



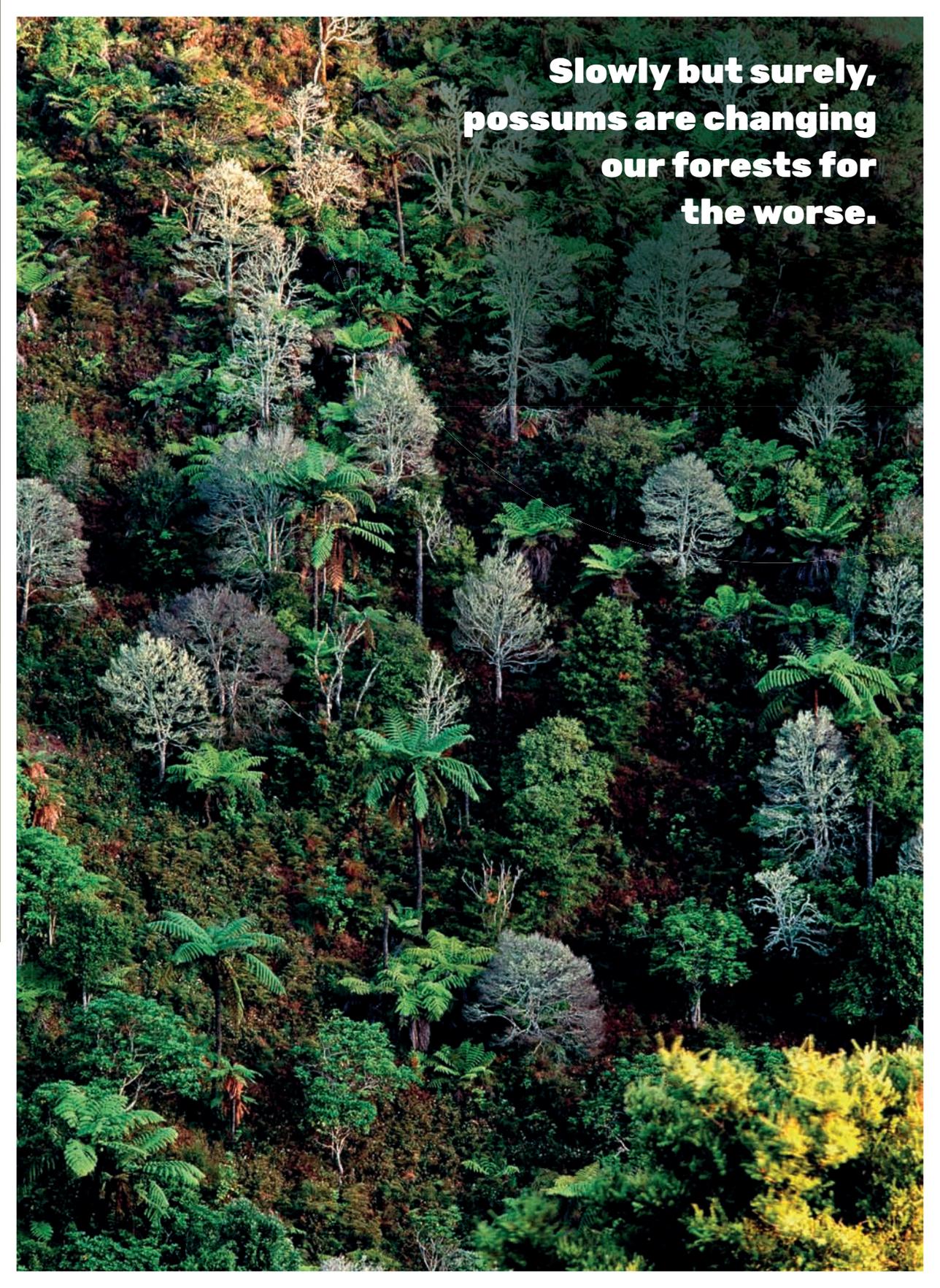
THE POSSUM PROBLEM

by Johanna Knox

Possums. You hardly ever see them, but they're all around: in the bush, on farms, in parks. They might even be in your garden. During the day, possums stay in their dens. These are dry, hidden places where they won't be disturbed. Possums emerge after dark, millions upon millions of them, all across New Zealand. And what do they do? They eat.

Possums devour the fruits and flowers that many of our native creatures need to survive. They also devour the native creatures. These include birds, bats, and insects. Possums like leaves too, especially new growth on rātā and kāmahi. Losing their leaves eventually causes the trees to die. Slowly but surely, possums are changing our forests for the worse.

