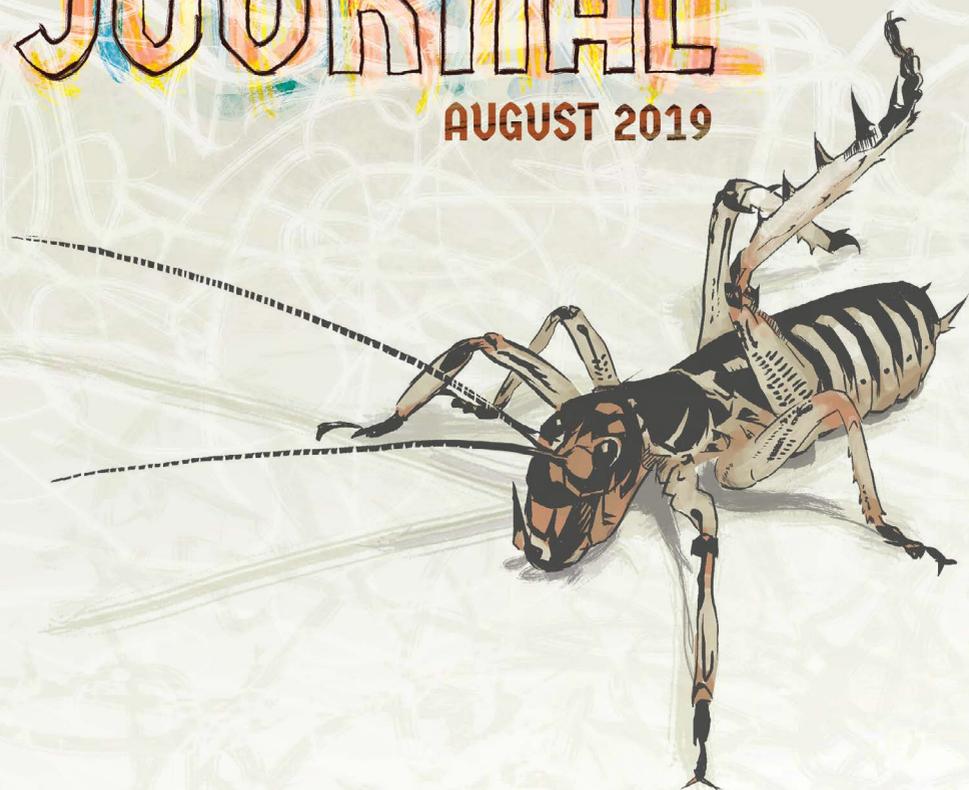




SCHOOL JOURNAL

AUGUST 2019



TITLE	READING YEAR LEVEL
Wētā	4
Pencarrow: New Zealand's First Lighthouse	4
Ika a Whiro	4
Stealing Maru	4
Max and Alice	4

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wētā

BY PHILIPPA WERRY

Many people are scared of wētā. They are big and covered in spikes, they hide in dark places, and they can sometimes jump. You might find one in the garden or in a piece of old wood. There could be one hiding in your letterbox – or even in your shoe!

But don't worry – wētā can't really hurt you. At worst, they might give you a nip if you try to pick them up. It's the wētā that should be scared of you because many of them are **endangered**.

Types of wētā

Wētā are similar to crickets and grasshoppers. Those insects can be found in other parts of the world. The name wētā is used only in New Zealand.

There are five types of wētā:

- ground wētā
- tree wētā
- giant wētā
- tusked wētā.
- cave wētā



Giant wētā



Tusked wētā

Each of these types includes many different **species**. For example, there are over fifty species of cave wētā. New species of wētā are still being found.

Why are wētā endangered?

Before people arrived in Aotearoa, only birds, bats, and tuatara hunted wētā. People brought rats, cats, stoats, and ferrets with them. These animals will all eat wētā if they get the chance. Wētā don't have wings, so they can't fly away to escape danger.

Some wētā will bite, scratch, or use the spines on the backs of their legs if they're attacked. Others will burrow into a hiding place so they can't be seen. But that's not much of a defence against large **predators**. One way to keep wētā safe is to take them to new homes on islands that don't have any predators.

Predators are one threat to wētā.

Another threat is loss of **habitat**.

If forests are cut down and not replaced, wētā will have nowhere to live.

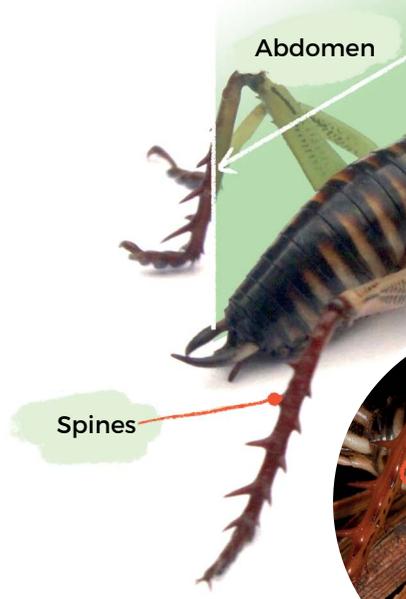
Parts of a wētā

Abdomen

Spines



Wētā can't fly, so it's not easy for them to escape from predators.



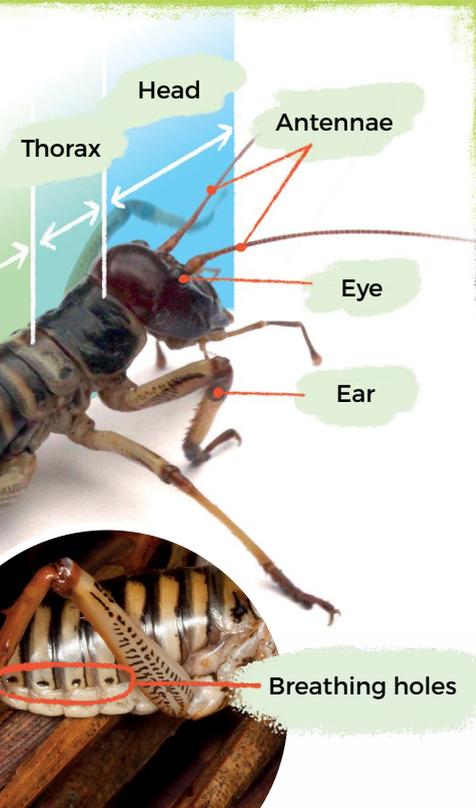
More about wētā

Wētā are **nocturnal**, which means they come out at night to feed. They don't have noses – they breathe through holes in the sides of their bodies. Three types of wētā (tree, giant, and tusked) have ears on their front legs!

In autumn, female wētā lay their eggs in the soil. The eggs hatch the next spring.

Why do wētā look like they're wearing tiny suits of armour? It's because their **skeletons** are on the outside. This hard covering helps to protect them. But the skeleton of a wētā doesn't stretch, so as the young wētā gets bigger, it has to get rid of its skeleton

and grow a new one. This is called moulting. Wētā moult up to ten times as they grow.



A wētā moulting





Cave wētā

Cave wētā often live in groups. Despite their name, they don't only live in caves. They live in other dark, damp places as well. You might find them under rocks or loose bark. They could be in rotten logs or holes in trees.

