

New potoroo find

by Tony Friend



Department of Conservation and Land Management researcher Tony Friend describes the field trip that culminated in the discovery of a small, but important new colony of Gilbert's potoroo—the rarest mammal in Australia.



Early on 10 February 2003, our team slowly climbed the steep slope towards a new trap line we had established near Bishops Gully in Two Peoples Bay Nature Reserve. Some of us had made this tedious journey before: others were making their first ascent. For more than a week, one or two members had visited the traps each day, carefully placing peanut butter baits in the traps, which were locked open. They had noted which baits had been taken, replacing them with fresh, tempting morsels. Sometimes there were signs of a furry visitor—a scat here, a digging there. But, so far, there was no unmistakable evidence of the team's quarry, the critically endangered Gilbert's potoroo (*Potorous gilbertii*).

The traps had been set for the final time on the previous afternoon. No more dress rehearsals, no more dry runs. This was the real thing. Any visitor from the previous night would still be in the trap that morning.

Eight years earlier, a PhD student was checking traps like these, only three kilometres away, on another slope of the Mount Gardner peninsula in Two Peoples Bay Nature Reserve. Liz Sinclair was trying to catch quokkas for her genetics study. Instead, she caught two strange animals, smaller and more delicate than quokkas (see 'Lost and found: Gilbert's potoroo', *LANDSCOPE*, Autumn 1995). Detailed examination by experts showed they were Gilbert's potoroos, a species thought to be extinct for more than a century. Subsequent laborious surveys and repeated trapping over the densely vegetated, rugged peninsula had shown that the population numbered only about 30. If this was the only population, this

potoroo was Australia's rarest, and possibly most endangered, mammal.

Surveys using hair-arches (small arches of flexible plastic sheeting held in shape by bent fencing wire) through which mammals move, leaving behind hairs that reveal the identity of the owner, had been carried out in bush areas for 50 kilometres around the Mount Gardner area (see 'Gilbert's potoroo: eight years on', *LANDSCOPE*, Autumn 2003). However, no potoroo hair had been recovered from outside Two Peoples Bay Nature Reserve.

The vegetation near Bishops Gully resembled that of known potoroo sites, but cage traps set here before had only caught bandicoots, quokkas and bush rats. Last year, however, a line of hair-arches set near Bishops Gully by Department of Conservation and Land Management (CALM) technical officer Jennifer Trouchet had yielded unmistakable potoroo hair.

Now, a line of 20 cage traps stretched for half a kilometre across the scrubby hillside. The team, comprising CALM staff, Gilbert's Potoroo Action Group members and other volunteers, reached the first four traps, set in the gully itself. With great anticipation, they peered into each trap, but found them either empty, or occupied by a disgruntled bandicoot or a slightly miffed bush rat. Another bush rat was the only capture in the next three traps. Was the hunt for potoroos to be fruitless again?

The eighth trap was closed. The inhabitant crouched at the back of the trap. Two brown eyes peered from a furry, jowly face, and a lightly furred tail was visible. Yes! It was a Gilbert's potoroo. The animal was gently coaxed into a bag, and a detailed check was

made. The animal was a young adult male, in good condition. All Gilbert's potoroos handled in the last six years have been implanted with a minute transponder, allowing any animal previously caught to be quickly identified. Our new capture was scanned with a special reader and a number appeared on the screen. No potoroos had been caught here before, but this one had been caught six months before, as a juvenile, on another trap line. He had not been caught at his original site since then. After being weaned at about four months, young



Facing page Juvenile Gilbert's potoroo.
Photo – Jiri Lochman

Top Potoroo habitat overlooks the blue waters of Two Peoples Bay.
Photo – Marie Lochman

Above Elizabeth Sinclair rediscovered the Gilbert's potoroo while setting traps for quokkas in Two Peoples Bay Nature Reserve in 1994.
Photo – Jiri Lochman



Left Gilbert's potoroos feed almost exclusively on underground fungi, which they dig up using their strong forefeet.
Photo – Jiri Lochman

Below left A young female potoroo from the new colony.
Photo – Helen Crisp, Gilbert's Potoroo Action Group

Bottom left Gilbert's potoroos inhabit dense scrub on the slopes of granite hills in Two Peoples Bay Nature Reserve.
Photo – Jiri Lochman



potoroos remain near their mothers for another three months before leaving to find their own home range. Perhaps this male had settled on our new trap line.

