

Briefing note on the Southern Hairy-nosed Wombat

**Yorke Peninsula
Natural Resource Management Group**



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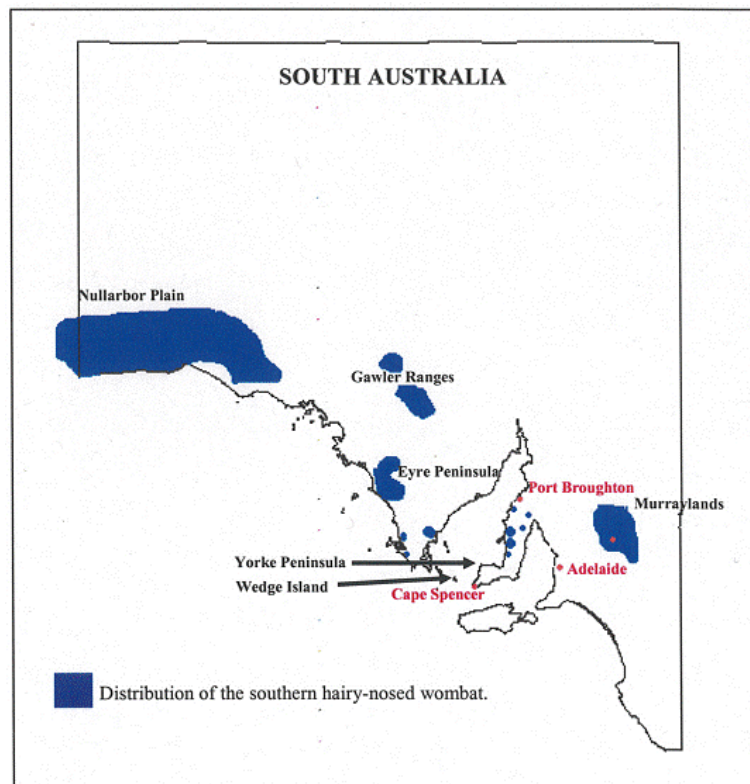


Government of South Australia

**Department for Environment
and Heritage**

Introduction

The Southern Hairy-nosed Wombat is a herbivorous, burrowing marsupial. It is the smallest of the three species of wombat weighing up to 32kg. They are easily distinguished from the Common Wombat by their soft furry muzzle, a broader nose, long ears and silky fur. They develop complex warren systems that can consist of up to 100 metres of tunnels with over 30 burrows (entrances). They feed on native grasses, forbs and a range of agricultural crops. South Australia provides almost the entire habitat for this species, which inhabits arid and semi arid environments. They occur in several regions across the state, predominately the Nullarbor, the Eyre Peninsula, the Gawler ranges, the Murraylands and the Yorke Peninsula. The Yorke Peninsula populations are genetically distinct from those in other parts of South Australia and are a significant population from a conservation perspective.



The current distribution of Southern Hairy-nosed Wombats
(Source: D. Taggart & E. Sparrow)

The Southern Hairy-nosed Wombat was once common on the Yorke Peninsula, occupying mallee woodland habitats, occurring from Innes to Port Broughton. It is now rated as vulnerable in the Northern and Yorke Region and endangered on the Yorke Peninsula (Gillam and Urban 2008). Southern Hairy-nosed Wombats are protected under the SA National Parks and Wildlife Act (1972).

Current Research

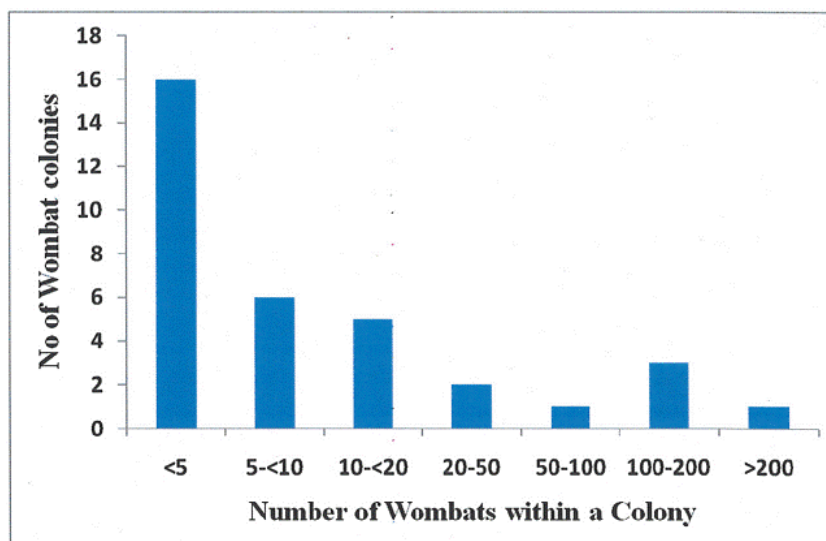
Dr David Taggart and Elisa Sparrow recently undertook a study of the Southern Hairy-nosed Wombat, on the Yorke Peninsula. The aim of the study was to:

1. Map the distribution and determine the status of remnant colonies of Southern Hairy-nosed Wombats on the Yorke Peninsula.
2. Collect genetic samples from all remaining colonies discovered, for population genetic analysis and for comparison with the Murraylands, Eyre Peninsula and Gawler Ranges populations.
3. Collect baseline information on the presence or absence of sarcoptic mange in the Southern Hairy-nosed Wombat colonies on the Yorke Peninsula.

