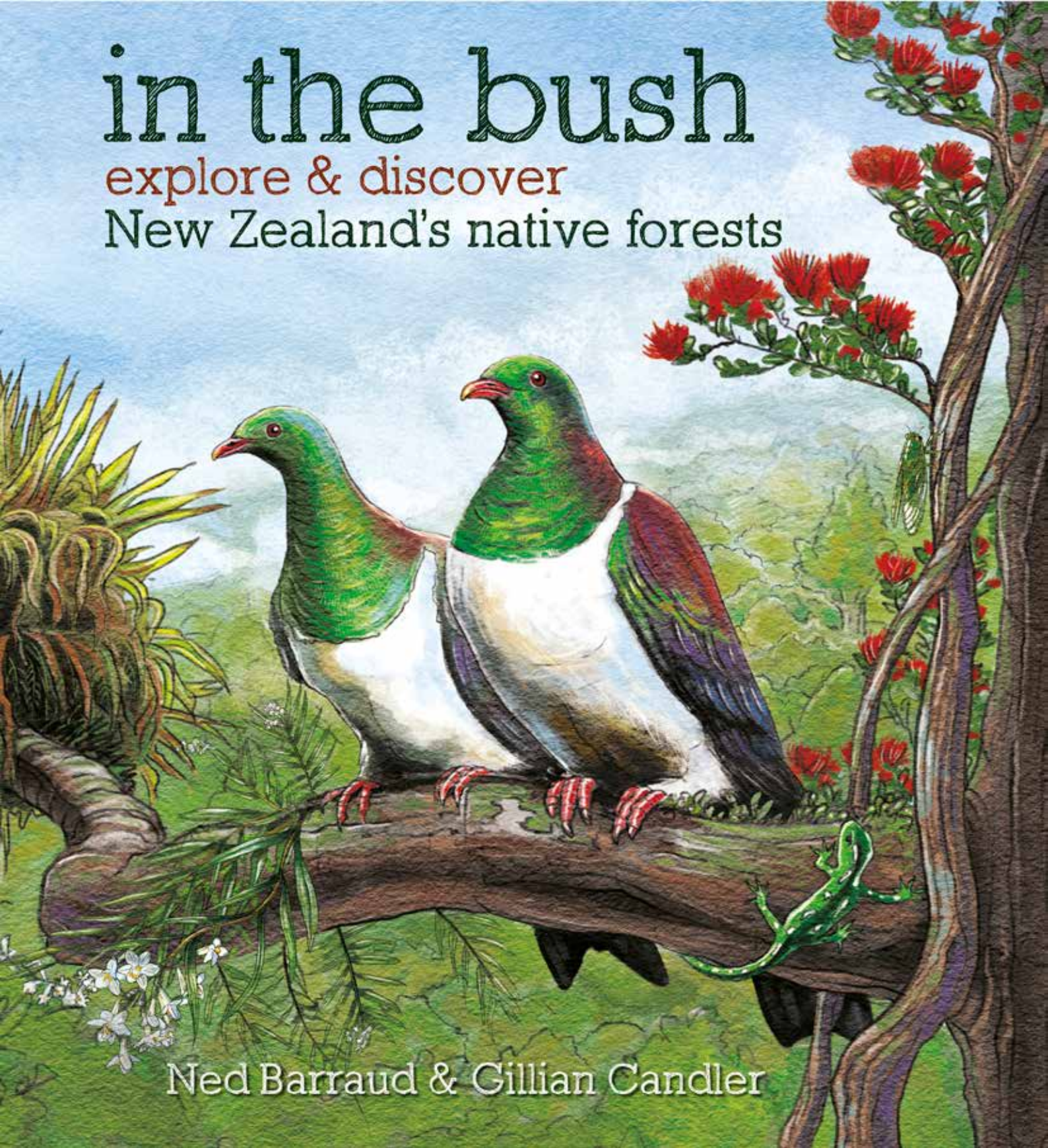


in the bush

explore & discover
New Zealand's native forests



Ned Barraud & Gillian Candler

in the bush

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New Zealand's native forests



by Gillian Candler
illustrated by Ned Barraud

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Tall trees reach up to the sun and the sky.