Cave wētā are smaller than other wētā. They have long, thin legs that are good for jumping. (They are also called jumping wētā.) Their **antennae** are also very long. They use them to feel around and find food. Cave wētā like to eat fruit, leaves, fungi, and dead insects.

Cave wētā have no ears at all. Instead, they sense vibrations through their feet and antennae.

Amazing wētā

Wētā have been around for over 100 million years. Scientists have found fossils that show wētā lived at the same time as the dinosaurs.

So next time you see one, don't jump with fright – take a moment to stop and think about what amazing creatures they are.

Glossary

antennae: long, thin feelers on the head of an insect, used mostly for touching and sensing things

endangered: close to becoming extinct (dying out)

habitat: the type of place where something usually lives

nocturnal: active at night

predator: an animal that hunts another animal



Ground wētā



Tree wētā

skeleton: a hard structure, usually made of bone, that supports the body of a living thing

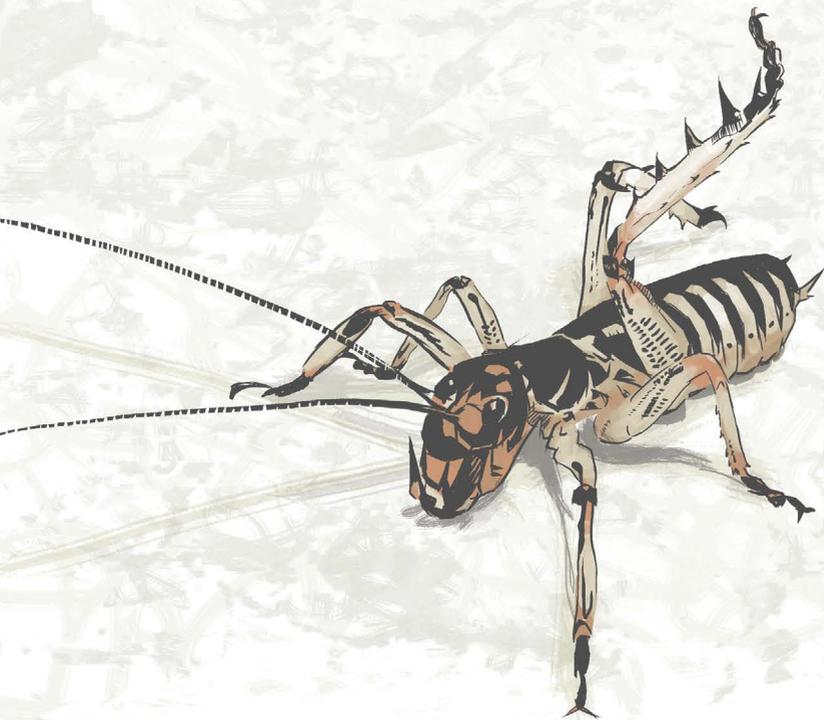
species: a group of living things that are similar and are able to produce young

Ika a Whiro

Under a moonless sky,
two armoured warriors
creep from tree burrows,
long antennae sensing
a challenger nearby.
Punga, they were once called
– spirit of ugliness.
Tonight these wētā papatu.
tsch-tsch-tsch-tsch-tsch

Sharp jaws flare.
They pēpeke,
flicking spiny hind legs.
They bite, they lunge.
One wētā grips the other.
He throws his opponent to the ground.
The defeated warrior crawls away.
tsch-tsch-tsch-tsch-tsch





Like a battle long ago –
Whiro fought Tāne with an insect army.
Tāne won, bringing wētā to Earth
to dwell in his forests.
Wētā hides under dead foliage.
Wētā hides in blackest caves.
He hides in cracks on mountain tops
and tunnels in the ground.
But at night, the ancient soldier emerges
ready for putakari once more.
tsch-tsch-tsch-tsch-tsch

Kelly Joseph

ika a Whiro:

experienced warrior,
war veteran

pāpatu: clash

pēpeke: draw up
the legs

punga: traditional
Māori name for wētā

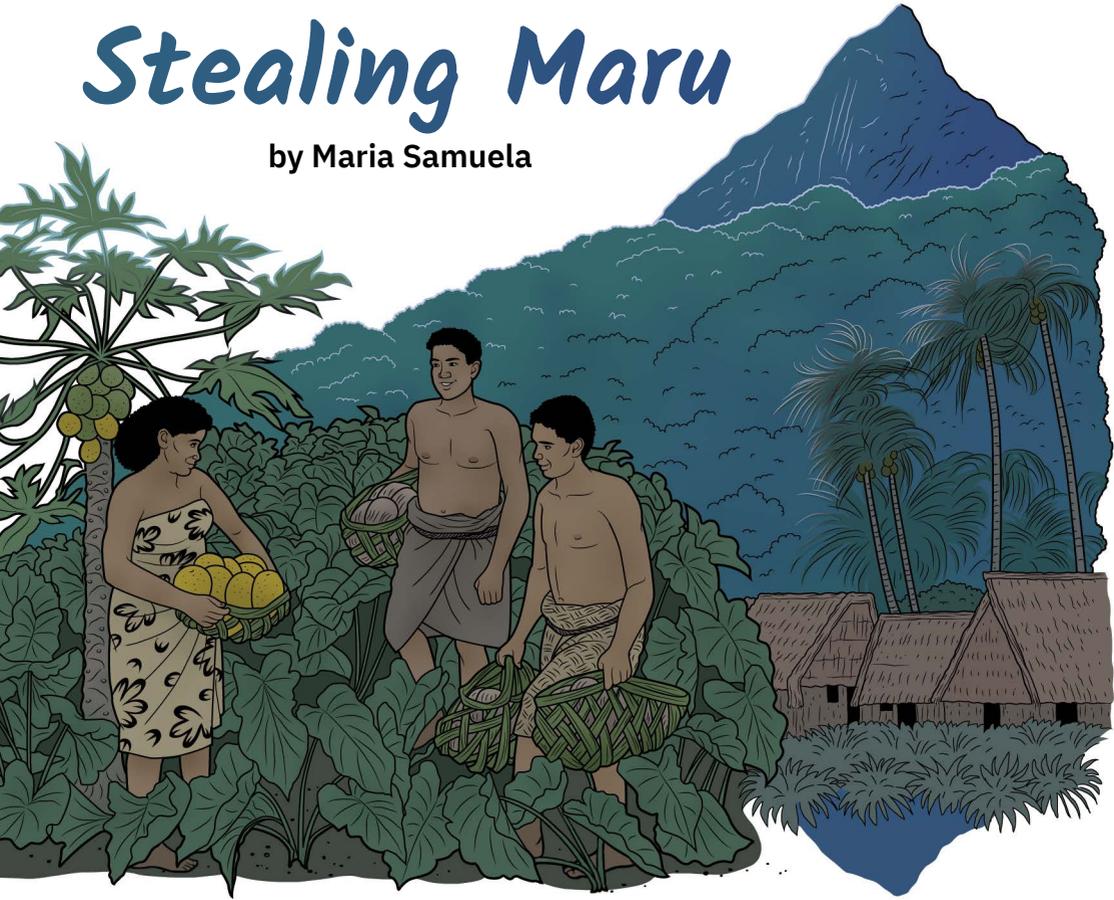
putakari: battle

Tāne: God of the forests

Whiro: God of the
underworld

Stealing Maru

by Maria Samuela



Long ago, when the world still believed in magic, there was a majestic maunga, or mountain, on the island of Rarotonga. The maunga was called Maru, which means shade. The maunga stood over the village of Puaikura like a giant guardian.

