

Curriculum LEVEL

May 2019



TITLE	READING YEAR LEVEL
Johnny Pohe and the Great Escape	8
Resistance: When Antibiotics Don't Work	7
Fly	8
Four of a Kind	7
Springers	8
The Name Game	7

This Journal supports learning across the New Zealand Curriculum at level 4. It supports literacy learning by providing opportunities for students to develop the knowledge and skills they need to meet the reading demands of the curriculum at this level. Each text has been carefully levelled in relation to these demands; its reading year level is indicated above.

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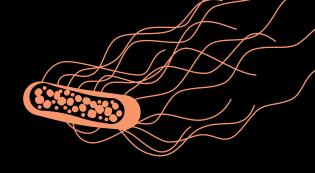
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SCHOOL Journal

Level 4 • May 2019



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JOHNNY POHE AND THE GREAT ESCAPE by Philip Cleaver



Early on the morning of 23 September 1943, fortune finally turned against Johnny Pohe. He'd flown many dangerous missions during the war – his luck was bound to run out. Hit by enemy fire, Johnny was forced to crash-land in the English Channel. He was captured two days later and taken to Stalag Luft III, deep in Nazi Germany. Despite being a prisoner, Johnny didn't accept that his war was over. He took part in an ambitious escape that would end tragically for himself and many others ...

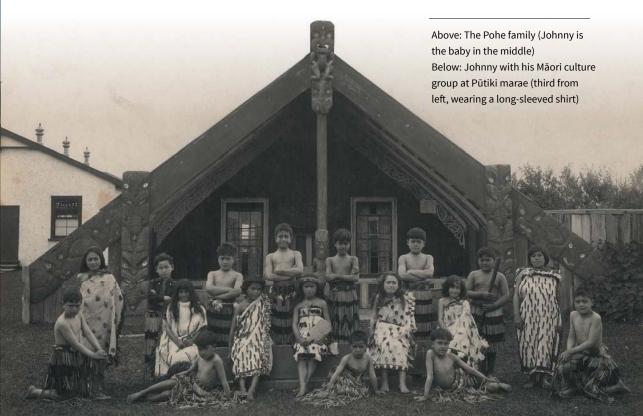
Porokoru Patapu Pohe

Johnny Pohe was of Te Āti Haunui-a-Pāpārangi and Ngāti Tūwharetoa descent. His full name was Porokoru Patapu Pohe, but everyone called him Johnny. He grew up in Turangaarere, near Taihape, where his family farmed. As a teenager, Johnny went to Te Aute College, a Māori boarding school in Hawke's Bay known for producing leaders. The school's motto is "Whakatangata kia kaha" (Quit ye like men, be strong).



Many of Johnny's classmates would also serve in the war.

Johnny was twenty-four and working on his family's farm when the Second World War started in September 1939. A few days later, he applied to train as a pilot. This was an unusual move. Māori were expected to go into the army, just like they had in the First World War. They weren't encouraged to join the air force or navy. Johnny was about to challenge this.





The Māori Battalion in Italy during the Second World War

MĀORI AND THE SECOND WORLD WAR

The New Zealand government didn't make it compulsory for Māori to fight in the Second World War, but some Māori leaders, especially the politician Āpirana Ngata, encouraged their people to volunteer. Ngata saw the war as an opportunity. He believed that if Māori made a significant contribution, they would gain greater respect from Pākehā and be treated more fairly – ultimately as equals. For many young Māori, there was another motivation: adventure. They wanted to be a part of the great event that was consuming the world.

To encourage Māori to sign up – and to ensure their contribution would be visible – Ngata made sure that a separate unit was established in the army, the 28th (Māori) Battalion. Most Māori who fought during the war served within this unit – around 3,600 in total. The cost was great. Of that number, around 650 men were killed and over 1,700 were wounded. Those who escaped physical injury had to live with wartime memories. Many had trouble fitting back into their old lives.

First Māori Pilot

Johnny Pohe became a qualified pilot in January 1941. He was the first Māori to be trained by the Royal New Zealand Air Force (RNZAF). He left for England soon after and was posted to 51 Squadron, a Royal Air Force (RAF) unit based near the town of Snaith. This squadron had bomber aircraft, and in mid-July, Johnny flew his first mission, bombing enemy targets in Europe.

Being part of a bomber crew was dangerous and stressful. Planes were targeted by guns on the ground as well as attacked by enemy aircraft. At night, searchlights swept the sky. The casualty rate for airmen like Johnny was high. Almost half (44 percent) of all crew who flew in RAF bombers were killed. Many more were wounded or captured and became prisoners of war.

By April 1942, Johnny had completed twenty-two missions. This was a lot – so many, in fact, that he was no longer expected to fly. For a time, Johnny worked as a flight instructor, but he was restless to return to the action. Eventually, he was allowed to rejoin his old unit. In September the following year, Johnny left on the mission that would be his last.



THE BOMBING OF GERMANY

Both sides dropped bombs from aircraft during the Second World War, with deadly consequences. At first, Britain's Bomber Command targeted German submarine bases, railway yards, aircraft factories, and ports. Being accurate was difficult, and bombs often missed the target. From early 1942, tactics changed, and the RAF shifted its focus to German cities and their populations – a strategy known as "area bombing". It was hoped this would destroy the morale of the German people. The result was devastation. On one night alone, in October 1943, ten thousand people died when a firestorm engulfed the city of Kassel. Over 400,000 German civilians were killed during the Allied raids of the Second World War. Millions more were left homeless.





Out of Luck

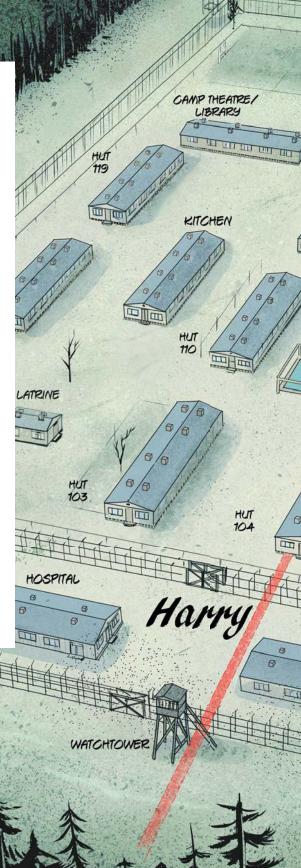
Johnny had been lucky for many months. He'd already survived a crash when the wing of his bomber caught fire. But, finally, his luck ran out. On the night of 22 September 1943, his plane was hit twice over the German city of Hanover. With an engine down, Johnny tried to fly home, but he was forced to crash-land in the English Channel. Johnny and two of his crew floated in an emergency dinghy for two days before being spotted and captured by the Luftwaffe (German air force) . Because he was an officer, Johnny was sent to Stalag Luft III, a German prisoner-of-war camp for officer airmen.

