



## **Section Two**

*Ecosystem Fact Sheets  
and Species Descriptions*



# Ecosystem Fact Sheets and Species Descriptions

*Several ecosystems that support endangered and threatened species in Tennessee have been highlighted in this section, including the spring and seep, riverine, bog, cave, cedar glade, barrens, and high-elevation ecosystems.*

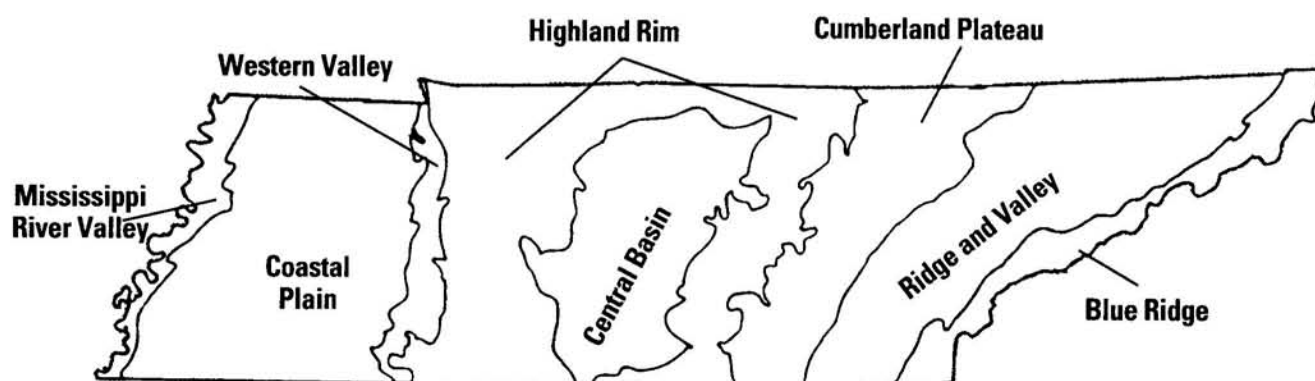
*Following each Ecosystem Fact Sheet are Species Descriptions of certain endangered and threatened species that live in and depend on that ecosystem.*

*Other ecosystems can be found in Tennessee, such as the bottomland hardwood forests, lakes and ponds, upland swamps, and many different forest ecosystems. We encourage you to learn about and explore all of Tennessee's diverse and wonderful ecosystems!*

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# Tennessee's Physiographic Regions



Tennessee owes its diversity of species and ecosystems, in part, to the impressive geological variations and changes in elevation found within its borders. From the Southern Appalachian Mountains in the eastern part of the state to the great flood plains of the Mississippi River in the west, the state can be divided into six distinct physiographic regions. Most of the ecosystems described in this guide can be found in one of these regions, while springs, seeps, and riverine ecosystems are found throughout the state.

The Blue Ridge, in eastern Tennessee, also known as the Unaka Mountains, is part of the ancient Southern Appalachian mountain range. This region covers approximately 2,000 square miles and includes the Great Smoky Mountains National Park and Tennessee's highest peak, Clingman's Dome, which is 6,643 feet above sea level.

The Blue Ridge Region is known for its exceptional diversity of plants and animals due to the tremendous variation in climate, geology, elevation, and solar exposure. There are over 2,000 species of plants in the Great Smoky Mountains National Park alone. The high-elevation and mountain bog ecosystems described in this guide are located in the Blue Ridge Region.

The Ridge and Valley Region can be found just west of the mountains. This region historically contained rich soils and prosperous farms; ridges reach 300 to 800 feet above the surrounding valley floor. This great valley begins in the northeastern corner of the state as a continuation of the Shenandoah Valley and reaches into the southwestern part of the state and into Alabama and Georgia. Covering an area of more than 9,000 square miles, this region is drained by the Tennessee River and its eastern tributaries.