Of course, this isn't what the settlers had in mind when they brought these furry **marsupials** to New Zealand.



**Slowly but surely,
possums are changing
our forests for
the worse.**

A fondness for fur

When the first British settlers arrived in Aotearoa, there were no animals that could be hunted for their fur. Australia had the brushtail possum, and hunters there made good money selling the creature's warm, silky fur. Hunters here wanted the same opportunity, so they decided to ship possums from Australia. The plan was for the animals to breed and start colonies. Then New Zealand could have a fur **industry**, too.

Our first shipment of possums arrived in 1837. A few decades later, small populations of possums dotted the country. Fur hunters were delighted. No one could guess at the environmental disaster to come. After all, possums hadn't caused problems in Australia. Why would things be different here?

A "HARMLESS ANIMAL"

The idea to introduce possums here was supported by special groups called acclimatisation societies. These societies, which sprang up in the 1860s, wanted to supply all the important species that New Zealand was "missing".

Species were chosen for a variety of reasons. Deer, rabbits, and trout were shipped over for sport. Horses and bullocks were brought for transport. Blackbirds and oak trees were chosen because they reminded the early settlers of home.

Acclimatisation societies also believed in supporting new industry. They were very much in favour of possums because the species would help to establish a fur trade. For over fifty years, acclimatisation societies organised the shipment and release of hundreds of possums in New Zealand. Writing about this work in 1917, one enthusiast said, "We shall be doing a great service to the country in stocking these large areas with this valuable and harmless animal."

Possum skins being sorted and stamped before they are sold



Fur hunters were delighted. No one could guess at the environmental disaster to come.

Ticket to paradise

Back in Australia, life was hard for possums. They endured an extreme climate, with harsh cold and searing heat. In summer, wildfires tore through the bush, incinerating everything in their paths.

Australia was also packed with predators, all of them competing for food. Eggs and small animals were a rare, protein-rich treat for possums. Mostly they lived on leaves, bark, and flowers – but even maintaining this diet could be hard work. The Australian bush was thinly spread. Any kind of food was hard to find.

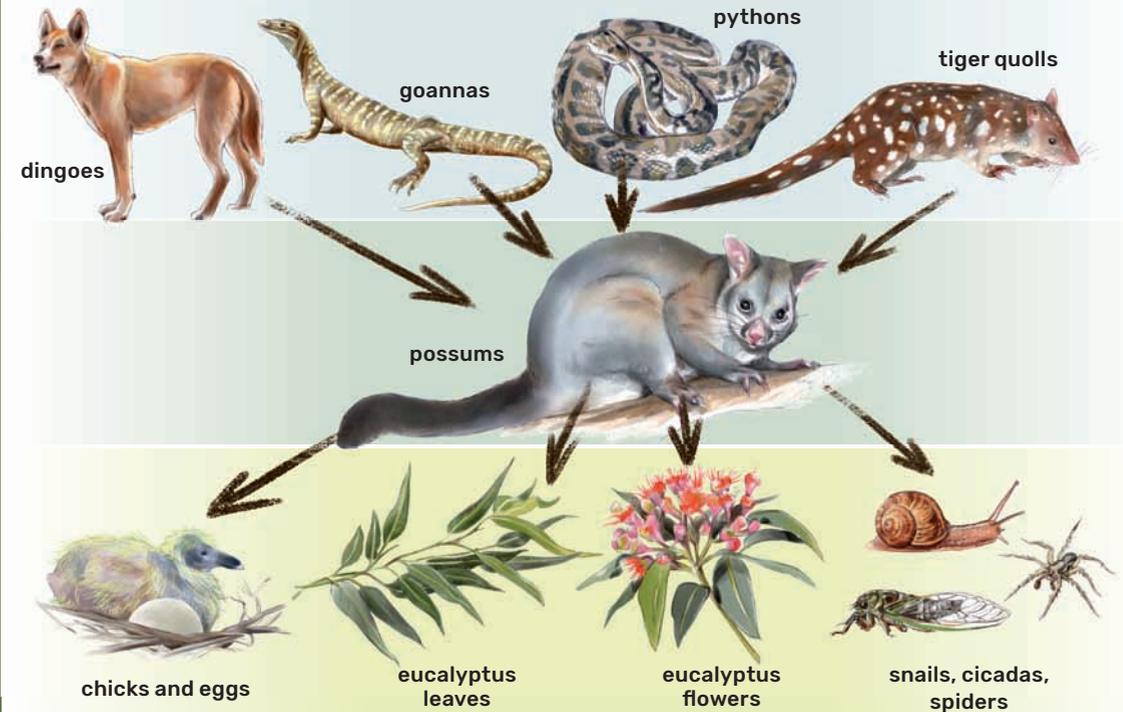
Other predators weren't just competition for food, either. The bigger species, such as pythons, dingoes, and goannas, saw possums as prey. Tiger quolls – cat-sized marsupials – killed possums with a bite to the neck, even though the two species were the same size.