Vines scramble up them to the light. Below, tree ferns spread their fronds, smaller ferns crouch in the shade and mosses carpet the ground.

Among the trees, birds search for food. On the ground, strange creatures shuffle through the damp leaf litter. What we call the bush, is a forest full of life, much of it hidden.

The New Zealand bush is home to many native animals and plants. Some are rare and can only live in sanctuaries where there are no pests.

Turn the pages of this book to find some of the interesting creatures and plants that live in the bush – at night, in the day, and in sanctuaries.



In the bush at night, some birds go hunting. A kiwi listens and smells for worms in the soft earth. Its long sensitive beak has nostrils at the very tip. A morepork swoops down – its large eyes have seen a wētā. Later, the calls of both birds will echo through the night.

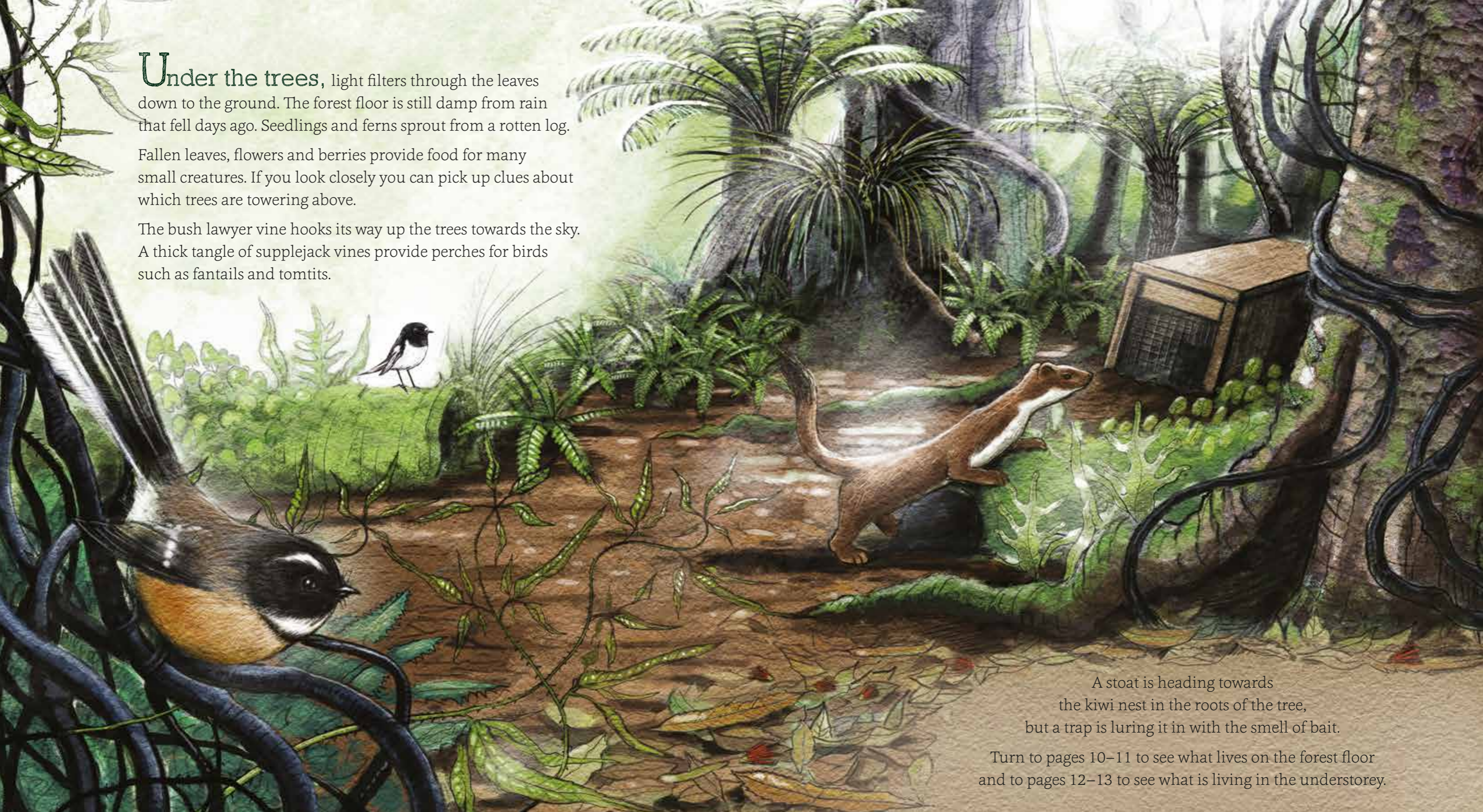
Glow-worms sparkle on the bank. Their lights attract little insects which the glow-worms trap on sticky threads. On the forest floor, a giant snail is looking for worms or slugs to eat. A tiny frog is hidden in the leaf litter, staying very still and hoping the rat won't find it.

