

Return of the TERNIS

How Scientists Are Saving Island Birds



by Jennifer Keats Curtis with Kim Abplanalp illustrated by Phyllis Saroff

Return of the TERNs

How Scientists Are Saving Island Birds

What would you do if your usual summer vacation spot vanished? Migratory animals worldwide are facing this issue as their warm-weather habitats disappear. Rising sea levels further complicate this problem as small islands wash away. This book is about an artificial-habitat-program partnership between Maryland Coastal Bays Program (MCBP), Maryland's Department of Natural Resources (DNR) Wildlife and Heritage Service, and Audubon Mid-Atlantic after a Common Terns' nesting island eroded away. A 48-square foot raft island was designed to give the birds a safe place away from disturbances, flooding, and predation. It is made of sections that are assembled, locked together and anchored near the old island for the terns' summer nesting season. With the island gone and a raft to take its place, will the terns return?

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- Match the Terns by Age
- Shorebird Snacks
- Fun Facts
- What's on the Raft?

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Jennifer Keats Curtis is an award-winning author that regularly, and delightedly, works with biologists, environmental specialists, and science experts to research and write her books. Some of her books include Children's Choice Book Award Winner *Kali's Story: An Orphaned Polar Bear Rescue*; NSTA Outstanding Science Trade Books for Children: *Pooper Snooper* (also 2023 Children's Book Councils Favorites), *After A While Crocodile: Alexa's Diary*, *Moonlight Crab Count*, and *Maggie: Alaska's Last Elephant*. The realistic fiction, *Creek Critters*, co-authored with scientists at Stroud Water Research Center, was a finalist for the AAAS/Subaru SB&F Prize for Excellence in Hands-on Science Books. Follow her on Twitter and Facebook.

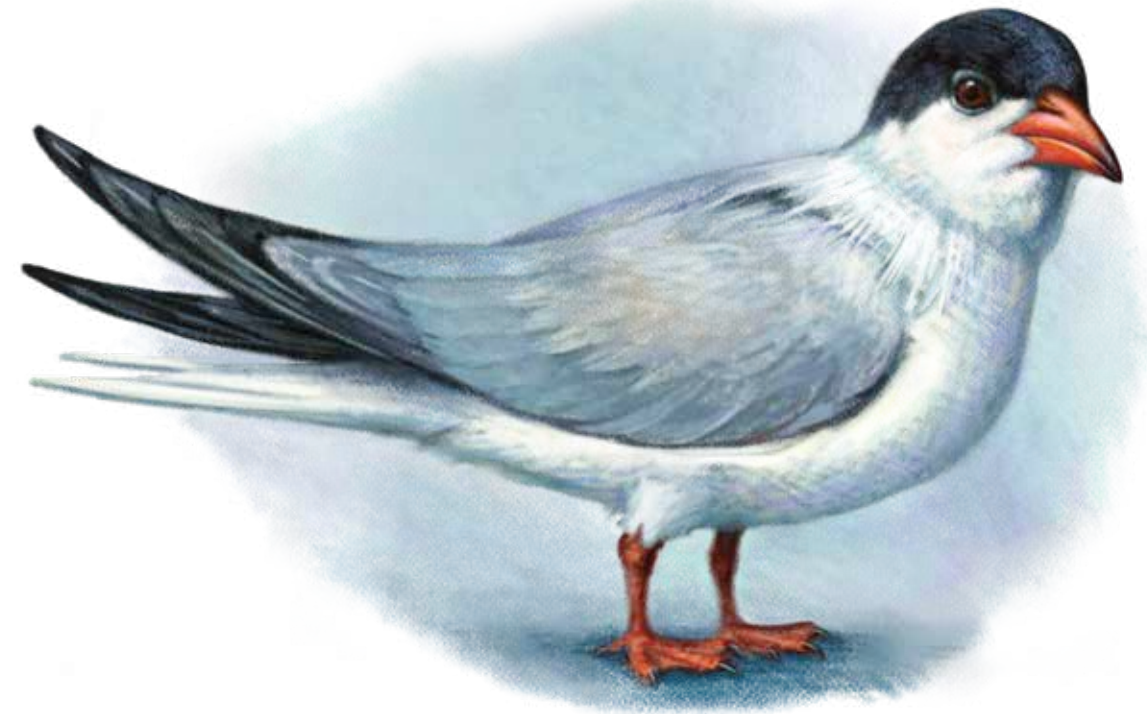
Kim Abplanalp (ab-plan-alp) is Maryland Coastal Bays' Bird Habitat Coordinator in charge of bird habitat restoration, waterbird monitoring, and the artificial breeding habitat project, the Tern Raft. She has presented at the Waterbird Society Meeting and Pacific Seabird Group and serves as the tern raft photographer for Audubon Mid-Atlantic. Her photos have been featured in Chesapeake Bay Magazine, the Capital Gazette, and other publications. Her images are the basis of this book's illustrations and appear in the For Creative Minds section. Besides researching horseshoe crab behavior, Kim has had a myriad of life experiences as a myofascial release therapist, art gallery owner, jewelry designer, and as a dock worker! She was also a yoga and meditation teacher spanning decades. In her spare time, she remains an avid birder and a bird guide.