After the tough Australian environment, the New Zealand bush was paradise. It was lush and damp with mild temperatures. The kinds of trees that possums found most delicious grew in abundance. There was also plenty of easy meat: New Zealand's native animals had never dealt with a predator like the possum before. Most of them were no good at hiding or escaping. Some native birds couldn't even fly – although their chicks were the most vulnerable.

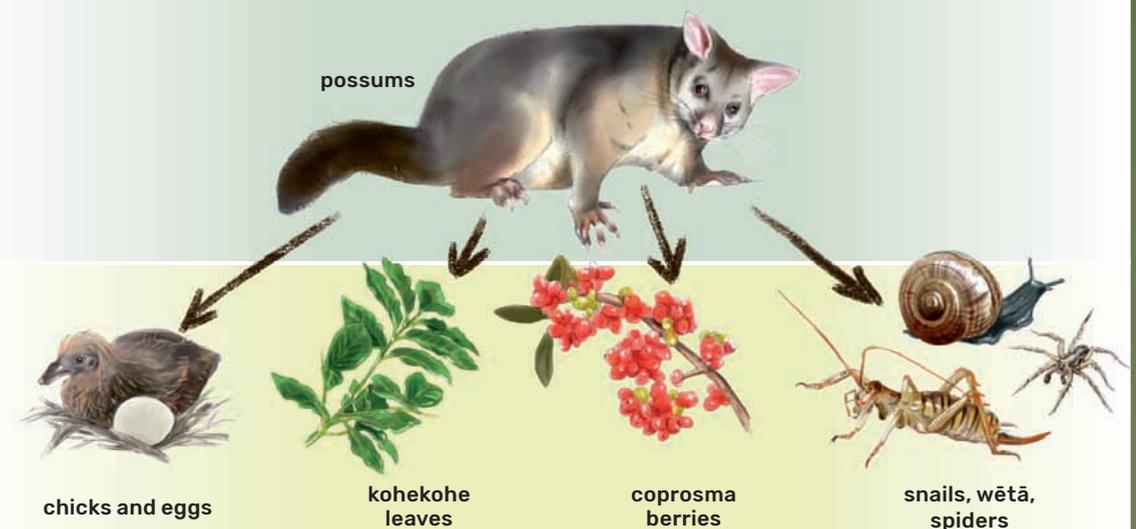
What's more, here in New Zealand, the new arrivals had a guaranteed spot at the top of the food chain. There was plenty for the possums to eat and nothing to eat them. Possums also had a new trick. In Australia, a female possum gave birth to one young a year. She'd only have a second **joey** if there was lots of food to eat. Usually there wasn't. In New Zealand, there was so much good food, a female could easily have two babies a year. In this way, possum numbers built up fast. Soon they would produce a population explosion.

After the tough Australian environment, the New Zealand bush was paradise.

AUSTRALIA



NEW ZEALAND



Trouble

At first, settlers didn't notice what possums were doing to the forests, but they did see the harm to their fruit trees and gardens. With no predators about, possums boldly came out of the bush to explore. They found their way into farm crops, orchards, and backyards. Then they had a feast.

By the 1920s, people were arguing about possums. Many had finally begun to notice possum damage to the forest, and farmers and gardeners were fed up. They demanded the right to kill possums (at the time, only trappers with a licence could do this), and they wanted no more possums to be brought here. Fur trappers were against these ideas. Their income came from selling possum skins. They didn't want things to change.

For several decades, the government tried to keep everyone happy. Laws were changed again and again, but the negative effect of possums on the environment had become impossible to ignore, and more people cared about stopping it. In 1947, after much debate, the government removed all restrictions on the taking of possums. The species was no longer protected, and people were allowed to use poison to **control** their numbers. At the same time, the government began working on its own plan to reduce the possum population.