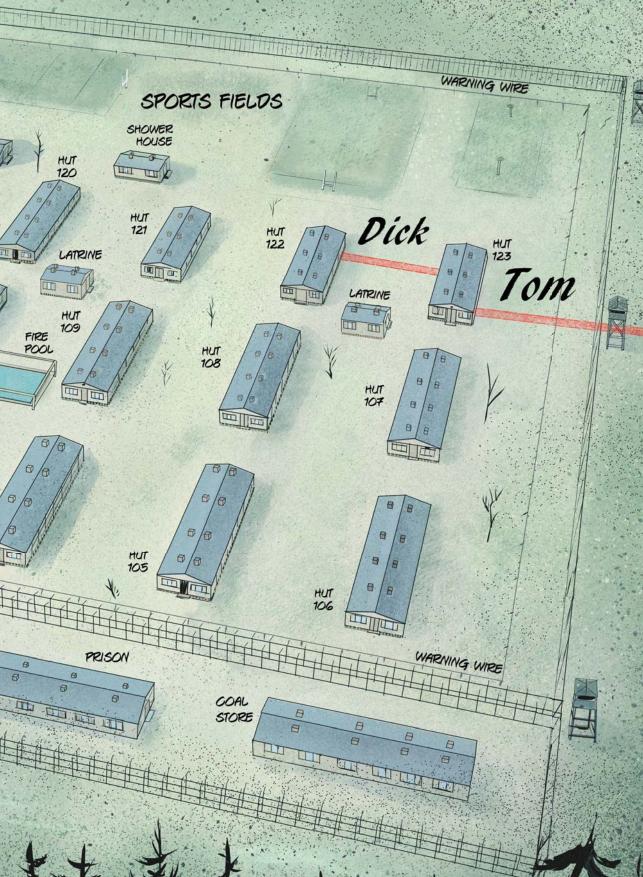
Unlike the inhumane conditions experienced by many wartime prisoners, men in the camp were treated reasonably well. They were given food, shelter, and medical care, and they were allowed to write and receive letters. In one letter, Johnny reassured his family, "Do not worry unnecessarily about me as you know I always manage to get along somehow." But life in Stalag Luft III was still difficult. The men relied on food parcels from home to supplement their rations, and the days were monotonous. Many longed to escape. The month Johnny arrived, three men made it out through a tunnel and back to England. Plans were also under way for a much more ambitious effort – a mass escape that would involve hundreds of men.

Tom, Dick, and Harry

Stalag Luft III had been carefully designed to prevent escape. The prisoners' barracks were raised off the ground so the guards could spot signs of tunnelling, and the camp was deliberately built on sandy soil that easily collapsed. The Germans also used microphones. These were placed around the camp perimeter to detect sounds of digging. Lastly, the camp's location had been chosen to make escape difficult. Allied territory – and safety – was hundreds of kilometres away. Any escapee faced a daunting task.

Men like Johnny were up for the challenge. By September 1943, hundreds were working on three tunnels: Tom, Dick, and Harry. If one tunnel was discovered, it was thought that the guards wouldn't look for another, and this proved to be right. Dick was abandoned after its planned exit point was built over during a camp extension, and Tom was found by the Germans and dynamited. In the end, Harry was the only hope. Building this tunnel would take around a year.





"Penguins" and Bribery

The escape plan was impressive. One of the first challenges was getting rid of the soil that came out of the tunnel. This work was done by "penguins" – men who scattered sand from small pouches sewn inside their trouser legs. Finding wood to brace the tunnel's walls was also difficult, as was building pumps to provide oxygen. The prisoners were resourceful, and anything that couldn't be found inside the camp was sourced from elsewhere. Guards were bribed for railway timetables, maps, and civilian clothing. They also provided identity papers so that new ones could be forged. For some, the bold plan was to pretend to be a local and get away by train.

Harry was finally ready in March 1944. Although six hundred men had worked on the tunnel, there was only enough time for two hundred to escape. The men were divided into two groups. The first was made up of those who spoke German or had a history of escape. It also contained men who'd done a lot of the work. This included Johnny, who was renowned for his tireless digging. The second group was chosen by ballot. These men were able to have only the most basic forged paperwork and equipment. They'd have to take their chances.



Escape

The men had to wait for a moonless night. One arrived on 24 March 1944, and the escape began. They struck trouble straight away. It was the coldest March in thirty years, and the exit trapdoor was frozen solid. Freeing it caused a ninety-minute delay. Worse was to come. It was suddenly discovered that the tunnel came up short of the nearby forest, which was needed to provide cover. The escape went ahead, and the first man emerged at 10.30 p.m. Six minutes later, he was followed by another.

These six-minute intervals were much longer than the original plan of one man per minute. A watchtower was nearby, and the extra time was needed so men could reach the woods. Word was sent back that no one with a number above a hundred would be getting away before daybreak.

At 1 a.m., there was another hitch: the tunnel collapsed. The men worked desperately to repair it, and the escape continued. Then, at 4.55 a.m., the seventyseventh man – another New Zealander – was spotted by a guard. He surrendered. The camp was searched, but the Germans were unable to find the tunnel's entrance, hidden under a stove in one of the huts. Eventually, a guard crawled back from the exit of the tunnel, and all was revealed.





The Other Side

For those who made it out – Johnny among them – the troubles continued. Because the escape had been delayed, many of the men missed trains and they had to wait, in daylight, for the next one. Others spread out on foot, but in places, the snow was deep, and they were forced to leave the safer woods and fields and follow roads. The cold was extreme. When Johnny was finally picked up several days later, his feet had frostbite.

