



DISCOVERING Alabama

Suggested Curriculum Areas

Biology
Social Studies
History

Suggested Grade Levels

5–12

Key Concepts

Habitat
Species Diversity
Ecosystems

Key Skills

Issue Analysis
Problem-Solving

Teacher's Guide

Red-cockaded Woodpecker

Synopsis

This video features the life history and the environmental issues surrounding the red-cockaded woodpecker (*Picoides borealis*), an endangered species that lives in Alabama and other Southeastern states. Protection of endangered species is a current topic of controversy. The two major opponents in this conflict over how to enforce the law are the commercial interests and environmental necessities.

Because perceptions and emotions that give rise to controversy are not always founded on facts, we have an opportunity to give students suitable skills and information so they can base their perceptions on facts. Here, controversy is our learning aid. The environmental controversy surrounding the red-cockaded woodpecker shows how complex such issues can be, and it highlights the environmental significance of protecting species and maintaining biological diversity.



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Robert G. Wehle
Charitable Trust



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Before Viewing

1. Select a controversial issue—local, state, or national. It should be a serious issue that is familiar to your students. Examples range from gun control to the spotted owl, or if you prefer a lighter subject, try a more traditional debate such as Alabama versus Auburn, Ford versus Chevrolet, or even chocolate ice cream versus vanilla. Introduce your chosen controversy with an obviously biased statement. For example, you might write on the blackboard, “Anybody with good sense knows that Alabama football is better than Auburn football.” Then ask each student to indicate his or her reaction to this statement by writing a large number from 1–5 on a sheet of paper (1 for strongly agree, 5 for strongly disagree). Place students in pairs, matching those with differing numbers to the extent possible. Allow five to ten minutes for the paired students to share with each other their differing feelings about the controversy in question.

2. Discuss how people often develop views based on feelings and perceptions rather than on facts and that controversy can arise before facts can be sorted out. Conduct a brainstorming session to list things that influence our feelings and perceptions. Examples include influences of family and friends, cultural traditions, incorrect information, self image, TV, etc.

3. Explain that the subject of endangered species is often controversial. Cite the issue of the spotted owl, for example, and the related conflicts between environmentalists and elements of the timber industry. Give the students the definition of **endangered species**: An endangered species is one whose prospects for survival and reproduction are in immediate jeopardy, and is one which requires deliberate assistance or extinction will probably follow (para-

phrased from the U.S. Endangered Species Act, 1973). Introduce the video by explaining that the red-cockaded woodpecker is an endangered species that has evoked controversy.

While Viewing

Stimulate a bit of friendly competition to see who can glean the most from the video. You might have students a) count the special habits/characteristics of the woodpecker, b) count the reasons for the bird’s decline, and c) note the arguments/positions that apply to each side of the controversy.

Video Mystery Question: What mental capacity seems to set humans apart from animals? (Answer: As far as we know, humans are the only creatures who can consider their past and contemplate their future.)

After Viewing

1. Have the class make a list of all the items and materials at school that come from forest resources. Discuss the term **ecosystem** and how native ecosystems (and native species) have been affected as human society has grown.

2. Review areas presented in the video where timber interests and environmental interests seem to differ. Ask students whether they believe their own role as consumers of wood products might have a bearing on this issue. Have students develop a list of questions or additional information they might pursue to better understand the issue. Brainstorm possible ways to resolve the red-cockaded woodpecker controversy and to help meet society’s demand for wood products while insuring the recovery of this endangered species.

Extensions

1. Invite guest speakers knowledgeable about forestry, wildlife, or the red-cockaded woodpecker issue. Pursue answers to the questions that were developed after viewing the video.

2. Try the old debate strategy: establish teams, pro and con, to research and debate the proposition: Resolved, “In the case of the red-cockaded woodpecker, enforcement of the Endangered Species Act will be harmful to the public good.”

