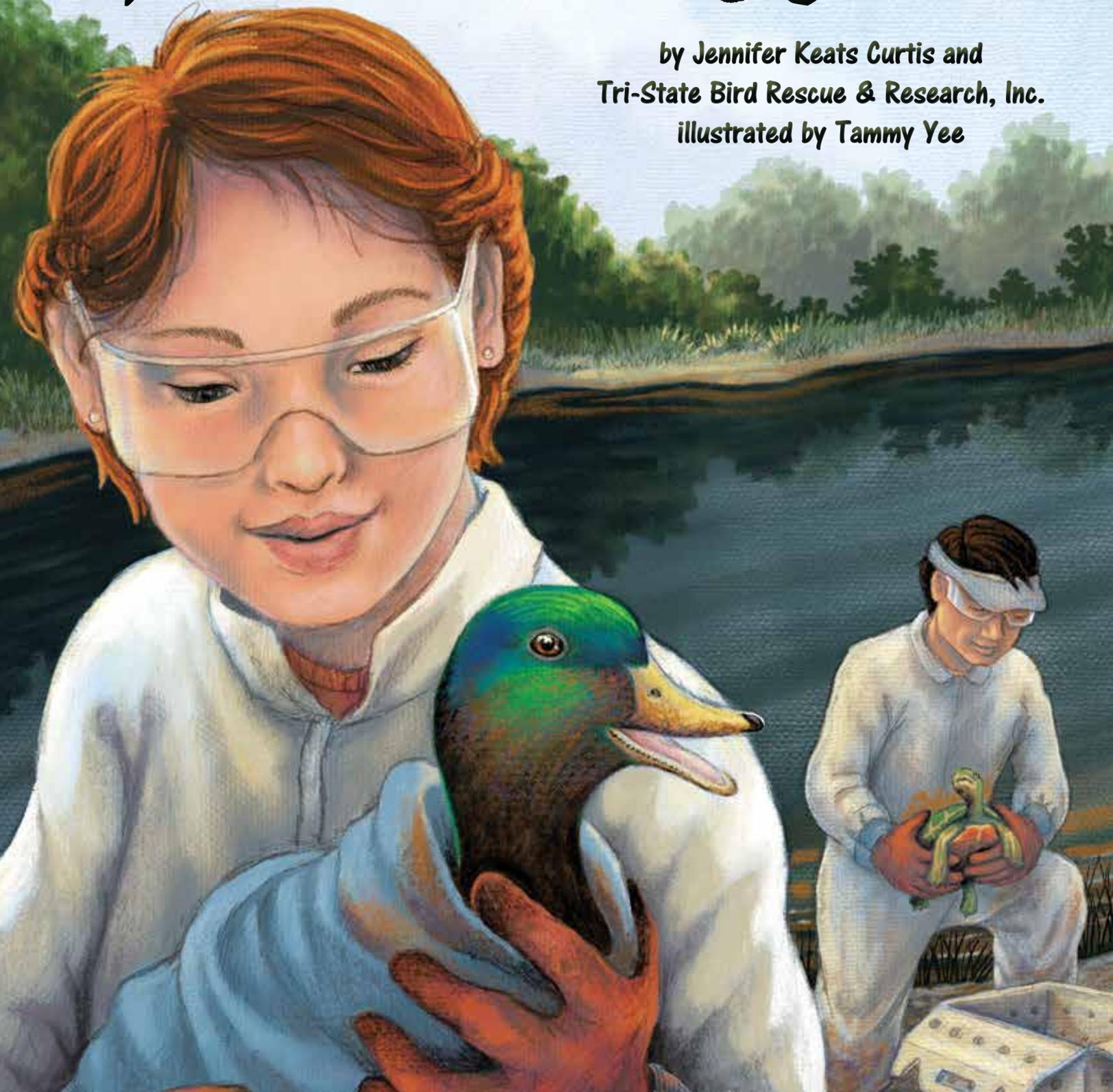


RIVER RESCUE

by Jennifer Keats Curtis and
Tri-State Bird Rescue & Research, Inc.
illustrated by Tammy Yee



RIVER RESCUE

When oil spills, workers hurry to clean the land and water. But oil spills can also affect every animal that lives in the area. Who helps these wild animals? On the East Coast, a team from Tri-State Bird Rescue & Research rushes to the scene to save as many as possible. Follow along to learn how these experts capture oiled animals and treat them quickly and safely so that they may be returned to the wild. This illustrated nonfiction is based on the extensive experience of the Oiled Wildlife Response Team at Tri-State.