Look carefully and you will see a possum munching through tasty leaves and flowers in the trees.

Under the trees, light filters through the leaves down to the ground. The forest floor is still damp from rain that fell days ago. Seedlings and ferns sprout from a rotten log.

Fallen leaves, flowers and berries provide food for many small creatures. If you look closely you can pick up clues about which trees are towering above.

The bush lawyer vine hooks its way up the trees towards the sky. A thick tangle of supplejack vines provide perches for birds such as fantails and tomtits.



A stoat is heading towards the kiwi nest in the roots of the tree, but a trap is luring it in with the smell of bait.

Turn to pages 10–11 to see what lives on the forest floor and to pages 12–13 to see what is living in the understorey.

What lives on the forest floor?

These **rimu** seedlings are growing on a fallen tree. Only one of them has a chance to grow to full size, and then only if enough light comes through the canopy.

PAGE 16

Avoid touching **ongaonga** – even a small sting can cause a painful rash!



This male **giraffe weevil** has a head that is half the total length of its body.



hook grass has a clever way of spreading its seeds. They hook onto kiwi feathers, animal fur or people's socks.



Baby ferns are growing on the fronds of the **hen and chicken fern**.

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MOSS helps trap the rain that has fallen by taking in water across its entire surface.

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The **peripatus** needs to stay damp to survive. They are usually found under the leaf litter.

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giant snails are now rare. They are eaten by rats and possums.

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The **stinkhorn fungus** looks like a flower, but smells like rotten meat.

