

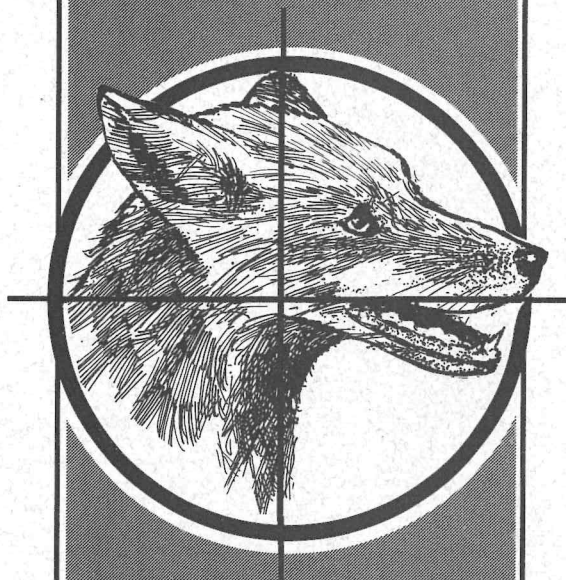
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OPERATION FOXGLOVE

*Protecting
native wildlife*



APRIL 1994



DEPARTMENT OF CONSERVATION AND
LAND MANAGEMENT

Many of Western Australia's animal species and plant communities are under threat of extinction from several causes. One of them is the fox.

Operation Foxglove is helping to protect native wildlife threatened by foxes in Western Australia's forests. It is a conservation initiative by the Department of Conservation and Land Management (CALM) and Alcoa of Australia Ltd. The operation will reduce the highly dangerous fox population by laying baits poisoned with 1080 ('ten-eighty'), a manufactured version of a poison that occurs naturally in Western Australia, and which does not harm native wildlife.

This booklet answers commonly asked questions about baiting. If you have any further questions, please contact your local CALM office:

Mundaring	(09) 295 1955
Kelmscott	(09) 390 5977
Jarrahdale	(09) 525 5004
Dwellingup	(09) 538 1001
Harvey	(097) 29 1104
Collie	(097) 34 1533
Bunbury	(097) 25 4300



DEPARTMENT OF CONSERVATION AND
LAND MANAGEMENT



The curse of the fox

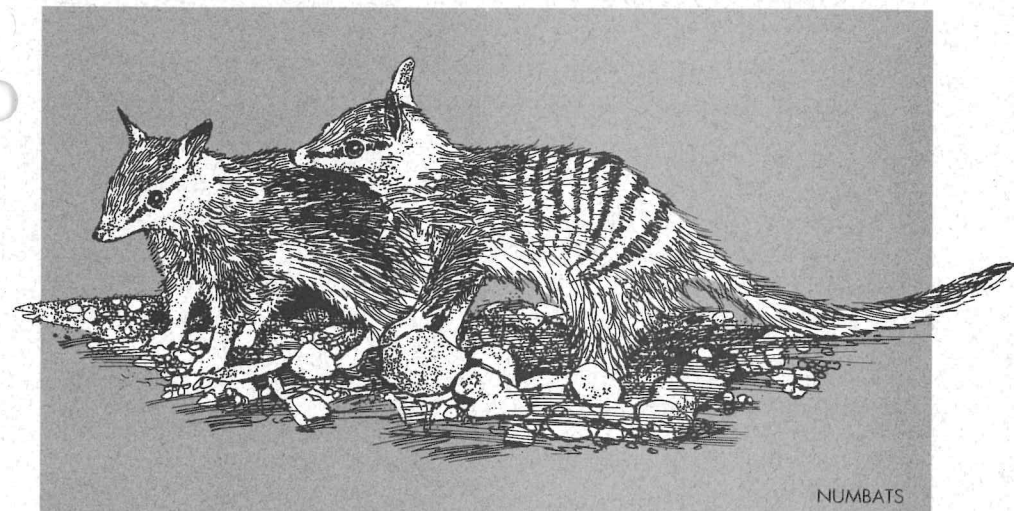
Western Australia has an amazingly rich diversity of wildlife. Indeed, many of our plant, bird and animal species occur nowhere else in the world. But of the 141 species of native mammals known to have occurred in WA, 11 are now extinct and several others are perilously close to extinction.