Arbordale Publishing offers so much more than a picture book. We open the door for children to explore the facts behind a story they love.

Thanks to Lisa Smith of Tri-State Bird Rescue & Research for verifying the accuracy of the information in this book.

The *For Creative Minds* includes

- Preventing Oil Spills & Helping Animals
- Wildlife Identification
- Q&A with Tri-State Executive Director Lisa Smith

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Award-winning Jennifer Keats Curtis has penned numerous stories about animals, including *Kali's Story: An Orphaned Polar Bear Rescue* (Children's Choice Book Award Winner) and *After A While Crocodile: Alexa's Diary* (NSTA/CBC Outstanding Science Trade Books for Children), with co-author Dr. Brady Barr of *Nat Geo Wild's Dangerous Encounter*, *Baby Bear's Adoption* with wildlife biologists at Michigan's DNR, and *Moonlight Crab Count* with co-author Dr. Neeti Bathala. The long-time writer's other recent books include *The Lizard Lady*, with co-author Dr. Nicole Angeli, *Maggie: Alaska's Last Elephant* and the *Animal Helpers Series*. When not writing, Jennifer can be found among students and teachers, talking about literacy and conservation. Visit her website at www.jenniferkeatscurtis.com.

Tammy Yee grew up in Honolulu, Hawaii, where she explored tide pools, swam in streams, and wrote and illustrated spooky stories. After college, she worked as a pediatric registered nurse. Having children rekindled her love for picture books, so in 1994 she exchanged her stethoscope for a paintbrush and has been illustrating ever since. Tammy has worked on more than thirty books including *A True Princess of Hawai'i* for Arbordale, *The Tsunami Quilt: Grandfather's Story*, *Lullaby Moon*, and *Baby Honu's Incredible Journey*. Tammy lives in Oahu with her family, two rabbits, a chinchilla, a cockatiel, a cat and a burping bulldog named Roxy. In her spare time, she raises monarch butterflies and creates origami projects. Visit her website at www.tammyyee.com.

