Arkaba Station

Arkaba Station: goats just don't add up

SATC: Randy Larcombe

Arkaba Station undertook a trial aerial shoot of goats over two days in June, removing 597 goats from their property which is managed for conservation and tourism and has been a part of *Bounceback* for some years. Station owner and new group member Brendon Bevan gave a passionate presentation to the North Flinders NRM Group at their meeting in September about why he believes goats just don't add up. We share his views here.

In order to complement Arkaba's Conservation Management Plan, it was decided that in 2015 we would implement a trial aerial goat cull. This was a conservation initiative in an effort to support the already effective works done through the *Bounceback* program over previous years.

Our efforts are all unashamedly conservation driven and as long as there is a dollar value associated with feral goats, we will never rid the landscape of them. It is time that we all approach the problem of feral goats with a clear and direct approach – absolute eradication.

If one was to get caught up in the average $60 per goat argument, one should also calculate at what cost and impact to the landscape, and indeed the environment as a whole, this $60 goat has had.

Let's make some conservative assumptions about feral goats. A feral goat:

- lives for 10 years
- consumes 1.8 kilograms of vegetation per day
- drinks 3.5 litres of water per day

This handful of information does not include the extensive effect of hoof traffic on what we know to be an exceedingly sensitive soil structure.

A $60 goat over its 10 years of existence has cost you and the environment 6750 kilograms of limited vegetation and 12,775 litres of scarce water – meaning you just sold nearly seven tonnes of vegetation and almost 13,000 litres of water for $60.

Our trial aerial shoot took place on June 2015. During the 10 hours of flying/shooting time, we shot every goat sighted – a total of 597 animals. If we apply our previous calculations removing these goats saved 4,029,750 kilograms of vegetation and 7,626,675 litres of water.

It is by looking at these *conservative* figures that we have come to the conclusion that these animals are not worth mustering to sell. Whether you are a pastoralist, an environmentalist or a healthy combination of the two as I know many in the area to be, you and the environment are losing hands down.

We cannot afford a short sighted, short term management solution that puts money in our pockets; we need to get rid of these things quickly in an effective and humane manner.

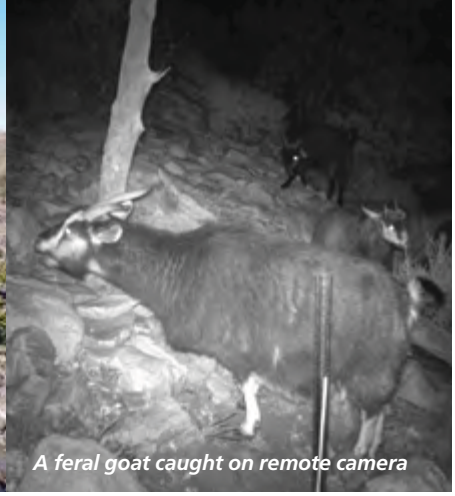
We were delighted to work closely with several neighbouring properties who supported the operation which allowed us greater access to a far bigger area of control.

When we started the aerial cull, I had expected approximately 150 feral goats to be taken over the two days. I was astonished to see the actual numbers. Our on-ground goat control has been consistent over the years, but I was taken aback by the enormous numbers we encountered and the realisation of the impact they are having environmentally.

Simply put, we need to do more and we need to do it consistently.

We have decided to implement three self-funded aerial goat culls per year from 2016. Our aim is to show a significant increase in the general wellbeing of the environment so as to gain support to cast the net even wider so as to eradicate these animals.

A heavily browsed Eremophila shrub



A feral goat caught on remote camera

Properties measure goat damage

Trish Mooney (Bounceback Project Officer) & Rob Brandle (Manager Scientific Services)

Four properties in the North Flinders district, each of them participating *Bounceback* properties – Gum Creek Station, Arkaroola Wilderness Sanctury, Bunkers Conservation Reserve and Yankaninna Station – now have a better understanding of the damage goats and rabbits are causing to shrubs and trees on their properties thanks to a quick survey method for measuring browse.

