PHILLIP ISLAND

Eastern Barred Bandicoots Return to Phillip Island

Fox eradication created an island safe haven that helped bring a Victorian mammal back from extinction in the wild.

The mainland Eastern Barred Bandicoot (*Perameles gunnii*) once occurred across the grasslands of south-western Victoria. Habitat loss and predation by introduced foxes drove the subspecies to the brink of extinction. A long-running recovery program used captive breeding and predator-free safe havens, but Phillip Island offered something different: a large, unfenced island landscape where bandicoots could again live and breed in the wild.

AT A GLANCE

- **Location** Phillip Island (Millowl), Victoria
- **Species** Mainland Eastern Barred Bandicoot (*Perameles gunnii*)
- **Churchill Island trial** 2015
- **Phillip Island release** 2017
- **Enabling action** Successful island-wide fox eradication
- **Outcome** A free-ranging, breeding island population

THE CHALLENGE

- By 1989, only one small population of mainland Eastern Barred Bandicoots remained.
- Fox predation was a major barrier to establishing free-ranging populations.
- Earlier recovery depended heavily on captive breeding and fenced predator-free reserves.
- A larger secure landscape was needed to rebuild abundance and reduce extinction risk.

Why an island?

Phillip Island Nature Parks had worked for more than a decade to eradicate foxes. When fox eradication was declared successful in 2017, the island became a rare opportunity to establish bandicoots without a predator-exclusion fence. This built on a 2015 trial on nearby Churchill Island, where 20 bandicoots were released and the population grew to about 120 within two years.

ISLAND RESTORATION UNLOCKED THREATENED-SPECIES RECOVERY

The bandicoot reintroduction was possible because a landscape-scale invasive predator program had already changed the ecological conditions of the island. Fox eradication did more than remove one threat: it created conservation infrastructure for restoring species that could not persist with foxes.

From trial to full-scale release

2015
CHURCHILL ISLAND
Trial release demonstrated that bandicoots could establish and reproduce in an island environment.

2017
PHILLIP ISLAND
Following successful fox eradication, 67 bandicoots were released to establish a large free-ranging population.

2021
RECOVERY MILESTONE
The Victorian population was reclassified from Extinct in the Wild to Endangered - an Australian first.

How the reintroduction worked

The Phillip Island release was one part of a multi-organisational recovery program operating since the late 1980s. The island phase combined decades of captive-breeding expertise with predator management, staged translocation, community engagement and long-term monitoring.

1 CREATE A SAFE HAVEN

Island-wide fox eradication removed the principal introduced predator preventing free-ranging recovery.

2 TEST THE APPROACH

The Churchill Island trial provided evidence that bandicoots could establish, breed and perform their ecological role in local conditions.

3 TRANSLOCATE

Bandicoots from the recovery program were released onto Phillip Island in 2017, establishing a population outside predator-proof fencing.

4 MONITOR

Radio tracking, trapping, remote cameras and spotlighting were used to assess survival, breeding, dispersal and population establishment.

5 MANAGE REMAINING RISKS

Feral-cat control and ongoing biosecurity remain important because island safe havens require continued protection.

6 WORK WITH COMMUNITY

Local support was central to creating social licence for releasing a threatened mammal into a populated and working island landscape.

Evidence of recovery

20	67	>300	~1,500
Churchill Island trial released	released on Phillip Island in 2017	Phillip Island population within following years	across recovery sites by 2021

The Phillip Island population established and expanded rapidly. Together with populations on other predator-free islands and fenced mainland sites, these gains transformed the outlook for the subspecies. In September 2021, the mainland Eastern Barred Bandicoot was reclassified in Victoria from Extinct in the Wild to Endangered. The recovery was significant and secure enough for Zoos Victoria to conclude its long-running captive breeding program.

A NATIONAL CONSERVATION MILESTONE

The 2021 change from Extinct in the Wild to Endangered was reported as the first time in Australia that a species classified as extinct in the wild had been brought back sufficiently to be reclassified. Island populations - particularly Phillip, Churchill and French Islands - were central to that achievement.

An ecosystem engineer returns

Eastern Barred Bandicoots are nocturnal digging mammals. While foraging they turn over soil, helping loosen compacted ground and influence water infiltration, nutrient cycling and seedling establishment. The Churchill Island trial recorded positive effects on soil conditions without observed negative ecological impacts. Reintroducing bandicoots therefore restores not only a species, but an ecological function.

WHY PHILLIP ISLAND MATTERS

Unlike small fenced reserves, Phillip Island provides a large, heterogeneous and connected landscape. The release demonstrated how successful invasive-predator eradication can turn an inhabited island into a threatened-species safe haven at a scale difficult to reproduce behind fences.

Lessons for Australian islands

REMOVE THE LIMITING THREAT FIRST

The reintroduction followed successful fox eradication. Species recovery was built on prior whole-island threat management.

USE SMALLER ISLANDS TO TEST AND LEARN

Churchill Island provided a manageable trial site before moving to the much larger Phillip Island landscape.

THINK BEYOND FENCED RESERVES

Predator-free islands can provide large, free-ranging safe havens and reduce reliance on costly predator-exclusion fencing.

RESTORE ECOLOGICAL FUNCTION

Returning digging mammals can reinstate soil disturbance and other processes that have been lost from island ecosystems.

COMMUNITY SUPPORT IS CONSERVATION INFRASTRUCTURE

Introductions to inhabited islands require consultation, trust and local participation as well as ecological evidence.

SAFE HAVENS STILL NEED MANAGEMENT

Fox freedom must be maintained, while feral cats, biosecurity risks, habitat condition and population health continue to require on-ground management.

KEY SUMMARY

What was achieved? A free-ranging Eastern Barred Bandicoot population was established on fox-free Phillip Island.

Why did it matter? The island population helped reverse the trajectory of a subspecies that had been extinct in the wild.

What made it possible? Long-term fox eradication, captive breeding, staged trials, monitoring, partnerships and community support.

What is the transferable lesson? Whole-island invasive predator management can create safe havens large enough to restore threatened species and ecological processes.

What comes next? Maintain island biosecurity and predator management, monitor population health and implement genetic rescue to maintain gene diversity and a network of secure populations.

Partners and recovery network

The recovery program is a long-term collaboration involving Phillip Island Nature Parks, Zoos Victoria, the Victorian Department of Energy, Environment and Climate Action, Parks Victoria, Conservation Volunteers Australia, Odonata Foundation, the National Trust of Australia (Victoria), the University of Melbourne, and other recovery partners. The Phillip Island work also depends on Bunurong Land Council Aboriginal Corporation and local community support.

Sources

- Phillip Island Nature Parks - Eastern Barred Bandicoot research and species information.
- Zoos Victoria - Eastern Barred Bandicoot recovery program.
- Victorian Government - Eastern Barred Bandicoot conservation information and 2021 reclassification announcement.
- Australian Government - National Recovery Plan for the Mainland Eastern Barred Bandicoot.
- Coetsee et al. (2026), The pivotal role of islands in the conservation of eastern barred bandicoots, Proceedings of the Royal Society of Victoria.