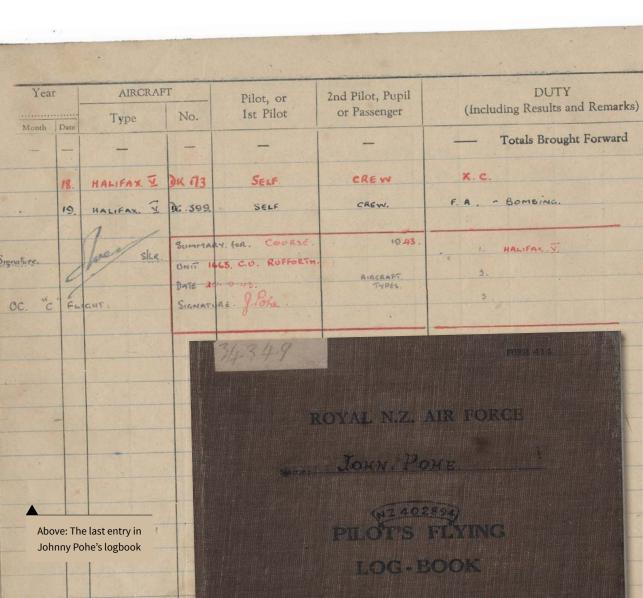
The escape was a disaster. Seventy-three men were captured, including Johnny. Only three made it back to England. Along with others, Johnny was taken to a town called Gorlitz to await his fate. Hitler's order, when it came, was harsh. All those captured were to be shot. Some of Hitler's advisers were against the executions, and in the end, Hitler reduced the number to fifty. These men would be shot individually and in pairs.

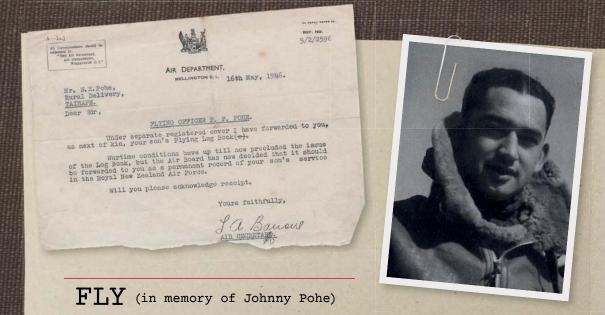
We don't know if Johnny died alone. We do know that another New Zealand pilot, Arnold Christensen, was executed at the same time. Johnny was cremated, and his ashes were buried in Sagan, a town near the camp.

No Return

Back in Turangaarere, Johnny's family learnt the terrible truth. Their son and brother was not just missing – he was never coming home. The New Zealand government was "deeply shocked", and in England, politicians said the executions were a war crime. They resolved to bring the culprits to justice. By the time the hunt for those responsible had begun, Hitler and most of his highest-ranking officers were dead, although some of those involved were eventually tried and executed.

After the war, Johnny's ashes were moved to a cemetery in Poznan, Poland. He now lies a long way from home, alongside other men who escaped from the camp.



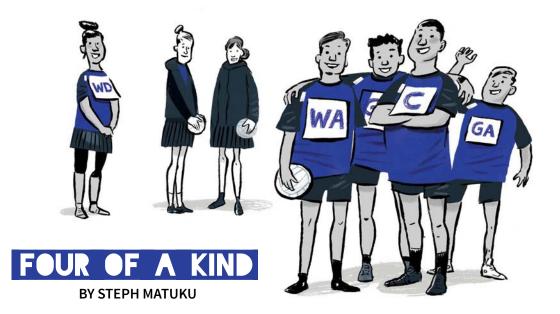


- It begins like this: a man with five sisters and one brother. Things we know: this man was once a boy. Things we don't know: his siblings' names in chronological order.
- Other things we know for sure: there was a farm near a town and the town was Taihape. Also: there was a war.
- 3. It hardly matters what day the planes came into it, but it may have been a Monday. Many Mondays from then were full of air and seeing the earth from up there.
- 4. Johnny was good at seeing the earth from up there. He flew and flew until he was made a flight sergeant. But before that, there were these words: Armstrong Whitworth Whitley Abingdon Handley Page Halifax Honeybourne Vickers Wellington.
- 5. If you think those are a mouthful, try this: hit and then hit while high in the sky in a Handley Page Halifax. And then falling out of that sky into the English Channel like a plane with one engine down.
- Things we know about the English Channel: it is cold and uninviting, especially if you're floating in a dinghy for two days.
- Rescue sounds like miss you, which is also like menu, depending on which way the wind is blowing. These may be some of the words that floated round Johnny's head those two days.



- Rescue sounds very different in German, which is the language Johnny would have heard when the dinghy was finally made redundant. It may have been a Monday.
- The German word for rescue is rettung, in case you're wondering.
- 10. Something else we don't know but might suppose: the Germans weren't saying words like rettung when Johnny arrived at Stalag Luft III.
- 11. It was a Wednesday.
- 12. It was 1943.
- 13. Dozens more Wednesdays went by.
- 14. On a Friday in March in 1944, Johnny and many other men finished digging a tunnel. It was dark and there was snow. They didn't march, or fly, but slipped out into the night and away from German words like häftling.
- 15. Suppose it were to end here, with dark and snow and not marching but slipping. And suppose the sun came up and Johnny and his mates kept walking, regardless of frostbite and sirens.
- 16. And if that were the end, I'd tell you that häftling is the German word for prisoner. But it wouldn't matter.
- 17. Because that would be, as I said, the end.
- 18. But instead of the end, there were guns.
- 19. And behind the guns were men.
- 20. And there would be no more planes and no more flying. Except in his family's dreams.

by Lynley Edmeades



Whaea Melanie carefully parked the school's new van. They were there. Caesar wiped the foggy window so he could see outside. Across the street, the courts gleamed after the morning rain. He'd imagined their first game on a sunny day – and with no spectators. But the place was packed.

Caesar peered closer. Something was wrong. "Miss," he said suspiciously. "Why are there no boys?"

"Wait! What?" said Dayton, making his own peephole. "What do you mean no boys?"

"There are no boys," Caesar repeated.

"Over there – is that one?" Kaya asked.

"That's a man." Bethany spoke with exaggerated patience. "With a beard!"

"He's really short," Kaya said. "Maybe it's a fake beard."

Caesar gave his team-mate one of his withering looks. "Why would a boy wear a fake beard to a netball game?"

"Dunno." Kaya shrugged. "Why do you take baths in your dad's aftershave?"

Kaya fanned his hand in front of his nose. Caesar's look intensified. "That's my aftershave, actually."

"Yeah," said Kaya. "For your fake beard." "Out you get," said Whaea Melanie. "You're wasting time. We need to warm up. It's a new season – let's be at our best. Stand out."