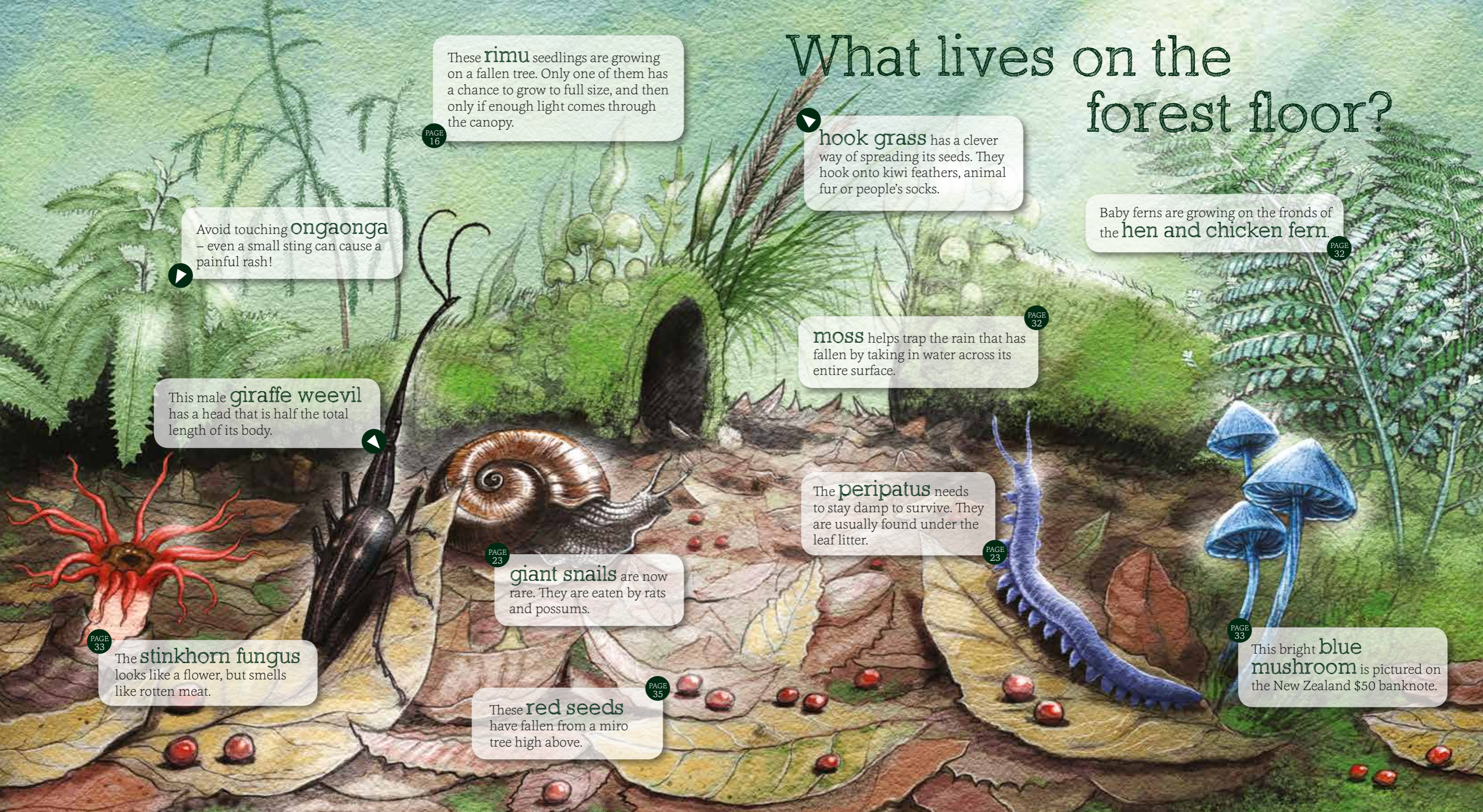
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These **red seeds** have fallen from a miro tree high above.

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This bright **blue mushroom** is pictured on the New Zealand \$50 banknote.

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High up is the forest canopy, where branches overlap and tree tops meet. Flowering rātā creates a bright red splash and attracts nectar-eating birds. The red berries belong to the supplejack vine, which has climbed all the way up from the forest floor. Many different trees, each with its own shade of green, make up the forest canopy.

Up here, kākāriki chatter and kākā swoop. A long-tailed cuckoo screeches and a falcon causes small birds to scatter.

One rimu tree stands taller than all the other trees.

Turn the page, and the book, to see the different plants and animals that make this rimu tree their home.





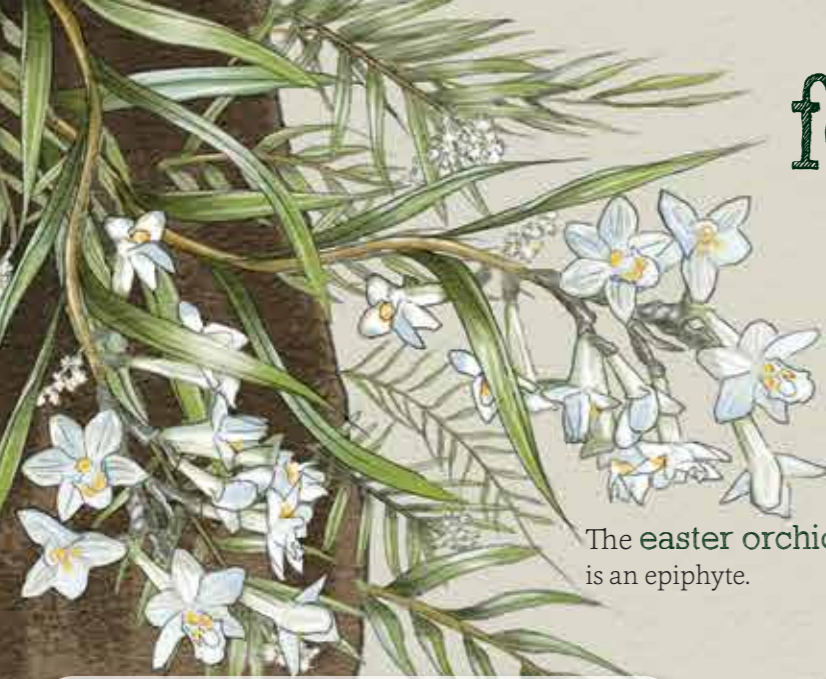
In the beech forest, where many beech trees grow together, there are fewer small trees and vines. Instead, the ground is mossy and unusual fungi grow.

