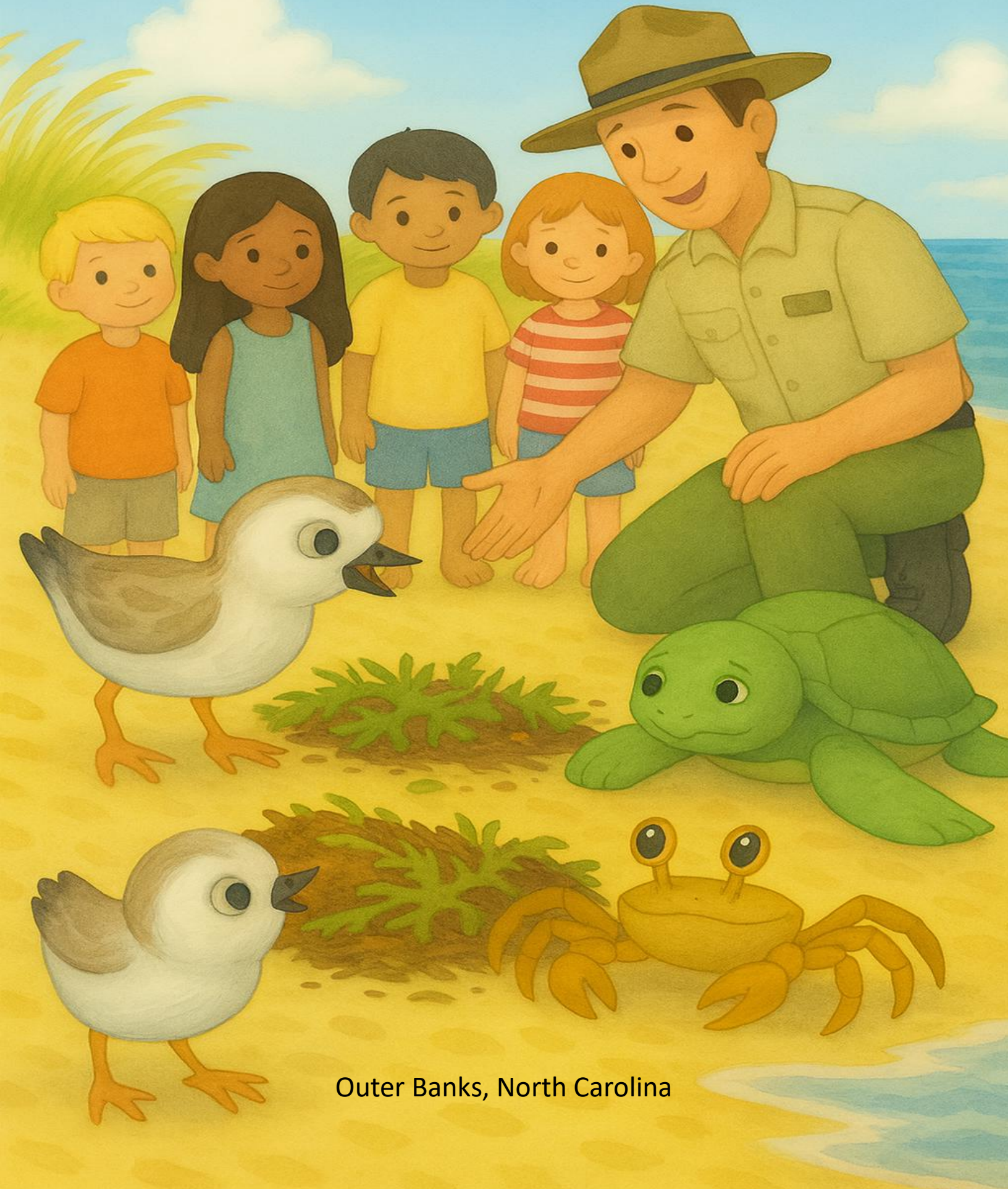


The Mystery of the Missing Wrack Line



Outer Banks, North Carolina

Forward

This storybook was created by the Outer Banks Coastal Conservation (OBCC), a nonprofit organization whose mission is to foster environmental stewardship and a deeper connection to the Outer Banks of North Carolina through outreach, education, and conservation efforts.

