



Crooked Creek

Environmental Learning Center

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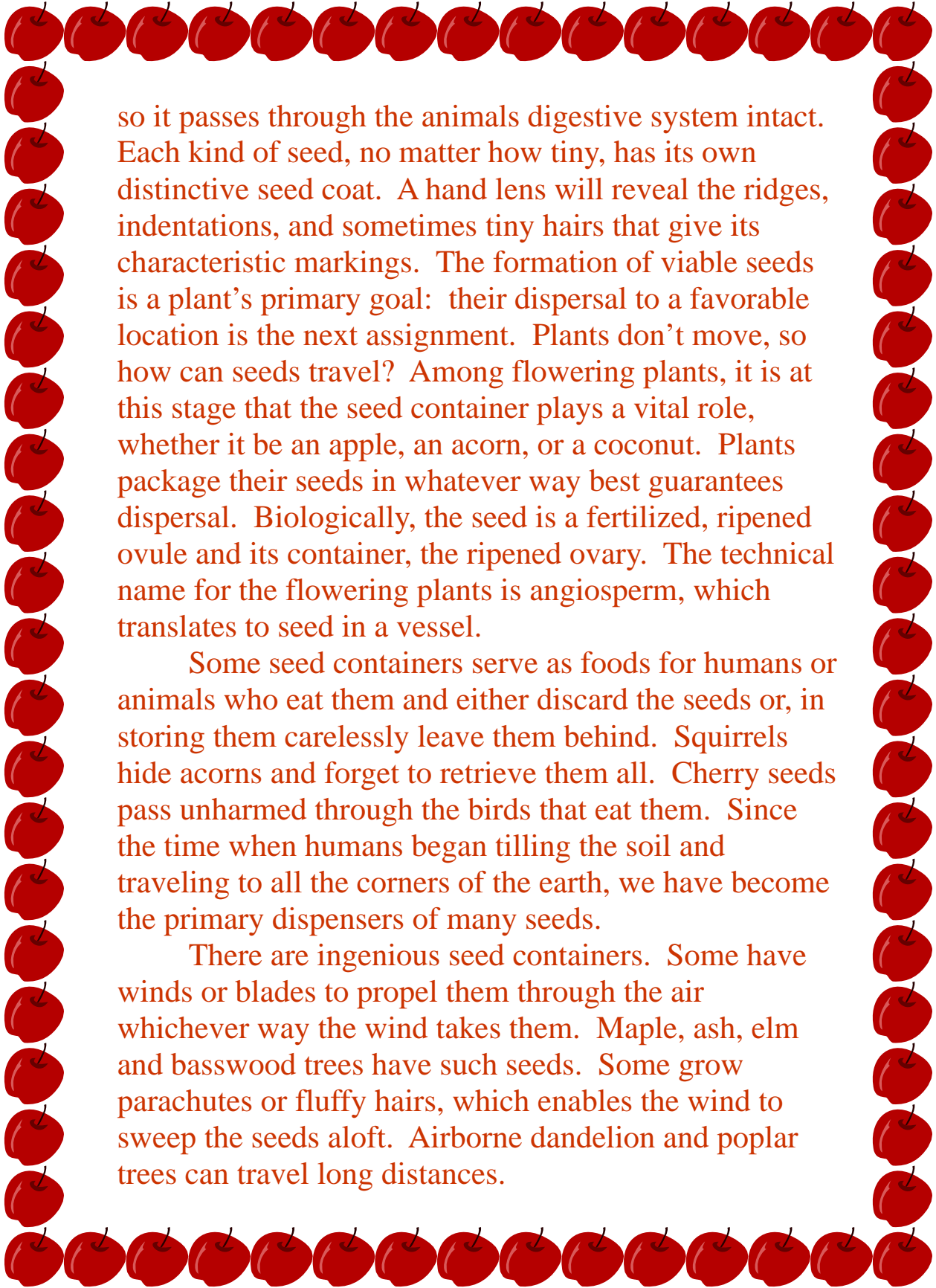
Ingenious Ways to Get Around

Anyone who has blown the fluffy seeds from ripe a dandelion or tossed an apple core onto the ground has unwittingly contributed to one of the most important missions in the plant world—seed dispersal. For without the dispersal of seeds to new locations, young seedlings would be competing with parent plants, often unsuccessfully, for sunlight, soil, water, and nutrients and the plant's success as a species could be endangered.