The possum problem

Over the next four decades, despite people's hard work, the number of possums grew. By 1980, possums were found in over 90 percent of the country. Around one third of them now live in the South Island; the rest are in the North Island, which has more of the kinds of trees that possums prefer.

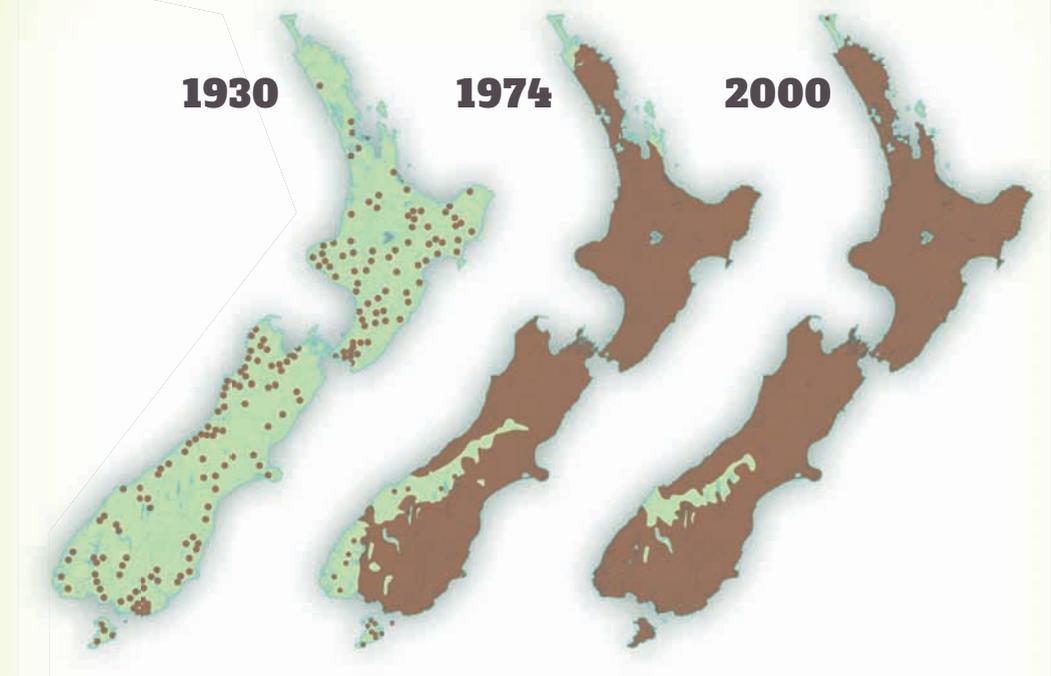
These days, many groups, such as regional councils, the Department of Conservation, and conservation groups, work together to reduce the possum population. Hunters and farmers trap possums, too. People use a variety of methods for control, including shooting, trapping, and poison. The best method depends on how easy it is to get to the possums, the number of possums in the area, and what other non-target species are around.

POSSUMS AND BOVINE TUBERCULOSIS

In the 1960s, yet another possum problem emerged. Scientists realised that possums were carrying and spreading **bovine** tuberculosis (TB), a disease they caught from infected cattle. Bovine tuberculosis spreads very easily, and cows can become reinfected after sniffing and licking infected possums

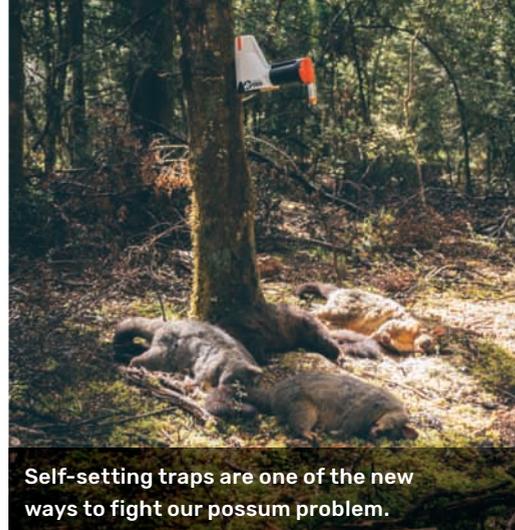
that have come out of the bush to die. In the past, large numbers of cows became infected with the disease and needed to be killed. This cost farmers millions of dollars. Now, thanks to possum control and herd testing, the extent of the problem has been greatly reduced.