We believe that small stories can spark big change. That is why we have made this book available as a free resource for parents, teachers, and community members.

All materials in this book may be freely downloaded, shared, printed and used for educational or nonprofit purposes.

To learn more, access additional resources at: www.theobcc.org.



Chapter 1: The Morning Surprise

One bright morning on an Outer Banks beach, the sand shimmered like gold. Tiny ghost crabs peeked from their burrows, sand fleas hopped near the tide, and seabirds called overhead.

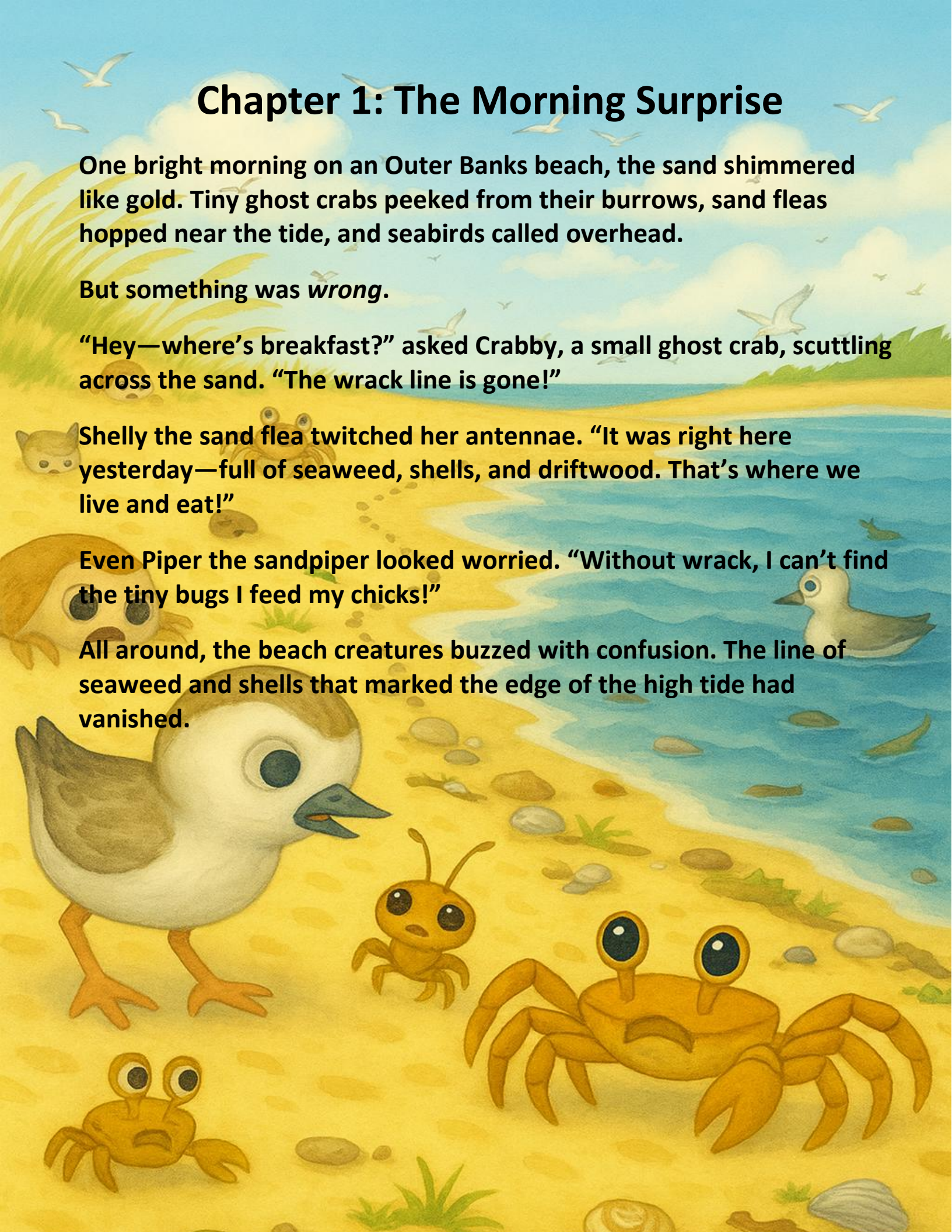
But something was *wrong*.