Since childhood, **Phyllis Saroff** has brought together her loves of science and art. In addition to *Return of the Terns: How Scientists Are Saving Island Birds*, *Pooper Snoopers*, *Creek Critters*, *Maggie: Alaska's Last Elephant*, *Vivian and the Legend of the Hoodoos*, *Tuktuk: Tundra Tale* and *Sounds of the Savanna* for Arbordale, Phyllis has illustrated nonfiction books about the natural world such as *Teeth* and *Mary Anning: Fossil Hunter*. She also illustrates for children's magazines, wayside signs and other educational material. Phyllis works digitally and with oil paint. Phyllis lives in Maryland with her husband, two sons, and two dogs. Visit her website at saroffillustration.com.

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This book is about a program that takes place in Maryland. The author wishes to thank the Maryland Coastal Bays Program's Dr. Roman Jesien; Maryland Department of Natural Resources' Dave Brinker; and U.S. Fish and Wildlife's Pete McGowan, without whom, this book could not have been written.

A giant sandbox floats on the water. The massive square is the size of an apartment. It's full of crushed shells, green spiky grass, tiny tents, and birds, so many birds.





The birds are about the size of a hot dog in a bun. With a little black cap on their white heads, they hop about on skinny, orange legs. Their beaks, the color of catsup, open. Shrilly, they call: *keek, keek, keek*.



This sandbox is not easy to find. It's far from nosy neighbors—people and animals. This secret place is Bird Town, or in this case, Tern Town.

These beautiful birds are Common Terns. They are not really in a sandbox. Tern Town is a big, floating island. Scientists created this island (a big raft) as a seasonal getaway. The birds' usual summer home—a small island—has washed away. And, if not for this raft, these terns would have nowhere to go.



