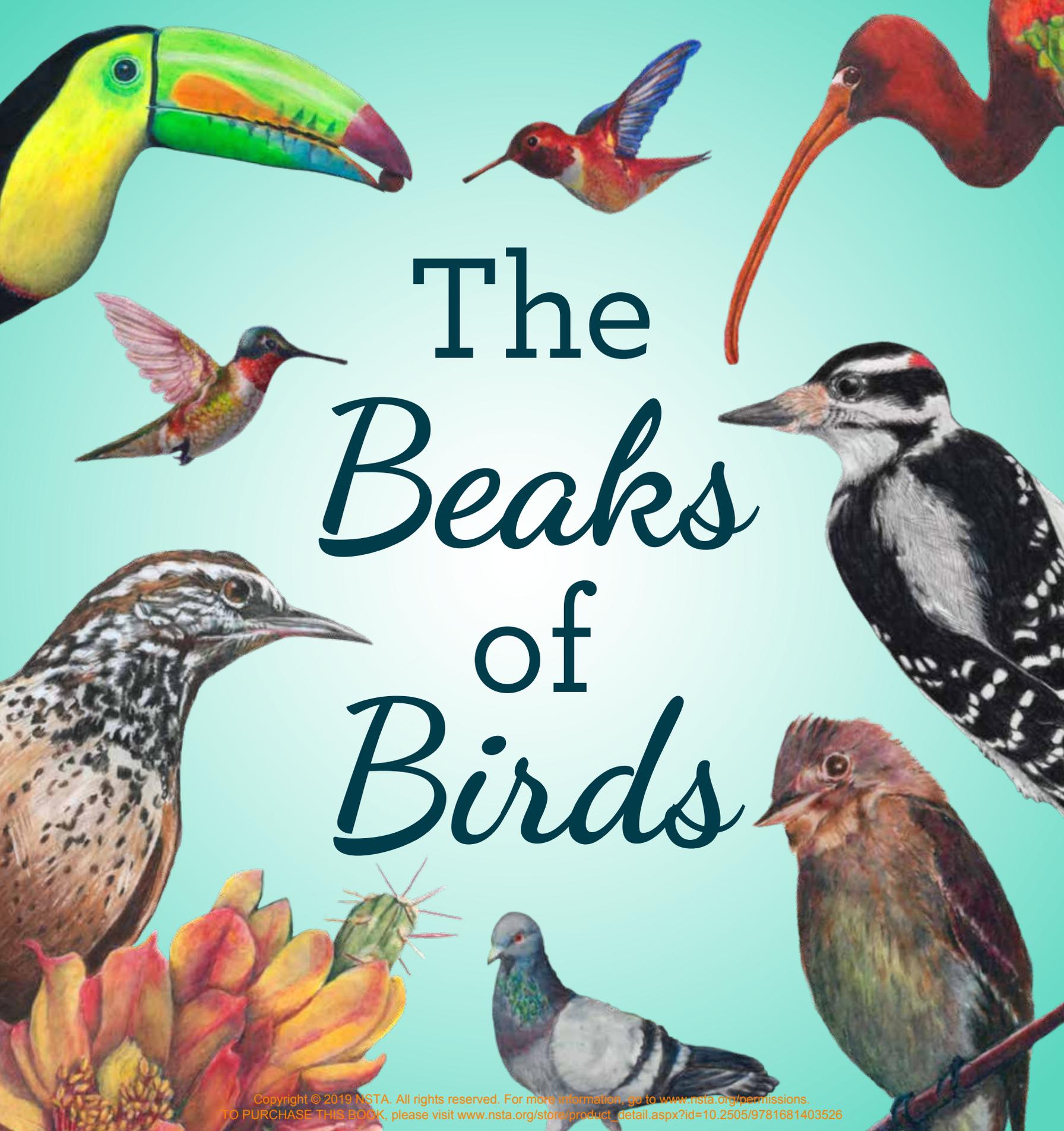


The Beaks of Birds

Richard Konicek-Moran
Kathleen Konicek-Moran


NSTA Kids
National Science Teachers Association

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About This Book

Come with us to explore the wonderful world of birds and their beaks. We will travel from a backyard to a park with a pond to see amazing birds using their beaks—or built-in, specialized “tools”—to eat. Birds use their beaks to do a lot of things: build nests, preen themselves to activate oil glands and keep feathers in proper order, and in some cases defend themselves. In this book, we will concentrate on how birds use their beaks to eat. You may notice that we use the words *beaks* and *bills* in this story. They mean the same thing. “Birders” (people who spend a lot of time looking at birds as a hobby) use both words when they talk about that part of a bird’s body.