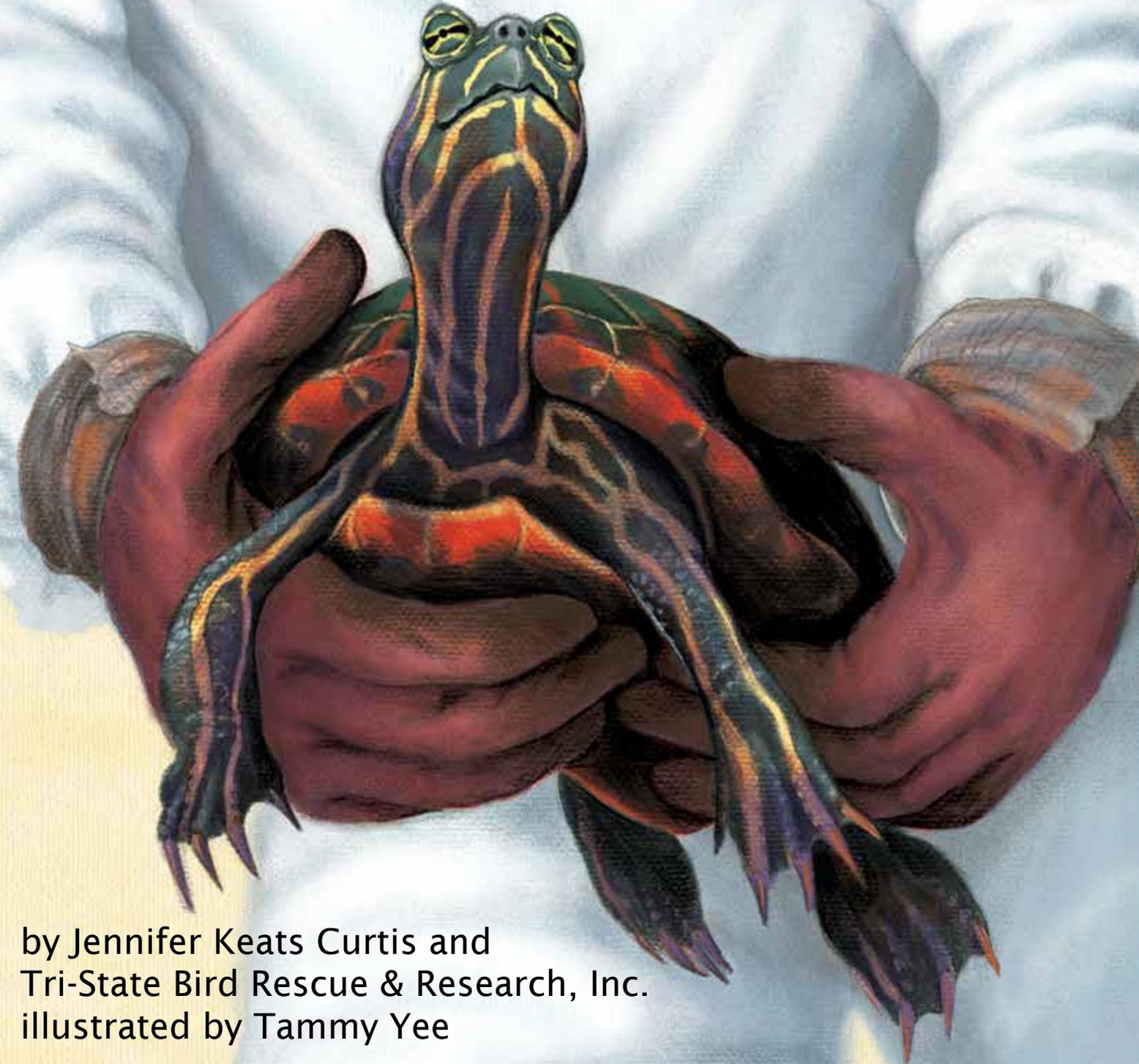


Jennifer Keats Curtis



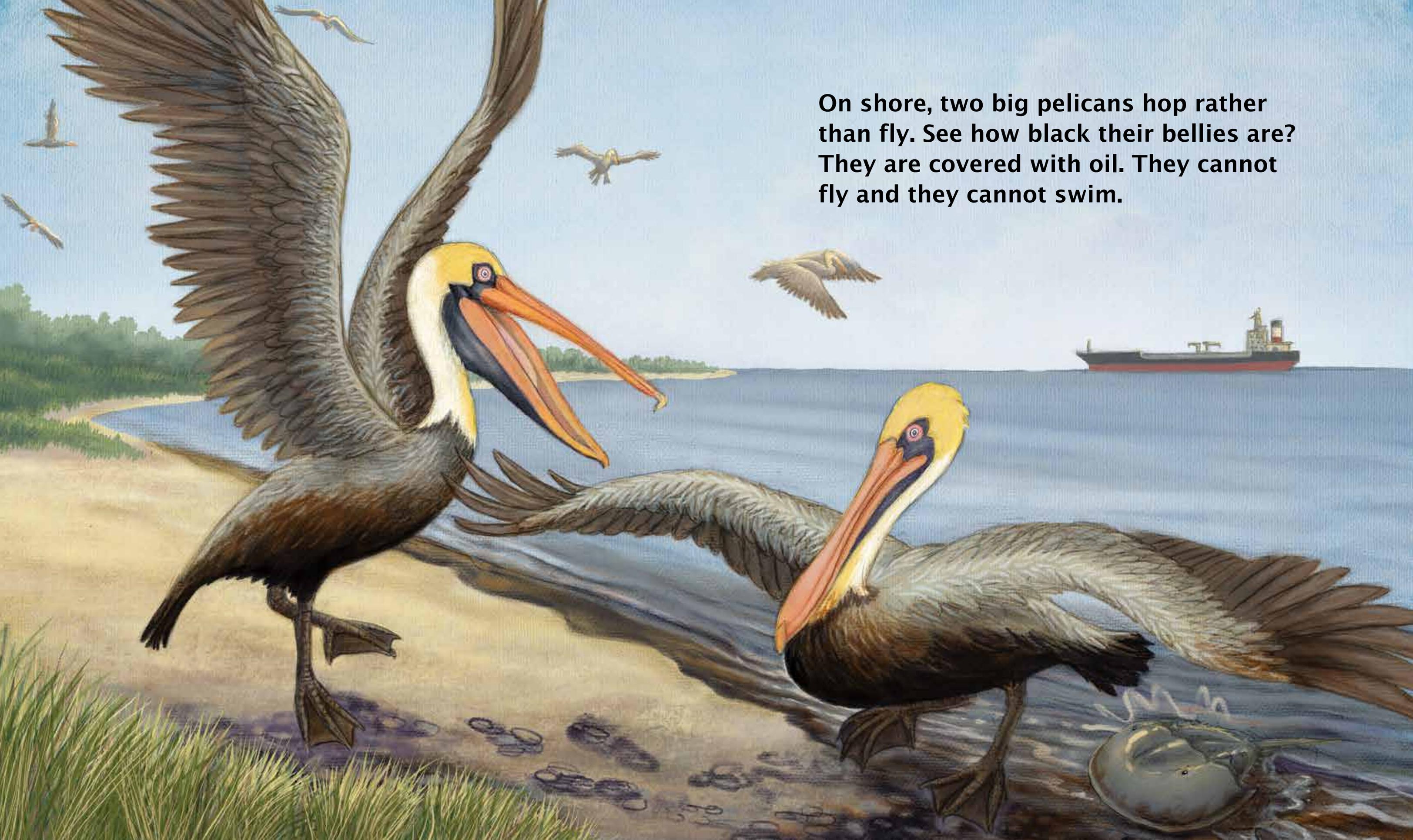
Tammy Yee

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On shore, two big pelicans hop rather than fly. See how black their bellies are? They are covered with oil. They cannot fly and they cannot swim.

