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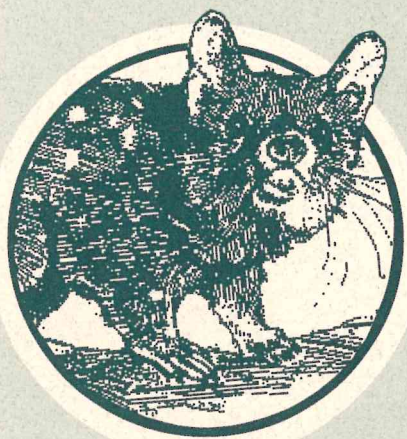
Department of Biodiversity,
Conservation and Attractions

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PROJECT EDEN



DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT



MARCH 1995
INFORMATION BOOKLET

Helping nature

The purpose of *Project Eden* is to make Shark Bay's Peron Peninsula a haven for rare native animals, some of which today survive only in colonies on nearby offshore islands. These and other native animals have been driven to the brink of extinction by several factors, but the 'big two' culprits are the European fox and the feral cat.

Research by the Department of Conservation and Land Management (CALM) and other agencies has shown that control of these foreign predators is the linchpin to successfully conserving native animals. This research shows that when fox and feral cat numbers are controlled, populations of small native animals increase rapidly and the threat of extinction dwindles.

In the southern part of Western Australia, the native animals have a natural ally - a group of native plants known commonly as the "poison peas" which contain a compound that is lethal to foxes and cats, but does not harm native wildlife. Over thousands of years, native animals have developed resistance to this natural poison, known as 1080 ('ten-eighty'). *Project Eden* links this natural advantage with modern technology and science so that control of foxes, cats and rabbits may be done selectively without harming native animals. When feral predator numbers are under control, small native

animals can be returned to the Peninsula. Effectively, the project will win back the region's biological diversity that the fox and the cat so nearly destroyed.

This booklet outlines the project and answers some of the commonly asked questions about using 1080. If you have further questions, please contact your local CALM office or CALM's *Project Eden* Headquarters at 67 Knight Street, Denham. Phone (099) 481 208.

A worldly heritage

The Shark Bay region has been internationally recognised as a World Heritage Area. One of the major reasons for this listing was because the region contains many important and significant habitats where threatened species of outstanding universal value still survive. The offshore islands, Bernier and Dorre, are two of the foremost areas for nature conservation in Australia as they are the last sanctuary for several mammal species once common on the mainland. They have not been subjected to the ravages of the fox and cat.

The species on these island havens include the boodie, rufous hare-wallaby, banded-hare wallaby, western barred bandicoot and the Shark Bay mouse. Other species that once inhabited the region include the chuditch, woylie, red-tailed phascogale, stick-nest rat and mulgara

(a marsupial mouse). These species are likely candidates for reintroduction on to the Peron Peninsula when feral predators have been controlled.

The poison peas - a natural ally

Western Australia has among the world's richest diversity of native plants, some of which are poisonous. These include the "poison peas" (some commonly known as heart leaf or kite leaf) or *Gastrolobium*s which contain the poison fluoroacetate, (1080). They were the bane of the early pioneers whose sheep and cattle would graze on them, only to die.

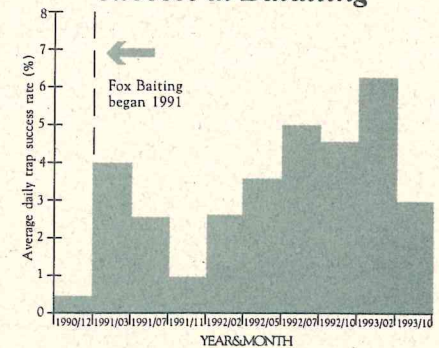
Because our native animals have evolved alongside these plants, they have built up high levels of tolerance to the poison. Even those species that would be at the end of the food chain - if it wasn't for foxes - such as the chuditch or native cat can tolerate its effect.

Researchers have found that we can use this poison in the fight against the fox. So in effect, we can use nature's resources to help conserve our native wildlife.

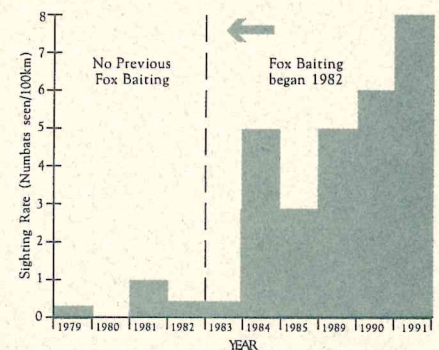
The baiting program

Project Eden involves laying dried meat baits treated with 1080 throughout the Peron Peninsula. About 10 baits are laid for every square kilometre - that's about one

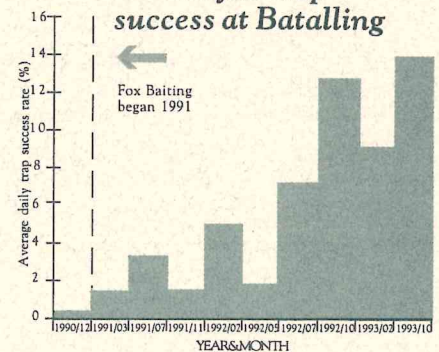
Chuditch trap success at Batalling



Numbat sightings in Dryandra Woodland



Woylie trap success at Batalling



every 150 suburban house blocks. The baiting is done from planes using satellite-based navigation systems that enable baits to be dropped very accurately.