Philosophical Reflections

A number of authors, from conservationists like Aldo Leopold to scientists like Albert Schweitzer, maintain that, even if we cannot discern it, other species have innate value. Can the worth of a living or an inanimate object be inborn? Or does something have value only if human beings assign it value? In view of our imperfect understanding of the world around us, how can we make such assignments?



Nature in Art

Video scenes of both the pileated and the ivory-billed woodpeckers include drawings done in the early 1800s by John James Audubon, whose self-taught knowledge of birds established him as a leading authority (and acclaimed artist) in North America. Guess where the Audubon Society got its name.

Community Connections

1. Identify a local plant or animal species whose status is endangered, threatened, or of special concern. Establish an **adopt-a-species** initiative, whereby students investigate the life history of the declining species, why it has declined, and local views and knowledge about the species. Build an information lab containing as much information and as many resources as students can collect about this species. When sufficient research is completed, students should prepare a public education campaign—news articles, slide show, educational leaflets—for local distribution and presentation.
2. Start a **habitat restoration** project. Invite local leaders from business, government, and citizen groups to work with the class in developing a plan for protecting the adopted species.



Complementary Aids and Activities

Project Learning Tree. Activity Guide K-5, "Web of Life." Available through: Alabama Forestry Association, 555 Alabama St., Montgomery AL 36104.

Project Wild Secondary Activity Guide, "Ethni-Reasoning." Available through: Alabama Department of Conservation and Natural Resources, 64 N. Union St., Montgomery AL 36130.

Nature's Way series, available through: The Center for Environmental Research and Service, Troy State University, Troy AL 36082.

Alabama Endangered Species, poster, available through: Alabama Power Company, 600 N. 18th St., Birmingham AL 35291 or the Alabama Conservancy, 2717 7th Ave. S., Suite 207, Birmingham AL 35233.

Nature Link, Wildlife Education Series, available through: Alabama Wildlife Federation, P.O. Box 1109, Montgomery AL 36102.

Alabama Woodpecker League at 3320 Wellington Road, Montgomery AL 36106. Contact to help protect the woodpeckers of Alabama and their habitats.

Additional References and Resources

The Red-cockaded Woodpecker: Notes on Life History and Management by Robert G. Hopper, Andrew F. Robinson, Jr., and Jerome A. Jackson, U.S. Department of Agriculture, Forest Service, Southwestern Area, 1720 Peachtree Road NW, Atlanta GA 30309.

"The Endangered Species Act and the Private Land Owner," by Wendell Neal, in *Alabama's Treasured Forest* (1993) from Alabama Forestry Commission, 513 Madison Ave., Montgomery AL 36130.

Alabama Forest Resources Center at 660 Adams Ave., Montgomery AL 36130.

Alabama Natural Heritage Program, Alabama Department of Conservation and Natural Resources, 64 N. Union St., Montgomery AL 36130. Can furnish current state lists of threatened and endangered species in Alabama. For federal lists for Alabama, write: U.S. Department of the Interior, Fish and Wildlife Service, Division of Ecological Services, P.O. Drawer 1190, Daphne AL 36526.

Alabama Nongame Wildlife Program, Division of Game and Fish, Alabama Department of Conservation and Natural Resources, 64 N. Union St., Montgomery AL 36130.

The Ecology of Commerce: A Declaration of Susceptibility by Paul Hawken (of Smith and Hawken) (1994).

Parting Thoughts

Alabama's state bird is a woodpecker—the yellow-shafted flicker or "yellowhammer," species name *Colaptes auratus*. Unlike other woodpeckers, the yellowhammer is commonly seen in the fields and meadows where it often feeds on the ground, dining on ants, beetles, and other insects.

Oh yeah, I almost forgot. There is a fair probability that someday you will encounter a well-meaning person who challenges your concern for a lesser species by asking, "What good is it?" A succinct response to this challenge was first expressed years ago by an ardent naturalist who looked his challenger in the face and calmly said, "My dear fellow, what good are you?"