"We'll be doing that all right," Dayton muttered, "seeing as we're the only boys within a 50-mile radius."

"Why didn't you tell us netball's for girls, Miss?" Caesar asked.

"It's not," said Whaea Melanie. "You're here, aren't you?"

"Not for long," said Dayton. He slumped down and pulled his beanie over his eyes.

"It'll be fine," said Bethany. "Chill."

"Easy for a girl to say."

Whaea Melanie slid open the door. Bethany and the rest of the girls climbed out – Anah and Kelsey and Hannah – but the boys didn't move. "Come on," said Whaea Melanie cheerfully. "Don't let all that practice go to waste."

"Shame!" moaned Dayton.

"I'm surprised you didn't make us wear skirts," Caesar added.

Whaea Melanie rattled her keys. "Out. I need to lock up."

Grumbling, the boys struggled out of the van. They huddled together, their breath misty in the early morning air, and sullenly waited for the next instruction.

"Right, follow me," said Whaea Melanie. Together, they trooped across the road, through the gates, and onto the courts.

Spectators crowded the sidelines, bundled in warm jackets, yelling encouragement. Little kids clung to their parents' legs; slightly bigger kids rode their scooters erratically in the narrow gaps between the courts. On the far side, by the sausage sizzle, a team in red was warming up. The air smelt of rain and fried onions. If they didn't have to play, Caesar thought, this might've been fun.

They followed Whaea Melanie to the office, where a woman in a blue puffer jacket sat behind a counter. Caesar noticed her checking them out – she seemed surprised.

"Court five," the woman said. "And you need to confirm player names. Gosh, you do have a lot of boys," she added.

"Couldn't find a rugby coach this year," said Whaea Melanie briskly. "Netball was the only option. So here we are."

"Great," said the office woman. "That's really great."

Was she whakamā? Caesar wondered – because she wasn't the only one.

The woman smiled brightly and passed Whaea Melanie a clipboard. "Enjoy your game, boys."

"Oh, we *won*'t," said Dayton under his breath. "What about us?" Bethany whispered crossly. "What about the girls!"

Whaea Melanie hustled them over to a quiet area by court five. Her mood had changed. She seemed annoyed. "It's not the dark ages," she grumbled.

"Dark ages?" said Kaya.

Vance grinned. "She means the olden days when girls played netball and boys played rugby and everyone was happy."

"Sounds like a plan to me," said Dayton. "But look how good our women's rugby team is," said Whaea Melanie. "The Black Ferns are world champs."

"Yeah, come on! Anyone can do anything these days," said Vance. "My cousin Shane wears make-up. He does vlogs."

Caesar rolled his eyes. They'd all heard about Vance's cousin the make-up vlogger.

"Well, there's a difference between knowing boys can play netball and being the only boys actually playing netball," grumbled Dayton.

"Look at it this way," said Whaea Melanie. "We might have a tiny advantage."

"What do you mean?" demanded Bethany. "She means," said Vance with a smirk, "that boys are better at netball than girls."

"That is *so* sexist!" Bethany folded her arms, waiting for an explanation.

"That is not what I mean," said Whaea Melanie. "If the other teams aren't used to playing against boys, it might rattle them a bit. It's a psychological thing."

Dayton didn't look convinced. "Well I don't want to play," he said flatly. "*I'm* the one who's rattled."

"Here," said Whaea Melanie, taking a ball from the gear bag. "Might as well warm up seeing as you're here. You'll freeze if you stand around."

Dayton threw the ball sulkily to Vance, who threw it to Kaya, who threw it to Caesar. "Fine," said Bethany, taking a second ball. "Whatever."

It wasn't long before their muscles had loosened up. Caesar was actually feeling good, and that's when he remembered: he *liked* netball. He didn't miss rugby at all.

The hooter sounded, ending the round. There were cheers and handshakes, then players began filing off the courts.

"Everyone's staring," hissed Dayton. He nodded towards a group of girls looking their way. "Look. They're laughing."

"There's a good reason for that, try-hard," said Vance. "Your shirt's on backwards."

"Oh," said Dayton. He quickly pulled it off and turned it round the right way. "That hasn't fixed anything, by the way. This still sucks."

"I don't know," said Caesar cautiously. "Maybe it's OK."

Strangely ... Caesar couldn't say why exactly ... but he was starting to have fun.

To prove his point, he pulled out his phone and took a quick selfie. "What shall I put for a caption?" he asked. "One of a kind?"

"One of a kind?" said Kaya indignantly. "There's four of us!"

"I'm thinking three," said Dayton. "This is still too weird for me."

Whaea Melanie held out her hand for Caesar's phone and dropped it in her bag. Then she turned to Dayton.

"How do you think the first women's rugby team felt? Or the first female astronaut? Or the first female prime minister? Or the first anyone? They didn't stop because *they* felt weird. And besides," she added, "you only have to feel weird for an hour or so, then we can go home."

Dayton kicked at the ground. He wasn't persuaded. Not yet. But Caesar could see that Whaea Melanie was getting somewhere. He decided it was time to help.

"OK, so we're not all the same," he said. "Some of us are girls, some of us are boys, some of us are try-hards – but we're still a team. We're dressed like a team –"

"We play together as a team," said Vance. "Yeah," said Bethany. "And if you don't step up, Dayton, you'll be letting us down – the team."

"She's right," Whaea Melanie said. "And you'd better make up your mind. Looks like we're about to start." The opposition had appeared on the court. Girls in green. They had high ponytails and new trainers and bounced on their toes. They looked smart, Caesar thought, and confident. They were used to winning.

"Come on, Saint Pats," a dad yelled. "All the way!" He looked confident, too, and they hadn't even started. Dayton was looking at the man. Clearly, he was having the same thoughts as Caesar. "Well?" said Whaea Melanie. "Oh, all right," Dayton said. They jogged onto the court. Caesar stood in the centre circle and studied the other players. He smiled.

They won the toss. The whistle blew.

THE NAME GAME

a screenplay by Victor Rodger

CHARACTERS: VIJAY, CHYE-LING, IBRAHIM, MIRI, UILEALEA (all students) MISS POTTER (substitute drama teacher)

Drama class. Three students, VIJAY, CHYE-LING, and IBRAHIM, are waiting for class to begin.

VIJAY

Man, that rain. It's insane. Hey! That rhymes.

