

The background of the cover is a textured, light blue-green wash. In the upper right, two small black birds are flying. The title 'Because of an Acorn' is centered in the upper half. Below the title, a large acorn with a dark brown cap and a yellowish-brown nut is shown in profile, resting on a small mound of green grass. Two large, dark green oak leaves are positioned above the acorn, as if blowing from the wind. The bottom half of the cover is filled with a dense field of tall, thin green grasses.

Because of an
Acorn

by Lola M. Schaefer *and* Adam Schaefer
illustrated by Frann Preston-Gannon

WHITE OAK TREES are a *foundation species* in the forests of the Cumberland Plateau, a large tract of land located west of the Appalachian Mountains in the southern United States. It contains parts of Kentucky, Tennessee, Georgia, and Alabama, and is one of the richest, most biologically diverse areas in the world. The white oak tree offers innumerable kinds of support to the living things in this forest ecosystem.

An **ECOSYSTEM** is a community of all the plants, animals, and natural resources in one area, and the relationships they form. The white oak forest ecosystem of the Cumberland Plateau includes the animals and plants mentioned in this book, and many more. One relationship, found in every ecosystem, is a **FOOD CHAIN** in which animals rely on plants, and/or each other, for food.

OAK SPROUTS and **SAPLINGS** are food for deer and rabbits. Larger trees become homes for many animals and plants, such as squirrels, birds, mosses, and even mistletoe. The white oak tree's roots hold the soil in place, making the ground stable for other plants. These roots also help hold water both underground and in streambeds, preventing soil erosion. Trees along the streams provide shade for fish and other aquatic life. In late autumn, leaves fall to the forest floor. They decompose during the winter and mix with other decayed matter to make fertile soil. More plants and trees grow in this rich compost. But the most important thing the oak gives to the forest is . . .

ACORNS. The acorn is the white oak's fruit (called a nut). In each acorn there is one tree seed, but most of the acorns that an oak tree produces won't become new trees. Instead, many of them will provide the forest animals with food: Birds, squirrels, chipmunks, deer, rabbits, wild turkeys, bears, and many others would starve without the nutritious and long-lasting acorn to see them through the fall and winter of each year. But squirrels bury more acorns for the winter than they need—and the forgotten acorns, tucked away in the soil, may one day become new trees to hold the soil, house the birds, and feed the forest.

THE FOREST NEEDS ALL OF ITS INHABITANTS. Sometimes a large ecosystem can survive the loss of one plant or animal. The Cumberland Plateau forests contain so much life that if one kind of snake died off, most of the plants and animals would continue to live. Any plant or animal, like a hawk, that depended on the snake for one of its important needs might die or move away. And if other plants and animals depended on that hawk, soon the loss of one living thing might become the loss of several others.

But the acorn is different. It lies at the center of a vast web of animal and plant life. Without the white oak, this forest ecosystem would not survive.

AND PEOPLE CANNOT SURVIVE WITHOUT FORESTS. Forests stabilize the land, which holds water we need to live. We drink this water, cook with it, and bathe in it. Tree leaves convert carbon

dioxide to oxygen, the gas we need to breathe. Some human foods and medicines come from plants in forests, and so do resources like wood for furniture and paper.

When people take too many resources from the forest too quickly, the ecosystem does not have time to rebuild. It cannot sustain itself. Some species of plants or animals get sick, die, and finally disappear. The Cumberland Plateau forests have

been impacted by mining, logging, and the building of homes and businesses. The largest threat is from clear-cutting. This is a process in which all trees are cut and removed from a specific area. Recently, people have worked together to slow down these activities and preserve the natural state of this area. Working together, communities have been able to conserve large portions of this land.

What Can You Do To Help?

- ✿ Use fewer napkins and paper towels and more cloth napkins and towels. The less paper products needed, the fewer trees will be cut.
- ✿ Collect and take your cardboard, newspapers, notepapers, and letters to the recycling center. The more we recycle, the less new paper will need to be made.

- ✿ Buy products that are made from recycled paper and cardboard. If recycled products sell well, there will be less need for new.
- ✿ Visit a forest near you. Take a hike. Watch the wildlife. Walk along a stream. Take photographs. When we appreciate the forest, we do more to conserve the land, plants, and animals.

Start today!