The Green Guardians of the Ocean

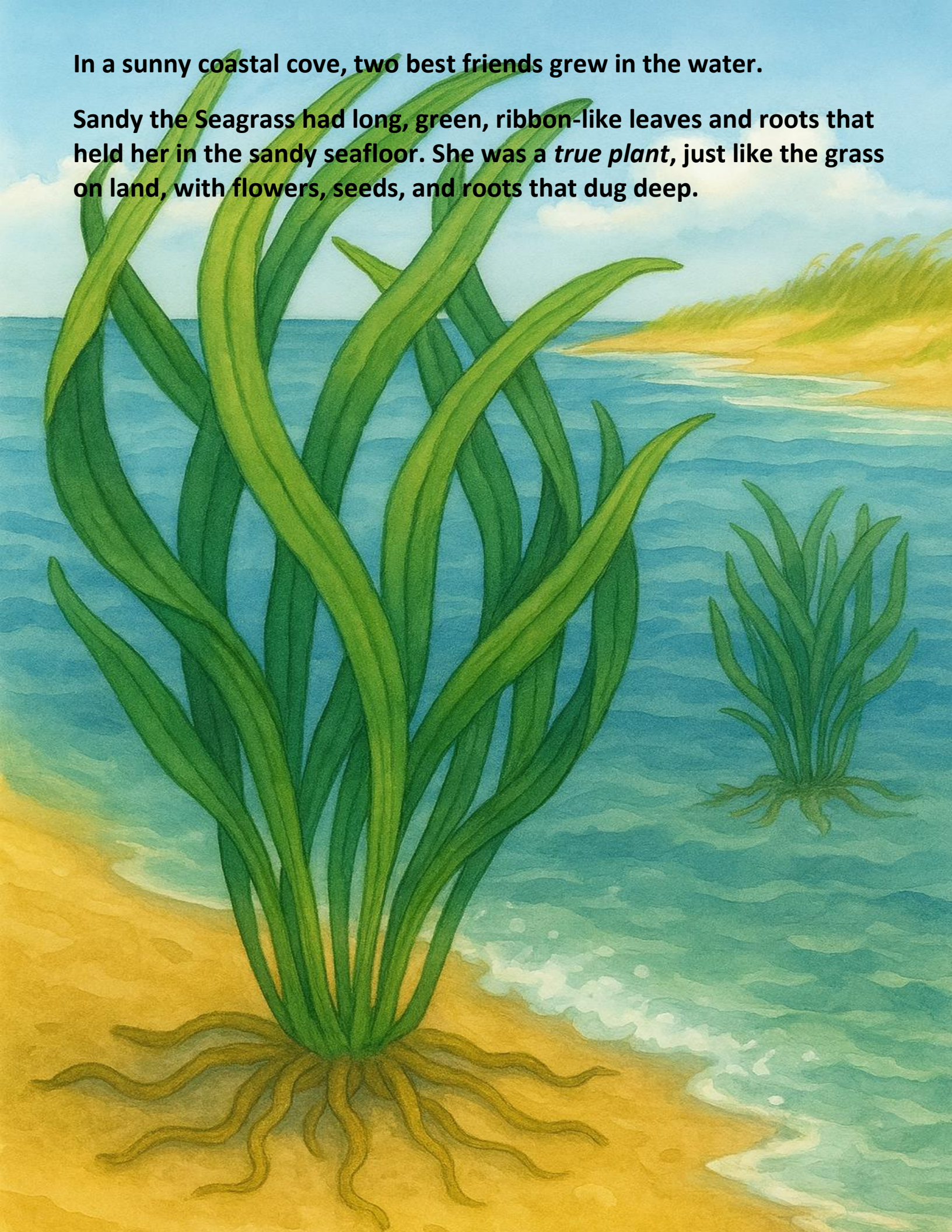
Outer Banks, North Carolina

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.