A bait-free buffer zone will be retained around the Denham township and the Monkey Mia facilities. The town buffer, which will be from just north of Little Lagoon east of the golf course and run south to Town Bluff, and extend for about 5 km west of Monkey Mia, is to protect family pets from inadvertently picking up a bait.

The baiting begins in April, 1995 and will be carried out twice a year. However, more regular baitings may be carried out if necessary.

Signs will be posted so that people will know which areas have been treated. Notices also will be placed in local media to ensure the public is kept informed.

The baiting program is similar to Operation Foxglove which aims to control foxes over 500,000 hectares of the jarrah forest between Perth and Collie. This program began early in 1994 and already some species such as the woylie have been reintroduced into areas from which they have become locally extinct.

A physical barrier

Baiting with naturally-occurring 1080 is just one part of the feral predator control program. An exclusion fence will be erected across the 3 km wide Taillifer Isthmus to present a further barrier to minimise reinvasion of the Peninsula by foxes, cats, goats and rabbits.

The fence will be designed so that vehicles will still be able to pass through on the main road without stopping but feral animals will not be able to get through at this point. Construction of the fence is due to begin in 1995.

A scent on the wind

The *Project Eden* team will include two especially important members - Soula and Sophie. They are female Rhodesian ridgeback dogs who have been specially trained as trackers to scent cats and foxes "on the wind". The dogs, which will be under the constant control of a CALM officer, will be used to track individual foxes and cats on the Peninsula.

Using tracker dogs is a new technique in native animal conservation programs in Australia. CALM will assess their potential as a management tool in controlling feral animals in other parts of the State.

Some questions and answers about fox and cat control

What is 1080 poison?

1080 is the name given to the synthetically produced chemical compound sodium monofluoroacetate. In Western Australia, it occurs naturally as fluoroacetate in *Gastrolobium*, plants known as "poison peas".

Does it pose a risk to people?

The actual amount of 1080 contained in the baits is minuscule compared with the level of poison that occurs naturally in *Gastrolobiums*. For example, 1kg of "heartleaf poison" leaves contains almost 3000 mg of fluoroacetate - this is over 100 times more than is contained in the number of baits spread over a square kilometre.

The baits are dried and very unappetising to humans. If a small child handled a bait and licked their fingers, they would have no ill effects.

Will it kill native mammals?

Western Australia's native mammals - in particular those in the southern parts of the State - have evolved alongside *Gastrolobium* species and have developed high levels of resistance to it. Even the chuditch, a type of native cat which preys on small mammals, has developed a high tolerance. This natural resistance to the poison is widespread among native animals, including those in the Shark Bay area.

Does 1080 persist in the environment?

Definitely not. Research by Curtin University on behalf of CALM has shown that 1080 is rapidly degraded by soil microbes and Agriculture Protection Board research has shown it is leached by heavy rain. There is no possibility that 1080 will persist or accumulate in the environment as a result of feral predator control measures. The compound occurs naturally in *Gastrolobium* species over big areas of the forested water catchments and yet our water courses are not contaminated with fluoroacetate.

Is it lethal to cats and dogs?

Dogs, including dingoes, and cats are very susceptible to 1080. Warning signs will be placed prominently so people visiting the Shark Bay area will know where baits have been laid.

What can I do if my pet picks up a bait?

There is no antidote for 1080 poisoning.

By law, dogs in public places have to be kept under control. Also, except for guide and tracker dogs, dogs and cats are not allowed in national parks or other nature conservation areas. Baits for controlling foxes and other vermin are used extensively throughout Western Australia, especially in the pastoral areas.

Signs will be displayed prominently to warn people that baits have been laid. People who do take their dogs into areas that have been baited should keep them on a leash or muzzle them.

Can non-poisonous methods be used such as biological control?

Research over the past 10 years has shown that baiting currently is the most effective and efficient method of reducing fox numbers, especially over big areas. Researchers from the Department of Conservation and Land Management and the Agriculture Protection Board and other agencies are investigating biological controls but a successful biological control is still many years away.

How will we know if fox and cat control has been successful?

Research at areas such as Julimar, Dryandra and Batalling in the southern part of the State has shown the number of sightings of native wildlife increases dramatically when fox and cat numbers are controlled. Special sites will be set up where fox and cat numbers will be monitored and the increase in wildlife populations recorded. No native animals will be reintroduced until fox and cat numbers have been reduced to very low levels. The real success will come when people can visit the Peron Peninsula and see more wildlife in their natural environment.

What other feral animals are being controlled?

Since the northern part of the Peninsula was declared Francois Peron National Park in 1993, CALM has gradually been destocking the former pastoral station. Regular shooting of goats has reduced their numbers from around 10,000 to about 400. Further goat controls will be carried out until they are eradicated.

