

**NARRATIVE
NONFICTION**
Reads like fiction—
but it's all true

THE WORLD'S DEADLIEST CREATURE

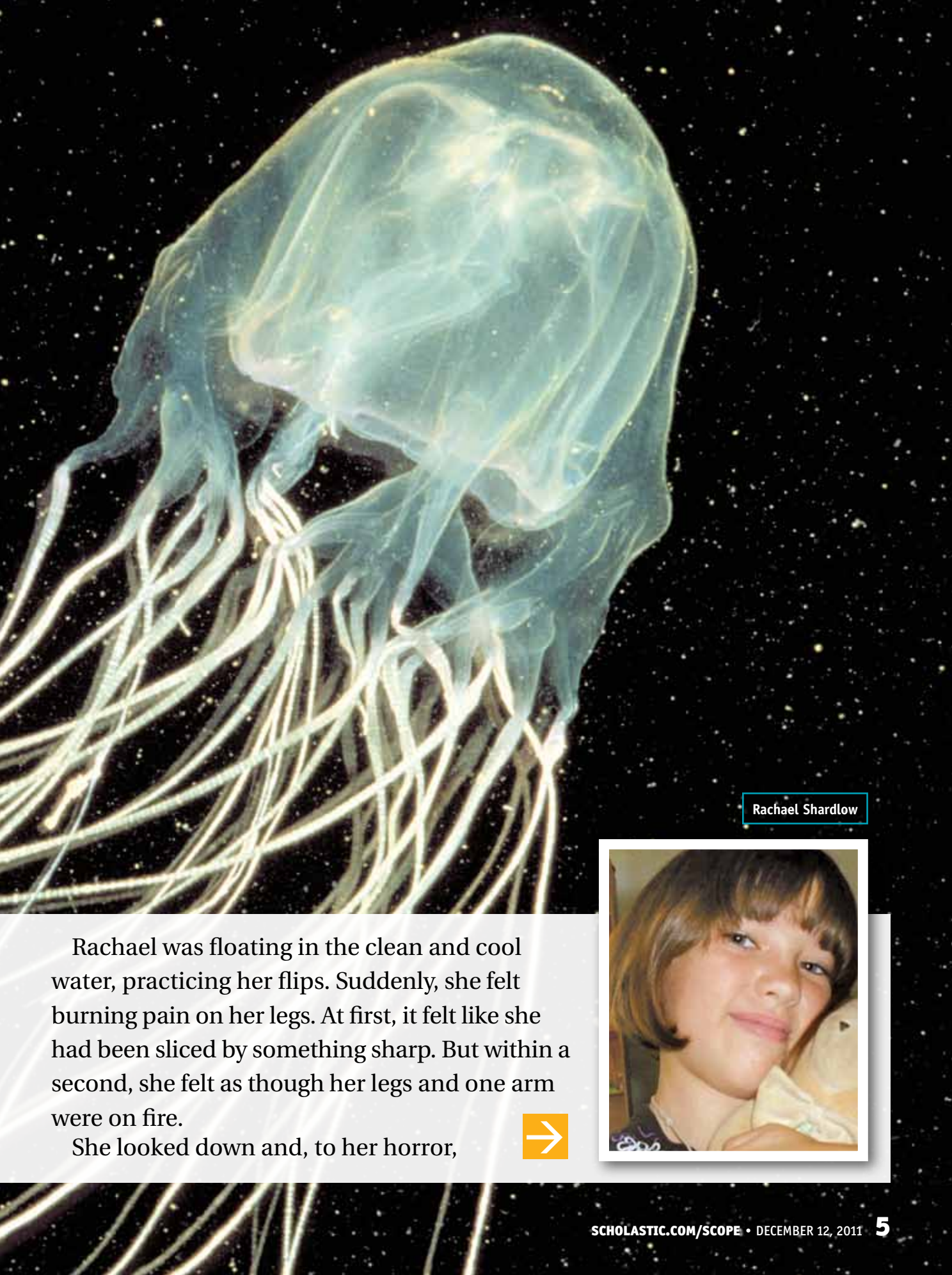
ENORMOUS, DANGEROUS, AND ALMOST INVISIBLE,
THE BOX JELLYFISH BRINGS TERROR
TO AUSTRALIA'S SWIMMERS **BY LAUREN TARSHIS**



AS YOU READ, THINK ABOUT:
PERSON VS. NATURE

The conflict between humans and nature is a common theme of literature. Think about how the people in this article struggle with nature.