While several factors have contributed to this, the biggest danger today is the 'crown of thorns' of the land, the European fox. Fortunately, research in the past 10 years has shown that even some species on the brink of extinction can be brought back, and new colonies established, if we can provide effective fox control. That is the reason behind one of WA's current conservation initiatives - Operation Foxglove.

Operation Foxglove is a massive native wildlife recovery program, an initiative of

the Department of Conservation and Land Management and Alcoa of Australia. It covers almost 500,000 hectares in the northern jarrah forest between Mundaring and Collie. The program will help ensure the survival of native fauna under severe threat from fox predation, and enable other species that have become locally extinct to be reintroduced, including the State's faunal emblem, the numbat.

Operation Foxglove is also part of an extensive research program on integrated wildlife management initiated by CALM, with further funding from the Australian Nature Conservation Agency and the Co-operative Research Centre for Biological Control of Vertebrate Pest Populations. It will allow fauna management to be integrated more easily into management strategies for the forest, and will give CALM a better understanding of foxes so that we can gain the maximum benefit from the control measures.



NUMBATS

The poison peas

For its area, the south-west of Western Australia has perhaps the greatest number of species in the world. It is thought that the State has about 12,000 species of flowering plants, which is remarkable when you consider that Great Britain has just 1400, about as many as are found in just one of our national parks.

Some of these plants are poisonous. These are the 'poison peas' or *Gastrolobiums*, which contain the poison fluoroacetate, commonly known as '1080' (pronounced ten-eighty). 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 with these poison peas, they have developed high levels of tolerance to the poison. Even those species at the top of the food chain - as the chuditch would be if it were not for foxes - can tolerate its effect.

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

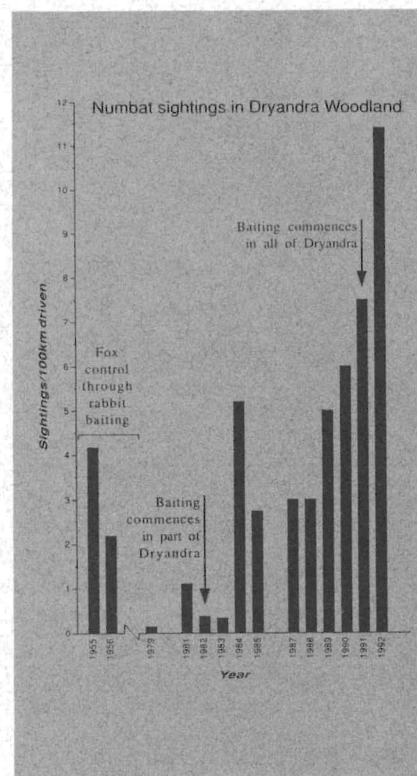
The baiting program

Operation Foxglove involves laying dried meat baits treated with 1080 throughout the forest. About five baits are laid for every square kilometre. If the forest were a suburban area, this would be roughly equivalent to one for every 300 house blocks.

Most baits will be dropped by aircraft, using a satellite-based navigation system

that enables baits to be dropped very accurately. Around popular recreation areas, baits will be laid by hand. Areas next to private property and towns will not be baited.

The baiting will begin in April 1994 and be carried out four times a year in January, March, June, and August. In some parts of the target area, baits will be laid twice a year in March and August to enable researchers to monitor the impact of different baiting programs. 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.