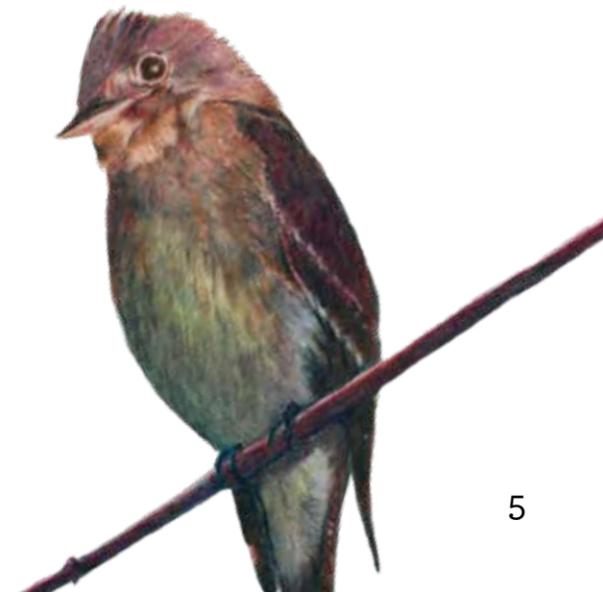
In this book, we help you understand that the structure of the bird’s beak plays a big role in the way birds function to find and capture their food. Engineers call this concept *structure and function* and use it to create many tools that are useful for humans. We call this a *crosscutting concept* because sometimes what we learn in one area of science can be used in others. For example, a paper clip or a thumbtack has certain uses because of its structure, and the way it is used (or functions) depends a lot on its structure or how it is put together. If you look in a toolbox, you can see how screwdrivers, pliers, and other tools are made to perform certain tasks. Applying the concept of structure and function to your toys will help you find out how they work.

To think about structure and function a little more, consider your hands. Your fingers and thumb allow you to grab things that other animals cannot. Think

about how you would hold a hammer if you didn’t have a thumb. If you have a dog or cat, try to imagine it holding a hammer—it can’t, right? Its paws do not have the right structure to hold a hammer.

In the same way, birds need the right type of beak to perform specific tasks. Imagine a woodpecker with a tiny beak. No way could a little beak peck holes in a tree to find bugs to eat. So over millions of years, the woodpecker has developed a beak that is long, sharp, and strong. The same is true for the tools we use when we eat. Over time, people invented the tools they needed for eating different kinds of foods. As you look at the various birds and their bills in this book, think about how they would eat if their beaks were different.

Now read on as you follow your neighbors Mrs. Aiko and Mr. Pedro around as they help you look at the birds in their yard, in the park, and in their photo album. As you look at each bird, think about how their beaks help them survive.





“Oh my goodness! Look at this beautiful pink bird with the strange beak. It looks like it has a scoop at the end.”

“Why don’t you give naming this bird a try,” says Mr. Pedro.

You look closely at the picture. The beak is shaped like a spoon.

“Spoonbeak?” you say.

“You’re on the right track! That’s a Roseate Spoonbill. Another clever name, right? The spoonbill swings its beak in the water, and the shape of it lifts the water and all the little critters in there up into the beak,” explains Mr. Pedro. “There are little filtering, teeth-like knobs on the beak that help the bird keep its prey but then let the water swish right out.”

You make sure to include a sketch of the spoonbill’s beak in your field notebook. Its head is bald, too, for the same reason as the Wood Stork.

“I know this bird. It’s a pelican,” you say.

“We saw these everywhere along the water in Florida,” comments Mr. Pedro.

“There’s a silly poem by an old-time author named Dixon Lanier Merritt that goes along with this bird. ‘A wonderful bird is a pelican. Its bill can hold more than its belly can,’” Mrs. Aiko tells you.