Distribution

The estimated total wombat population on the Yorke Peninsula today stands at 830 individuals, spread across 34 colonies (Taggart and Sparrow 2010). Only three of these colonies consist of more than 100 wombats. These three colonies are located at Wauraltee (257 wombats), Pt Pearce (200 wombats) and Kulpara (150 wombats).

Many of the colonies are extremely small; 16 colonies consisted of less than five individuals and six colonies had between 5-10 individuals. This would suggest a high level of inbreeding, which would detrimentally effect the colony's ability to persist through time. The numbers are so low that colony extinctions due to the loss of individuals from road accidents, general persecution or mange are more probable compared to the larger colonies. It also makes these colonies very vulnerable to natural disaster such as flood or fire.



Number and size of Southern hairy-nosed colonies on Yorke Peninsula
(Source: D. Taggart and E. Sparrow)

Threats

Most of the Yorke Peninsula wombat colonies disappeared less than 60 years ago. Pastoral and agricultural activity has fragmented their distribution with large scale land clearance. Introduced plant species have replaced many native food sources. On heavily grazed pastoral lands there is great competition for food, which is often exacerbated by drought. The introduction of rabbits has created further competition for native grasses. Critically important to the raising of young is pasture composition. Overgrazing by rabbits and domestic stock alter the pasture composition to the wombats detriment.

A skin disease known as sarcoptic mange is further threatening wombat numbers. This disease is caused by a parasitic mite and is carried and spread by foxes, which enter wombat burrows while searching for food. Once a wombat has been infected with mange, it can die within 2-3 months, depending on the season. Female and juvenile wombats are more susceptible to mange as they are more social than the males. This alters the gender balance of the colonies, resulting in lower reproductive rates and, potentially, the colony's eventual collapse. At present, the three largest colonies are known to be infected with mange (Wauraltee, Pt Pearce and Kulpara).

Reproduction can completely cease in drought years and juvenile mortality rates are very high. An increase in the adult population requires three consecutive years with good rainfall. The recent drought is a further strain on the Yorke Peninsula population.

Community Attitudes

On cropping land, grazing by wombats is believed to significantly lower production rates, resulting in reduced income. The burrowing of wombats can damage infrastructure on a property, including fences, roads, tanks and buildings, grave sites, dams and can lead to soil erosion.

Dr Taggart reports considerable negativity surrounding the issue of wombats on valuable cropping land in the Port Victoria-Wauraltee Districts. Wombat burrows pose an inconvenience and potential danger to farm machinery. The burrows also have an indirect impact through harbouring rabbits and foxes.

It is a challenging task to strike a balance between the interests of farmers, conservationists, the general public and the wombats. There are many management options which need to be explored if the Yorke Peninsula Southern Hairy-nosed Wombat population is to be prevented from decreasing further. It may be cost effective to work together with the Murray Darling Basin, Alinytjara Wilurara and the Eyre Peninsula NRM Regions who also have Southern Hairy-nosed Wombats in their regions.

Recommendations

Dr Taggart has presented the Northern & Yorke NRM Board with a supplemental funding request, that addresses the current gaps in our knowledge on the conservation status of the wombats and the required management options.

- Dr Taggart suggests that a plan for sustainable management of the remaining population be prepared with the Department of the Environment and Natural Resources and other stakeholders/interested parties. For this to happen, the viability of translocation and the prevalence of mange need to be determined first. The requested funding for the preparation of reports and a management plan is \$12,000.
- That translocation trials be conducted, to determine how to successfully relocate the wombats from one colony to another. It is estimated that such trials would cost \$53,000, including 10 GPS collars and 12 weeks field work. If these trials are successful, translocation could be used to prevent inbreeding and as an option for colonies creating significant issues on farm land. Both moving wombats from one colony to another and moving warrens towards bushland by collapsing existing burrows should be explored. If farmers are not given several management options they may (illegally) attempt to relocate wombats themselves, which could have an impact on wombat numbers.

The Southern Hairy-nosed Wombat Management Plan Viterra –Wallaroo Site (Shimmin Environmental Consultants 2010) goes into great detail in relation to collapsing existing warrens without harming the wombats. Through the use of a porthole camera (mounted on a remote control toy car) and a one way swing gate (in which wombats could exit, but not return), they were confident that the warrens had been evacuated before collapsing them.

- Dr Taggart's third recommendation is that the demographic, genetic and disease status of the smaller, more isolated wombat colonies be determined, in order to identify the most threatened colonies for conservation action and protection. In the proposal presented to the Northern and Yorke NRM Board, the requested funding for a three week field survey is \$12,000. A further \$20,000 is requested for the collection, storage and analysis of wombat genetic samples.
- Finally, he recommends that steps be taken to ensure that animals do not become further inbred and that no further genetic loss occurs within the Yorke Peninsula population. This needs to be addressed in the management plan.
- The total requested funding for the next stage of research and management from the Northern and Yorke NRM Board is \$97,000. In addition, Dr Taggart's proposal includes \$155, 000 of in kind support from The Adelaide Zoo, The University of Adelaide and volunteers.
- In addition to Dr Taggart's recommendations, studies are currently being undertaken into the treatment for sarcoptic mange by Dr Clare Death. This

could be valuable information for saving infected colonies in the future. Fox baiting around uninfected warrens could help reduce the transfer of mange to these colonies and may need to be part of a management plan. If funding was available, land could be purchased from farmers for the conservation of wombat colonies. Local interest in the wombats should be investigated as volunteers could be involved in monitoring wombat numbers to reduce ongoing costs and to increase community participation and the chance of continuity.

Bibliography

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