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 Shardlow

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.

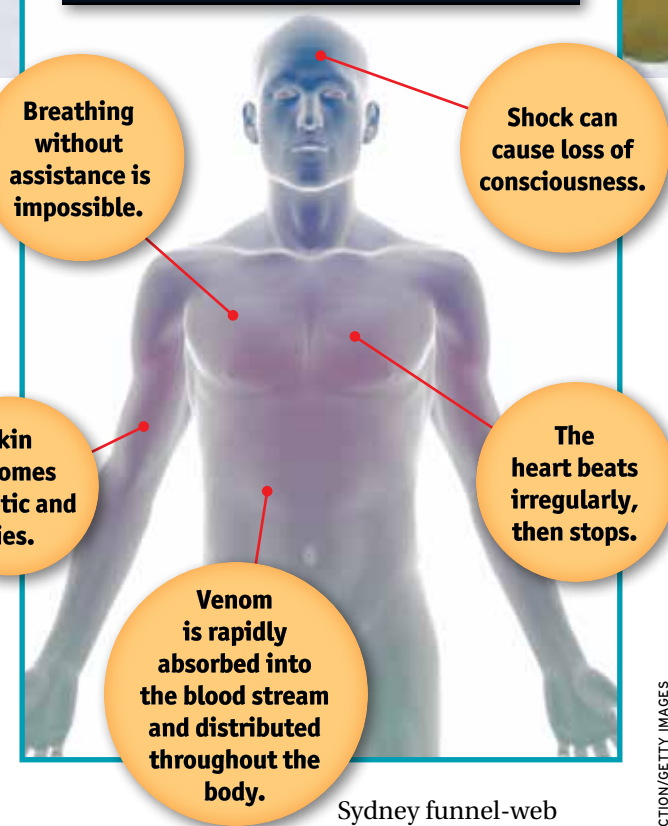
She looked down and, to her horror,



Rachael's leg has extensive, permanent scarring after her encounter with the box jellyfish.



HOW BOX JELLYFISH VENOM AFFECTS THE BODY



saw that she was entangled with an enormous jellyfish. Its large head was square, and its tentacles seemed to stretch endlessly into the water. Several of the tentacles, each no thicker than a strand of spaghetti, were 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 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.

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 arm.

Horror-Movie Creature

Australia is home to some of the world's most-feared creatures. There's the eastern brown snake—lightning fast, furiously aggressive, and the second-most-venomous snake in the world. There's the

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



For more than half the year, signs along the Queensland coast warn swimmers of the presence of dangerous jellyfish.

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



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

INSTANT DEATH



BLACK MAMBA

CAPE BUFFALO

POISON DART FROG

WHY YOU'RE DOOMED

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.

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

MACHINES

Beware of these creatures—especially on their home turf!

HOW YOU WILL FEEL

Awful. The venom goes straight for your nerves and shuts down your organs. But first you'll fight for breath and lose the ability to speak. So at least you won't wake anyone up with your screams of agony.



Imagine how that Barbie doll felt when your dog ripped it apart. Actually, don't. Just hope you'll be knocked unconscious.

First, you'll puke a lot. Then all the muscles in your body will spasm uncontrollably until your heart stops.



YOUR ONLY HOPE

Get a dose of anti-venom—fast. You may have as little as 20 minutes before certain death.



Climb up a tree and hope the buffalo loses interest, though buffalo have been reported to stay for days waiting for people to climb down. Hold on tightly, even if it sprays you with its stinging urine.



There is no antidote, so close your eyes and try to convince yourself it's all a bad dream.

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





ABOVE: Dr. Jamie Seymour studies a box jellyfish;
INSET: Rachael, a few weeks after the attack.

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. ●

CONTEST

Write About the Struggle With Nature

How does Dr. Seymour hope to resolve the struggle between humans and the box jellyfish? How might his strategies work with other deadly creatures? Write a paragraph answering these questions. Be sure to use details from the article, sidebar, photos, and captions to support your ideas. Send your paragraph to **BOX JELLYFISH CONTEST**. Five winners will each receive *Tentacles* by Roland Smith. See page 2 for details.



**GET THIS
ACTIVITY
ONLINE**