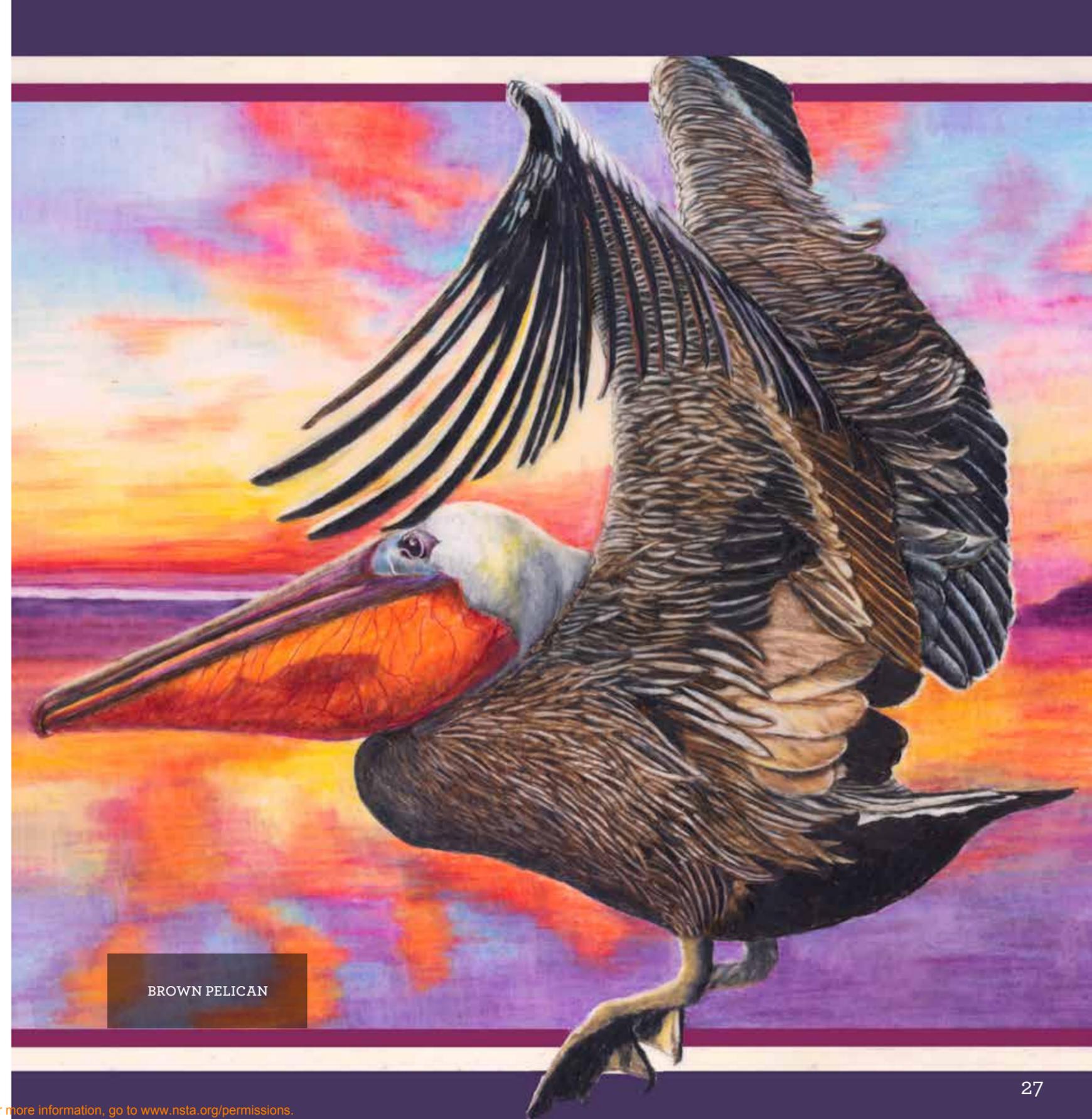
“Look at the size of that beak!” you exclaim. “I bet it catches really big fish.”

“Well, you would think so, but actually it crashes into the water from high above and stuns *little* fish. Then, it scoops them up into its huge throat pouch,” Mrs. Aiko explains.

“A big fish with big bones can cause harm if it gets stuck in a pelican’s throat,” says Mr. Pedro. “So as it flies away, the pelican drains the water out of its pouch. Sometimes, gulls try to steal fish out of its beak while it is flying. And a pelican is so big that a gull may actually perch on its head to do its stealing!”

“Is that a fish in the pelican’s beak?” you wonder.

“What do you think?” Mrs. Aiko asks.



BROWN PELICAN



The Beaks of Birds



Come along on a tour of the wonderful world of birds and their beaks. This book is the story of a child and two grown-up friends on a jaunt across their yard, in a park, past a pond, and through the pages of a photo album. Like them, you'll find you can figure out what birds eat by the shape of their bills—and why some have beaks like straws, pouches, or even daggers. Also like them, you'll have all kinds of questions about amazing birds—from house finches to hummingbirds to great blue herons—that use their own built-in tools for eating. Rounding out the story are eight kid-friendly activities and background information parents and teachers can use.



The authors are the husband-and-wife naturalists who also wrote and illustrated the NSTA Kids book *From Flower to Fruit*. Just as that book was designed to encourage budding botanists, *The Beaks of Birds* will provide a fascinating start for future birders and biologists.

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