsmart.org.au/pest-animal-species/feral-cat/> Website also includes other Standard Operating Procedures for trapping using soft net traps, methods of euthanasia, trapping using cage traps and padded-jaw traps.

Threatened Species Strategy 2015. Available at: <http://www.environment.gov.au/biodiversity/threatened/publications/threatened-species-strategy>

Tracey J, Lane C, Fleming P, Dickman C, Quinn J, Buckmaster T & McMahon S (Ed) 2015. 2015 *National Feral Cat Management Workshop Proceedings*, Canberra 21-22 April 2015. PestSmart Toolkit publication, Invasive Animals Cooperative Research Centre, Canberra. Available at: <http://www.pestsmart.org.au/2015-national-feral-cat-management-workshop-proceedings/>

Woinarski J, Burbidge A & Harrison P. 2014. *The Action Plan for Australian Mammals 2012*. Collingwood: CSIRO Publishing.

Book Review

The action plan for AUSTRALIAN MAMMALS 2012



JOHN CZ WOJNARSKI, ANDREW A BURBIDGE AND PETER L HARRISON

Subspecies Conservation Summary

Kangaroo Island Echidna

Tachyglossus aculeatus maculicinctus (Rothschild, 1905)
Tachyglossidae

Other common name: Short-beaked Echidna (Kangaroo Island)

Conservation status
Endangered (Babyl)

Justification
The Kangaroo Island Echidna has an Area of Occupancy of <math>< 5000 \text{ km}^2</math>. It occurs at a single location and there is a continuing decline in the number of mature individuals.

Retrospective status 2002
Endangered (Babyl)

Retrospective status 1992
Endangered (Babyl)

Previous Action Plan assessment
Near Threatened (Approaches to) (Maxwell et al. 1996)

IUCN status (2012)
Not Evaluated. The full species is Least Concern (Aplin et al. 2008).

EPBC Act status (2012)
Not listed

Reason for change from EPBC Act listing
 genuine change new knowledge taxonomic change previous mistake other

Explanation: The Kangaroo Island Echidna has a small range and there is a continuing decline in number of mature individuals due mainly to predation by feral Cats and road mortality.

Legal status in range State
South Australia Not listed

Taxonomy
Several subspecies of the Short-beaked Echidna have been described reflecting morphological variations throughout its large range; however, these have not been subjected to modern molecular analysis and the mainland 'subspecies' at least, are likely to be invalid.

ICUN Criterion	Criteria eligibility
A	Near Threatened: population size reduction approaching 30% in 75 years (3 generations)
B	Endangered: <math>< 5000 \text{ km}^2</math> single location, continuing decline in number of mature individuals
C	Near Threatened: population size inferred as <math>< 10,000</math>, continuing decline inferred to be $> 10\%$ within 75 years
D	Near Threatened: single location, plausible threats, but not likely to become Critically Endangered or Extinct in a very short period of time



T. a. acanthion is Least Concern; *T. a. aculeatus* is Least Concern; *T. a. arfurnus* is Least Concern; the species as a whole is Least Concern.

Taxonomic distinctiveness: very high (global), high (Australian)

Range
The Kangaroo Island Echidna is restricted to Kangaroo Island, South Australia.

Abundance
There are no robust measures of population size; however, Kangaroo Island Echidnas are relatively common throughout most of the island's remaining natural vegetation, but at a lower density than prior to European settlement due to habitat loss (Risemiller 1999). They are declining due to predation by Cats and Pigs, and due to road mortality. Recruitment does not keep up with rate of non-natural and natural deaths (P. Risemiller pers. comm.).

Monitoring
Monitoring of individuals in subpopulation inhabiting Pelican Lagoon peninsula is being continued (commenced in 1988, P. Risemiller pers. comm.) and there are other study sites on the island. Reports of road mortality across the island are being collected as well as deaths by

ICUN Red List assessment data	Estimate	Reliability
Extent of occurrence (land)	4400 km ² stable	high
Area of occupancy (land)	c. 2200 km ² stable	medium-high
No. of mature individuals (land)	c. 5000 increasing	medium
No. subpopulations	1	high
No. locations	1	high
Generation time	24 years	medium

Scope and Format

This book presents a standard template format, as seen above, for all Australian mammal taxa and presents data important to

Comments and review by Michael Banyard

recommend an Action Plan for each. The authors compare their findings with those of the IUCN Red List assessment data. While not a "bedtime read" this

This is a valuable reference book for anyone interested in Australian mammals. To quote the authors' purpose, "The Australian mammal fauna has fared catastrophically since European settlement. Previously common and widespread groups have been forced to extinction; many surviving species now eke out an existence in a tiny fraction of their former range or are sustained in a type or emergency care under the life support system offered by island marooning, captive breeding or predator-proof fencing.