Honeydew, a sweet, sticky waste from tiny insects in the beech tree trunk, is good food for birds but it also attracts some pesky wasps.

A bellbird is after the nectar in the mistletoe flower. The flower has sprung open and covered the bellbird's head with pollen. Elsewhere, a rifleman hunts for insects in the bark of the beech trees.

On the ground, mice are feasting on the fallen beech seeds.

forest plants & fungi



The **easter orchid** is an epiphyte.

epiphytes (said: ep-e-fight)

Ferns, mosses and flowering plants that grow on trees are called epiphytes. They cling or perch on the tree, taking their food from rain, sun and any leaf litter that has built up around their roots.

mosses

Mosses are different from other plants. They don't have veins for transporting water – instead, they can take in water across the surface of their thin leaves. If they dry out, they won't die. Instead, they stop growing and wait for rain.

plant facts

- Trees, ferns, mosses, grasses and vines are all types of plants.
- All plants need air and water to grow, and nearly all also need light.
- Plants reproduce – create new plants – in different ways. Flowering plants spread by seeds. Others such as ferns and mosses spread by spores.

ferns

Ferns produce spores from which baby ferns grow. This fern has spores in little packages on the back of some leaves.

hound's tongue fern
kōwaowao



spores

flowering plants need the help of birds, bats, insects or the wind to help pollinate them.

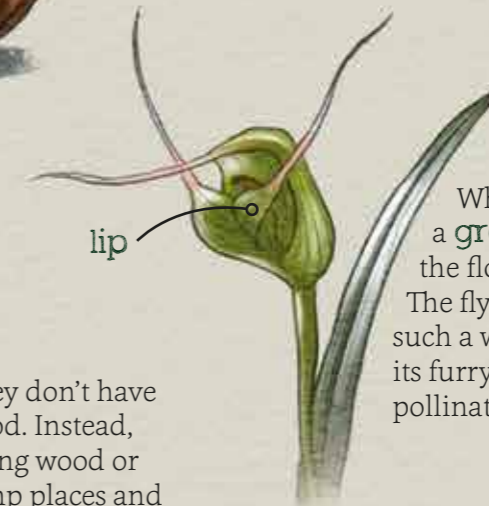
wood rose is a rare plant and it is a parasite, which means it takes all its food from the roots of the tree that it lives on. It has no green leaves and doesn't need light to grow. Short-tailed bats are known to pollinate the flowers.



After a bird has taken nectar (and pollen) from a **tree fuchsia** flower, it turns from green to red. Birds then know that this flower has already been visited.



kōtukutuku



lip

When a fly lands on the lip of a **greenhood orchid**, it triggers the flower to flick the fly inside. The fly must then climb out in such a way that it collects pollen on its furry body, which it will carry to pollinate the next orchid.

fungi

Fungi are different from plants. They don't have leaves and can't make their own food. Instead, most fungi get their food from rotting wood or decaying plants. Fungi grow in damp places and don't need light to grow. The part of the fungus that you can see is actually its fruit-body. Most of the fungus is underground or in the tree. Fungi can be many different colours and shapes.



purple pouch fungi

bracket fungi