POSSUM DISTRIBUTION 1930-2000



Possums were first released in New Zealand in 1837. Since then, they have slowly but surely colonised most of the country. Possums only reached the northern tip of the North Island and south-west Fiordland in the 1990s.

There are risks with using poison. Some poisons occasionally kill native animals or people's dogs. However, a lot of people believe that a small amount of **by-kill** is acceptable. The number of native creatures saved from possums is far greater than the number killed by poison. And scientists are constantly working on new ways to make sure only the pests eat the poison.



Self-setting traps are one of the new ways to fight our possum problem.

Today around 30 million possums live in New Zealand. That's a lot, but it's a big improvement on the 1980s, when there were twice as many. Although the number is going down, most scientists believe our furry friends are here to stay. Getting rid of every last one would take too much time and money. One day, there might be a breakthrough. In the meantime, we can only control the possum population so the damage they cause isn't too great.

POSSUM CONTROL AT HOME

LOOK FOR:

- possum runs (narrow tracks of flattened grass worn down because possums are using a regular route)
- claw marks around the base of tree trunks; smooth patches on bark
- torn leaves (especially new leaves), missing buds on fruit trees, damaged skin on unpicked lemons
- munched vegetables in the garden
- small, cigar-shaped possum poo.



GLOSSARY

- bovine:** relating to cattle
- by-kill:** any species that is killed by mistake (also called by-catch)
- control:** to reduce numbers of a pest to a level at which they don't cause unacceptable damage
- industry:** a group of businesses, factories, and individuals that make a similar product or provide a similar service
- joey:** a young possum or kangaroo or any other marsupial
- marsupial:** an animal (always a mammal) that is carried in its mother's pouch after birth so it can finish growing

WHAT TO DO:

- get rid of potential nesting places (anywhere dry and dark, such as sheds or under bushes)
- wrap the bottom of tree trunks in a sheet of metal (this creates a slippery surface that possums can't climb over)
- buy possum traps.



The Possum Problem

by Johanna Knox

Text copyright © Crown 2017

Illustrations on pages 39, 41, and 43 by Adele Jackson copyright © Crown 2017

The following images are used with permission from the Alexander Turnbull Library, Wellington:
page 36 reference 1/2-110438-F
page 37 reference PAColl-6203-32

The image on page 38 by patchtok from <https://flic.kr/p/pn94ob> is used under a Creative Commons licence (CC BY 2.0).

The images on the following pages are used with permission:
34 copyright © Andrew Mercer
35 and 40 copyright © Arno Gasteiger
42 (top) copyright © Goodnature
42 (bottom) copyright © Ngā Manu Nature Images

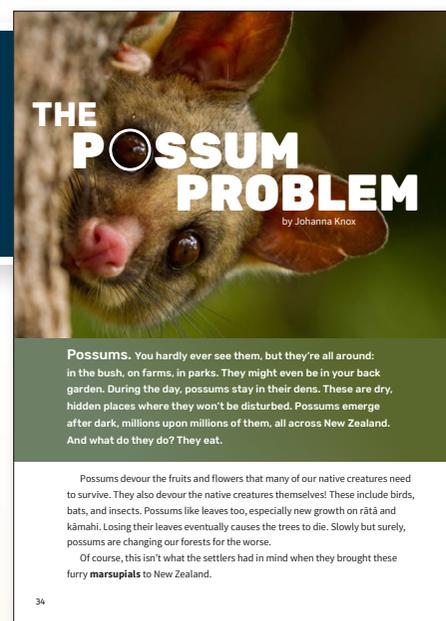
For copyright information about how you can use this material, go to:
<http://www.tki.org.nz/Copyright-in-Schools/Terms-of-use>

Published 2017 by the Ministry of Education
PO Box 1666, Wellington 6140, New Zealand.
www.education.govt.nz

All rights reserved.
Enquiries should be made to the publisher.

ISBN 978 1 77669 061 9 (online)

Publishing Services: Lift Education E Tū
Editor: Susan Paris
Designer: Simon Waterfield
Literacy Consultant: Melanie Winthrop
Consulting Editors: Hōne Apanui, Ross Calman, and Emeli Sione



SCHOOL JOURNAL LEVEL 3 AUGUST 2017

Curriculum learning areas	English Science
Reading year level	Year 6
Keywords	acclimatisation societies, bovine tuberculosis, change, ecosystems, endangered species, environment, food chains, fur, fur trade, hunting, New Zealand history, pest control, possums, predators, trapping