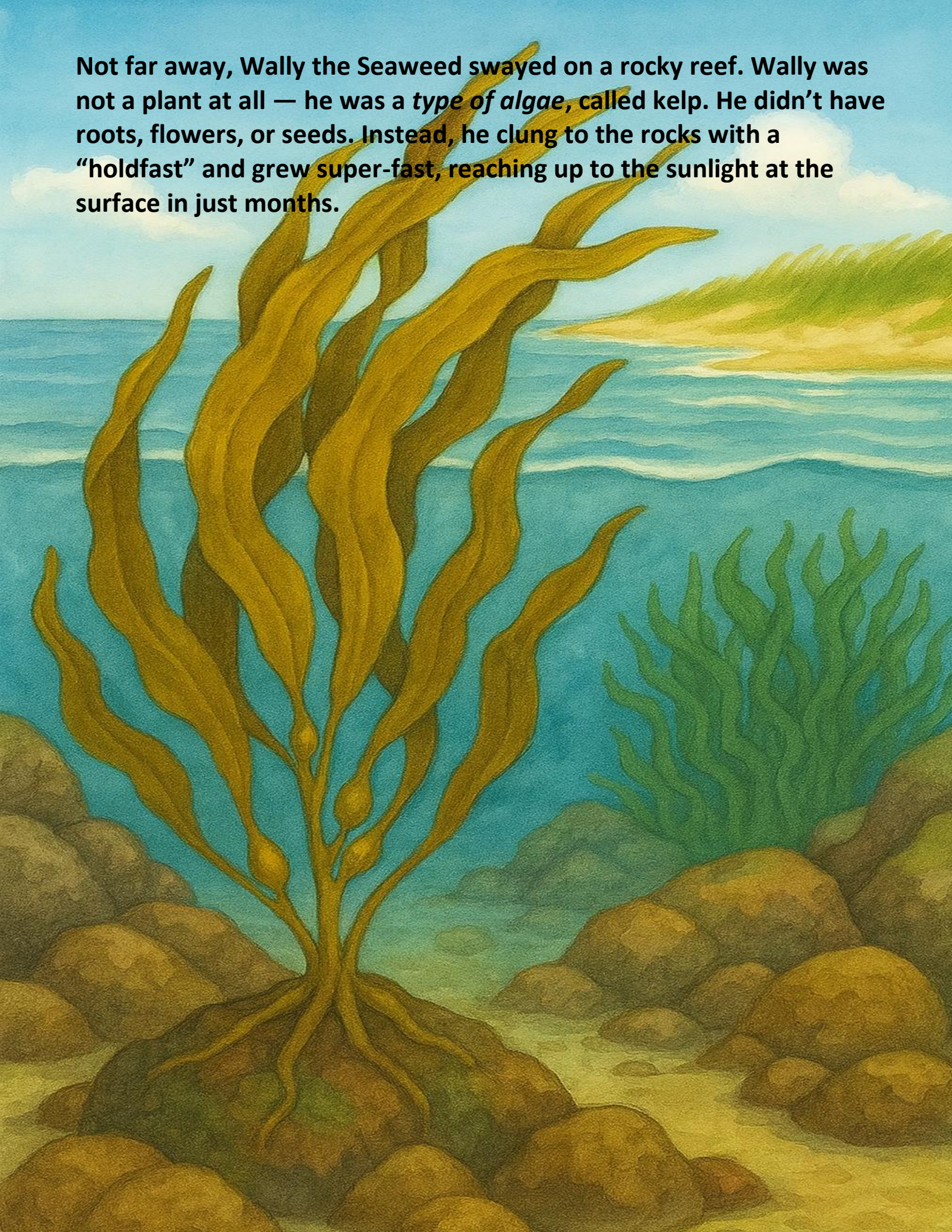
We believe that small stories can spark big change. That is why we have made this book available as a free resource for parents, teachers, and community members.