Seed production and dispersal may not seem especially significant to those of us whose favorite part of the plant's life cycle is the flowering stage, but for the plant it is the ultimate goal. Flowers are just one step in the process: they are the plant's way of conceiving, fertilizing and nurturing the tiny plant embryos as they develop into seeds.

Seeds are well adapted to house the plant's next generation because they provide both nourishment and protection for the infant plant. An inner layer, surrounding the embryo, stores enough food to nourish the plants when it first sprouts until its roots can take nutrients from the soil and its leaves can produce their own food.

The outer seed coat protects the embryo from drying out, freezing and being destroyed by some animals. An apple seed is apt to be eaten, but its seed coat is relatively smooth and hard,



so it passes through the animals digestive system intact. Each kind of seed, no matter how tiny, has its own distinctive seed coat. A hand lens will reveal the ridges, indentations, and sometimes tiny hairs that give its characteristic markings. The formation of viable seeds is a plant's primary goal: their dispersal to a favorable location is the next assignment. Plants don't move, so how can seeds travel? Among flowering plants, it is at this stage that the seed container plays a vital role, whether it be an apple, an acorn, or a coconut. Plants package their seeds in whatever way best guarantees dispersal. Biologically, the seed is a fertilized, ripened ovule and its container, the ripened ovary. The technical name for the flowering plants is angiosperm, which translates to seed in a vessel.

Some seed containers serve as foods for humans or animals who eat them and either discard the seeds or, in storing them carelessly leave them behind. Squirrels hide acorns and forget to retrieve them all. Cherry seeds pass unharmed through the birds that eat them. Since the time when humans began tilling the soil and traveling to all the corners of the earth, we have become the primary dispensers of many seeds.

There are ingenious seed containers. Some have winds or blades to propel them through the air whichever way the wind takes them. Maple, ash, elm and basswood trees have such seeds. Some grow parachutes or fluffy hairs, which enables the wind to sweep the seeds aloft. Airborne dandelion and poplar trees can travel long distances.

Other seeds have sharp hooks or barbs that attach to passersby. Burdocks and beggar ticks are well-known hitch-hikers. There are even seed containers with seams that burst open with such force that the seeds explode from the parent plant. Jewelweed gets its nickname touch-me-not, from the sudden expulsion of seeds that follows touching the ripened pod. A few seed containers are buoyant and carry their seeds on the water to new destinations. Coconuts are known for this. Thus dispersal of seeds is accomplished in a variety of ways, but they all attempt to achieve a common objective—distribution of the ripened seeds far enough away from the parent plant to reduce competition.

(Jenepher Lingelbach: Hands-on Nature)

LOOKING BACK
SUNDAY, AUGUST 20, 2006,
ED AND SUE BRUCE PRESENTED A VERY
INTERESTING PROGRAM ON THE PEOPLE DURING
THE PERIOD OF THE FRENCH AND INDIAN WAR. IF
YOU DID NOT GET TO
ATTEND YOU MISSED AN
EDUCATIONAL AND
FASCINATING
PROGRAM.





Membership Benefits Include:

- * Engraved Leaf on Donation Tree
- * Monthly E-Newsletter
- * Official ELC T-Shirt
- * Satisfaction of improving the quality of life in our community.

All Contributions Are Tax

Armstrong County has no county or state parks. The Crooked Creek Environmental Learning Center is uniquely suited to fulfill the need for a facility and organization to provide environmental and resource conservation education.

Unlike state and county parks, the ELC is not supported by tax dollars and must rely on grants, user fees, donations, and sponsors to sustain operation.

As residents of Armstrong County, it is our duty to protect our resources and promote environmental awareness. Make a donation to the ELC today to ensure the health and happiness of those tomorrow!

**CROOKED CREEK ENVIRONMENTAL
LEARNING CENTER**

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