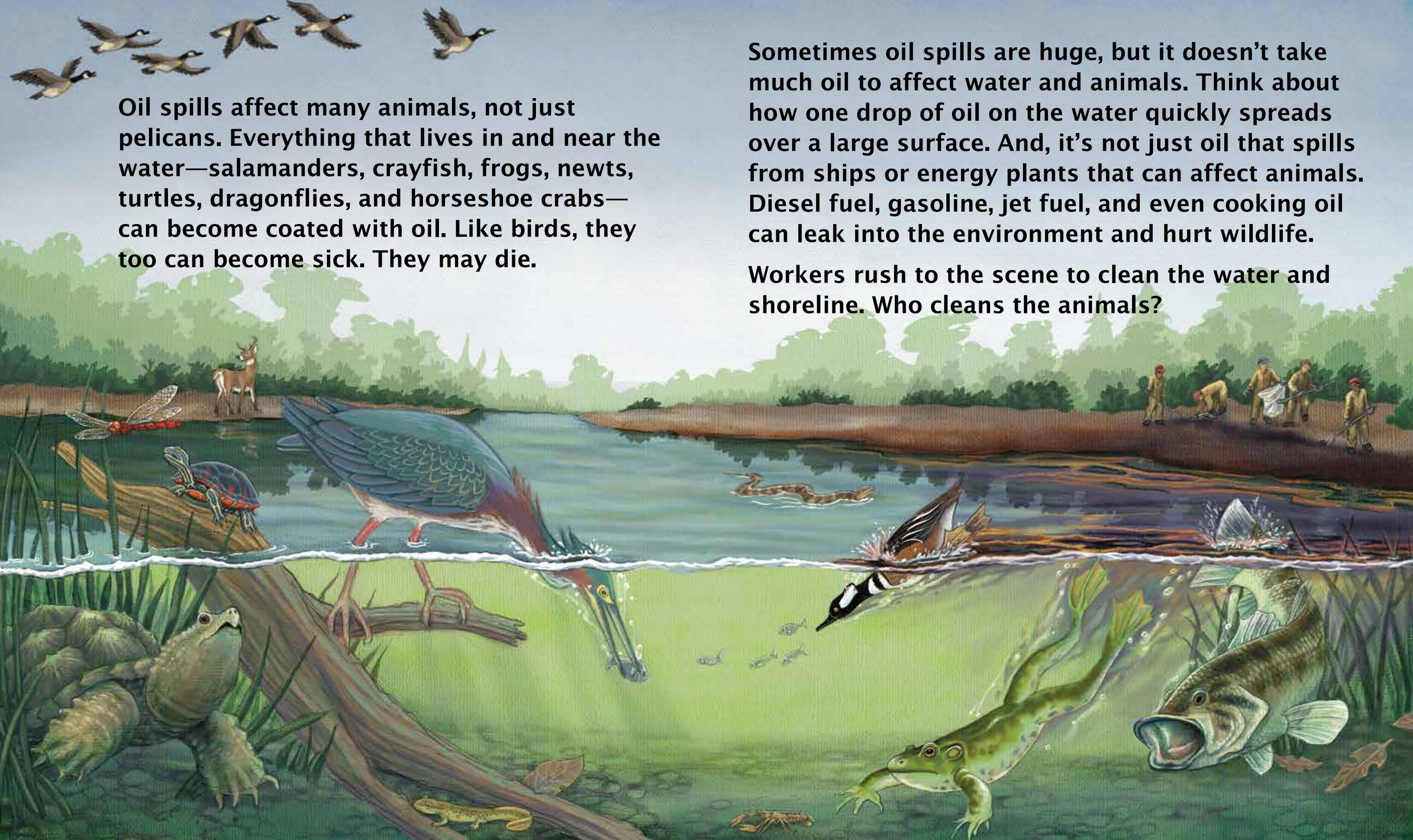


Water birds—like pelicans, swans, herons, ducks, and geese—have special feathers that lock together like Velcro® to create a waterproof drysuit.

A drysuit is a protective suit worn by people working or playing in cold water. The suit keeps water out and the wearer warm and dry.

Droplets of water bead up and roll off the feathery drysuit. Without waterproofing, water penetrates that layer. The pelicans become cold and wet. They cannot get off the ground and they cannot float. When they use their beaks to preen—clean and straighten their feathers—they will swallow the oil on their feathers. This can make them sick.





Oil spills affect many animals, not just pelicans. Everything that lives in and near the water—salamanders, crayfish, frogs, newts, turtles, dragonflies, and horseshoe crabs—can become coated with oil. Like birds, they too can become sick. They may die.

Sometimes oil spills are huge, but it doesn't take much oil to affect water and animals. Think about how one drop of oil on the water quickly spreads over a large surface. And, it's not just oil that spills from ships or energy plants that can affect animals. Diesel fuel, gasoline, jet fuel, and even cooking oil can leak into the environment and hurt wildlife.

Workers rush to the scene to clean the water and shoreline. Who cleans the animals?



We do. We are the Oiled Wildlife Response Team at Tri-State Bird Rescue & Research in Delaware. Only a few organizations in the United States can save these animals. Tri-State is the only experienced team on the East Coast.

When we get a call to help, we rush to the scene. We pick up as many oiled animals as we can, capturing some with nets.

For Creative Minds

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Preventing Oil Spills & Helping Animals

People hearing “oil spill” usually think of an oil pipeline that breaks or a rig or ship spewing black, shiny oil that floats across water and onto the land. While that is one kind of oil spill, other fuels and even cooking oil can quickly spread across water and the shores. Any kind of oil spill can hurt animals that live in and near water. Oil ruins animals’ ability to insulate or waterproof themselves. Oil-covered animals become cold and waterlogged. They may swallow the oil, which makes them sick.

