



Livestock guardian dogs protecting native species

Linda Van Bommel, PhD

ANU College of Science, Postdoctoral Researcher

Livestock guardian dogs (LGDs) have a long history of protecting domestic animals from predators and thieves. The use of LGDs has been traced back to the time of the Roman Empire, but the practice likely started much earlier than that. The majority of LGD breeds originated in Europe and Asia, and their use has spread to most continents of the world. These dogs can be effective in protecting many types of livestock from many different types of predators, including in Australia. In a survey of 150 Australian livestock producers with LGDs, 96% of the respondents reported that predation on livestock had either ceased or decreased significantly after the dogs started working. For many producers, LGDs make the difference between being eaten out of business by predators and running a profitable livestock enterprise.

LGDs can protect more than just livestock. On Middle island, in Warrnambool, Victoria, a pair of Maremma sheepdogs are successfully protecting a colony of Little Penguins from fox predation. Since these Maremmas started working in 2006, the colony has slowly increased from only 10 penguins to over 180 in 2013.

To investigate if these dogs can also protect other native species from fox and cat predation, eight Maremma sheepdogs are now in training



to protect Eastern Barred Bandicoots. Eastern Barred Bandicoots used to be widespread in Tasmania and western Victoria. They still occur in Tasmania, but they are now listed as extinct on mainland Australia. It is thought that habitat loss and predation by foxes and cats are the main contributors to their decline on the mainland. These bandicoots have successfully been released into predator free enclosures at several sites in Victoria, where they thrive in a predator free environment. However, for this species to become re-established in the wild, outside of predator proof fences, fox and cat predation on the bandicoots needs to be managed. The Maremma sheepdogs are in training to achieve just

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Email address avcb@ava.com.au

Facebook [@AustralianVeterinaryConservationBiology](https://www.facebook.com/AustralianVeterinaryConservationBiology)



White-nose syndrome - Australian bats at risk

Keren Cox-Witton

Wildlife Health Australia, Mosman NSW

White-nose syndrome (WNS) is killing bats in North America. This fungal disease, caused by *Pseudogymnoascus destructans*, is estimated to have killed over 6 million insectivorous bats in the USA and Canada since it was first recognised in 2006.

WNS affects hibernating cave-dwelling bats, as the fungus likes cold temperatures and can't grow above 20°C. Clinical signs include white or grey powdery fungus on the fur or wings, damage to the wing membranes, mass mortality and unusual behaviour such as flying during the day or increased activity during hibernation. *P. destructans* has also been found across Europe and in north-east China, but without the mass mortalities observed in North America, possibly because the bats and the fungus have evolved together over a long period. It is thought that the disease may have been introduced accidentally into the USA from Europe by human activity, as the fungal spores can be transmitted on contaminated clothing and equipment. The fungus can survive in the environment for long periods, even in the absence of bats.

WNS has not been identified in Australia, but our southern insectivorous bats have been assessed as at risk if the pathogen were introduced. We have a number of bat species that hibernate in caves where temperatures are low enough for the fungus to survive and grow. This includes a critically endangered species, the southern bent-winged bat.

The most likely way for *P. destructans* to enter

To find out what signs to look out for and how to report a suspect case of WNS in Australia, go to the WHA website:

<http://www.wildlifehealthaustralia.com.au/ProgramsProjects/BatHealthFocusGroup.aspx#WNS>

and to learn more about WNS in North America:

<https://www.whitenosesyndrome.org>



Micro bat from US Cave

Photo courtesy of U.S. Fish and Wildlife Service

Australia is on clothing, footwear or equipment that has been used in affected caves overseas. Activities to prevent introduction have included raising awareness within the caving and wildlife community and providing advice on decontamination. In July the International Congress of Speleology was held in Sydney, which attracted cavers from overseas and included field trips to Australian caves. The congress organisers were very proactive and worked with the Department of Agriculture and Water Resources and Wildlife Health Australia to reduce the risk of WNS introduction by visitors to the congress. Response guidelines outlining possible management options have also been developed to assist in the event of an outbreak if it were to occur in Australia.