“Hey—where’s breakfast?” asked Crabby, a small ghost crab, scuttling across the sand. “The wrack line is gone!”

Shelly the sand flea twitched her antennae. “It was right here yesterday—full of seaweed, shells, and driftwood. That’s where we live and eat!”

Even Piper the sandpiper looked worried. “Without wrack, I can’t find the tiny bugs I feed my chicks!”

All around, the beach creatures buzzed with confusion. The line of seaweed and shells that marked the edge of the high tide had vanished.



Chapter 2: The Great Investigation

“Don’t worry,” said Crabby, puffing out his chest. “We’ll solve the mystery of the missing wrack line!”

The beach team gathered clues. First, they searched near the dunes — no wrack there. Then they checked by the tide pools — still nothing.

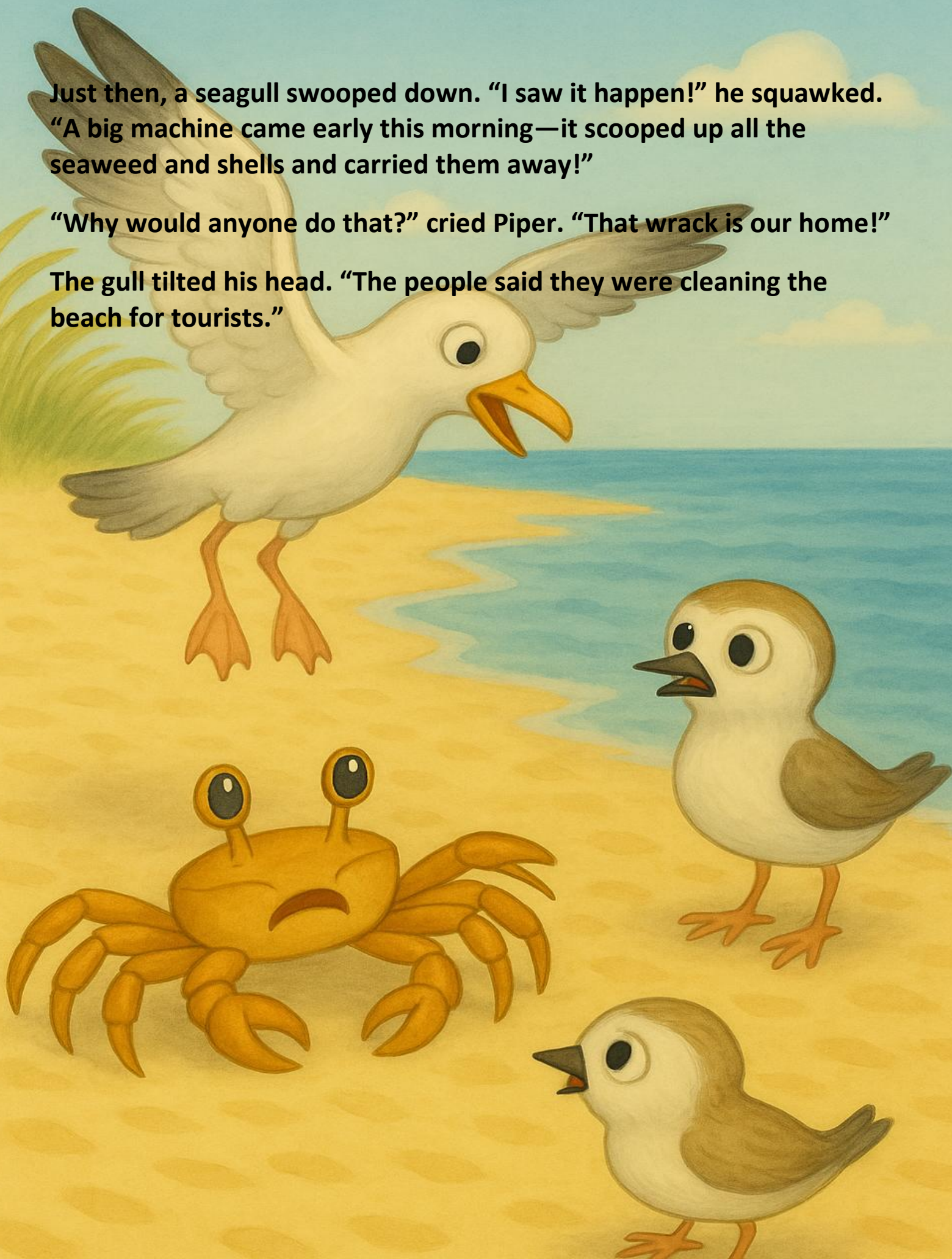
Finally, they saw big tire tracks pressed deep in the sand. “Someone’s been here,” Shelly whispered.