After an oil spill, trained responders come with tools to soak up, clean up, vacuum, and move the oil. How the oil is cleaned will depend on what kind of oil has spilled, how much there is, where the oil has spilled and the time of year.



Even in our own homes, we can help prevent oil spill problems by:

- Putting lids on items that contain any kind of oil or grease, even peanut butter, before we throw them away.
- Disposing of cooking oil the right way—let it cool and put it in a container with a lid.
- Never dumping any kind of oil outside or into the garbage or sewer.
- Checking and maintaining inside and outside oil tanks because they can rust and leak.
- Thinking about how we can use less oil, such as riding our bikes, walking or carpooling rather than taking our car.
- Remembering to turn off the lights and unplug electronic devices, like TVs and computers, when they are not in use. Using less electricity means using less oil.

Besides oil, trash can also hurt wildlife. How can you help animals stay free from pollution?

- When you see trash, pick it up and put it in a recycling bin or trash can with the lid on so that no animals will become tangled in it or take it back to their homes. Fishing line, kite strings, balloons, and plastic bags are especially dangerous trash.
- Rethink the ways you use plastic and reduce the amount of trash you produce. Pack your lunch in reusable containers rather than plastic bags. Use a reusable water bottle.
- Organize a clean-up day around your home or school.
- Ask your principal about a recycling program at your school if one isn’t already in place.

Wildlife Identification

Oil spills can affect every animal that lives in and near the water. Can you identify these animals that were helped at Tri-State?



Answers: 1. snake, 2. young goose, 3. horseshoe crab, 4. pelican, 5. gannet, 6. crayfish, 7. turtle

Q&A with Tri-State Executive Director Lisa Smith

How often do you rescue oiled animals?

We never know when oil spills will occur or if animals will be affected, so we remain ready all of the time.

What was the biggest spill that you've been involved in?

The 2010 spill in the Gulf of Mexico. We set up treatment centers in Louisiana, Mississippi, Alabama, and Florida. We cared for over 2,000 birds. Brown Pelicans were the most common patient.

What is the hardest animal to clean and why?

Each animal presents challenges. Pelicans can be tricky. They often get oil inside their pouches. That has to be carefully cleaned. Diving birds like loons have very dense feathers so it can take longer to wash them the right way. Diving birds are also hard to clean because they can't stand like geese and ducks. We put them in special cages where the bottom looks like a hammock. We work hard to get them clean and into pools as fast as possible.



What is the biggest animal you have helped? The smallest?

The biggest have been beavers and snapping turtles that weigh over 50 pounds! The smallest have been songbirds, tiny turtles, frogs, salamanders, and crayfish.

How much does it cost to care for oiled animals?

It depends on the circumstances but it is expensive. We need many experienced people but professional treatment increases the chances of the animals returning to the wild, so it's worth it. Other costs include:

- The right food, like fish for pelicans
- Medical supplies and safety equipment, such as special suits and gloves
- Getting rid of oily wastewater collected during washing
- Fuel to heat hot water for washing.



You want the animals in your care to stay as wild as possible so that they can be released. Do the animals get attached to you?

No, we try not to talk around them or to them. We make sure we never treat them like pets. We want them to go back to the wild where they belong.

How hard is it to catch animals affected by oil?

It depends on the type of oil and how much is on the animals. If the oil is heavy, like crude oil, the animals are often easy to catch. They can't fly or run away. If the oil is light, like diesel fuel, they can be hard to catch. They may still be able to fly or get away. Sometimes, we use special traps or cannon nets to catch oiled birds that can still fly.



Who cares for the animals?

Most of our staff have a background in biology or animal science. They have volunteered at Tri-State or worked in places like Tri-State. Our wildlife veterinarian has very special qualifications. Some staff members are veterinary technicians. Staff or volunteers who will be working with mammals (like raccoons) must have pre-exposure rabies vaccinations so they can safely handle these animals.

What is the best part of your job?

One is seeing how many people care about wildlife and how hard they will work to help them. The other is returning animals to their wild homes once their rehabilitation is complete.

What should I do if I find an oiled animal?

