



Feral swamp buffalo continue to invade Kakadu despite successful control attempts aimed at limiting their damage. Parks Australia

No easy solutions to Kakadu's feral animal problem

Cane toads, swamp buffalo, feral pigs ... some of the most visible 'wildlife' in World Heritage-listed Kakadu National Park happen to be the rampantly successful progeny of feral animals introduced by European settlers from the 1820s onwards. Controlling them within this ecologically and culturally complex setting is the ongoing challenge.

Today, these animals – not just mammals, but fish, insects and other invertebrates – pose a major threat to the unique ecosystems and native wildlife of Kakadu, Australia's largest national park and a representative microcosm of the Top End's diverse ecosystems.

Unlike other areas of Australia, Kakadu retains most of the plant and animal species thought to have been present in the area 200 years ago – around 1600 native plants, 560 native vertebrates and 10 000 or so

insects, most of which are undescribed.

Swamp buffalo have been a persistent threat to the park, despite the Northern Territory's Brucellosis and Tuberculosis Eradication Campaign (BTEC) carried out in the 1980s and 1990s. Although the dense populations in Kakadu were greatly reduced, numbers are again on the rise due to migration of animals from Arnhem Land, outside the BTEC control area.

So, the question could well be asked, what are the prospects for effective and sustained control of buffalo, pigs and other feral animals in Kakadu?

Associate Professor Corey Bradshaw from Charles Darwin University in Darwin is lead author of a recent paper in *Wildlife Research*¹ that reviewed the available published research on feral animal introductions and control attempts in

northern Australia from 1950 to 2005.

He says the aim of the paper was to highlight the environmental risks posed by feral animals, the success of previous control efforts, and gaps in knowledge that need to be filled in so that park managers can set up effective control of feral animals 'within complex cross-cultural settings'.

The cultural complexity arises from the fact that Kakadu is managed jointly by Parks Australia and the traditional owners, local Aboriginal people whose ancestors first settled the area around 40 000 years ago. And, when it comes to issues like feral animal control, the views of these traditional owners are not necessarily the same as those of Parks Australia's conservationists.

Aboriginal people in Kakadu, for example, have come to regard buffalo as an important food resource. As a result, park managers have allowed the farming of buffalo inside the park, within a fenced area that has supplied fresh meat to locals. (The future of the 'buffalo farm' is currently under

Aboriginal people in Kakadu, for example, have come to regard buffalo as an important food resource.

review as some Aboriginal people in different locations say they prefer to maintain their own small herds.)

Peter Cochrane, Director of National Parks, heads up Parks Australia in the Federal Department of the Environment and Water Resources. He says the Bradshaw review paper highlights the need for 'more systematic and knowledge-

driven management of feral species in the park'.

Feral pigs in particular are a major threat to wetlands and monsoon forests, he says, because they breed quickly and require sustained resources and effort to keep under control.

'The issue is not so much lack of information – we have invested considerable effort over the last few years – but the need for additional resources for sustained action to reduce populations of feral animals across the park, and to assess the effectiveness of our actions,' says Cochrane.

Bradshaw and Professor Barry Brook of the University of Adelaide have developed a simple computer-based tool to assist park managers in optimising feral animal culls under the new Feral Animal Management Strategy for Kakadu, which is currently being finalised.

Parks Australia have invested in this new strategy to help its staff and Aboriginal communities work together on feral animal control to reduce habitat damage and costs, generate income, monitor populations and allow for the retention of small populations of buffalo and other 'contentious' feral species.

Still, Bradshaw believes there is a critical gap in our knowledge base – the lack of long-term monitoring data to quantify the impact of animal densities on habitat. Such data, he says, would demonstrate to local people and politicians the value of supporting sustained feral animal control programs that include assessment of operations – with feedback from indigenous landowners – to refine future control plans.

● Mary-Lou Considine

More information:
Kakadu National Park Management Plan 2007–2014, www.environment.gov.au/parks/publications/kakadu/pubs/kakadu-mp-2007.pdf

¹ Bradshaw CJA, Field IC, Bowman DMJS, Haynes C and Brook BW (2007). Current and future threats from non-indigenous animal species in northern Australia: a spotlight on World Heritage Area Kakadu National Park. *Wildlife Research* 34, 419–436.