Just then, a seagull swooped down. "I saw it happen!" he squawked. "A big machine came early this morning—it scooped up all the seaweed and shells and carried them away!"

"Why would anyone do that?" cried Piper. "That wrack is our home!"

The gull tilted his head. "The people said they were cleaning the beach for tourists."



Chapter 3: The Empty Shore

As the day grew hot, the beach felt strangely silent. No seaweed meant no food for sand fleas. No sand fleas meant no food for shorebirds.

Crabby peeked out of his burrow. "It's too bright without driftwood to hide under," he said.

Even the dunes began to dry out — without wrack to trap blowing sand, the beach started to flatten.

Shelly sighed. "The wrack line may look messy to people, but it's what keeps this whole place alive."



Chapter 4: A Visitor from the Sea

That evening, the friends noticed a sea turtle struggling to crawl ashore. She looked exhausted.

“What’s wrong, Miss Turtle?” asked Crabby.

The turtle smiled sadly. “I came to lay my eggs, but the sand feels bare and hard. The wrack helps hold moisture and keeps the sand cool. Without it, nesting is tough.”

Piper flapped her wings. “We have to do something! The people don’t understand what they’ve taken away.”



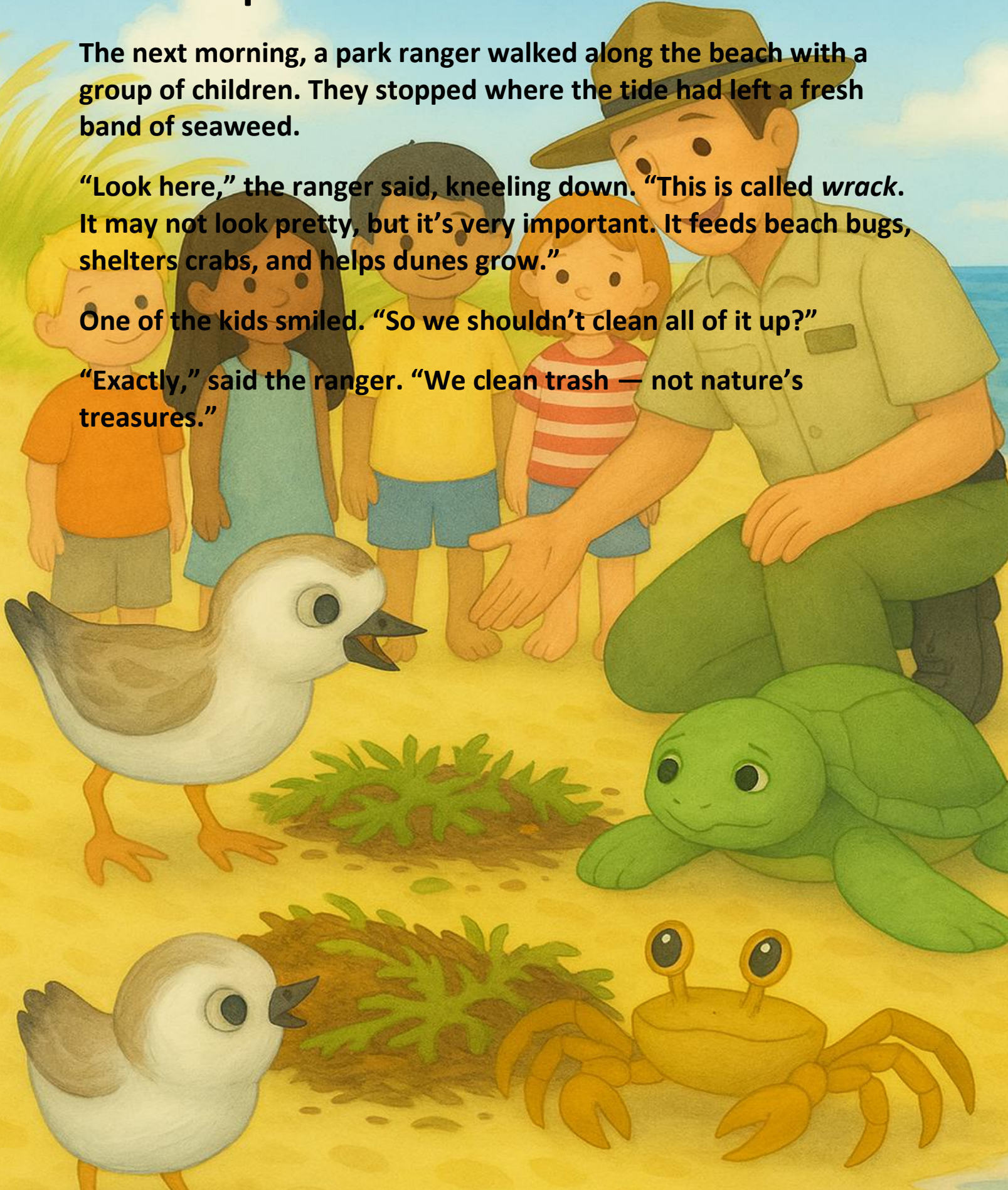
Chapter 5: The Wrack Comes Back

The next morning, a park ranger walked along the beach with a group of children. They stopped where the tide had left a fresh band of seaweed.

“Look here,” the ranger said, kneeling down. “This is called *wrack*. It may not look pretty, but it’s very important. It feeds beach bugs, shelters crabs, and helps dunes grow.”

One of the kids smiled. “So we shouldn’t clean all of it up?”

“Exactly,” said the ranger. “We clean trash — not nature’s treasures.”



As the sun set, the wrack line once again curled gently along the shore — full of life, food, and the whispering sound of waves.



