

The Live Oak and the Wind

by Aurora McCollum



Have you ever wondered why live oaks are shaped just so?

Well, many years ago, on a coastline much like you would see in North Carolina, there was a live oak forest. In this forest, there was a curious little sapling called Quint. Quint was eager to learn and always wanted to hear about the rest of the world from the animals who roamed it.

The **migratory** birds always had the best scoop. One bird told her all about the **monumental** redwoods in California that grow over 200 feet tall with trunks 30 feet wide. Another told Quint of the loblolly pines, which are also tall and straight, but very skinny. Another still told her of the giant cypress trees that grow out of the water.

As she heard these stories, Quint looked down at her own small trunk. She was only a few feet tall, and her trunk was less than a



Live oaks (*Quercus virginianus*) can grow to about 50 ft tall, and their trunks are about 5–6 ft. in diameter. A redwood width (the equivalent of two minivans) is just less than the average height of one live oak! And for height, four live oaks could stack into one coastal redwood tree or two could stack into a loblolly pine. And as for bald cypresses? Well, they're just wet around the roots!

Migratory (adj.) describes an animal that moves from one place to another throughout the year

Monumental (adj.) very great, large, massive

foot wide! Then she looked up at the trees surrounding her and noticed something. All the elder live oaks were short, although still much taller than Quint, and had wide **gnarled** trunks and twisting

Live oaks are gnarled and twisted due to the forces of wind! What they lack in height they make up for in deep **TAPROOTS** and widespread roots. All of this gives them a low center of gravity that helps them remain upright during hurricanes and coastal winds.

branches. She couldn't resist asking her relatives, "Why are we shaped so differently than other trees?"

An older tree responded, "We grow this way because it helps us thrive here on the coast. We can stay strong when things get tough. Most importantly, we can survive the hurricanes." As they said this, the other trees seemed to sway in agreement. "What's a hurri..." Quint started to ask. But a squawking rose-breasted grosbeak had just landed, full of stories about her travels from Maine, so Quint's question went unanswered.

There is nothing gross about male red-breasted grosbeak's breasts: they have colorful and vivid red patches on their neck and breast feathers!

The next morning was particularly **blustery**. Yet, through the wind, Quint overheard two timid gray squirrels, Sci and Russ, who lived on Quint's closest neighbor tree. They were discussing hurricanes! Maybe Quint would finally get some answers.

"—remember that last hurricane??" chittered Russ. "What a gully-washer. The wind was so strong it broke off the branch our nest was on. It tore up all our hard work!"

Sci chattered back, "Oh, I remember! A storm like that really is the scariest thing in the world. And it's so exhausting! It feels unfair that us animals have to run and hide on higher ground to avoid the flooding. But running away is safer for us than the alternative... that's why I'm always on the lookout. Even when we get a warning, there's no telling quite how bad



Gnarled (adj.) full of knots
Taproot (n.) the main root of a tree that grows straight down
Blustery (adj.) very windy and loud

the damage will be... And this time of year, well, there could be one any day!!”

“I think I feel a breeze pickin’ up,” said Russ, on edge. “Do you feel that?”

“Now that you mention it...” replied Sci. “You might be right. Should we pack a go-bag, just in case?”

Both squirrels skittered around, reinforcing their nests, packing their bags, and warily watching the sky.

When Russ stopped for a moment to catch his breath, Quint saw her chance: “Excuse me Mr. Russ, but, during a hurricane, do the trees run away too?”

“Nope,” Russ chirped, “trees can’t run. Y’all just have to hope your roots’ll be able to keep you in place, otherwise you’d be swept away too! That water’s intense, but...well, y’all look pretty strong to me. Right, Sci?”

Sci was already nodding in agreement. Quint took in what they were saying; she had a better idea of what a hurricane was (a big storm with lots of wind and flooding), but wondered what it would be like to actually experience one.

Sci and Russ kept up their chatter, imagining and replaying all the worst-case scenarios for hours and days on end. Quint had to tune it out: she knew enough to know a hurricane was no joke.

Although Sci and Russ were particularly nervous squirrels, they were Quint’s favorite residents. This was in part because they were always happy to answer her questions and tell her all they knew. But their fears seemed

Grey squirrels don’t really pack go-bags... but they do store acorns all around in **CACHES** (hidden storage) so that no one storm could destroy all their stored food.



Cache (n.) a hiding place, especially for preserving food

so far from Quint's peaceful and predictable daily life that she almost couldn't believe hurricanes were real! For young Quint, only two things ever changed. First was the wind, which was

The growth of plants can be affected by mechanical forces, like wind, in a process called thigmomorphogenesis. (Say that word five times fast!) In areas with constant wind, trees end up "shaped" in ways that help them survive — for example live oaks living with coastal winds have a shape that looks like the tree has "bent" with the prevailing winds.

sometimes strong and sometimes calm, but always present. Second were the critters that used the oaks for shelter, scurrying up and down their branches as they made their nests.