In this book, we provide a comprehensive review of the current conservation status of all Australian mammal species and subspecies."

CSIRO Publishing

ISBN 9780643008738 (hardback) pages 1038

14 Kangaroo Island Echidna

Threat factor	Conservation rating	Extent over which threat may operate	Evidence base
Predation by feral Cats	severe	extensive	81% of young killed nearly by cats (Brisfield and McKelvey 2003); some adults killed by cats (P. Risemiller pers. comm.)
Habitat loss and fragmentation	severe	extensive	extensive forest clearing has reduced population size; some clearing continues
Road mortality	moderate	extensive	c. 2000 km of roads on Kangaroo Island; echidnas have long home ranges (Brisfield and McKelvey 1994); average of 35 road deaths reported per year and many more unreported (P. Risemiller pers. comm.)
Predation by feral Pigs	minor-moderate	moderate	species documented in pig scat (1980-1992) (P. Risemiller pers. comm.)
Death due to electric fences	minor-moderate	moderate	minor catches from mainly around plantations

Information required

Theme	Specific actions	Priority
Survey to better define distribution	estimate population size and measure decline rate	medium
Assess impacts of threats on species	estimate population level impacts of road mortality and predation by cats and feral pig	low-medium
Establish or enhance monitoring programs	continue monitoring in areas with previous work following established methodologies; establish new long-term monitoring areas to follow	low
Assess effectiveness of threat mitigation options	monitor status of feral pig subpopulations	low
Monitor landscape effectiveness	N/A	
Assess diet, life history	continue life history studies of tracked individuals	medium
Monitor genetic diversity	define estimates of genetic diversity and assess viability	medium
Understand research to develop new or enhance existing management mechanisms	develop fence-line, targeted feral Cat eradication technology	high

other means, e.g. feral Cat and Pig predation, electric fences.

Ecology

The diet consists of a wide range of invertebrates (Risemiller 1999, 2003), which are extracted from soil, rooting vegetation and invertebrate nests using the Echidna's powerful claws and beak. The single egg is laid into a rudimentary pouch and hatches after 10 days. Young are weaned after 205-214 days (Risemiller and McKelvey 2000). Age at first reproduction is 10-12 years for females (Risemiller and McKelvey 2003). Longevity is up to 48 years in the wild and up to 50 years in captivity (Jones et al. 2008, AnAge 2012). Generation length is here assumed to be 25 years.

Because of its relative abundance in native habitat and intact ecosystems, the Kangaroo Island Echidna has been extensively studied in the field and laboratory (e.g. Risemiller and McKelvey 1994, 2000, 2003, 2006).

Recovery plan

There is no recovery plan.

Current management

There is no targeted management.

Conservation objectives

1. Maintain current range and abundance.

Comments received from Peggy Risemiller

Theme	Specific actions	Priority
Active mitigation of threat	control feral cats in conservation estate	high
Control breeding	limit road mortality via regulation, enforcement and education	medium
Control breeding	N/A	
Control breeding	prevent and implement a necessary plan for Kangaroo Island	high
Translocation	via introduction of 'genetic animals' not recommended as they have a strong homing instinct and it may reduce a female with dependent young	
Monitoring	continue monitoring of individuals and of deaths due to road mortality and predation	high
Community engagement	involve Kangaroo Island community and visitors to provide a better understanding of Kangaroo Island	medium

book is awesome in its scope and importance to people engaged in the conservation and management of our precious fauna.

Executive Positions

AVCB 2016

Nominations will shortly be called for all current executive positions in AVCB. These will include President and up to 8 Executive positions. Specific tasks (eg Newsletter Editor, Treasurer, Media etc) are filled from within the executive or appointed from the membership by consultation.

The viability and functionality of the SIG depends on the number and energy of its executive. We are currently running under a 'jury rig' which has insufficient numbers to make the SIG function effectively. In response to a survey about non-participation in the AVA one respondent answered that they had not been invited. Fair enough! Let's put that right immediately. Any and all financial members of AVCB are warmly invited to participate in its operation. Your contribution will be valued and the rewards of friendship and purpose can be unexpected and surprising.

Cheers, Michael Banyard

Our Wildlife Friends



Working Group

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Note: AVCB is being managed by the Working Group because elections have not been held since 2010. They will be replaced by an elected Committee in May 2016 or steps taken to wind up the SIG.