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

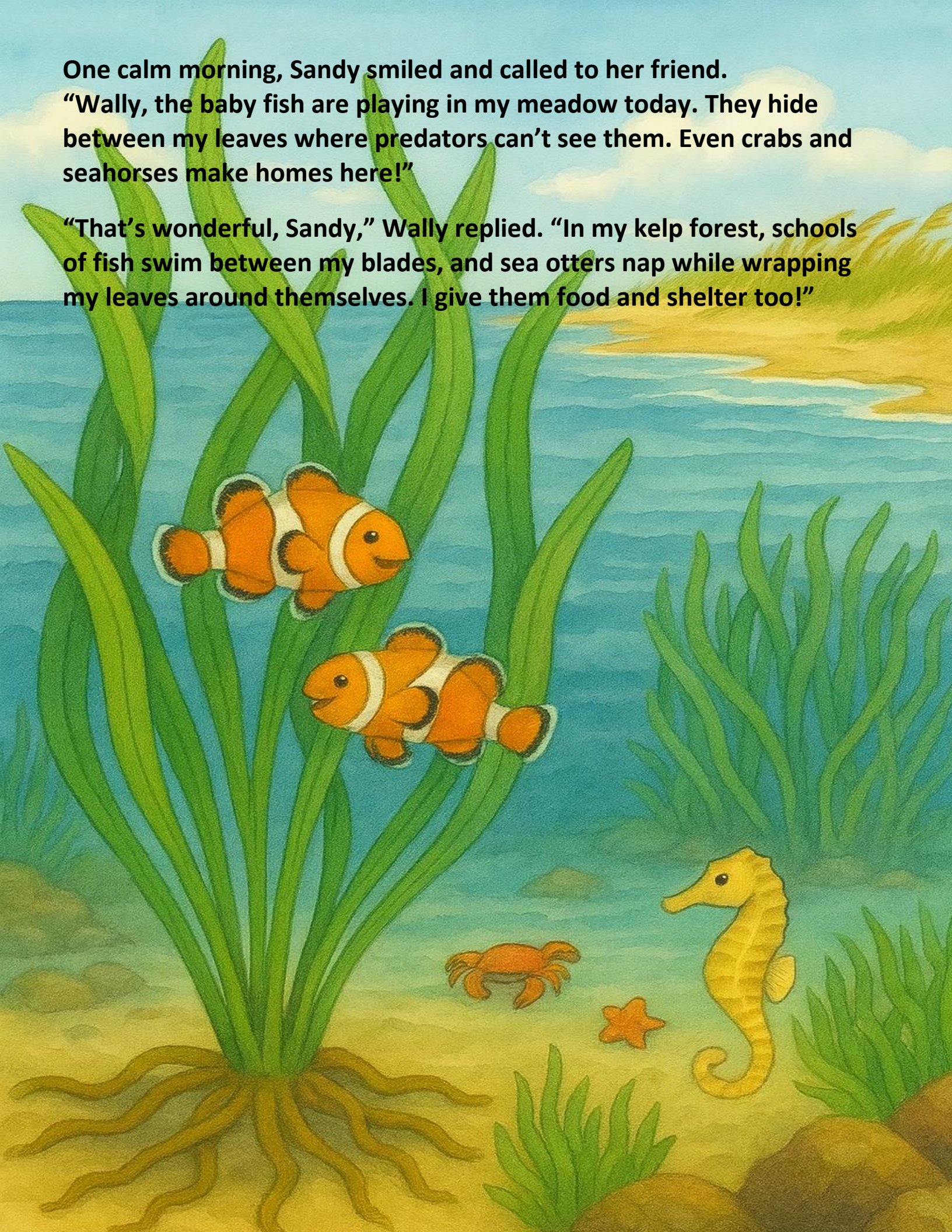


In a sunny coastal cove, two best friends grew in the water.

Sandy the Seagrass had long, green, ribbon-like leaves and roots that held her in the sandy seafloor. She was a *true plant*, just like the grass on land, with flowers, seeds, and roots that dug deep.