VIJAY is impressed with himself, but CHYE-LING ignores him.

CHYE-LING I got soaked just running from the car.

IBRAHIM

Same.

MIRI enters, dripping wet.

CHYE-LING

Hey, Miri!

MIRI Fahhh. It's a hurricane out there!

VIJAY Hey, hey, hey ... if it isn't my sweet Juliet.

> **MIRI** Oh my gosh, can you not?

VIJAY Well? Aren't you going to say hello to your Romeo?

MIRI

Vijay, you are so not my Romeo.

VIJAY

What are you talking about? You heard Mr Jackson-Bourke last week. He said I'm Romeo. And you're Juliet.

CHYE-LING

Did you guys learn your scene?

MIRI

Yeah. But I'm not sure how convincing I'm going to be - know what I mean?

MIRI nods towards VIJAY, who looks affronted.

IBRAHIM

Oooh! Cold!

VIJAY We might have to seriously review our relationship.

> MIRI Uh ... what relationship?

CHYE-LING Where's Mr Jackson-Bourke anyway?

IBRAHIM

And where's Uilealea? That guy – he's such a crack-up.

CHYE-LING I wonder if he's learnt the lines for our scene this time.

IBRAHIM

If he hasn't, I bet Mr Jackson-Bourke will make him be the donkey in the Christmas show again.

CHYE-LING

He was pretty good as the donkey, actually.

IBRAHIM

Actually, yeah. You're right. He was.

IBRAHIM is imitating **UILEALEA** being a donkey when **UILEALEA** arrives, wearing sunglasses and shaking the water from his umbrella.

UILEALEA

It's OK, everyone. You can relax. The star of the show's here.

MIRI rolls her eyes.

MIRI

What are you wearing sunglasses for? It's pouring out there.

UILEALEA

Well, you see, Miri, my future's so bright I gotta wear shades.

IBRAHIM

Huh? What does that even mean?

MIRI

It means he's an egg.

IBRAHIM An egg?

MIRI Yeah. A really big, smelly one.



UILEALEA

Miri, I just want you to know that sticks and stones may break my bones, but names will never stop me from becoming the next Dwayne Johnson.

IBRAHIM

Wait - that's not how that rhyme goes.

UILEALEA

It is now 'cause that's how I roll.

MIRI

You're sad.

UILEALEA

Don't be a hater. Be a celebra-ter.

MIRI

That's not even a word.

UILEALEA begins to rap.

UILEALEA

Celebra-ter. Celebra-ter. Cele-celebra-ter. Everybody now ...

UILEALEA encourages the others to join in. Everyone does except **MIRI**.

UILEALEA/CHYE-LING/VIJAY/IBRAHIM

Celebra-ter. Celeb

MISS POTTER arrives in a fluster. She's drenched.

MISS POTTER

Goodness, it's a little bit wet out there this afternoon, isn't it? Kia ora, everyone. You must be Mr Jackson-Bourke's drama class.

VIJAY

Yes.

MISS POTTER

Sorry I'm late. The traffic was horrendous. I'm Miss Potter.

UILEALEA Are you related to Harry?

MISS POTTER

Harry who?

UILEALEA

Harry Potter.

UILEALEA sniggers at his own joke.



MISS POTTER

Oh. Was that a joke?

MIRI

Burrrrrn.

MISS POTTER

I'm going to be your drama teacher today.

CHYE-LING Where's Mr Jackson-Bourke?

MISS POTTER He had to fly to Nelson for a family thing.

VIJAY Are you friends with Mr Jackson-Bourke?

MISS POTTER

Yes. We went to drama school together.

VIJAY

So are you just friends friends? Or are you, like, Romeo and Juliet friends?

MISS POTTER looks a little flustered.

MISS POTTER

We're very good friends.

VIJAY looks over at MIRI.

VIJAY

Like us, eh, Miri?

MIRI rolls her eyes again.

MISS POTTER

So. Because you don't know me and I don't know any of you, I thought we could start off by playing the name game. Do you know the name game?

The students shrug.

MISS POTTER (CONT'D)

Let's make a circle ...

Everyone gets into a circle.

MISS POTTER (CONT'D)

With this game, you look at someone and say their name, then that person looks at someone else and says their name, and so on, and so on. And the point of the game is to remember the order you say everyone's names. Eventually, you do it faster and faster, and if you get it wrong, then you're out. Is that clear?

Everyone nods. MISS POTTER notices UILEALEA and his sunglasses.

MISS POTTER (CONT'D)

Excuse me, what's your name?

UILEALEA

Uilealea.

MISS POTTER looks concerned. Clearly this is a hard name for her.

MISS POTTER

Do you need to wear those sunglasses for medical reasons ...

UILEALEA

Uilealea.

MIRI

He's just trying to be cool, Miss. He thinks he looks like the man.

UILEALEA

I don't think I do. I know I do.

MISS POTTER

Would you mind taking them off while you're in class?

UILEALEA doesn't move for a beat, then dramatically takes his sunglasses off.

MISS POTTER (CONT'D)

Thank you.

UILEALEA

You're welcome.

MISS POTTER looks at VIJAY.

MISS POTTER

I'll get you to start. Look at someone and say their name.

VIJAY looks straight at MIRI.

VIJAY

Juliet.

MIRI

That's not my name. Say my name, egg.

VIJAY

All right, all right. Miri.

MISS POTTER (under her breath) Miri.

MIRI looks at IBRAHIM.

MIRI Ibrahim. **MISS POTTER** (under her breath)

Ibrahim.

IBRAHIM looks at CHYE-LING.

IBRAHIM Chye-Ling.

MISS POTTER (under her breath) Chye-Ling.

CHYE-LING looks at VIJAY.

CHYE-LING

Vijay.

MISS POTTER (under her breath) Vijay.

VIJAY looks at MISS POTTER.

VIJAY

Miss Potter.

MISS POTTER looks around the circle. There's only **UILEALEA** left. She hesitates.

MISS POTTER

Um, sorry. Can you say your name one more time for me, please?

UILEALEA

Uilealea.

MISS POTTER

How would you feel if I just call you Ui?

UILEALEA

I thought this game was about you learning our names? Uilealea is my name.

MISS POTTER looks really awkward.

UILEALEA (CONT'D) Don't worry. Pālagi teachers always get it wrong.

MISS POTTER No. I'm going to get it right. One more time, please.

> **UILEALEA** Uilealea.

MISS POTTER One more time for luck?