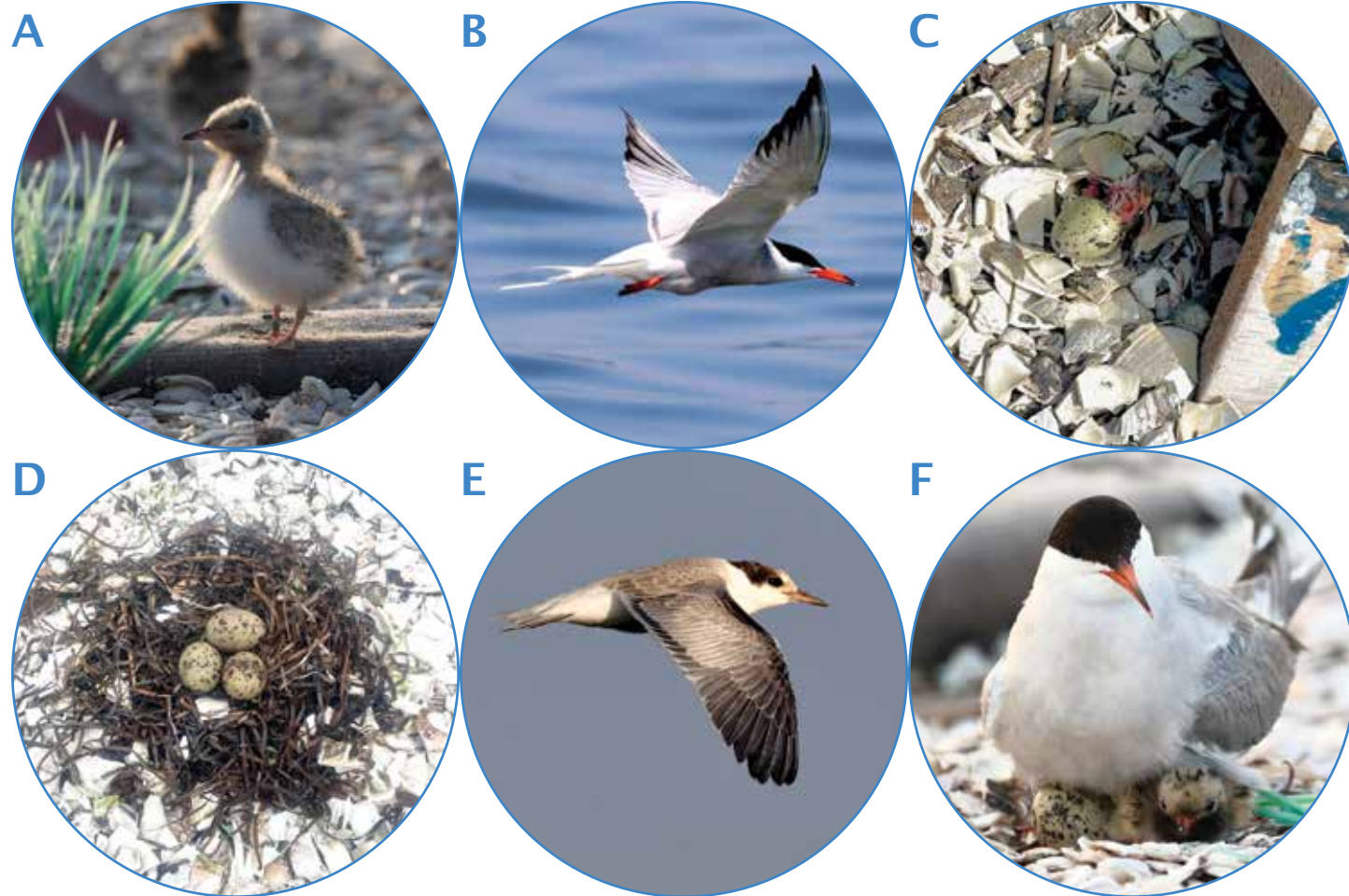
For Creative Minds

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Match the Terns by Age

Identify the tern by its age.

1. I am an **egg** waiting to hatch.
2. I am a **hatchling**, just breaking out of my egg.
3. I am waiting for my brother or sister to hatch. We are well cared for by both parents.
4. I am four or five days old, a young **nestling**.
5. I am a **fledgling** and can fly.
6. I am an **adult**.