AVCB Stream, AVA Conference - Preliminary Brisbane, May 14-18, 2018

Field Trip: Wildlife Care, Treatment & Captive Breeding

This field trip will provide a complete day's program visiting some of the major wildlife care and captive breeding centres in SE Queensland. A single minibus will operate with a capacity of approximately 15 persons. We will visit RSPCA's busy facility at Wacol en-route to Hidden Vale Sanctuary, a purpose built wildlife care and captive breeding facility. We will also hear of the wildlife postgraduate work being conducted at

Hidden Vale by graduate students of UQ. Lunch will be at the spectacular Spicers Lane where delegates can choose their own lunch options from simple to lavish. Then on to the University of Queensland campus at Gatton to inspect their Veterinary Hospital. This trip will provide the opportunity to meet key wildlife vets and carers as well as become acquainted with current practice and issues. With a full program and limited space best to book early. The host for our trip will be Dr Vere Nicholson, well known Gold Coast Dreamworld Vet.



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that. Once the bandicoots are re-introduced in the wild, the dogs will be there to keep them safe from predation without predator proof fences.

As part of their training, the Maremmas are gradually introduced to bandicoots and other native species, but they are mainly raised with sheep. At the re-introduction sites, the dogs will have a small number of sheep to protect in addition to the bandicoots. Maremmas are very social dogs, and the sheep will provide them with social interaction. Bandicoots are shy, solitary and hide for a large part of the day, which could make it difficult for the Maremmas to associate with them.

As the bandicoots and the sheep inhabit the same area, they will both be protected by the Maremmas. The first two pairs of dogs are scheduled to start work at re-introduction sites at the end of 2017.

If the trial is successful, it could result in the use of livestock guardian dogs for the protection of a range of other threatened native Australian species. This could greatly benefit biodiversity, and could be a big stride forward in returning locally extinct species to their former ranges without the use of predator proof fences.



Book Review

“The New Nature” Author Tim Low

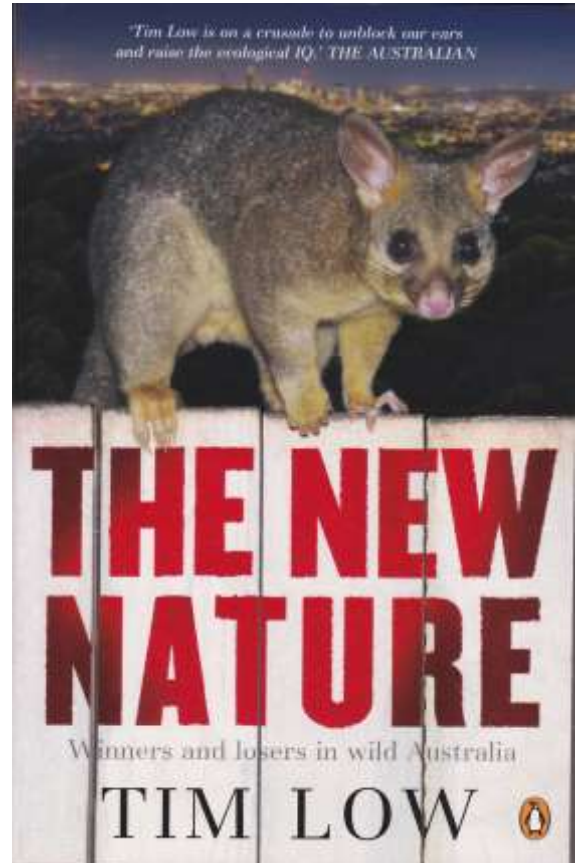
Michael Banyard

The challenging journalistic style of the author with frequent blunt statements initially made this book an uncomfortable read. For example, “It might seem heretical to say this, but cities and farms provide some species with better habitat than anything natural, which they show by living in high densities. Like humans, brush-tail possums, rainbow lorikeets and bluetongue lizards reach their peak densities in cities.” This style continues throughout the book but generally with sufficient detail and qualification added to support the blunt statements. None the less the book is a little quirky and challenging. But in another sense this is also its strong point. It is didactic and introduces the reader to lots of concepts and ideas which one might not have considered. The challenging style keeps the reader focussed.