Quint's life was pretty steady—the sea breeze, the chattering critters, the older trees around her. But change was afoot for Quint—inch by inch, day by day. She just didn't know it yet.

Months passed. Some days were exhausting, some were **invigorating**, but most days were simply normal. No matter what the previous day brought, Quint got up at sunrise, ready to do it all again. She spent most of her time talking with the other trees, growing leaves and branches, and welcoming the animals who made their homes in her canopy.

As Quint grew, she loved watching her branches take new twists and turns. She felt a thrill from widening her trunk and feeling herself become more solid and grounded with every passing month. Trees like Quint, that live in blustery conditions, are shaped by the force of the wind.

Because of this, there were times that Quint was unhappy. This WIND, she thought. It NEVER stops! She had heard from a hermit thrush that there were places far north and west of their little coastline where the air was still. Quint thought that sounded a LOT more peaceful. Since the wind usually came from the same direction, she could feel her branches taking on the shape of the wind, meaning she was a little lopsided. She sometimes wished for days when she didn't have to flex under the pressure of the wind, when she could grow exactly how she wanted, not having to take into account the force that pushed her around each day.

Invigorating (adj.) having a stimulating or exciting effect, making you feel more alive

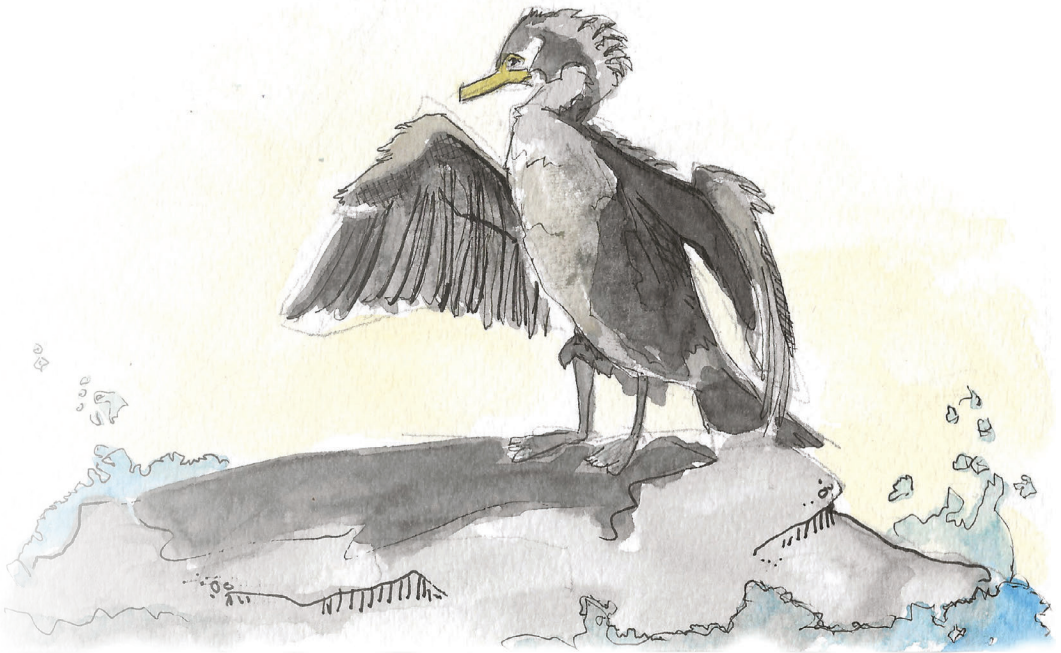
But even in those moments of frustration, in the back of her mind, she thought of the hurricane and wondered. Could her lopsided trunk and twisted branches withstand it? Despite the fearful chatter from Sci and Russ, she felt ready to be tested—ready to face a storm like the older oaks.

Still, many years passed without much **adversity**, and Quint was content.

Then one day, a cormorant suddenly appeared on their shore, clearly exhausted from a **turbulent** flight. He sputtered out one word: “Hurricane!” As that word escaped his beak, Quint’s world exploded with noise. All the birds and squirrels took off as quickly as they could; where they went, the trees were never sure. The oaks, with their deep roots and heavy bodies, couldn’t run away.

Quint was afraid.

She looked to her relatives for comfort, and the older trees reassured her—this isn’t the first storm they had endured, and it certainly wouldn’t be the last. One especially gnarled and ancient



Adversity (n.) a state of continued difficulty
Turbulent (adj.) describing irregular motion