The people of Puaikura were very proud of their maunga. It cast a shadow over the village in the early morning, so the people could sleep for longer. It also sheltered the village from the harsh sun in the daytime, so the trees and plants could grow tall and lush. And it was beautiful to look at.

Near Rarotonga, there was another island called Aitutaki. The people of Aitutaki were jealous of the people of Puaikura and their maunga.

“The crops in Puaikura grow strong,” one said.

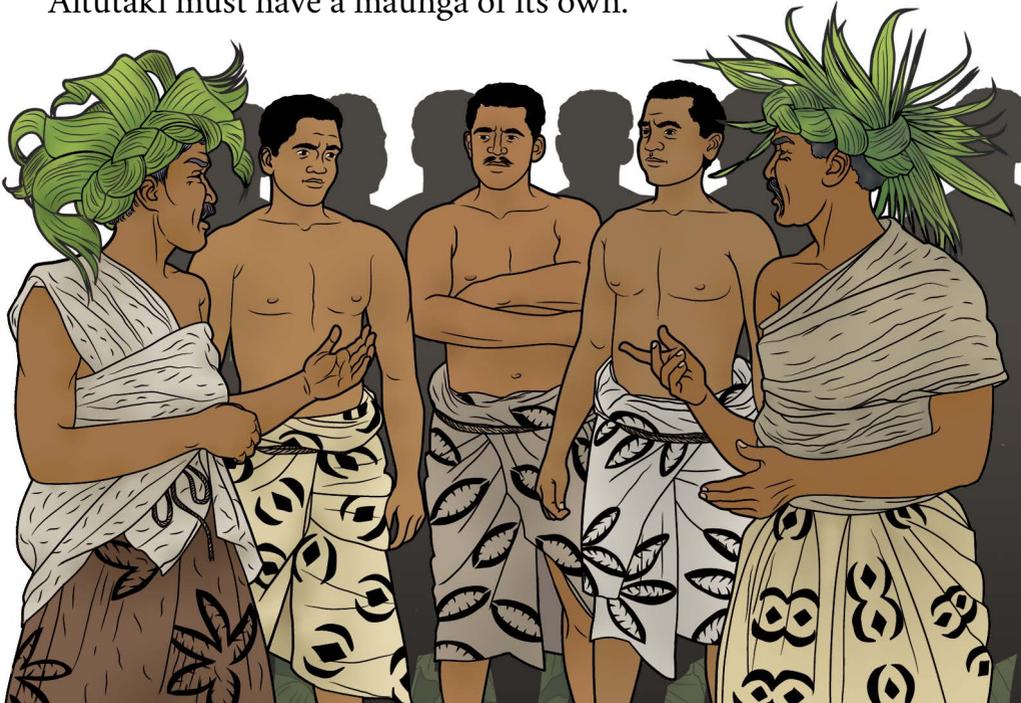
“The villagers in Puaikura are happy because they rest well,” said another.

“The maunga is the most beautiful we’ve seen,” said a third.

Aitutaki was flat. The people of Aitutaki wanted a maunga like Maru. If they had their own maunga, they thought, their crops would grow strong, too. If they had their own maunga, their people would be well rested. If they had their own maunga, they would be the envy of all the other islanders.

Two ariki, or chiefs, lived on Aitutaki. Their names were Vaeruarangi and Tamatoa. They gathered their strongest warriors. “Bring us this Maru!” the two ariki ordered.

“Aitutaki must have a maunga of its own.”



Over the next few weeks, the warriors prepared to steal Maru. They built two huge vaka, strong enough to carry a very heavy load. Then they filled each vaka with tools to cut down the maunga. They prayed to the god Rongo for his blessing and for a safe journey. When everything was ready, they sailed for Rarotonga.

The warriors were brave and clever. They used the stars and the birds and the patterns of the waves to help find their way. They planned to arrive in the middle of the night so that no one would see them stealing the maunga.

When it was nearly nightfall, the warriors saw Rarotonga in the distance. Maru looked as beautiful as they had imagined. They paddled in silence to the western side of the island and the village of Puaikura. It was dark when they landed. The people of Puaikura were fast asleep.

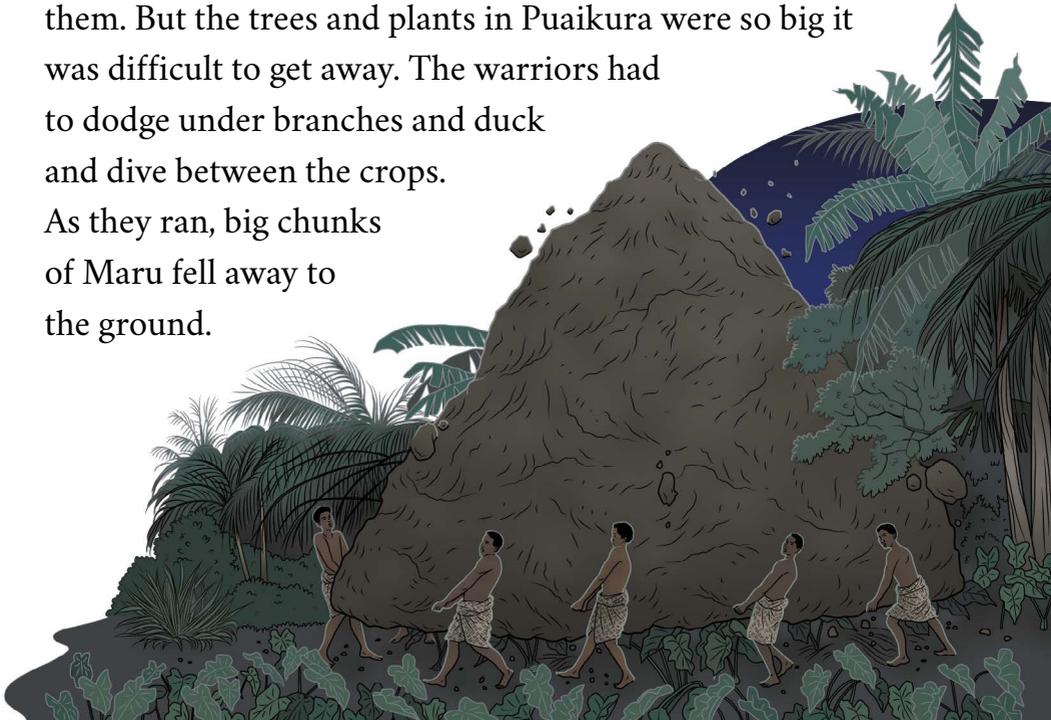
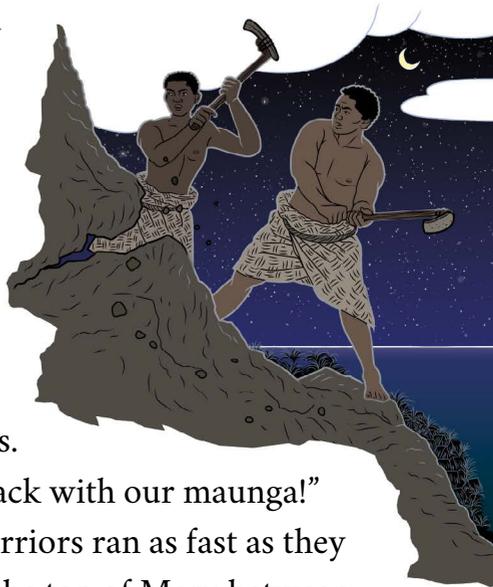


The warriors picked up their tools and sneaked through the village to the bottom of Maru. They climbed up the side of the maunga. Then they started to cut into it.

