

The very hungry kina

Based on the true story of Goat Island Marine Reserve, Aotearoa New Zealand

By Allison Arnold

Not so long ago, near the land of the long white cloud, there was a rocky reef cloaked with a lush kelp forest. There was a great diversity of sea animals that lived on the reef. Some of the animals lived in the kelp, while others, like the old crayfish, scuttled along the rocky seafloor. The kelp was home to snails, sea stars, isopods, and young crustaceans that clung to the fronds or burrowed into the stipes. Butterfish loved to cruise through the canopy, biting off a kelp blade here and there. The kina had an appetite for kelp as well. They would hide in the rock cracks, where they were safe from being eaten by crayfish, and would munch on the kelp scraps that drifted to the seabed. Other fish living on the reef were snapper, spotties, leatherjackets, and seahorses. They would patrol the kelp forest for succulent snails and other small animals. The snapper were the biggest of the fish and loved to eat kina, despite their spiny surface. The seahorses were the smallest fish. They would curl up in the kelp and camouflage themselves, waiting to ambush an unsuspecting shrimp.

For many years the animals, though wary of neighbors with empty bellies, lived in harmony. Then one day, a hook with a tasty morsel descended into the water from above. The leatherjacket and spotties took a curious nibble, but along came a big snapper, who barked, "Move along fishes! That's a free lunch and I feel the need for a feed!" But as suddenly as he had snapped up the morsel, he disappeared toward the surface and never returned. The other snapper were dismayed by his disappearance, but alas, as more tasty morsels were dangled from above, they could not resist the allure and were hauled to the surface as well. By and by the snapper vanished toward the sky.

The crayfish had been watching the snapper disappear from the reef and wondered where they had gone. "Maybe they've gone on a great adventure?" offered one crayfish. "Maybe there are more of those tasty morsels up above?" salivated another. The crayfish agreed that the tasty morsels looked more appetizing than the spiny kina. Just then, a cage dropped down from above with a tasty morsel inside. The crayfish fought with each other to be the first inside. It was the biggest crayfish who prevailed, but once he was in, he couldn't get out. "I'm trapped!" he yelled, as the cage sped toward the surface. Soon other cages dropped down on the reef, and by and by the crayfish vanished toward the sky.

Those few crayfish left on the reef cowered in their dens in fear, while the few remaining snapper hid among the boulders. With the decline of their dreaded predators, kina emerged from their hiding places in the rock cracks. To celebrate their excursion onto the open reef, they feasted on all the drift algae in sight, becoming plumper with every bite. Said one kina to another, "How delightful it is to tour the reef without worry of being eaten by those terrifying snapper and crayfish." "Aye," agreed the other, and they bristled with pleasure at the new state of affairs.

The kina were not bothered by the constant intrusion of hooks and cages. They were content with their new life and as they ate, they grew and multiplied. Soon there were so many kina that they were eating the drift algae faster than it would fall from the kelp canopy. When the drift algae were gone the kina became very hungry. One plump kina looked wistfully toward the canopy where the kelp blades wafted in the current. "I know!" he exclaimed, "I will fell this kelp frond and refill my belly." With that, he gnawed at the stipe until the whole frond toppled to the seabed. The blades were instantly devoured by a pack of kina, but their hunger was not satisfied, so they felled another frond, and then another.

All the clamour of the falling kelp forest awakened a seahorse who was dozing in the canopy. "What is all this commotion?" demanded the seahorse. "You are disrupting my sleep and destroying my home!" "But we are hungry," bleated the kina. "Well, I'm hungry too," added the butterflyfish, and you are eating all of the fresh blades which are my food." "And our shelter!" exclaimed the spotties and the leatherjackets. "But we are hungry," repeated the kina as they continued to clear the kelp forest. And as they ate, they grew and multiplied.

Before long, the forest was cleared and the reef became barren rock. The seahorse, butterflyfish, spotties, leatherjackets, and all the small animals that had clung to the kelp fronds or burrowed in the stipes were left homeless, without shelter or food. The kina now ruled the reef, but it was no longer the lush, harmonious, or diverse place it had been.

In all of their effort to fell the kelp forest, the kina had not noticed that the hooks and cages, which had been the snappers' and crayfishes' demise, no longer appeared on the reef. Those contraptions had stopped appearing just as suddenly as they had first arrived. Peering out from their hiding places, the crayfish and snapper saw that it was safe to venture out on the reef. They were devastated to see that the kelp forest had been lost and their neighbours were gone. "Those kina have a voracious appetite, said the crayfish to the snapper." "Well, after hiding for so long I have a voracious appetite too!" said the snapper to the crayfish. And with that, he snapped up one kina after another until his belly was full.

By and by the kina numbers declined as the snapper and crayfish ate and grew and multiplied. And as the kina declined, the kelp forest regenerated. And as the forest regenerated, the seahorse, butterflyfish, spotties, leatherjackets, and all the small animals that clung to the kelp fronds or burrowed in the stipes returned to the reef. And by and by that rocky reef, near the land of the long white cloud, became the lush, harmonious, and diverse place it had once been.

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