By the time the traps had all been checked that morning, excitement had risen even higher. Two more potoroos had been caught, in traps 10 and 20. One was a juvenile female, weaned but not quite old enough to breed. We had not caught her before. The other was a young adult male, caught six months earlier a kilometre away in another valley.

This find was very exciting. Since their rediscovery in 1994, potoroos had only been regularly caught from four areas on the Mount Gardner peninsula. Particular animals lived at each of these patches of suitable habitat, and formed separate colonies that, together, comprised the Two Peoples Bay population. Occasional movements occur between colonies, generally by adult males or dispersing young, but all adult animals reside in a particular area. While the Bishops Gully animals were clearly related to the other potoroos, it appeared that we had located another small colony.

Tiny transmitters were attached to the potoroos' tails with sticking plaster so that, by following their movements, we could find out if they were indeed residents, or just passing through.

During another trapping session, in March 2003, we again caught the three original animals, as well as an adult female carrying a large furred young in her pouch. She had been caught before in a distant trap line. She was also fitted with a transmitter so that her movements could be monitored.

By locating all of the animals every few days for the next two months, CALM technical officer Stephanie Hill was able to show that these animals were indeed resident in the Bishops Gully area, confirming that they comprised a new colony.

What is the significance of this find? Clearly, this is not a completely separate population, as three of the four are known to have come from other areas. Firstly, some of the animals that had been caught once and then disappeared had not died or left the safe haven of the Mount Gardner area. Instead, they had found a suitable habitat large enough to support a viable group. Secondly, the total number of known Gilbert's potoroos has increased by four animals, or more than 10 per cent. Thirdly, the Two Peoples Bay population is producing healthy young animals that are able to establish themselves where habitat is available. This is important knowledge if we are to increase the number of populations by moving wild-born or captive-bred animals to a new site.

With such small numbers and so little habitat available, the Gilbert's potoroo is in a desperate situation. The discovery of the Bishops Gully colony is a small but positive step forward towards its recovery.



Tony Friend is a principal research scientist with CALM's science division in Albany. He can be contacted on (08) 9842 4500 or by email (tonyf@calm.wa.gov.au).

48 Floral trappings

While there are many carnivorous plants, the Albany pitcher plant is one of a kind.

55 The tenuous tuart

What is causing the decline of tuarts? A State Government Taskforce is working with local communities to find out.

Regulars

3 Contributors and Editor's letter

9 Bookmarks

Prehistoric Mammals of Australia and New Guinea.
Beneath Busselton Jetty.
Silly Baby Magpie!

18 Feature park

Francois Peron National Park.

20 Endangered

The pine featherflower.

62 Urban antics

Sea lions.

Publishing credits

Executive editor Ron Kawalilak.

Editors David Gough,
Carolyn Thomson-Dans.

Contributing editors Verna Costello,
Rhianna Mooney.

Scientific/technical advice

Kevin Kenneally, Paul Jones, Chris
Simpson, Keith Morris

Design and production Tiffany Aberin,
Maria Duthie, Natalie Jolakoski,
Gooitzen van der Meer.

Illustration Gooitzen van der Meer.

Cartography Promaco Geodraft.

Marketing Estelle de San Miguel

Phone (08) 9334 0296 Fax (08) 9334 0498.

Subscription enquiries

Phone (08) 9334 0481 or (08) 9334 0437.

Prepress Colourbox Digital.

Printing Lamb Print, Western Australia.

© ISSN 0815-4465

All material copyright. No part of the contents of the publication may be reproduced without the consent of the publishers.

Please do not send unsolicited material, but feel free to contact the editors.

Visit NatureBase at www.naturebase.net

Published by the Department of Conservation and Land Management, Dick Perry Avenue, Kensington, Western Australia.