They worked quietly so that they wouldn't get caught. When the top of the maunga broke away from the base, they carried it down the slope and back towards their vaka. By now, the warriors were tired. The mountain was heavy, and they grunted as they carried it between them. Their noise woke the villagers.

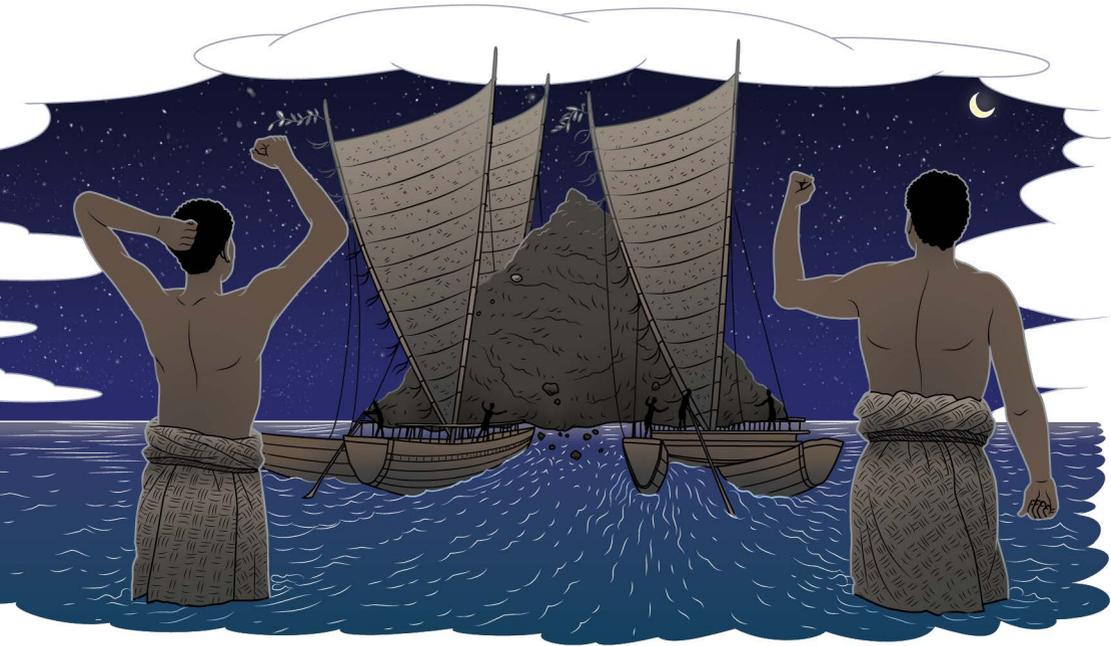
“Stop!” cried the villagers. “Come back with our maunga!”

Hearing the angry shouts, the warriors ran as fast as they could towards their vaka, carrying the top of Maru between them. But the trees and plants in Puaikura were so big it was difficult to get away. The warriors had to dodge under branches and duck and dive between the crops. As they ran, big chunks of Maru fell away to the ground.



“Taviviki!” yelled the villagers. “Hurry up! The thieves are getting away!”

The warriors saw the beach ahead. Quickly, they pushed their vaka into the sea, the crumbling Maru balanced between the two vessels. The angry villagers watched their precious Maru disappear into the night.



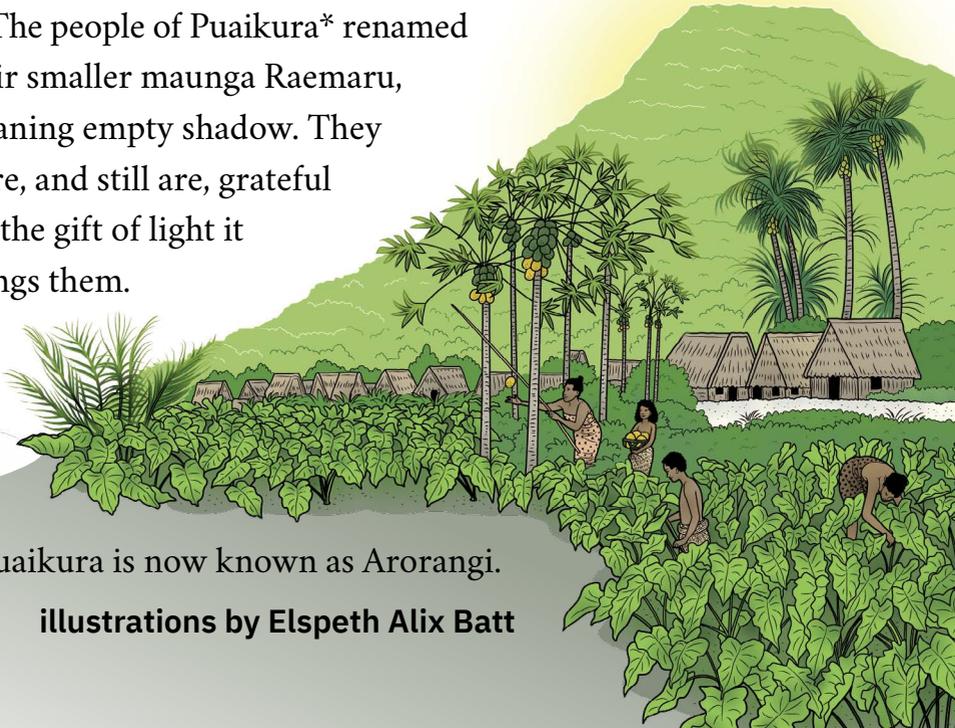
The warriors took all night and day to sail back to Aitutaki. By the time they reached home, the maunga was the size of a hill. It didn't matter. The people of Aitutaki now had their very own maunga, and they could enjoy its protective gifts.

The people of Aitutaki gave Maru a new name. They called it Maunga Pu, meaning top of the mountain. The maunga still stands on Aitutaki today.

Back in Rarotonga, the people of Puaikura were angry. They planned revenge. Tinomana, their ariki, gathered together his best warriors. They started building new vaka, strong enough to carry them all. They got ready to attack Aitutaki.