Answers: 1D; 2C; 3F; 4A; 5E, 6B

Shorebird Snacks

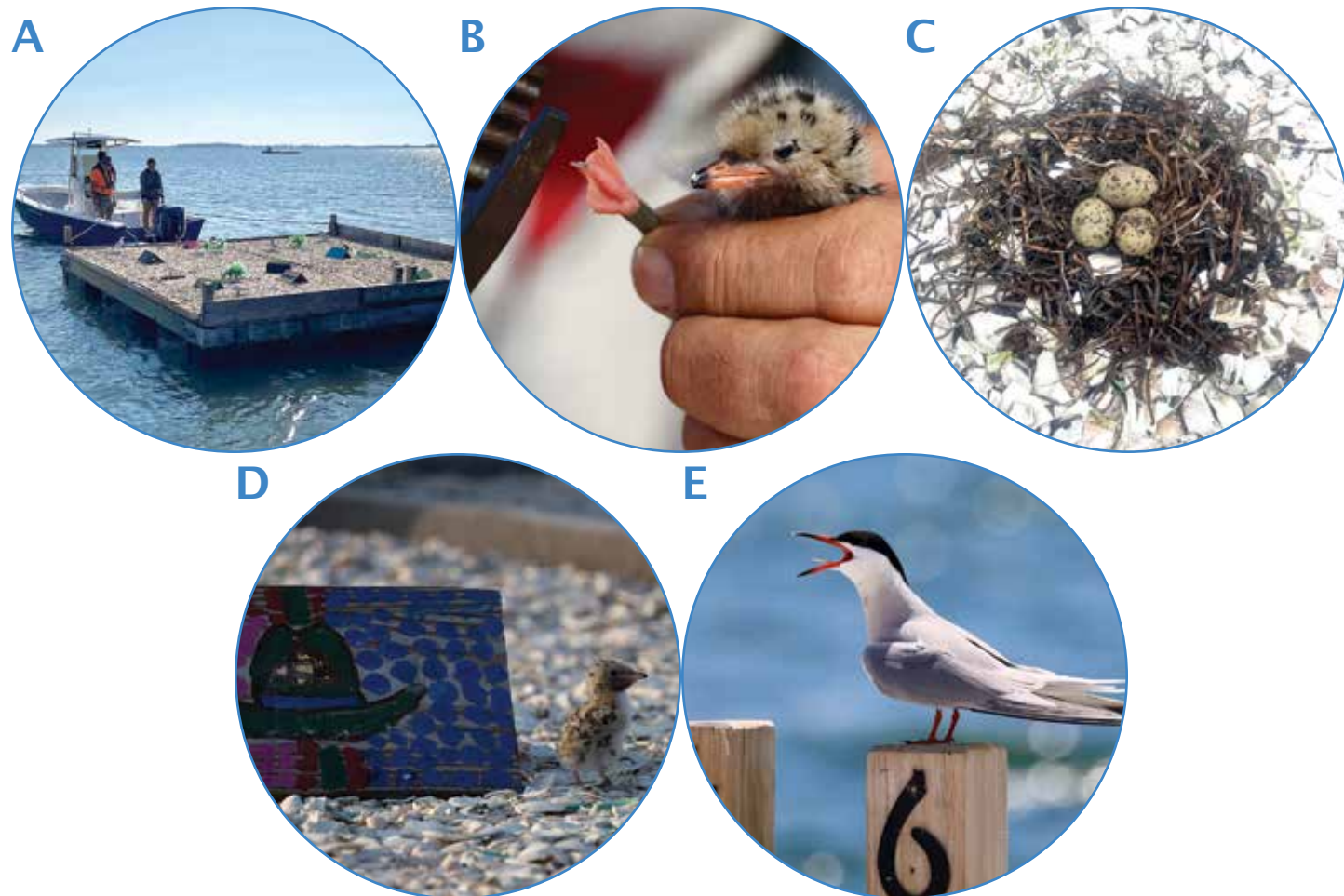
Different shorebirds eat different foods. Common Terns eat small fish including American sand lance, menhaden, spot, Atlantic silverside, bay anchovies, and occasionally sand crabs! Find what the terns are eating in the photographs.



Fun Facts

Match the statement to the photo.

1. Terns cool themselves down by “panting.” Since birds can’t sweat, they cool off by opening their beaks. They may also spread their wings to feel the breeze or take a dip in the water.
2. Adults make a nest, called a scrape, by moving the sand (or broken shells) with their beaks and then wiggling their bellies until they are settled in. Sometimes, they add sea grasses that blow onto the raft.
3. Both adults and chick terns are banded to allow scientists to recognize individuals, record information about them, and report when the terns leave the raft.
4. The raft is made of sections that are assembled, locked together and anchored for the terns’ summer nesting season. When put together, the raft is 48 x 48 feet.
5. The Maryland’s Coastal Bays Program hosts a “Bay Day” each year where children can paint the shelters to be used on the raft.