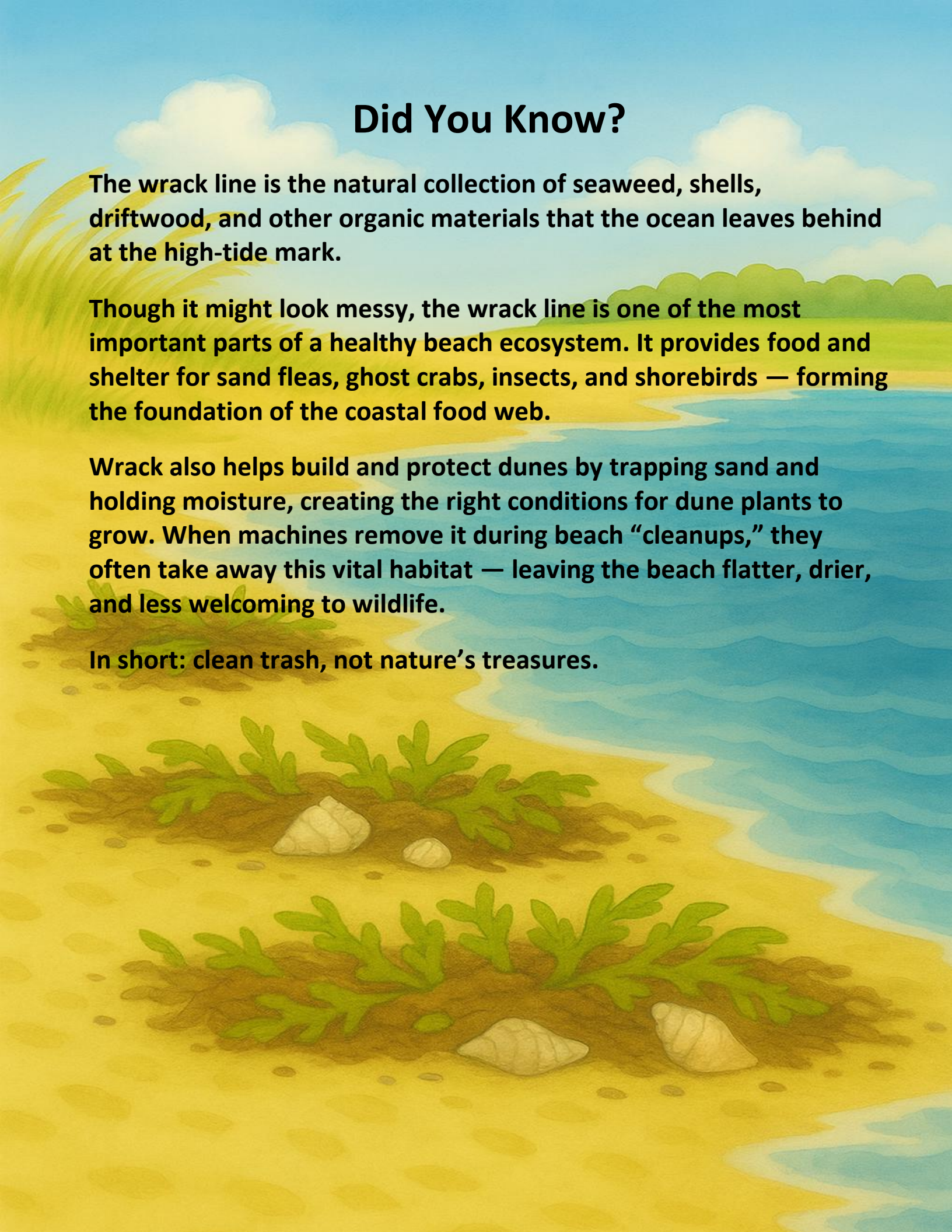
Did You Know?

The wrack line is the natural collection of seaweed, shells, driftwood, and other organic materials that the ocean leaves behind at the high-tide mark.

Though it might look messy, the wrack line is one of the most important parts of a healthy beach ecosystem. It provides food and shelter for sand fleas, ghost crabs, insects, and shorebirds — forming the foundation of the coastal food web.

Wrack also helps build and protect dunes by trapping sand and holding moisture, creating the right conditions for dune plants to grow. When machines remove it during beach “cleanups,” they often take away this vital habitat — leaving the beach flatter, drier, and less welcoming to wildlife.

In short: clean trash, not nature’s treasures.



References

American Shore and Beach Preservation Association. (2021). *The role of wrack in coastal ecosystems*. Retrieved from <https://asbpa.org>