But while they were building the vaka, the people noticed something. Without their maunga, their village was no longer sheltered from the rising sun, so they woke earlier each morning. Because they woke earlier, they could work on their crops for longer. They could also fish for longer and catch more seafood. And they had more time in the day to spend with their families. They got used to this new way of living. The longer days made them happy. They got more things done. After a while, they didn't feel angry any more about losing the top of their maunga.

The people of Puaikura* renamed their smaller maunga Raemaru, meaning empty shadow. They were, and still are, grateful for the gift of light it brings them.



* Puaikura is now known as Arorangi.



Pencarrow

New Zealand's First Lighthouse

by Tricia Glensor

New Zealand's coastline has always been a dangerous place for ships and boats. Early Māori knew that. Several traditional stories tell of waka being washed onto rocks in storms. Since the 1790s, when the first Pākehā reached New Zealand, more than 2,300 ships have been wrecked in New Zealand waters.

The wreck of the *Maria*

In July 1851, the ship *Maria* was sailing towards Wellington. It was night, and there was a storm. The *Maria* struck a rock near the entrance to Wellington Harbour. The ship broke in half, and its lifeboat was smashed on the rocks. Only two of the twenty-eight people on board survived. After this disaster, many people in Wellington asked for a lighthouse to be built.

What is a lighthouse?

A lighthouse is a tower with a light at the top. It guides sailors into harbours at night and warns them of hidden rocks and reefs.

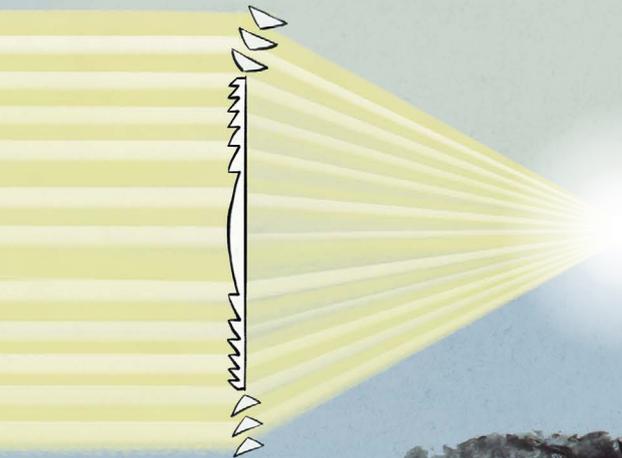
In early lighthouses, wood or coal were burnt to make the light, but these fuels don't burn very brightly. Later lighthouses burnt oil or **kerosene** and then **acetylene gas**, which give off a stronger light. Today, most lighthouses use electricity.

The lights in lighthouses have special **lenses** that bend the light and make more of it travel in the same direction. This makes the light much brighter.

Fresnel lenses

Lighthouses use special lenses called Fresnel lenses.

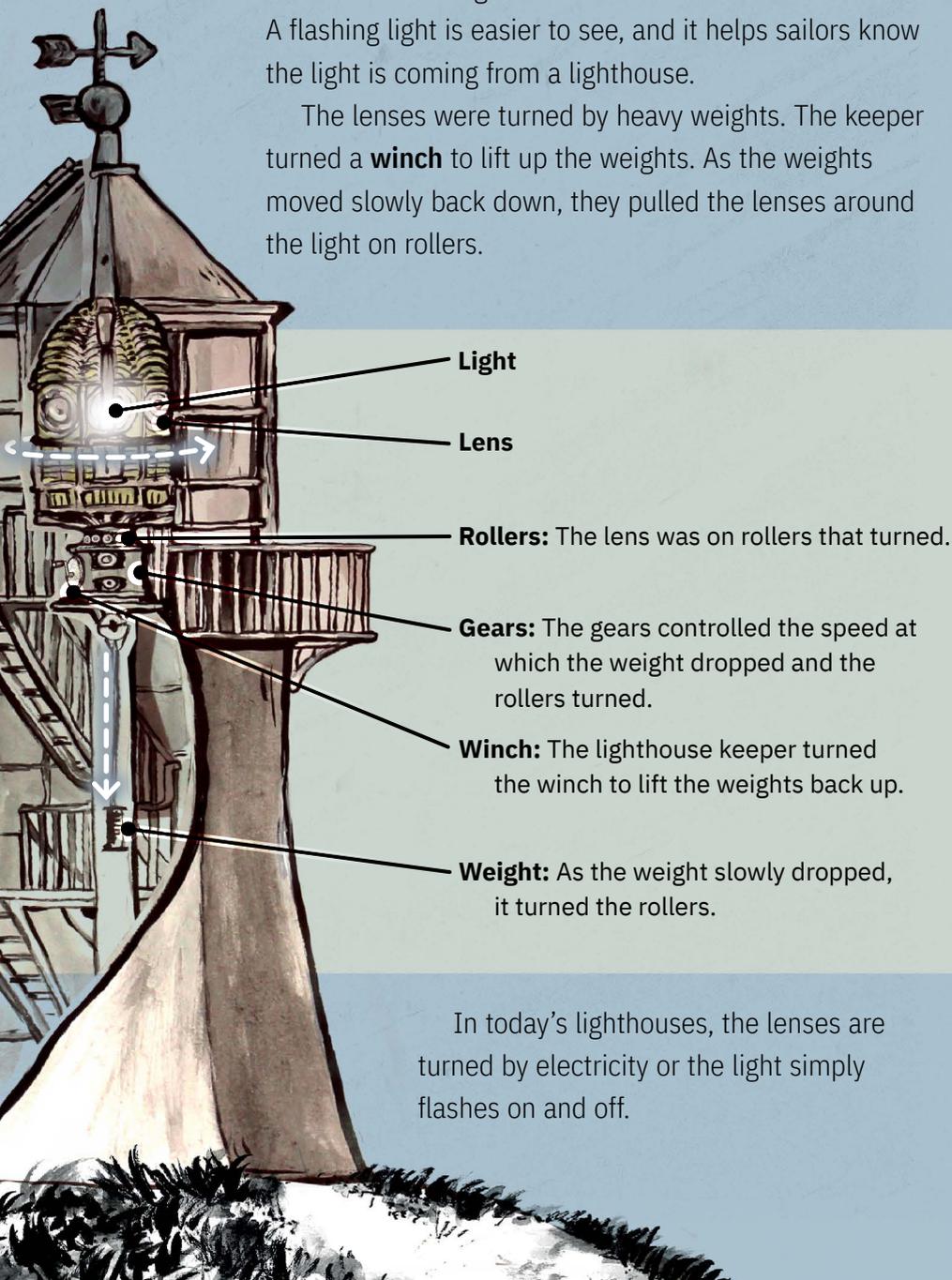
A Fresnel lens bends the light so it travels in the same direction.



Light source (lamp)

Early lighthouses had solid panels between the lenses. These made the lights flash when the lenses were turned. A flashing light is easier to see, and it helps sailors know the light is coming from a lighthouse.

The lenses were turned by heavy weights. The keeper turned a **winch** to lift up the weights. As the weights moved slowly back down, they pulled the lenses around the light on rollers.