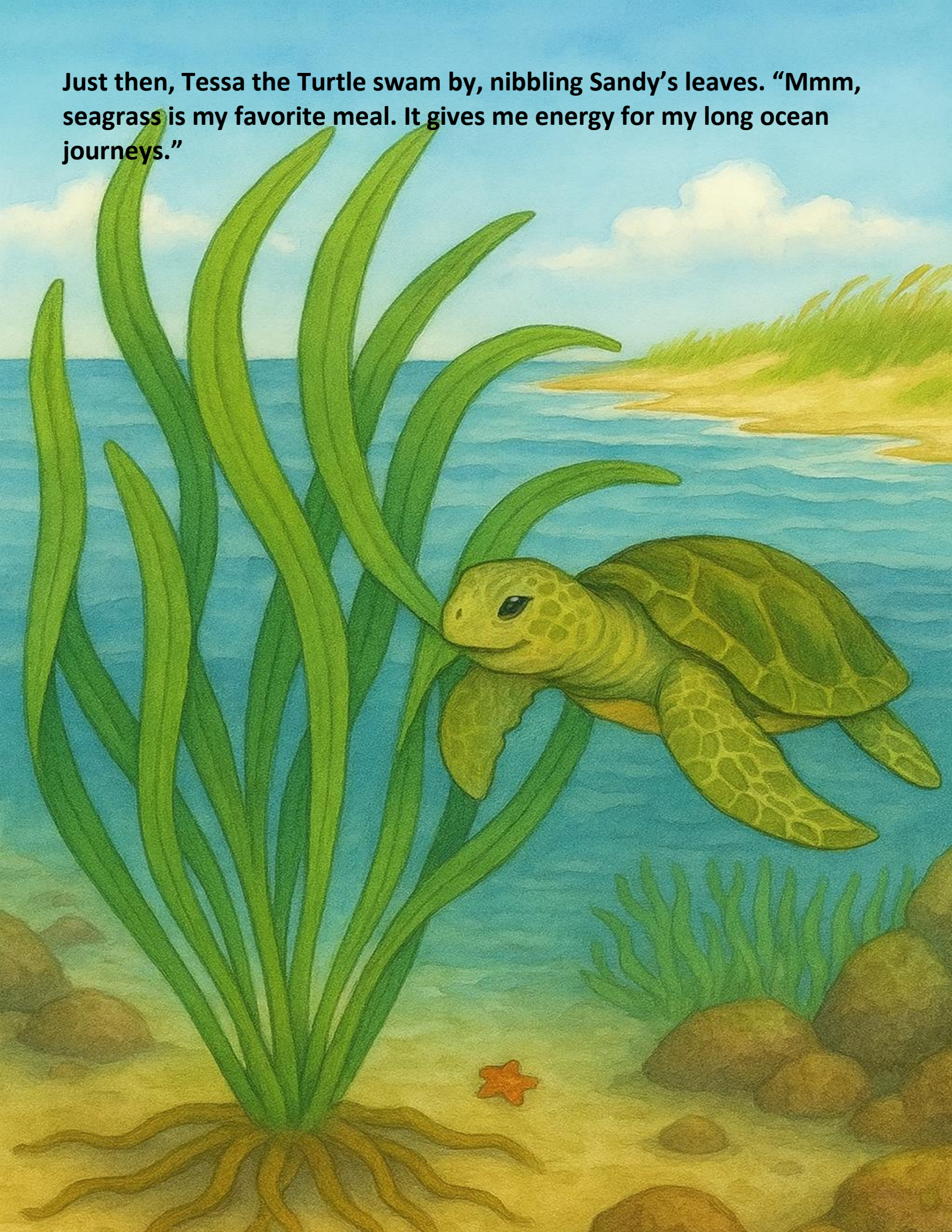


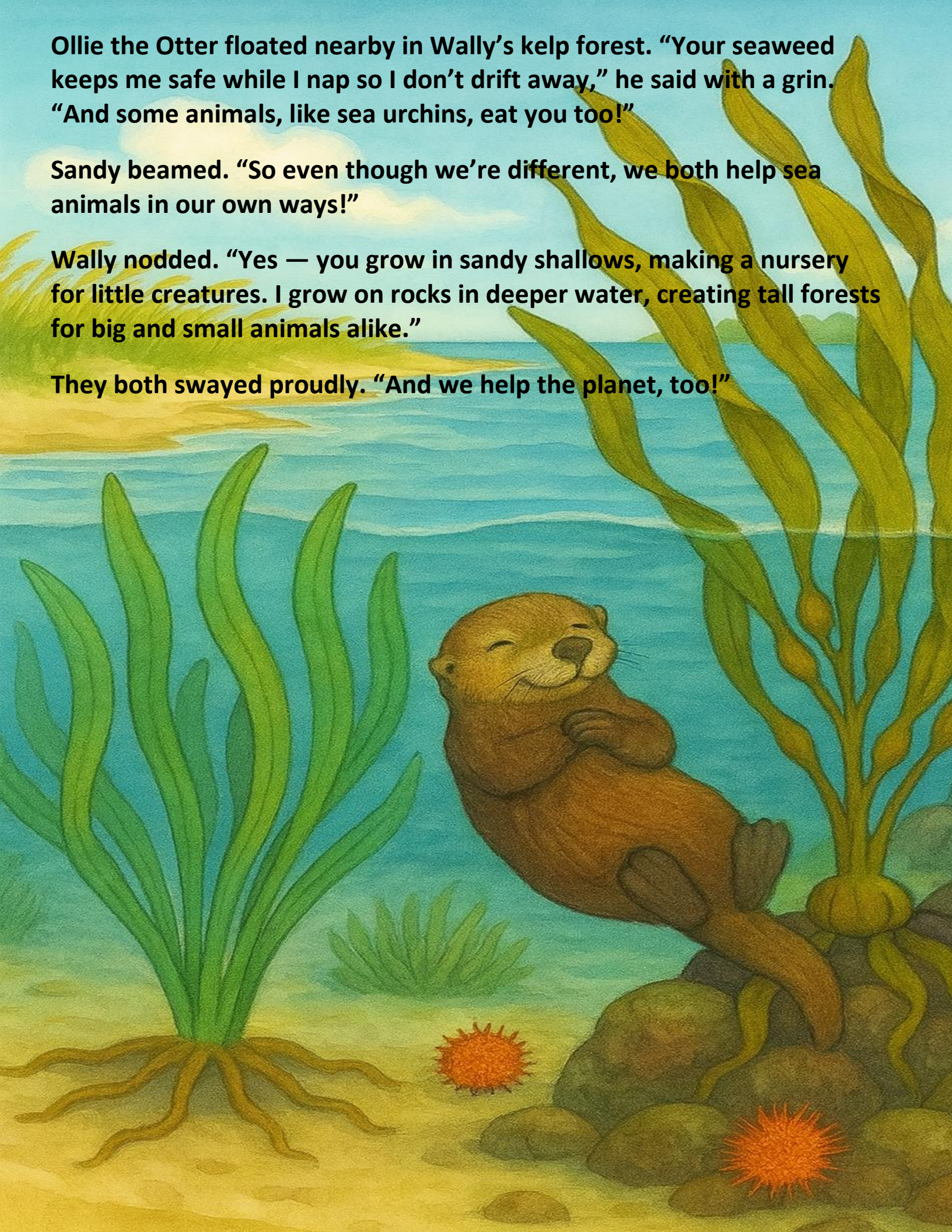
Not far away, Wally the Seaweed swayed on a rocky reef. Wally was not a plant at all — he was a *type of algae*, called kelp. He didn't have roots, flowers, or seeds. Instead, he clung to the rocks with a "holdfast" and grew super-fast, reaching up to the sunlight at the surface in just months.



One calm morning, Sandy smiled and called to her friend. “Wally, the baby fish are playing in my meadow today. They hide between my leaves where predators can’t see them. Even crabs and seahorses make homes here!”

“That’s wonderful, Sandy,” Wally replied. “In my kelp forest, schools of fish swim between my blades, and sea otters nap while wrapping my leaves around themselves. I give them food and shelter too!”


Just then, Tessa the Turtle swam by, nibbling Sandy’s leaves. “Mmm, seagrass is my favorite meal. It gives me energy for my long ocean journeys.”