VIJAY, CHYE-LING, IBRAHIM, MIRI, and UILEALEA Uilealea.



MISS POTTER

Oi-lay-lay.

The students snigger. MISS POTTER is embarrassed.

MISS POTTER (CONT'D) Which bit did I say wrong?

CHYE-LING Like, the whole thing, Miss.

MISS POTTER

Oh. Maybe if you break it down for me, then I can ...

UILEALEA Sure. It's Ui ...

MISS POTTER Ui ...



UILEALEA Lea ...

MISS POTTER Lea ...

Lea ...

LEQ

MISS POTTER

Lea ...

UILEALEA

Ui-lea-lea.

MISS POTTER

Oi-lay-lay.

The students laugh, but MISS POTTER looks increasingly frustrated.

MIRI

lt's "ui" like "we" ...

IBRAHIM

As in "We are waiting for you to say his name right."

MISS POTTER

We ...

MIRI

And then "lea" ...

VIJAY Like Princess Leia Leia. UILEALEA

Not like Princess Leia. More like lair. As in Aragog's lair.

VIJAY

Aragog's what?

CHYE-LING

As in the forbidden fortress in Harry Potter with all those spiders ... which I hate!

MISS POTTER (under her breath)

We Aragog's lair lair. We Aragog's lair lair. We Aragog's lair lair. OK. Let's try the game from the beginning. The same pattern as before.

UILEALEA

Fa'amālosi, Miss.

MISS POTTER looks confused.

UILEALEA

It means go for it.

MISS POTTER nods to VIJAY to start the game. VIJAY looks at MIRI.

VIJAY Miri.

MIRI looks at IBRAHIM.

MIRI Ibrahim.

IBRAHIM looks at CHYE-LING.

IBRAHIM Chye-Ling.

CHYE-LING looks at VIJAY.

CHYE-LING Vijay.

VIJAY looks at MISS POTTER.

VIJAY. Miss Potter.

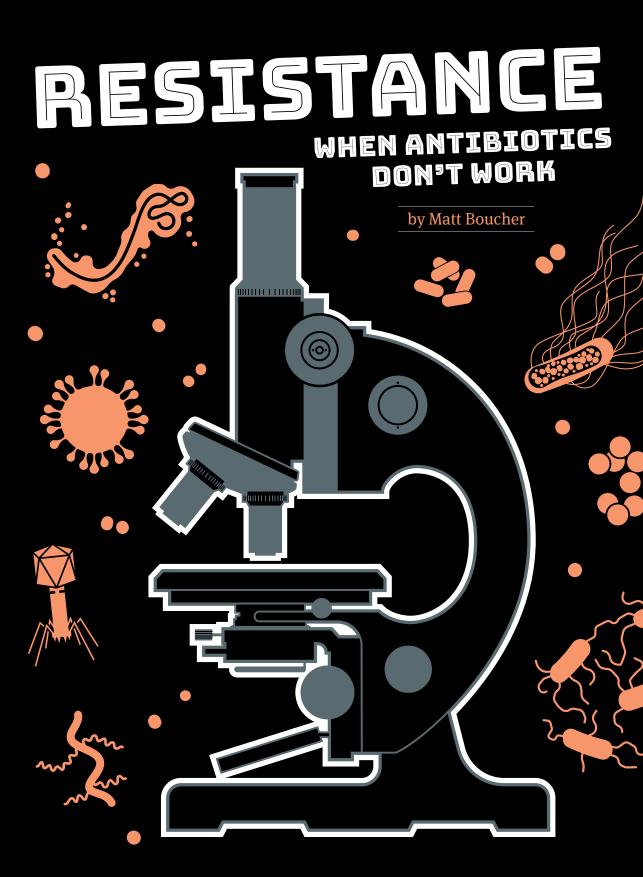
MISS POTTER looks at UILEALEA.

MISS POTTER We-lair-lair. How'd I do?

Silence. Then **UILEALEA** gives her the thumbs up. **MISS POTTER** punches the air in victory. The students clap. **MISS POTTER** takes a bow.

THE END

illustrations by Freddy Pearson



Whether it's a cold that gives you the sniffles, a flu that makes you ache, or a sore throat that just won't go away – everyone gets sick. Usually, infections clear up on their own or can be treated with antibiotics, a kind of medicine that fights bacteria. But some of the antibiotics we once relied on are no longer working. This is called antibiotic resistance. Some scientists say that antibiotic resistance is one of the greatest health problems of our times.

Meet the Bugs: Viruses and Bacteria

When we get sick, we often say we've caught a bug – an odd description when you think about it, but it isn't far from the truth. You have caught something: either a virus or a bacteria. Both can make people sick, however, what they are and how we treat them is very different.

Viruses are tiny – so tiny they can only be seen through a powerful microscope. A virus survives by invading a **host**. The virus then reprograms the host's cells to make copies of itself. These new cells eventually infect other cells ... and so the cycle continues. With most viral infections, there's very little the host can do. When that host is you, your body will fight the virus off in its own time. In fact, time – and rest – are your only weapons.

Bacteria are a different kind of bug altogether. They're still microscopic, but they can be up to a hundred times larger than a virus. More importantly, bacteria are living things. Unlike viruses, they don't need a host to survive. A single bacteria cell can eat, breathe, reproduce, and sometimes move on its own. Although bacteria are everywhere, most are harmless to people; some are even helpful, such as lactobacillus, a kind of bacteria that lives in your large intestine and helps digest food. But other bacteria are a problem. They produce chemicals that are **toxic** to their host and cause infection. Sometimes your body can fight off a bacterial infection, but there are times when it needs help. This is where antibiotics come in.

host: a living thing that is home to another living thing (usually a parasite) **toxic:** poisonous or harmful

Alexander Fleming's Petri Dish

If you've ever taken antibiotics when you've been sick, you probably felt better after a few days. But it wasn't always this easy. Before 1928, a serious bacterial infection – especially in a wound – often led to death (about a third of all soldiers who died in the First World War died from infection and disease, not from being killed in battle). Common diseases such as pneumonia, tuberculosis, and whooping cough were also killers. Before antibiotics, it was even possible to die from an infection in a tiny cut.

Luckily, in 1928, the Scottish scientist Alexander Fleming accidentally made a life-saving discovery. Fleming was an expert in bacteria, and one day, returning home from holiday, he noticed something strange. Fleming had been growing the bacteria staphylococcus in a **Petri dish** – and now the dish was contaminated with a blue-green mould. What was unusual was that the staphylococcus bacteria had stopped growing around the mould.