The book is arranged in four sections 1) Nature and Us 2) Changing Places 3) Conflicts and 4) Resolutions. This structure provides some context but the journalistic style continues throughout and much overlap exists between section themes .

Some of the challenges discussed include: is it only humans that exploit the new nature; winners and losers in nature; the historic instability of nature; the concept of nativeness and what that means for species that might exist in widely separated zones within Australia; feral animal control and native animal translocations; acclimatisation and the introduction of non-native species and much more.

Many historic points of interest are discussed. On page 38 our attitude to wilderness and how it evolved from mariner Dirk Hartog’s abject appraisal, “this land is cursed, the animals hop, not run, the birds run, not fly and the swans are black not white”. On page 39 the politicians’ response to Australia’s first national park, Sydney’s Royal National Park describing it as ‘mere wilderness’ and suggesting it would take years to make any use of it with the introduction of picnic grounds, foreign trees, deer and trout. The author suggests that a change came in our attitude to wilderness about the time of the confrontation with the Tasmanian Hydro-Electric Commission and Lake Pedder driven by the Tasmanian Wilderness Society, the photog-



rapher Peter Dombrovskis and environmentalists like Bob Brown amongst many. From this time it is suggested that ‘wilderness’ in Australia took on a more spiritual meaning.

Chapter 13, Noble Arks, Stocking National Parks, discusses historical examples of how humans, with the best of intentions and little ecological awareness, spent years ‘improving’ national parks and ensuring that they were stocked with species from all over Australia. Many of these, of course, died in their unsuitable new habitat. The management of koalas and their translocations comes in for some special criticism.

While those with intimate knowledge of the specific topics covered by the author will challenge some of the statements made in this book its ability to provoke the reader and extend the mind make this book a recommended read.

“The New Nature” Author Tim Low, Penguin Random House Australia, Paperback, pp390 First Published 2002, Revised 2017.

AVCB News and Diary

General Notes and Comment

The AVCB Committee have been active in their efforts to maintain and promote the interests of conservation biology. This has included:

- A Review of Policy Priorities - see below
- Preparation of AVA Conference Speaker and Field Trip Program for 2018
- Preparation of a submission on the RSPCA Discussion Paper - Identifying Best Practice Cat Management in Australia
- The current development of a joint issues

paper on Land Clearing and Its Wildlife Welfare Implications

- Engagement and support with veterinary students' welfare groups
- Discussions regarding a shared webinar
- Engagement via our Facebook page - please check it out and share with your friends. The reach of this page is greater than 1000 views on some posts [@AustralianVeterinaryConservationBiology](#)

Upcoming Events

- AVCB Committee - Half Yearly Strategic Review - January 2018
- AVA National Conference - AVCB Stream May 2018

Policy Priority Review 2017/18*

High Priority

Feral Animal and Native Animal Population Control

Kangaroo and wallaby population control (AVA Policy; Wild Animals; Ratified 2/2009)

Control of selected sexes not discussed

Monitoring of numbers

Dingoes and trophic cascades and non-lethal control not mentioned

This policy has not been reviewed for 8 years

Wildlife Disease and Biosecurity

Guidelines for veterinarians dealing with bats (AVA Policy, Wild Animals; Ratified 15/2/2008)

Research and practice advanced with Hendra and ABLV needs updating

Policy now 9 years old

Detailed of specific protocols are not usually included in policy documents

Habitat Loss and Degradation (new, in discussion)

Habitat loss and degradation including Old Growth Forests (No AVA Policy)

Welfare during and after clearing

Incorporate wildlife corridors

Fragmentation

Effect on threatened species

Assessments of suitability and set asides

* Note: High Priority Group only shown