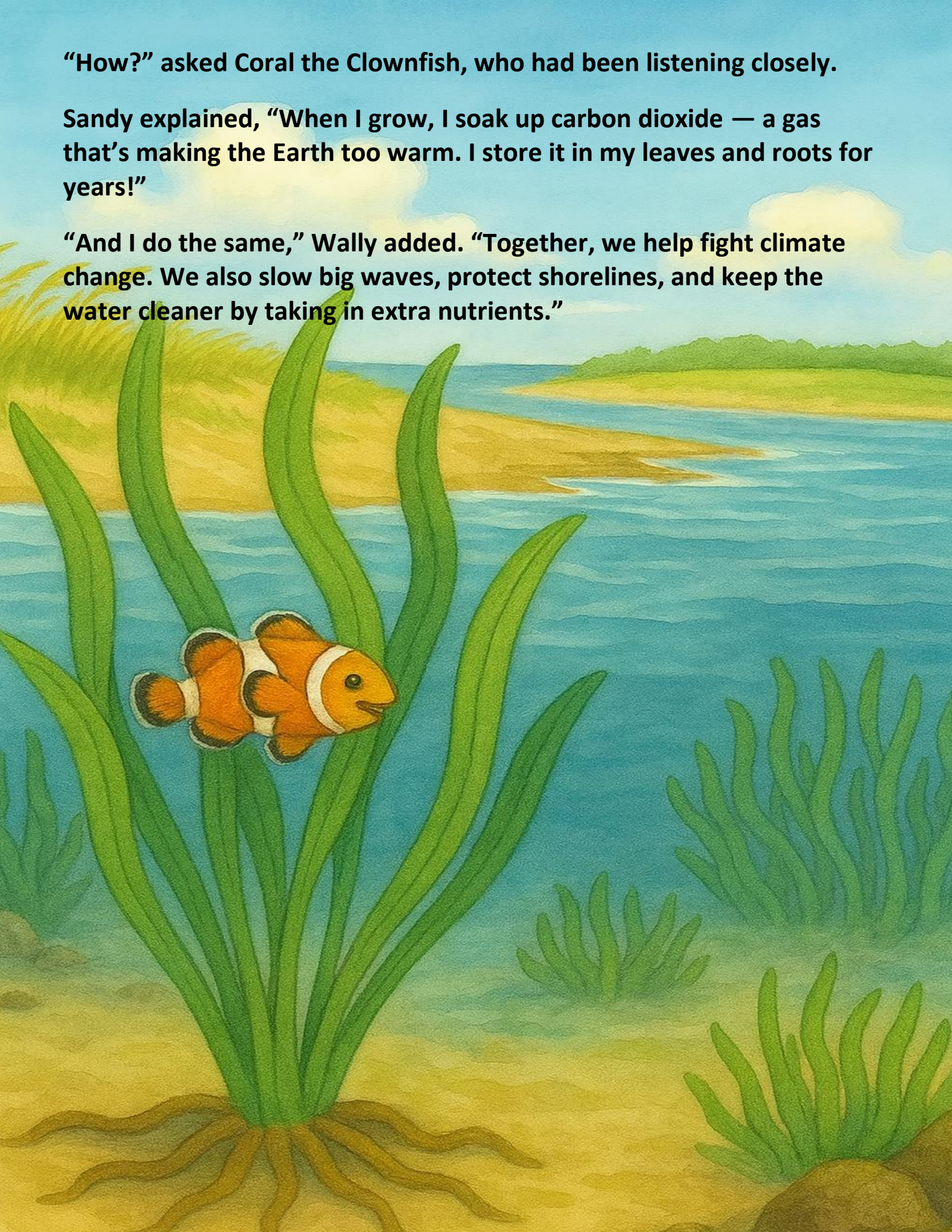


Ollie the Otter floated nearby in Wally's kelp forest. "Your seaweed keeps me safe while I nap so I don't drift away," he said with a grin. "And some animals, like sea urchins, eat you too!"

Sandy beamed. "So even though we're different, we both help sea animals in our own ways!"

Wally nodded. "Yes — you grow in sandy shallows, making a nursery for little creatures. I grow on rocks in deeper water, creating tall forests for big and small animals alike."

