THE WORLD’S DEADLIEST CREATURE

ENORMOUS, DANGEROUS, AND ALMOST INVISIBLE, THE BOX JELLYFISH BRINGS TERROR TO AUSTRALIA’S SWIMMERS

By Lauren Tarshis

It was a bright day in December, which is summer in Australia. Ten-year-old Rachael Shardlow and her brother, Sam, 13, were swimming in one of their favorite spots, the Calliope River. The swimming area is about 15 miles from where the river empties into the Pacific Ocean.
Rachael was floating in the clean and cool water, practicing her flips. Suddenly, she felt burning pain on her legs. At first, it felt like she had been sliced by something sharp. But within a second, she felt as though her legs and one arm were on fire.

She looked down and, to her horror,
In spite of his pain, Sam dragged his sister to shore and shouted for help. “I can't see!” Rachael whispered to her brother. “I can't breathe.”

Moments later, as her parents rushed over, Rachael fell unconscious. The terrifying creature was still wrapped around her legs and arms.

Rachael had no idea that she was now in the grip of the world’s deadliest creature: the box jellyfish. Its large tentacles were armed with 500,000 microscopic harpoons called nematocysts, each loaded with lethal venom. The moment those tentacles made contact with Rachael’s skin, the venom was injected into her body.

Rachael’s skin burned. Her heart felt as though it was being squeezed in her chest. Rachael’s brother heard her screams and ran through the water to help her. When he reached out to her, one of the jellyfish’s tentacles brushed his leg, searing him.

Sydney funnel-web spider—more toxic than any other, and prone to nesting in sock drawers and toy chests. And of course there is the great white shark, which lurks in large numbers in the waters off Australia’s southern coast.

But no creature in Australia—or
on Earth—compares with the box jellyfish, which Australians call the “marine stinger.”

It certainly looks terrifying, like a monster from the imagination of a horror-movie writer. Its head is enormous, like a squared-off basketball. It has 24 unblinking eyes and clusters of tentacles that can grow to be nine feet long. Its venom is a deadly mixture of chemicals that can kill a human in three minutes.

Nobody knows how many of these dangerous creatures skulk along the northern coast of Australia. Over the decades, at least 100 people have died from their stings. So dangerous are these creatures that for seven months every year, from October until May, some of northern Australia’s most beautiful beaches must be closed to swimmers. Box jellyfish are practically invisible in the water, so they are all but impossible to avoid. They prefer shallow waters close to shore and often head into river estuaries. Everywhere you travel along the coast, you’ll see marine-stinger warning signs. Rescue stations at campgrounds and beaches stock jugs of vinegar, which can help neutralize jellyfish venom.

Still Not Breathing

No warning signs were posted around the swimming area where Rachael and Sam were playing that day, because it is unusual for a box jellyfish to travel so far up the river, away from the ocean. Nor was there any vinegar at the nearby rescue station. But two of the people who responded to Sam’s screams for help were experienced coastal campers. They had brought vinegar along with them for their trip. A box jellyfish can’t simply be pulled off once it is entangled with a person. This would cause more deadly venom to fire. Only vinegar can inactivate the nematocysts that haven’t started stinging yet, so the jellyfish can be removed.

The campers retrieved the vinegar from their tent and doused Rachael’s legs and arms. The jellyfish fell from her body, but Rachael remained unconscious. Her heart had stopped beating. Rachael’s father lifted her up and ran with her in his arms to their car. As her mother drove, her father administered CPR. For eight minutes, he pushed on Rachael’s chest and breathed air into her lungs. She still was not breathing when they reached paramedics, who rushed her to the hospital.

No person had ever survived such a severe box-jellyfish sting.

Unlocking Mysteries

As the news of Rachael’s dire situation spread, it caught the attention of Dr. Jamie Seymour, a venom biologist at James Cook University, in the northern Australian city of Cairns. For years, Seymour has been trying to unlock mysteries that
will help Australians avoid such perilous encounters.

On any given day, you might find Seymour in waist-deep water, staring down as though he has lost a contact lens. What he’s really doing is looking for box jellyfish. More specifically, he is looking for the shadows the creatures cast on the ocean floor. This is the only way to spot their transparent bodies.

When he sees one, he scoops it into a bin and goes to work. Using special glue (and wearing a thick suit and protective rubber gloves), he attaches a transmitter to one of its tentacles. He then releases it back into the water. The glue wears off within a few days, but in the meantime the transmitter allows Seymour to track where the jellyfish goes. The data he has gathered over the years have provided some intriguing clues about how these creatures behave.

For example, scientists had always assumed that box jellyfish were little more than giant balls of slime floating aimlessly around the ocean. It turns out that a box

Up to 14 feet long and lightning fast, this deadly snake slithers through the savannahs and rocky hills of southern and eastern Africa. Run into this guy, and he’ll strike you not once but repeatedly, injecting you with lethal amounts of neuro- and cardiotoxins.

Grazing in the wilds of southern Africa, the cape buffalo will charge you on a whim, crushing your bones with its massive 1,500 pound body. Then it will skewer you like a kebab on one its three-foot-long horns.

In the tropical rainforests of Central and South America, this pretty little fella secretes enough poison through its skin to kill 10 men. One touch, and it’s all over.
jellyfish isn’t so simple. Those 24 eyes give it a 360-degree view of its surroundings, enabling it to track its prey—mostly small fish and crustaceans like shrimp—with great precision. And it doesn’t just drift through the water, but moves with great purpose and speed.

Another surprise: Box jellyfish sleep at night. They sink to the bottom of the ocean, close their eyes, and snooze. This lets them hide from their main predator, a type of sea turtle that’s impervious to their venom.

**Grim Thoughts**

Many mysteries of the box jellyfish remain unsolved. For one thing, scientists still don’t understand what makes the creature’s venom so deadly. But they are making progress that could lead to a more effective treatment for the sting.

When Seymour heard about Rachael’s injuries, his thoughts were grim. He himself has suffered minor stings.

“Imagine someone
slicing your skin with a red-hot knife, then magnify that pain by 100,” he says. “Then hold onto that pain for 20 minutes.”

Seymour did not believe that a person could survive a sting as severe as Rachael’s.

He was happy to be wrong.

Doctors were able to restart Rachael’s heart and get her breathing. The campers with the vinegar prevented the jellyfish from injecting even more venom into Rachael’s body. But it was Rachael’s father, who knew CPR, who made the key difference. He saved his daughter’s life.

Rachael was in the hospital for several weeks. She suffered mild memory problems for the first few months she was home. Her scars will be permanent, but she has fully recovered. Today, warning signs are posted along the Calliope River and vinegar is kept at the rescue station. Rachael, however, plans to limit her swimming to pools from now on.

As for Dr. Seymour?

He continues his work, hunting those deadly shadows. His goal, he says, is that one day, Australians will swim without fear.