Will fewer goats mean more vegetation and therefore a greater fire risk?

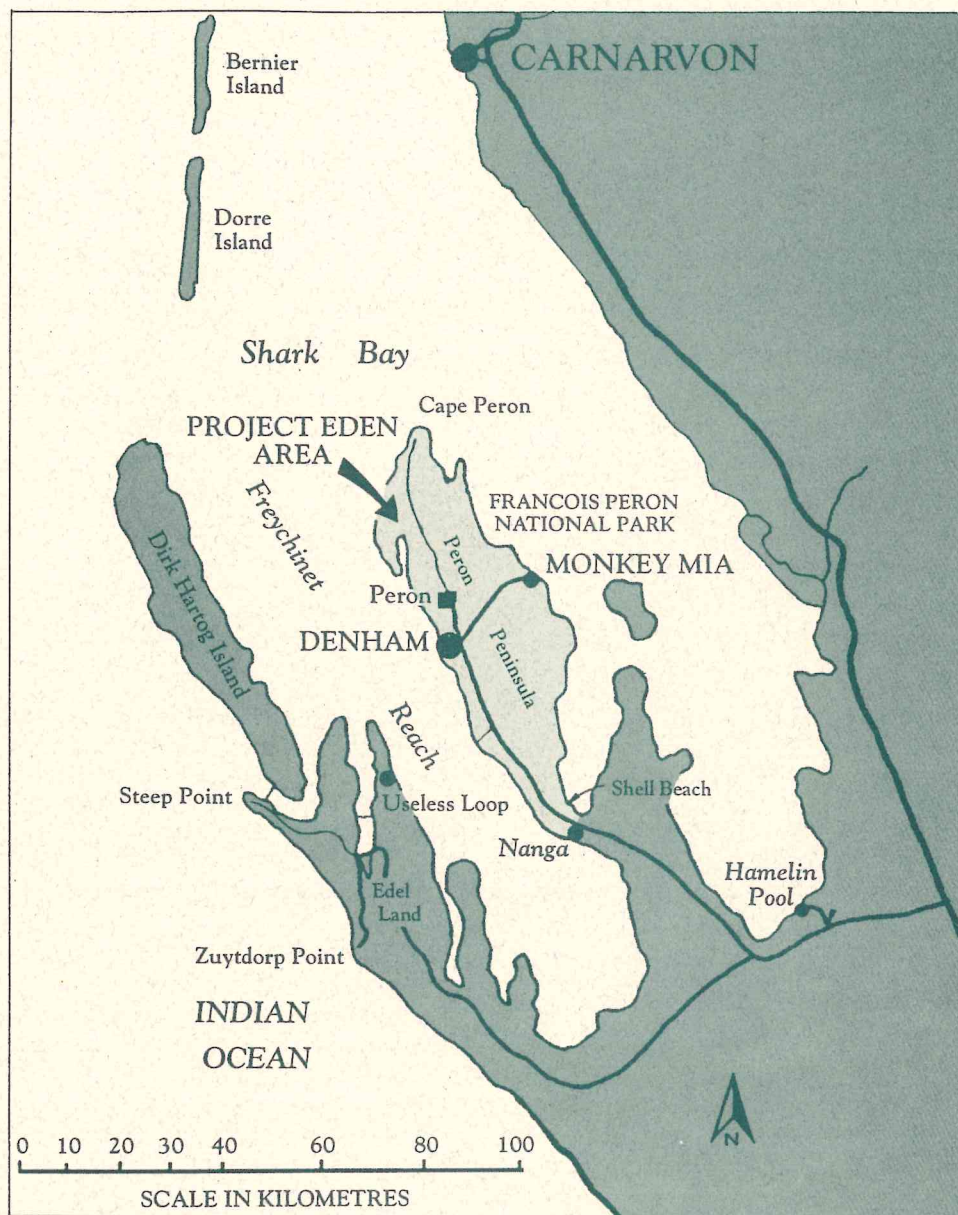
Reducing the grazing pressure by sheep and goats on the Peninsula has resulted in the natural bush regenerating and the reappearance of some flowering annuals. The impact in the bush has been an increased fire risk but a key part of *Project Eden* is a strategic fire management plan. This is to protect the Denham and Monkey Mia communities as well as visitors to the park and the vegetation within the park. The fire management plan also will help protect the habitat of native animal populations when they are re-established in the area.

Will fewer foxes lead to an increase in pests such as rabbits?

The introduction of foxes since the mid-1800s appears to have had virtually no impact on rabbit numbers on farmlands or in pastoral areas although researchers expect there will be an increase as a result of predator control. However, it is planned to introduce the myxomatosis virus in the event rabbit numbers increase. Myxomatosis has been used widely across Australia for rabbit control for many years. Other baiting techniques also will be used to reduce rabbit populations.

Where can I find out more information?

If you have further questions, please contact CALM's Project Eden Headquarters at the Department's office, 67 Knight Street, Denham. Phone (099) 481 208.



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