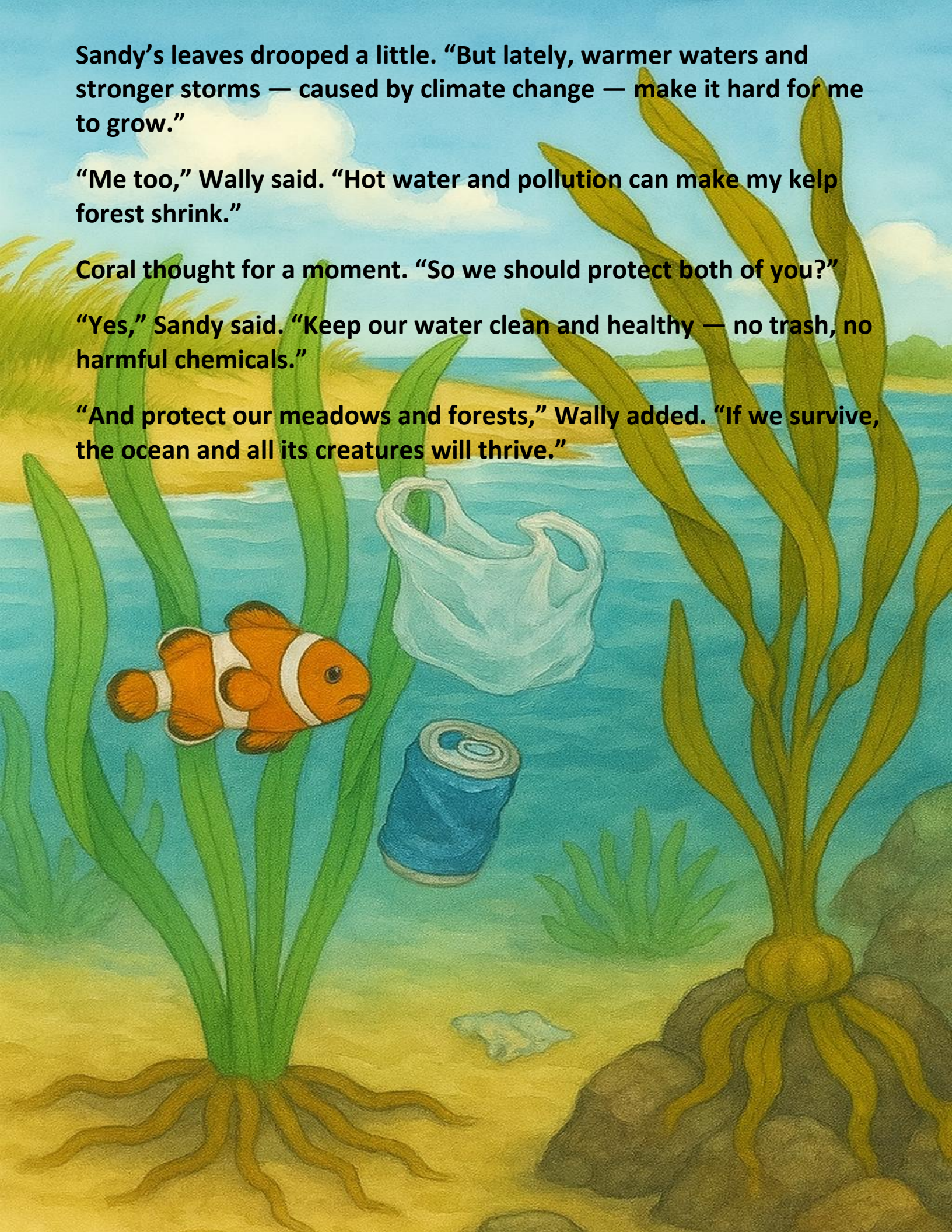
They both swayed proudly. "And we help the planet, too!"



“How?” asked Coral the Clownfish, who had been listening closely.

Sandy explained, “When I grow, I soak up carbon dioxide — a gas that’s making the Earth too warm. I store it in my leaves and roots for years!”

“And I do the same,” Wally added. “Together, we help fight climate change. We also slow big waves, protect shorelines, and keep the water cleaner by taking in extra nutrients.”



Sandy's leaves drooped a little. "But lately, warmer waters and stronger storms — caused by climate change — make it hard for me to grow."