The Cumberland Plateau is known for the difficulties it presented to early settlers. The plateau rises 1,000 feet above the Ridge and Valley Region and is cut in the south by the Sequatchie Valley. The wild areas of this region contain scrub oak forests, and the stream sides are lined with sweet gum, poplar, willow, and sycamore trees. Extensive coal fields in this region have been mined, mostly in the last century, and the limestone of the region is connected to the Mammoth Cave system of Kentucky. Many caves are found in the Cumberland Plateau Region.

The Central Basin and the Highland Rim Regions are uniquely different physiographic regions that make up Middle Tennessee. The Highland Rim is a somewhat arid plain with shallow soils, traversed by ravines and streams. This region is often broken into the Eastern and Western Highland Rims. The Central Basin lies within the Highland Rim. The Central Basin is an elliptical basin

that is, on average, 400 feet lower than the surrounding Highland Rim. It is one of the best agricultural regions of the state. Soils in this region are ideal for the cultivation of the state flower, the iris, giving Nashville its nickname, "Iris City." The limestone bedrock of both the basin and the rim is broken into a network of thousands of caves, sinkholes, and other karst features. These two regions consist of cedar glades, barrens, and many cave ecosystems, all of which are described in this guide.

The final physiographic region of the state is sometimes referred to as the Western Plains. The western valley of the Tennessee River slopes gradually down to what was once the coastal plain of an ancient sea and on to the flood plains and bottomlands of the Mississippi River. This region has extensive quality remnants of bottomland hardwood forests. Many wetlands can be found in these bottomlands. Reelfoot Lake, Tennessee's largest and only natural lake, is located in this region. Formed by an earthquake in the early 1800s, Reelfoot is home to an incredible variety of birds and other wildlife, including bald eagles, thousands of waterfowl, nesting great blue herons, river otters, and beavers.

For a more in-depth look at the physiographic regions of Tennessee, refer to the National Watchable Wildlife Program's *Tennessee's Wildlife Viewing Guide*. This excellent resource can help you and your class locate and explore the wild areas of Tennessee near you!

# Tennessee's Endangered and Threatened Species List

Taxa	Common Name	Species	Status in Tennessee
<i>Arachnid</i>	Spruce-fir moss spider	<i>Microhexura montivaga</i>	E
<i>Bird</i>	American peregrine falcon	<i>Falco peregrinus anatum</i>	Delisted August 1999
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T
	Kirtlands warbler	<i>Dendroica kirtlandii</i>	E (migrant)**
	Least tern	<i>Sterna antillarum</i>	E
	Peregrine falcon	<i>Falco peregrinus</i>	Delisted August 1999
<i>Crustacean</i>	Nashville crayfish	<i>Orconectes shoupi</i>	E
<i>Fish</i>	Amber darter	<i>Percina antesella</i>	E
	Blackside dace	<i>Phoxinus cumberlandensis</i>	T
	Bluemask (=Jewel) darter	<i>Etheostoma sp.</i>	E
	Blue shiner	<i>Cyprinella caerulea</i>	T
	Boulder darter	<i>Etheostoma wapiti</i>	E
	Conasauga logperch	<i>Percina jenkinsi</i>	E
	Duskytail darter	<i>Etheostoma percnurum</i>	E
	Pallid sturgeon	<i>Scaphirhynchus albus</i>	E
	Pygmy madtom	<i>Noturus stanauli</i>	E
	Slackwater darter	<i>Etheostoma boschungii</i>	T
	Slender chub	<i>Erimystax cahni</i>	T
	Spotfin chub	<i>Cyprinella monacha</i>	T
	Smoky madtom	<i>Noturus baileyi</i>	E
	Snail darter	<i>Percina tanasi</i>	T
	Yellowfin madtom	<i>Noturus flavipinnis</i>	T
<i>Mammal</i>	Carolina northern flying squirrel	<i>Glaucomys sabrinus coloratus</i>	E
	Indiana bat	<i>Myotis sodalis</i>	E
	Gray bat	<i>Myotis grisescens</i>	E
<i>Mussel</i>	Alabama lampmussel	<i>Lampsilis virescens</i>	E
	Alabama moccasinshell	<i>Medionidus acutissimus</i>	T
	Appalachian elktoe	<i>Alasmidonta raveneliana</i>	E
	Appalachian monkeyface pearlymussel	<i>Quadrula sparsa</i>	E
	Birdwing pearly mussel	<i>Conradilla caelata</i>	E
	Coosa moccasinshell	<i>Medionidus parvulus</i>	E
	Cracking pearlymussel	<i>Hemistena lata</i>	E
	Cumberland pigtoe mussel	<i>Pleurobema gibberum</i>	E
	Cumberland bean pearlymussel	<i>Villosa trabalis</i>	E
	Cumberland elktoe	<i>Alasmidonta atropurpurea</i>	E
	Cumberland monkeyface pearlymussel	<i>Quadrula intermedia</i>	E
	Cumberlandian combshell	<i>Epioblasma brevidens</i>	E
	Dromedary pearlymussel	<i>Dromus dromas</i>	E
	Fanshell	<i>Cyprogenia stegaria</i>	E
	Fine-lined pocketbook	<i>Lampsilis altalis</i>	T
	Fine-rayed pigtoe	<i>Fusconaia cuneolus</i>	E