Happy outings,

W. Neal



DISCOVERING

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Activity/Information Sheet

Red-cockaded Woodpecker

Species Description

The red-cockaded woodpecker is slightly larger than a bluebird, about $7\frac{1}{4}$ inches long. The back and top of the head are black, and the cheek is white. Numerous small white bars arranged in horizontal rows across the back give a ladder-backed appearance. The chest is dull white with small spots on the side. Although males and females look almost alike, males have a small red streak above the cheek. This red cockade can be seen only with powerful binoculars in bright sunlight. It is not normally visible. All other small Southeastern woodpeckers have one or more of the following characteristics: conspicuous red on the head, a prominent white patch on the wing, or brown feathers.

The Clan

Among woodpeckers, the red-cockaded has an advanced social system. These birds live in a group called a clan containing from two to nine birds. A clan never has more than one breeding pair. Young birds frequently stay with their parents for several months. The other adults are usually males called helpers.

Some clans have no helpers, but others have as many as three. The helpers are usually the sons of the breeding male and may be from one to three years old. Most young birds hatched in the spring leave the clan throughout the year, but a male sometimes remains to become a helper. The helper assists in incubating eggs, feeding the young, making new cavities, and defending the clan's area from other red-cockaded woodpeckers. A breeding male may live for several years. When he dies, one of his helper sons may inherit the status of breeding male.

The Colony

A clan of nests and roosts in a group of cavity trees is called a colony. The colony may consist of one or two cavity trees (or as many as twelve), but it is inhabited by only one clan. The birds drill cavities in live pines. At any time within a colony, some cavities will be under construction, some will be in use, while some will have been abandoned. In most colonies, all the cavity trees are within a circle about 1,500 feet wide. Occasionally, all the trees are within a 300-foot area, but in other colonies the trees may be one-half mile apart.

Each clan member attempts to claim a cavity for roosting with only one bird in a cavity. Birds without hollows in live trees often roost in scars on pine trees, in crotches between limbs, or in cavities in dead trees. Only the red-cockaded woodpeckers make hollows in live pines, but eleven other birds, five mammals, two reptiles, and bees are known to use their cavities.

Some animals may use the cavity after it is no longer suitable for the red-cockaded woodpecker, while others compete vigorously with the bird for its hollow. Some of their major competitors are the bluebird, red-bellied woodpecker, red-headed woodpecker, pileated woodpecker, and the flying squirrel.

The Territory

All year the clan defends a territory surrounding the colony ranging from less than 100 acres to more than 250 acres. The total area used by a clan can be as large as 1,000 acres. A clan tries to keep other red-cockaded woodpeckers out of its territory, but frequently will trespass on its neighbors' territories. At times fighting erupts with two opposing birds grasping each other's beaks and falling to the ground.

Feeding Behavior

The clan spends much of its time looking for food as it travels about its territory. Most of the searching is concentrated on the trunks and limbs of live pine trees. There the birds scale the bark and dig into dead limbs for spiders, ants, cockroaches, centipedes, and the eggs and larvae of various insects. Repeated feeding visits are sometimes made to lightning-struck pines that are infested with beetles. The birds also spend time in cypress and hardwoods. Near farmland, they will feed on corn earworms. On occasion, the birds will eat such fruits as blueberry, sweetbay, magnolia, wild cherry, poison ivy, and wax myrtle. They drink water from flooded holes in trees and from the ground.

Nesting Behavior

The red-cockaded woodpecker nests between late April and July. Only the breeding male courts and mates with the female. The female usually lays two to four eggs in the breeding male's roost cavity. Clan members take turns incubating the eggs during the day, but the breeding male stays with the eggs at night. The eggs hatch in ten to twelve days. Nestlings are fed by the breeding pair and helpers. Adults bring food to the nest from up to 700 yards away. Young birds leave the nest in about 26 days. Adults continue to feed the young after they leave the nest, but less frequently as summer progresses.