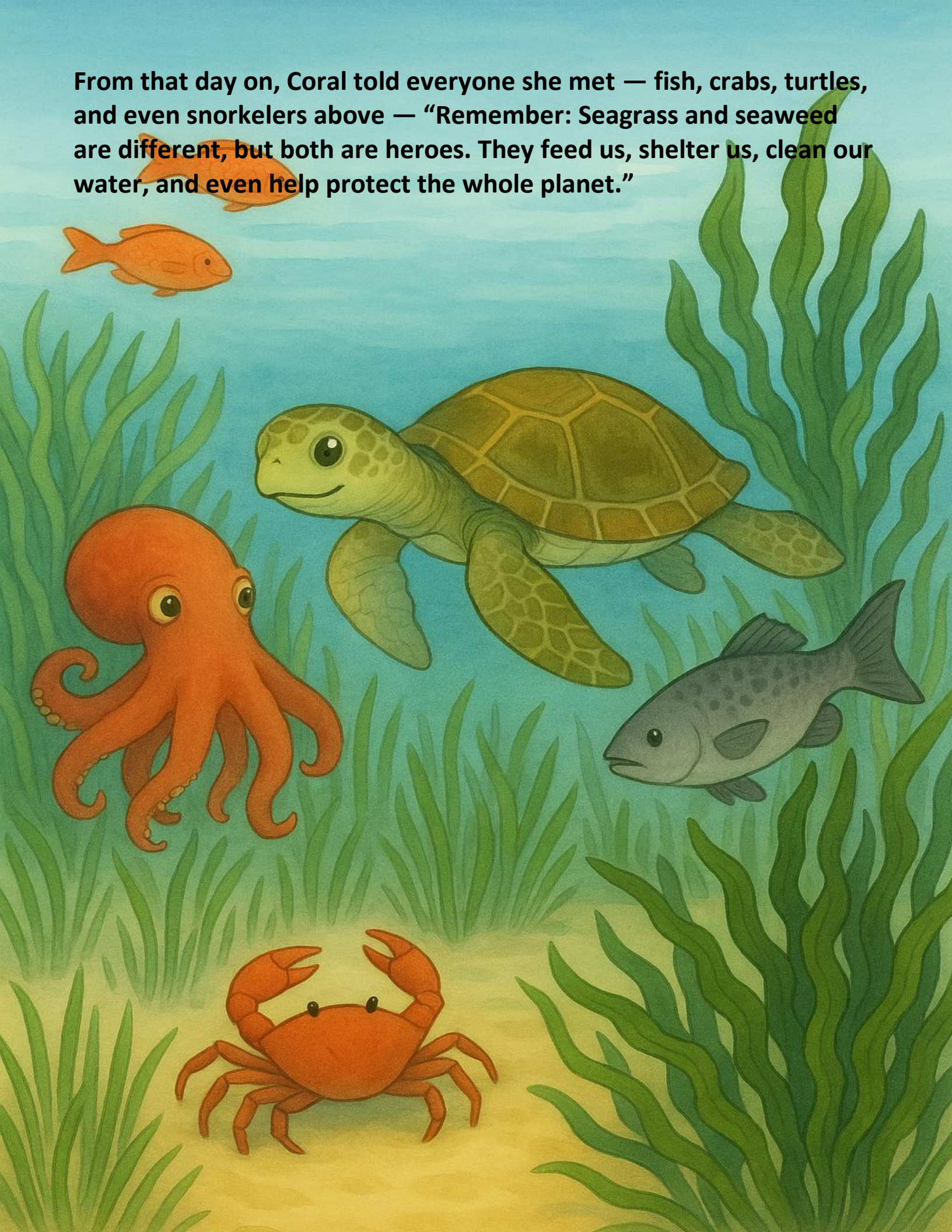
"Me too," Wally said. "Hot water and pollution can make my kelp forest shrink."

Coral thought for a moment. "So we should protect both of you?"

"Yes," Sandy said. "Keep our water clean and healthy — no trash, no harmful chemicals."

"And protect our meadows and forests," Wally added. "If we survive, the ocean and all its creatures will thrive."

From that day on, Coral told everyone she met — fish, crabs, turtles, and even snorkelers above — "Remember: Seagrass and seaweed are different, but both are heroes. They feed us, shelter us, clean our water, and even help protect the whole planet."



Did You Know?

Both seagrass and seaweed are beneficial to sea animals, but in slightly different ways because they are very different organisms.

Seagrass

- **What it is: A flowering plant (not an algae) that grows in shallow, sheltered coastal waters.**
- **Benefits to sea animals:**
  - **Food: Sea turtles, manatees, dugongs, and some fish and invertebrates eat it directly.**
  - **Shelter & Nursery: Provides hiding places for young fish, crabs, shrimp, and other marine life.**
  - **Habitat stability: Its roots help hold sediment in place, keeping the water clearer and protecting coral reefs from silt.**

Seaweed

- **What it is: Marine algae (macroalgae), including kelp, that grows on rocks, reefs, and sometimes floating in the open ocean.**
- **Benefits to sea animals:**
  - **Food: Many marine herbivores — like sea urchins, some fish, snails, and even some seabirds — eat seaweed.**
  - **Shelter & Habitat: Large kelp forests create underwater "forests" where fish, sea otters, and invertebrates can live and hide from predators.**
  - **Nutrient cycling: Seaweeds help recycle nutrients in the water and produce oxygen through photosynthesis.**

Shared Benefits

- **Both produce oxygen.**
- **Both provide habitat complexity, making the ecosystem richer.**
- **Both help improve water quality by absorbing excess nutrients.**

References

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