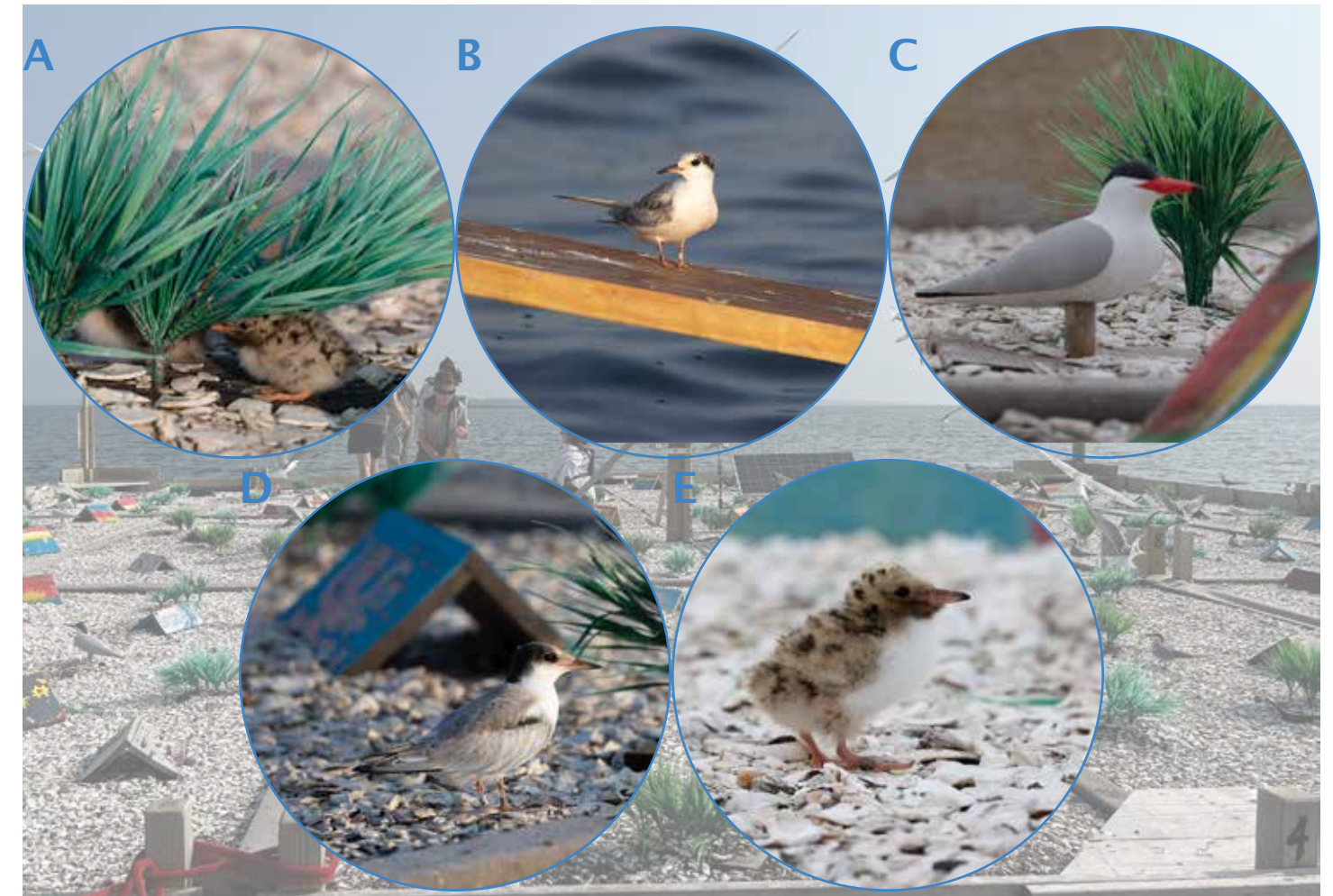


Answers: 1E; 2C; 3B; 4A, 5D

What's on the Raft?

Everything the scientists put on the raft has a reason. See if you can match the description to the item.

1. Shelters give the birds a place to get out of the direct sun and be safe from predators.
2. Decoys help the birds think that there are already other birds on the raft, letting them know it's a safe place. Scientists also play a lure to attract the birds.
3. Artificial grasses are “planted” because the scientists would not be able to water real grasses on the raft in the bay.
4. Broken shells are used instead of sand that may get blown off by wind.
5. Young birds might be strong enough to fly off the raft but not yet grown enough (or muscular enough) to lift off of the water. The birds can paddle over to the ramp to walk up to the raft. The ramp's slope is the same as the slope of the island.



Answers: 1D; 2C; 3A; 4E, 5B

The raft in this book is based on the work of a partnership between Maryland Coastal Bays Program (MCBP), Maryland's Department of Natural Resources (DNR) Wildlife Heritage Service, and Audubon Mid-Atlantic. They wish to thank their terrific group of volunteers who make this project a success. Special thanks to Todd Peterson, John Collins, Karin and Tom Johnson, and Frances and Matt Cole for all their support.

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