Fleming identified the mould as a penicillium. This is a group of common moulds found everywhere: in the soil, in the air, and on food. These moulds produce a chemical called penicillin. The most important thing about penicillin – and what excited Fleming so much – is that it prevents bacteria cells from reproducing properly, and eventually, they die. Fleming had stumbled on something huge, and he knew it. Penicillin went on to become our first antibiotic. Doctors finally had an effective way to treat infection.

> **Petri dish:** a small dish found in laboratories, used for growing micro-organisms, such as bacteria

Resistance

Since Fleming's time, many more antibiotics have been found or created. Their use has been one of the greatest developments in modern medicine. Doctors can now cure patients from diseases and infections that were once untreatable, and millions of lives have been saved. In recent years, however, the story has taken a worrying turn: bacterial resistance. This is something Fleming predicted.

Like people, every bacteria cell is unique, and some – by chance – are more resistant to certain antibiotics than others. These bacteria can either live longer after a dose of antibiotics or not be affected at all. Taking antibiotics when they're not needed helps resistance to develop. The antibiotics will kill off most of the bacteria, leaving only the most resistant alive. When these resistant bacteria reproduce, they pass this resistant **trait** on – and some bacteria reproduce every twenty minutes! Soon, there's a whole new population of resistant bacteria – and a big problem to deal with.

YOUR NOSTRILS: A CASE STUDY

The inside of your nose is coated with bacteria. Because they're in the right place, these bacteria are usually harmless – but elsewhere, such as in a cut, they can cause infection. If this happens, the normal treatment is antibiotics.

Now imagine that you don't have a cut but you do have a cold. You're feeling stuffed up, especially your nose! So you take an antibiotic. The antibiotic won't fix your cold because all colds are caused by a virus and antibiotics can't harm viruses. The antibiotic will, however, kill most of that bacteria in your nose. The only survivors will be the few that have natural resistance.

These surviving bacteria will quickly reproduce. Soon, your nose will have a new coating. Everything seems back to normal ... only is it? It's possible most of the new bacteria have inherited resistance from their parent bacteria – and in particular, resistance to the antibiotic you just used. Now imagine the next week you do get that cut. If the bacteria from your nose gets into the cut and you get an infection, the infection may be harder to treat because the antibiotics won't work as well.

HOW DOES ANTIBIOTIC RESISTANCE OCCUR?



A variety of bacteria: a few are resistant to antibiotics.

•

Antibiotics kill the bacteria causing the illness as well as other, harmless bacteria. Only resistant bacteria survive.

The resistant bacteria reproduce and take over.

•

4.

Resistant bacteria sometimes transfer their resistance to other bacteria.

32

The Future of Antibiotics

Most of us have used antibiotics at one time or another. They're often the reason we recovered from being sick. But how long can we rely on these medicines? Because some people use antibiotics too often and to treat the wrong illnesses, bacterial resistance is a fast-growing problem. Some bacteria are already resistant to *all* of the antibiotics scientists have discovered or invented. And more and more bacteria are becoming resistant all the time.

But we can fight back. First, we need to save antibiotics for when they're really needed. This means never for a cold or the flu. The antibiotic won't help you (because it won't work), but it will help antibiotic-resistant bacteria to develop. Secondly, we can do our best to prevent the spread of infectious diseases. Fewer diseases to treat means fewer antibiotics will be used. It also reduces the chances for resistant bacteria to spread.

STOPPING THE SPREAD

Infectious diseases spread from one person to the next, usually through body fluids such as saliva (spit), mucus (snot), and faeces (poo). The bacteria or viruses hitch a ride on these fluids to infect another person. To prevent making other people sick, cover your mouth with your inner elbow when coughing or sneezing. This stops the bugs from getting into the air, on surfaces like furniture, or on your hands, where they can easily be passed on. Washing your hands regularly helps to rinse bugs away, preventing infection from bugs you may have picked up from something – or someone – you've touched.

The Antibiotics Pharmacist

Emma Henderson is an antibiotics pharmacist. She gives advice to doctors about which antibiotics to use for which illnesses, including when an antibiotic isn't needed. Her work helps to ensure patients get the right medicine to treat their illness without them taking anything unnecessarily, which adds to the problem of resistance. Emma's main message is "prevent antibiotic resistance by only taking antibiotics when they're really needed". She also wants to remind people that antibiotics shouldn't be shared.

The Infectious Diseases Doctor

Ayesha Verrall is a doctor who specialises in infectious diseases. She looks after patients with diseases caused by bacteria and viruses. The hardest part of her job is figuring out how to treat people when they have infections caused by bacteria that are resistant to antibiotics. Ayesha works closely with antibiotics pharmacists and microbiologists to choose the best possible treatment for her patients. She wants everyone to make sure they follow their doctor's advice and get their **vaccinations**. This helps to prevent diseases before they start.

The Clinical Microbiologist

Juliet Elvy is a clinical microbiologist. The hospital laboratory where she works receives over a thousand samples of blood and other body fluids every day! Along with her team, Juliet helps to identify which bugs are present in which samples by growing bacteria in Petri dishes (just like Alexander Fleming) and testing them. The team also tests the bacteria for resistance by placing little discs soaked in antibiotics on the dishes to see which antibiotic will prevent the bacteria from growing. She reports this information back to doctors so they can work with antibiotics pharmacists to decide the best treatment for patients.

vaccination: an injection given to a person so they won't get a certain disease



Emma Henderson, antibiotics pharmacist



Ayesha Verrall, infectious diseases doctor

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Street 0

Juliet Elvy, clinical microbiologist

Springers

by Annaleese Jochems

You follow your dad down a corridor that smells like eggs. He passes a lot of doors before stopping outside one of them. He reads the name. "They've moved her," he says and goes back the way you came.

Downstairs, he tells a receptionist your grandma's name: Meredith. Here it smells like flowers. The receptionist smiles. "Room sixty-five," she says. "Third floor."

You hold the lift while an old lady shuffles in. While you wait, Dad says, "You've been here before, remember?" You might, the carpet looks familiar, but then it's the sort of carpet you see in lots of places. A nondescript, muddy shade of grey with no pattern.

"Are you OK?" Dad asks.

"Um, yeah?" You feel fine.

"OK," he says. "Good."

