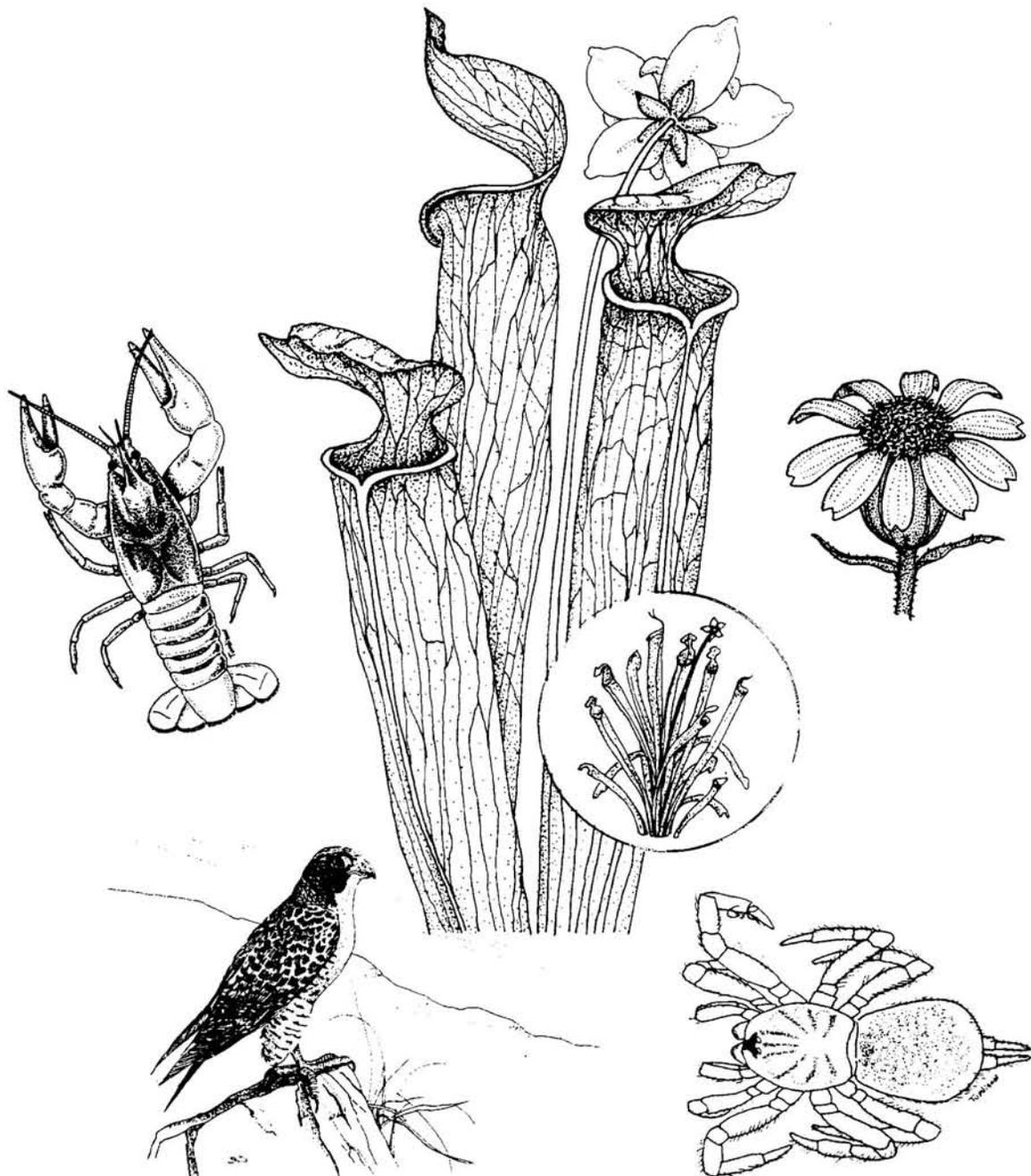


# An Educator's Guide to the Threatened and Endangered Species and Ecosystems of Tennessee





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# Introduction



# Introduction

## Goals

### The goals of this guide for educators and students are to:

- *Provide information and resources necessary to communicate concepts and terminology concerning endangered and threatened species in a fun and inspiring format.*
- *Foster an appreciation for the endangered and threatened species found in Tennessee and the ecosystems that support them.*
- *Develop an understanding of the factors that cause species to decline.*
- *Introduce Federal legislation that serves to protect endangered and threatened species.*
- *Introduce the values of wild resources and the benefits that the natural world provides humans.*
- *Introduce ways every person can help protect and restore endangered and threatened species and their ecosystems.*
- *Increase knowledge of our natural environment that will lead to informed decisions with regard to ecosystems and the plants and animals that depend on them.*