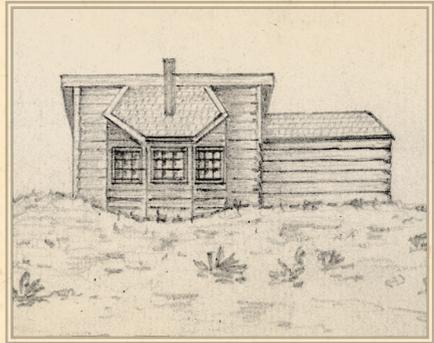


In today's lighthouses, the lenses are turned by electricity or the light simply flashes on and off.

The lighthouse is built

Plans were made for a lighthouse at Pencarrow Head. In 1852, George Bennett was given the job of New Zealand's first **lighthouse keeper**.

George, his wife, Mary Jane, and their children moved into a two-roomed cottage at Pencarrow and waited for the lighthouse to be built. While they waited, they set up a lamp in the cottage window as a warning for ships.



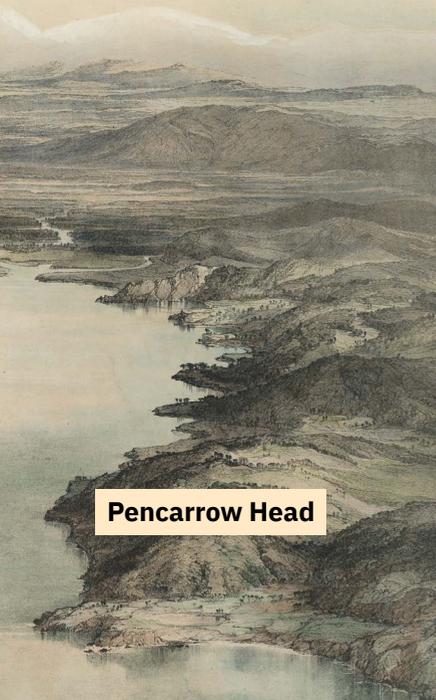
A sketch of the cottage

Wellington Harbour about 1840





The children of George and Mary Jane Bennett (1859)



Pencarrow Head

But in 1855, George Bennett drowned, and Mary Jane Bennett became the main keeper of the Pencarrow light. She is the only woman ever to be a lighthouse keeper in New Zealand.

The lighthouse was made of **cast iron**. It was built in England and shipped out to New Zealand in 480 packages. When the ship arrived at Pencarrow, the heavy packages had to be dragged up the cliff on rails by a steam-powered winch. The lighthouse was assembled at the top of the cliff, 120 metres above the sea.

On 1 January 1859, the Pencarrow lighthouse shone for the first time. Its light could be seen for 48 kilometres, right across Cook Strait. Ships on Wellington Harbour flew streamers to celebrate.

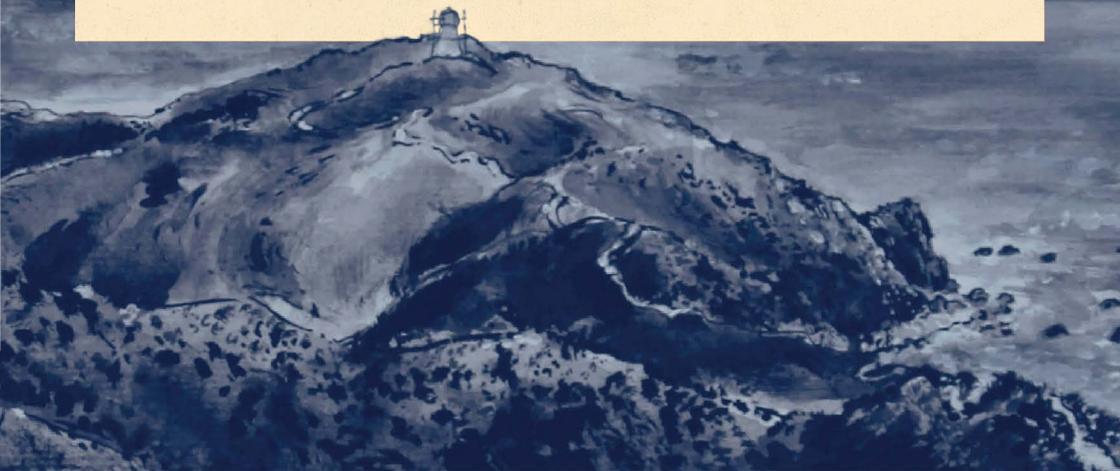
Working night and day

A lighthouse keeper had to work very hard. Their most important task was to make sure the light burnt all night, every night of the year. Every fifteen minutes, they had to pump oil to the light to keep it burning. Once every hour, they had to wind up the heavy weights that turned the lenses. Any keeper who fell asleep or let the light go out would lose their job immediately.

Mary Jane Bennett could not afford to lose her job. She had six children to feed. In the 1850s, jobs for women were hard to find and badly paid, and there were no **benefits** for single parents or unemployed people.



During the day, there were other tasks to do. The lenses had to be cleaned and polished daily. Mary Jane and her family had to cut firewood, bring up coal from the bottom of the cliff, clean and paint the tower, and repair any damage. They grew vegetables on the land around the house, and they also kept animals for food. There was no electricity, so meals were cooked on a coal range and clothes were washed by hand. Everyone had to help, including the children.



All supplies, including fuel for the light, had to be brought in by ship. The heavy boxes had to be hauled up the cliff. In stormy weather, it was dangerous work.



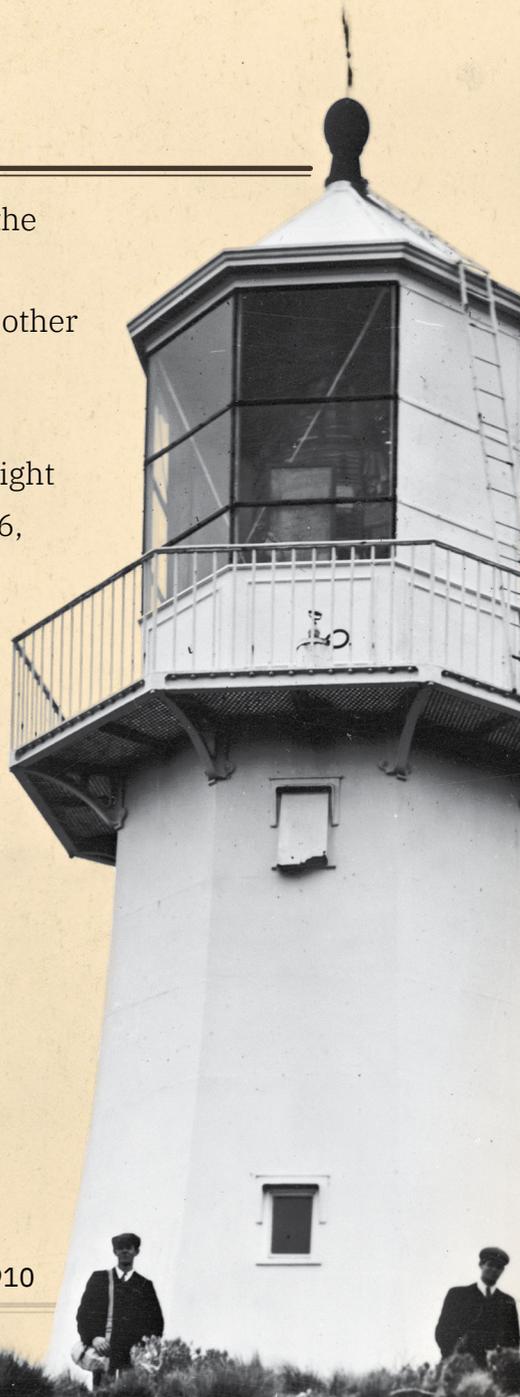
Out of a job

Mary Jane Bennett was keeper of the Pencarrow lighthouse until 1865. After Mary Jane, there were many other lighthouse keepers at Pencarrow.