Defeo, O., McLachlan, A., Schoeman, D. S., Schlacher, T. A., Dugan, J., Jones, A., Lastra, M., & Scapini, F. (2009). *Threats to sandy beach ecosystems: A review*. *Estuarine, Coastal and Shelf Science*, 81(1), 1–12. <https://doi.org/10.1016/j.ecss.2008.09.022>

Dugan, J. E., Hubbard, D. M., Page, H. M., & Schimel, J. P. (2011). *Marine macrophyte wrack inputs and dissolved nutrients in beach sands*. *Estuaries and Coasts*, 34(4), 839–850. <https://doi.org/10.1007/s12237-011-9398-6>

National Park Service. (2023). *Beach ecology: The importance of wrack lines*. Cape Hatteras National Seashore. U.S. Department of the Interior. Retrieved from <https://www.nps.gov/caha>

North Carolina Department of Environmental Quality. (2022). *Coastal habitat protection plan update: Beaches and dunes*. Division of Marine Fisheries. Retrieved from <https://deq.nc.gov>

Schlacher, T. A., Weston, M. A., Schoeman, D. S., Olds, A. D., Huijbers, C. M., & Connolly, R. M. (2015). *Golden sands and green tides: The ecology of wrack deposition on sandy beaches*. *Marine Ecology Progress Series*, 529, 1–16. <https://doi.org/10.3354/meps11394>