If present in high numbers, goats can kill or damage long-lived trees and shrubs by halting their growth, producing stunted dwarf plants that never grow above a metre or less in height.

They also occupy the same habitat as Yellow-footed Rock-wallabies, and compete for food, water and shelter.

When these impacts continue over decades, trees and tall shrubs gradually disappear completely or are represented by just a few old plants.

Palatable plants are those most at risk and include sandalwood, quandong, native orange, mulga, dead finish, mintbushes, some of the emu-bushes and the spiny Christmas bush.

If goat numbers have been high for some time, then there will also be impacts on less palatable species as well, like the rock eremophilas and sennas.

Goats also remove short-lived shrubs like mulla mulla and native tomato bushes, which make it hard for animals like Yellow-footed Rock-wallabies to survive drought, as these are the plants that get them through dry periods.

The surveys were carried out on the four properties with the assistance of volunteers during March-June.

The approach firstly uses plant size and shape to get a snapshot of long term affects and then looks at the extent of chomping on plant tips at the end of summer, when the last season's growth has matured and the effect of recent browsing is clearest.

This provides landholders with a clear understanding of whether current goat control is allowing native vegetation to recover and provides a baseline for future management.

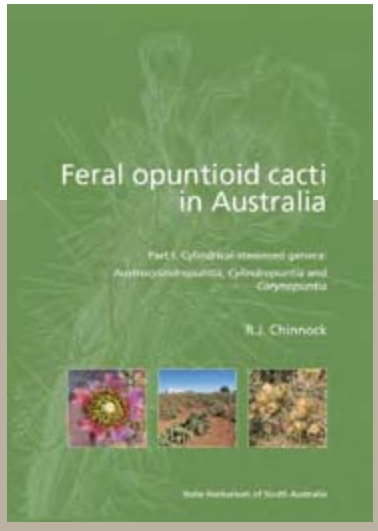
The goat browse method was endorsed by the Yellow Footed Rock Wallaby Preservation Association (YFRWPA) as it provided validation for their own observations:

"The YFRWPA found [the goat browse assessment on the Bunkers Conservation Reserve] of huge value as it was independent, and based on an established evaluation methodology which the YFRWPA membership does not have, even if ongoing subjective observation has indicated that things were improving," said Kaz Herbst.

Bill McIntosh of Gum Creek Station also found the work useful; "This work is important because it highlights the ongoing attrition caused to some of our most important tree and shrub stands, by even low levels of feral goats. A lot of this insidious decline, because it is a gradual process, might otherwise go unnoticed… and negate much of the environmental value in setting aside higher, inaccessable country for conservation purposes."

Interested in learning more about the damage goats and rabbits are causing to plants on your property? Contact Natural Resources SA Arid Lands Bounceback team for more information 8648 5300.

SAAL NRM Board, Natural Resources SA Arid Lands, Australian Government



NEW CACTUS BOOK AVAILABLE

Land managers cursed with invasive cacti are encouraged to pick up a copy of *Feral opuntioid cacti of Australia*, a new publication by one of Australia's foremost cactus experts Bob Chinnock.

This first section of the two-part book covers the cylindrical stemmed genera *Austrocylindropuntia*, *Cylindropuntia* and *Corynopuntia* – this includes species like Devil's Rope, Coral Cactus, Jumping Cholla and Hudson Pear.

It provides an easy means for field identification as well as detailed species descriptions and notes; many colour photos; detailed line drawings and descriptions of the cacti stems, fruit and flowers; information on suitable controls; and occupational health and safety issues. Information on how to collect and prepare pressed specimens; dispersal and biological/chemical control; and a glossary, complete the book.

This book is an essential reference tool for anyone concerned with identifying and eradicating weedy cacti.

The second part, containing the flat stemmed genus *Opuntia* (eg Wheel Cactus and Common Prickly Pear), is currently in preparation.

The 69 page book costs $25.

Further information
Visit know.ourplants.org/cacti