Wildlife - barometer for the forest

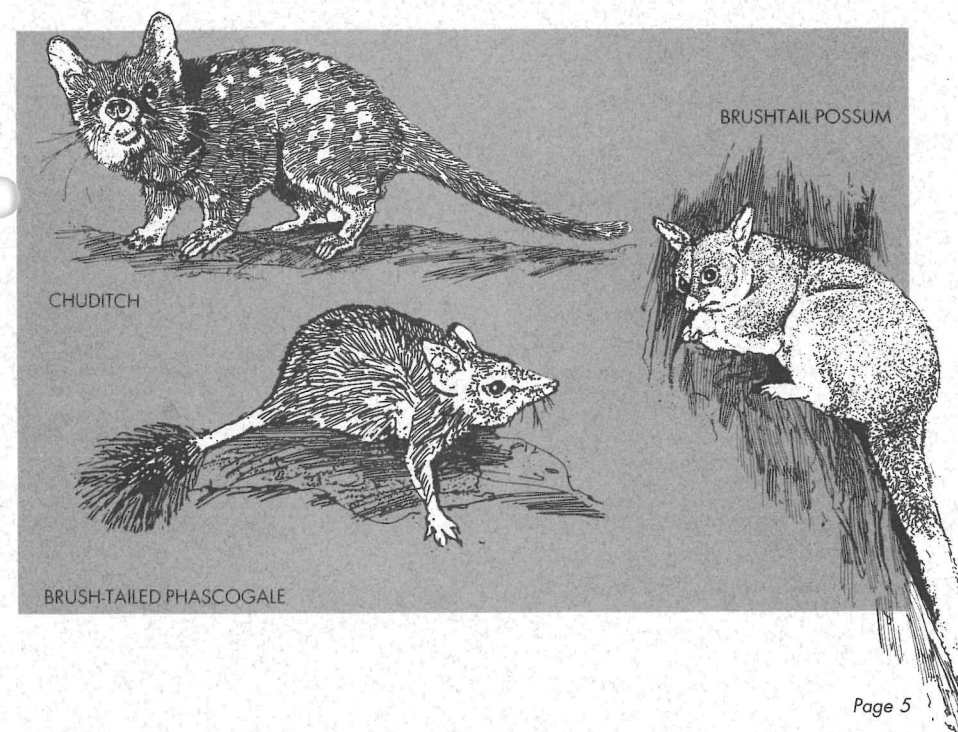
The native mammals known to occur throughout the northern jarrah forest, but which are known to be eaten by foxes, include the chuditch, brush-tailed phascogale, mardo, quenda, western pigmy possum, brushtail possum, woylie, western brush wallaby, quokka, and southern bush rat. Numbats also used to occur in the jarrah forest but now are generally confined to a few woodland areas in which foxes have been controlled. Further fox control will mean these animals can be reintroduced so that new, secure populations can be established and the survival of the species ensured.

The reintroduction of species such as the woylie also will provide a natural 'barometer' for the forest ecosystem.

Chuditch are already widespread in the forest, but they are few and far between. They are expected to become more common after fox control.

The woylie and chuditch are very good indicators of the health of the natural environment. If they are thriving, then many of the other natural processes that 'drive' our forests also will be thriving.

Fox control and the reintroduction of native marsupials are a major initiative of CALM and Alcoa of Australia, and add a fauna dimension to rehabilitation measures Alcoa is carrying out as part of its bauxite mining operations. The initiative demonstrates the integrated approach that is essential to managing our native forests, and recognises that wildlife management is part and parcel of the rehabilitation process.



SOME QUESTIONS AND ANSWERS ABOUT FOX CONTROL



What is 1080 poison?

1080 (pronounced ten-eighty) is the name given to the synthetically produced chemical compound sodium monofluoroacetate. In Western Australia, it occurs naturally as fluoroacetate in plants belonging to the species *Gastrolobium*, which are known as poison peas.

Does it pose a risk to people?

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

The baits are dried and very unappetising to humans. If a small child handled a bait and licked his or her fingers, there would be no ill effects. However, baits should not be eaten.

Will it kill native mammals?

Western Australia's native mammals have evolved alongside *Gastrolobium* species, and they have developed high levels of tolerance to it. Even the chuditch, a type of native cat which preys on small mammals, has developed a high tolerance.

Does 1080 persist in the environment?

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

How is the poison laid?

Small dried meat baits are injected with a small quantity of 1080. Five of these baits will be dropped from the air over each square kilometre of the forest - that's one every 20 hectares, roughly equivalent to one for every 300 suburban house blocks.

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 forest areas will know if baits have been laid.

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

By law, dogs in public places have to be kept under control. Also, dogs 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. There is no antidote for 1080 poisoning.

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

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

How will we know if fox control has been successful?

Research at areas such as Julimar, Dryandra and Batalling has shown the number of sightings of native wildlife increases dramatically when fox numbers are controlled (see p.4). Special monitoring sites will be set up, and any increase in wildlife populations will be monitored. The real success will come when people can visit the forests and see more wildlife in their natural environment.

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

Rabbit populations in forest areas are low, and it is unlikely that fox control will result in a significant increase in rabbit numbers.

How much will this program cost?

About \$146,000 has been allocated for the first two years to cover the operational costs of the program. Further funding is being made available to cover the costs of monitoring and other research.