Call a licensed wildlife rehabilitator. Every wild animal is different.

If you aren't experienced in handling these animals, you could be hurt or they could be hurt. Oil can be dangerous for people. Don't touch it with your bare hands. Latex gloves will not protect you from some unsafe substances. If you see an oil spill, please call the National Response Center at (800) 424-8802.



Thanks to Lisa Smith of Tri-State Bird Rescue & Research for verifying the accuracy of the information in this book.

Photo credits go to Tri-State Bird Rescue & Research and to the EXXON VALDEZ Oil Spill Trustee Council for the images used in the For Creative Minds section.

Library of Congress Cataloging-in-Publication Data from Library of Congress goes here...or

Cataloging Information is available through the Library of Congress:

SENT TO LOC ON 8/21/18

978-1-60718-8230 English hardcover ISBN
978-1-60718-8353 English paperback ISBN
978-1-60718-8759 Spanish paperback ISBN
978-1-60718-8766 English ebook PDF ISBN
978-1-60718-8780 Spanish ebook PDF ISBN
978-1-64351-1573 English ePub3 ISBN
978-1-64351-3157 Spanish ePub3 ISBN

Interactive, read-aloud ebook featuring selectable English (978-1-60718-8797) and Spanish (978-1-60718-8803) text and audio (web and iPad/tablet based)

Lexile® Level: 820L

key phrases: environmental education, helping animals, oil spills

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Lisa Smith, Executive Director, Tri-State Bird Rescue & Research; personal interview, multiple 2016 and 2017

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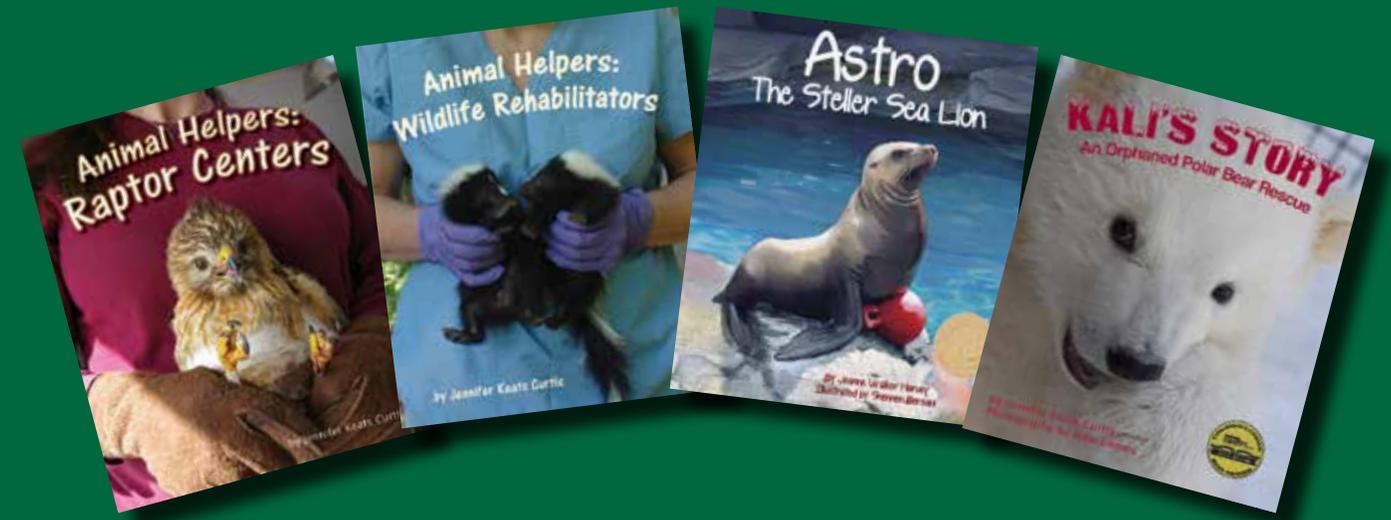
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Manufactured in China, December 2018
This product conforms to CPSIA 2008
First Printing

Arbordale Publishing
Mt. Pleasant, SC 29464
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