On the third floor, you follow a new corridor. Room 65 is on the right, halfway down. Your dad stands for a moment at the door before knocking, maybe reading her name. You look at the side of his face and wait. Usually his cheeks are pink, but today, they're red.

The woman who answers – your grandma, Meredith – is very small and dressed entirely in purple, though her slippers are bright green. She has a hard chin but soft-looking cheeks, and her hair is fluffy. When she smiles, you see a tooth at the front that's a little crooked.

"Well! Haven't you got enormous!" your grandma says to you.

You're only as high as her, and together, you look up at your father, who really is tall. "We'll come in, shall we?" he says.

Your grandma looks at him a while before answering. "Yes, definitely," she says. "Do." Her room is small and crowded. There's a single bed with a bright pink bedspread and an armchair with a tartan rug.

"Now, how are you?" your grandma asks. She's looking at you.

"Good, thanks." She nods, satisfied, and looks at Dad. He sits on the bed and gestures for you to take the hard chair. You do. Your grandma sits in the armchair.

"What about you?" Dad asks. "All right?"

"Despite the fact someone stole my blue cardigan yesterday, I'm fine."

"That's good," he says.

"Just yesterday. It was my blue cardigan with the swans."

"I brought you a frog, Mum."

Your father's forgotten it was you who picked the frog. You dig it out of your bag and hand it to him. For a moment, he looks disappointed. It's soft, a kid's toy, but in the shop, he'd told you it was a good choice.

Your grandma leans over and takes the frog. She squeezes it and smiles brightly. "Well, that's good ... that's one good thing ... another frog." She examines it for a while, then says, "Well, I guess I'd better show you my frogs."

You don't see any frogs.

"Get up, George. Help me move this chair." She gets up and waits for your father to do the same. He stands with his hands on his hips and looks at your grandma's chair. You look at it, too. There's nowhere to move it, and why does she want it moved in the first place? Plus it's so big. It's an armchair.

Your dad starts to say something, but she stops him. "No need to get *logistical* about it, George. We'll just move the chair."

Dad scratches the back of his neck, and his belly juts out.

He has to move the chair slowly, shoving it round in incremental steps. You sit on the bed and lift your legs so he can squeeze past. Then you see it: an entire cabinet filled with frogs.



If you told your friends about this, they wouldn't understand – but when you first see the frogs, you laugh with happiness. They have the same googly eyes, fat bellies, and bobbly fingers, but each one is different. There are china frogs, metal frogs, soft frogs, and plastic frogs. Some are naked, realistic-looking frogs; others wear hats or shorts. They're mostly jolly, but after a while of looking, you see that a few of the realistic ones have a frozen sadness. Their skin looks too dry, and they're so still. At least a hundred frogs sit together on the glass shelves. You wonder how long they've been there, waiting to be seen.

Grandma's rocking backwards and forwards in her new spot by the window, beaming. "No toads," she says. "I binned the toads." She leans over to open the cabinet and instructs you to take out all the plastic ones. "My springers," she explains. You have no idea what she's talking about, but you do as she says.

"Let's see her spring them," Grandma says to Dad, who's now sitting back on the bed. She points out a frog to you – a big orange one with brown-and-white spots. She explains that if you put the frog flat on the ground and push on the plastic tab, it will jump when you let go. You try this, but the frog does more of a flop than a jump.

"That one's a dud," Grandma says. "Don't worry." She points out a smaller frog to try. This one shoots above your head and hits the lightshade.

"Bravo!" she laughs. "Do it again."

You do. The second springer lands on top of the wardrobe. When you turn to see if Dad saw, he's resting his cheek on his palm and looking at Grandma, not at you or the jumping frog. "Some more," she says.

Dad asks if he can make some tea.

"Definitely. Bags are in that bottom drawer, under my diaries." Grandma points to the small dressing table by the door.

"Under your diaries," Dad says.

"Yes, but don't bother, actually. They've taken the kettle. There was a big discussion, and they decided I wouldn't have one any more. Jane came, at least."

After four more springs, Dad says, "All right, should we go somewhere? A cafe?" He goes off without waiting for an answer, saying he'll be back with a wheelchair.

You collect up the frogs and continue springing them. Grandma reclines in her chair with her head back and her eyes half-open, watching. She's smiling a little, and when they hit the ceiling, she makes a small, satisfied noise.





When Dad gets back with the chair, Grandma's so quick getting in you're not sure why it's necessary, but Dad looks at you and comments it would be good if they had safety belts. She's looking at you, too, winking.

Your dad pushes her slowly down the corridor. One wheel squeaks with each rotation. When you get outside, on the footpath, Dad looks both ways, undecided. "Not a big town, is it? What do you reckon?"

Grandma shuffles in her chair. "Doesn't make a difference."

He turns left. You would have gone right. The chair's rattly and slow, and you have to be mindful of each step so you don't catch the back of Dad's sandals.

"You do know I'd rather walk?" Grandma says. She shuffles round in the chair to face you. "Does he know I'd rather walk?" You nod neutrally. You don't really know.

Soon, Dad's puffed, but he keeps pushing, and you keep following.

"Bit of a one-way street, huh?" Grandma says.



You hear little pebbles crunching beneath the wheels and jog round to walk in front, facing backwards, so you can kick a few out of the way. Dad's breathing heavily through his open mouth. Little drops of sweat have gathered at his temples.

"How about we go home?" Grandma says.

. En

Dad just pushes.

"If you came to visit more than once a decade," Grandma adds quietly, "you wouldn't feel the need to exhaust yourself like this."

Dad doesn't say anything. You think about offering to push but decide against it.

Back in the room, Dad picks up frogs. They've landed in strange places. You and your grandma watch and eat chocolate biscuits from a packet she keeps under her bed. Then she reaches over and touches your dad's leg. "It's all right."

"What is?"

"The frogs. Don't worry about them just yet. Have a biscuit."

There's a bird out the window. A pigeon in a gum tree. You see Dad catch sight of it, the way his head turns quickly for a second look.

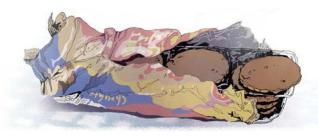
"Is that the one?" he asks. "Is that the bird you're always telling me about? On the phone?"

"Oh, yes. The kererū."

"He is fat."

"Isn't he."

The bird swivels right, then left, lifting up and down on its legs so the whole branch shifts.



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