Over time, there were changes to the Pencarrow lighthouse. The light was often hidden by fog, so in 1906, a new lighthouse was built at sea level, where there was less fog. In 1955, the lighthouse changed to electricity. This meant that keepers didn't have to stay up all night to look after the light.

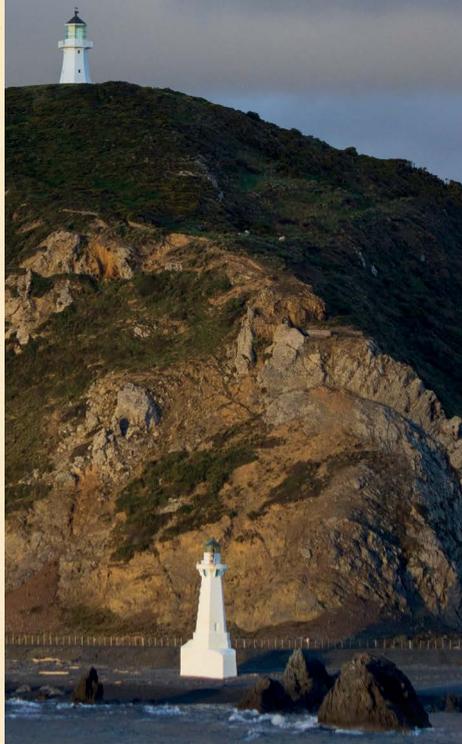
These days, solar panels provide electricity for most lighthouses, and the lighthouses are automatic – their lights are controlled by computers in Wellington. There are no lighthouse keepers any more.

People visiting the old lighthouse in 1910



A historic place

The old Pencarrow lighthouse is now a historic place. People can walk or bike along the coast to visit the lighthouse. It still stands proudly above the coast it once protected.



GLOSSARY

acetylene gas: a colourless gas that burns very brightly

benefit: money the government gives to people in need

cast iron: a mixture of iron and carbon that has been shaped in a mould

kerosene: a liquid that is made from petroleum and used for lighting and heating

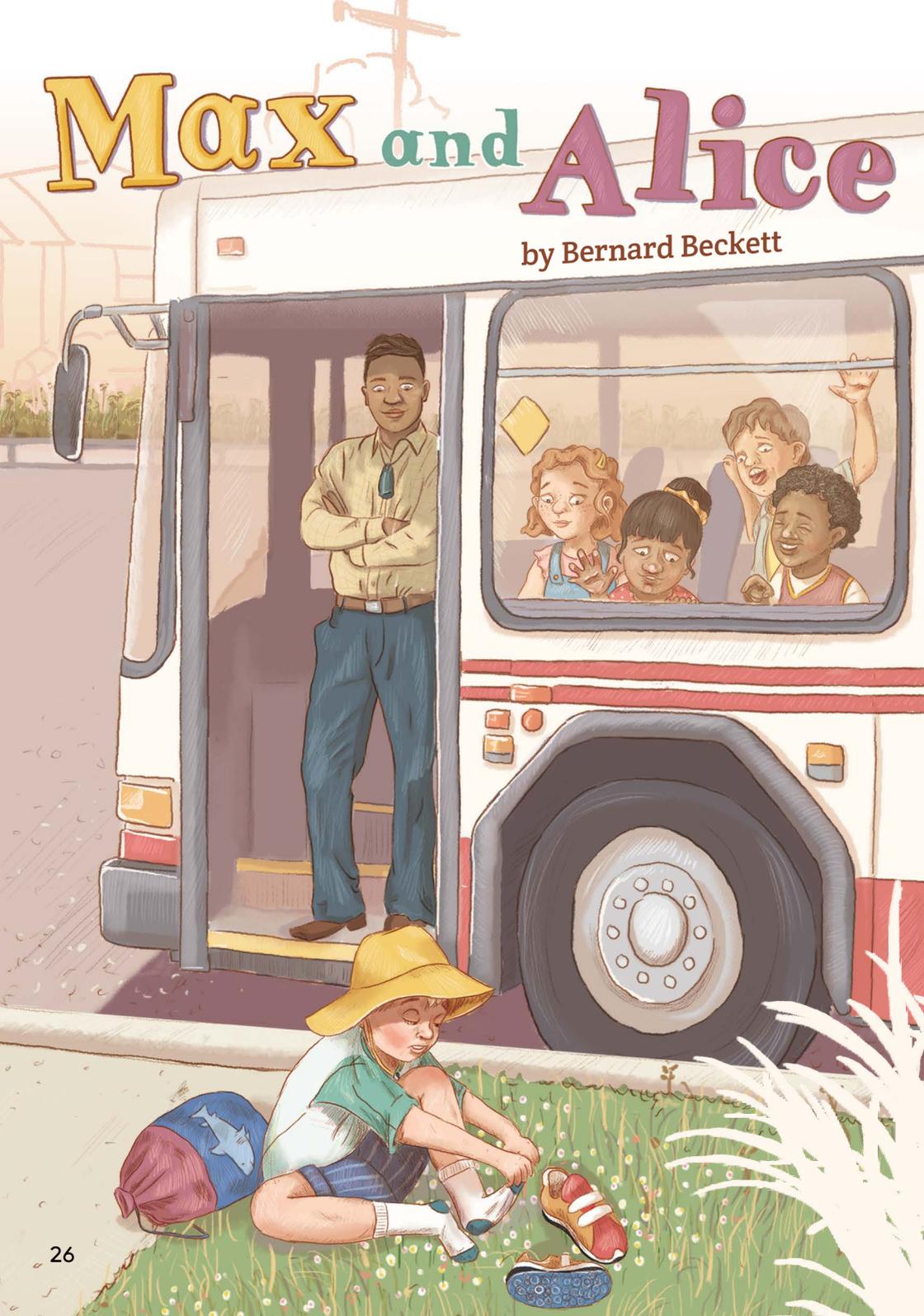
lens: a piece of curved glass or plastic that bends light rays as they pass through it

lighthouse keeper: a person whose job is to look after a lighthouse

winch: a machine that can pull a heavy weight by winding a wire or chain around a drum

Max and Alice

by Bernard Beckett



On the day of the swimming sports, Max took off his shoes and socks and put them on again three times. Only then was he happy that his socks were lined up exactly the way he liked them.

The other kids waited on the bus. Adam and Noah laughed out the bus window. When Mr Sandbrook told them to be quiet, they slumped down behind the seat and pulled faces.