There is an impressive diversity of ecosystems in Tennessee. Stretching between the Great Smoky Mountains and the Mississippi River, bottomland hardwood forests, caves, cedar glades, and a massive network of streams are only a sample of the ecosystems that can be found in the state. This diversity of ecosystems within Tennessee's landscape has made it home to a rich variety of plants and animals, many of which are rare and unique. There are creatures and plants living in Tennessee that are found nowhere else in the world. Changes to the natural world, such as habitat destruction and the invasion of nonnative species, threaten ecosystems and the plants and animals that depend on them. The fate of Tennessee's ecosystems, plants, and wildlife is linked to every resident of the state, yet few are familiar with the natural diversity around them.

As of November 1999, 1,201 plants and animals in the United States were federally listed as endangered or threatened under the Endangered Species Act. As of January 2000, Tennessee had 102 plants and animals federally listed as endangered or threatened, more than any other state without a coastline. Additional species are considered endangered by the state of Tennessee. While these numbers may seem discouraging, it is important to understand that the designation of endangered or threatened to a species means **there is still time to take action to prevent extinction.**

The first step in protecting and restoring endangered and threatened species is to become familiar with the ecosystems, plants, and animals around us. This process can be rewarding and inspiring; so many fascinating creatures and plants share our world! It is important to focus on positive ideas when working with younger students, as they are easily discouraged by perplexing environmental issues and doomsday statistics.

This guide is meant to educate and inspire readers to take pride in, and become excited about, the natural world and its inhabitants so that positive steps can be taken to protect them. It is designed to be a fun and motivating introduction for educators and students to the endangered and threatened species found in Tennessee, the ecosystems that support them, and the many ways we can all make a difference for wild resources in our communities.

# Organization

This guide is divided into three sections.

## Section One: Background Information

This section provides educators with information regarding species status, ecosystems and habitats, the values of wild resources and the benefits they provide humans, legislation designed to protect endangered and threatened species, and ways to make a positive difference for endangered and threatened species and their ecosystems.

## Section Two: Ecosystem Fact Sheets and Species Descriptions

This section begins with a brief description of the six physiographic regions found in Tennessee. Physiographic regions are areas that have patterns of relief features or landforms that differs significantly from that of adjacent regions.

Ecosystem Fact Sheets provide information about the ecosystems in Tennessee that support endangered and threatened species. Each fact sheet describes the ecosystems' unique characteristics, origins, importance, resident species, and ways to help protect and restore the ecosystems. Each Ecosystem Fact Sheet is followed by descriptions of selected threatened and endangered species which depend on that

ecosystem. Each species description describes the species' status, characteristics, habitat, life history, role in its ecosystem, threats, recovery information, and ways to help protect the species and its habitat. A list of all the endangered and threatened species found in Tennessee accompanies the fact sheets.

Species Descriptions of selected extirpated species that no longer exist in Tennessee and extinct species describe species no longer found in Tennessee. Lists of all the extirpated and extinct species once found in Tennessee accompany these descriptions.

Success stories of three ongoing efforts in Tennessee provide insight into the challenging and rewarding process of species recovery.

## Section Three: Educational Activities

This section is comprised of a series of activities designed to help educators communicate information regarding endangered and threatened species in Tennessee to students in a fun and motivating format. The activities are designed to be used with the information and resources provided in this guide. These activities can be used to supplement other existing programs and curricula that teach about endangered and threatened species. Grade level recommendations are assigned to each activity, though teachers should assess each activity to determine which steps are most appropriate to their student's abilities. Activities are correlated to the National Research Council's National Science Education Content Standards.

Enjoy learning about Tennessee's endangered and threatened species and their ecosystems!