Alice watched Max carefully checking each sock. She smiled at him, the way her parents had taught her to smile at people who were having a hard day. So did Alice's friend Amy. Last winter, Alice, Amy, and Louis had started a kindness club in the library at lunchtime. But some older kids had stolen all the felt pens and drawn on the cushions, and the librarian had closed the club down.

Max didn't seem to notice them smiling. He was too busy concentrating on his socks.

On the day the teacher aide, Ms Va'a, brought her lamb and miniature pony to school, Max hugged the lamb and told it stories. When it was time to go back to class, he cried and shouted, "No!"

Melissa and Avril whispered to each other, and two of the other boys at his table sniggered.

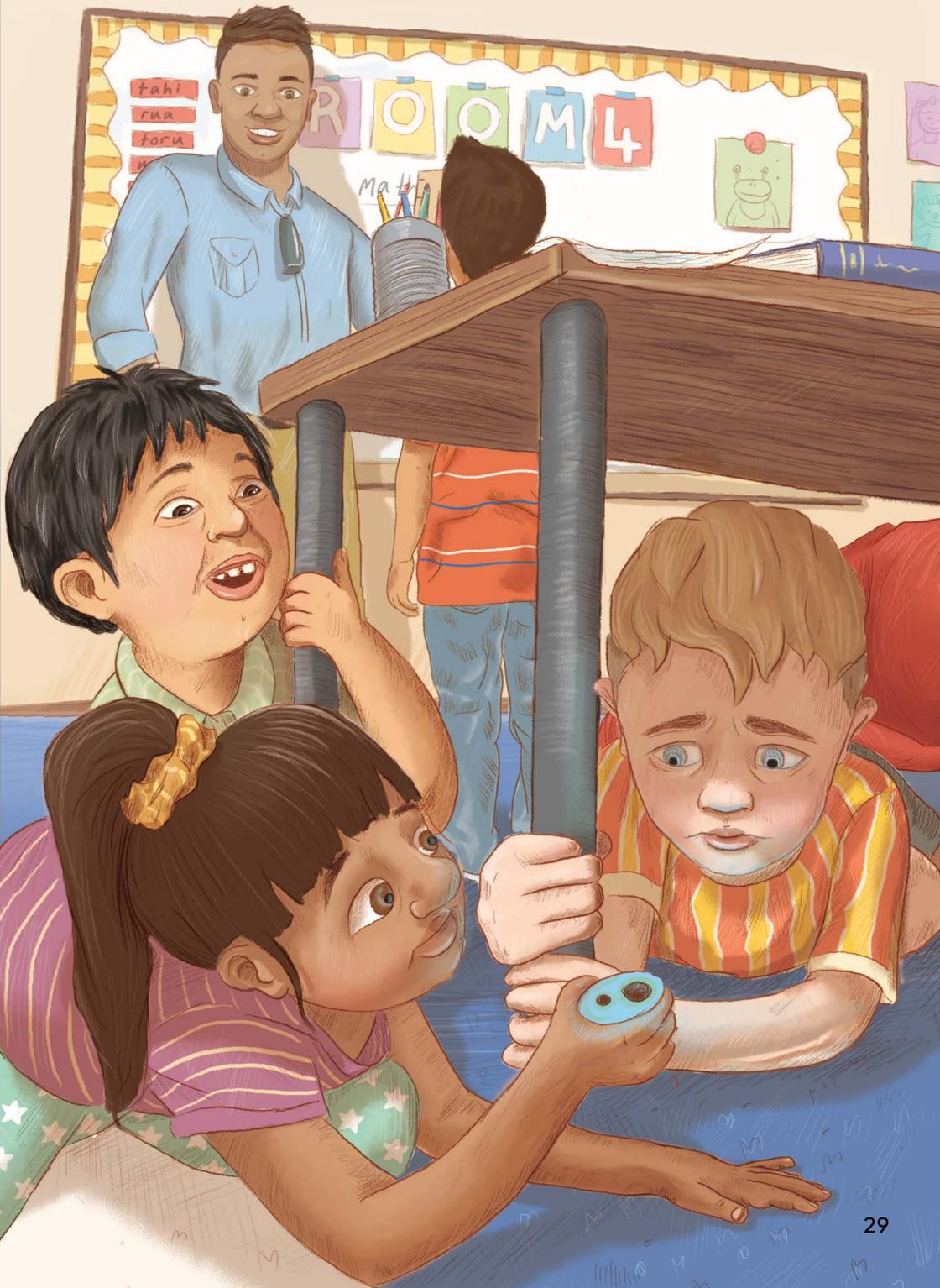
Alice waited until Max looked at her, and then she smiled at him. She used her very best supportive smile, which she'd been practising at home in the mirror. Max wiped his eyes with his sleeve and ran to his favourite beanbag. He didn't smile back.

On the day of the earthquake drill, everyone climbed underneath their desks, the way they had practised. But Max didn't go under his own desk. He hid under Mr Sandbrook's desk, and when the drill was over and it was time to come out, Max wouldn't move. He stayed there, clinging to the metal legs as if he was trying to stop himself sliding across the floor.

Mr Sandbrook crouched down and tried to explain to Max that it was only a drill. But Max stayed put.

Alice and Bao talked to Mr Sandbrook, and he said they could sit next to Max. Nobody spoke. After a while, Alice showed Max her new pencil sharpener. It lit up with green and blue flashes when it was used. Max took the sharpener in his hands and smiled. He crawled out from under the desk without being asked and joined the others. Alice didn't ask for her pencil sharpener back, even though it had been a present from her auntie.





On the day of school sports, Alice tripped on a skipping rope and grazed her knee. Little drops of bright red blood ran down her leg and stained her new blue socks.



“Are you all right?” Chantelle asked. Chantelle knew Alice didn’t like the sight of blood. Alice nodded, trying hard not to cry. She knew if she looked down at the graze, it would frighten her, so she screwed up her eyes and turned her face to the hot sunshine.

Mr Sandbrook came over. “Chantelle, Avery,” he said, “please take Alice over to the office to get a plaster.”

Alice stood up. Her legs began shaking, and she wanted to sit down again. Then she felt a hand take hers. It was a small hand, no bigger than her own. It was Max’s hand. He didn’t say anything.

Chantelle, Avery, and Max took Alice to the main office. Chantelle explained what had happened. Max watched carefully as Denise in the office wiped Alice’s knee clean and gave her a choice of plasters. Alice chose a blue one with white clouds.



On the day that was exactly one week before Alice’s birthday, she brought six invitations to class. They were in bright yellow envelopes with eight glittering stars on the front, one for each year she’d been alive. Alice had glued them on herself. Five of the cards were for Chantelle, Amy, Avery, Louis, and Bao. The sixth card was for Max.

That afternoon, Alice watched Max run out to meet his mother. She always waited beside the drinking fountain. Max pulled the card out of his bag and showed it to her. Max’s mother hugged him and whispered something in his ear. Max turned around and pointed at Alice. Max’s mother looked towards Alice and smiled.



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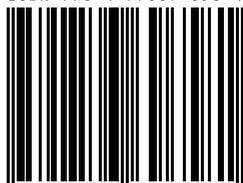
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