E = Endangered  
T = Threatened  
\* = Listed because of similarity of appearance  
\*\* = Migrates through Tennessee



Taxa	Common Name	Species	Status in Tennessee
	Little-wing pearlymussel	<i>Pegias fabula</i>	E
	Orange-footed pearlymussel	<i>Plethobasus cooperianus</i>	E
	Ovate clubshell	<i>Pleurobema perovatum</i>	E
	Oyster mussel	<i>Epioblasma capsaeformis</i>	E
	Pale lilliput pearlymussel	<i>Toxolasma cylindrellus</i>	E
	Pink mucket pearlymussel	<i>Lampsilis abrupta</i> (= <i>orbiculata</i> )	E
	Purple bean	<i>Villosa perpurpurea</i>	E
	Purple cat's paw pearlymussel	<i>Epioblasma obliquata obliquata</i>	E
	Ring pink mussel	<i>Obovaria retusa</i>	E
	Rough pigtoe	<i>Pleurobema plenum</i>	E
	Rough rabbitsfoot	<i>Quadrula cylindrica strigillata</i>	E
	Shiny pigtoe	<i>Fusconaia edgariana</i>	E
	Southern clubshell	<i>Pleurobema decisum</i>	E
	Southern pigtoe	<i>Pleurobema georgianum</i>	E
	Tan riffleshell	<i>Epioblasma walkeri</i>	E
	Triangular kidneyshell	<i>Ptychobranhus greeni</i>	E
	Upland combshell	<i>Epioblasma metastriata</i>	E
	White wartyback pearlymussel	<i>Plethobasus cicatricosus</i>	E
Plant	American hart's-tongue fern	<i>Phyllitis scolopendrium</i> var. <i>americana</i>	T
	Blue Ridge goldenrod	<i>Solidago spithamea</i>	T
	Braun's rock cress	<i>Arabis perstellata</i>	E
	Cumberland rosemary	<i>Conradina verticillata</i>	T
	Cumberland sandwort	<i>Arenaria cumberlandensis</i>	E
	Eggert's sunflower	<i>Helianthus eggertii</i>	T
	Large-flowered skullcap	<i>Scutellaria montana</i>	E
	Leafy prairie-clover	<i>Dalea foliosa</i>	E
	Price's potato-bean	<i>Apios priceana</i>	T
	Pyne's ground plum	<i>Astragalus bibullatus</i>	E
	Roan mountain bluet	<i>Hedyotis purpurea</i> var. <i>montana</i>	E
	Rock gnome lichen	<i>Gymnoderma lineare</i>	E
	Ruth's golden aster	<i>Pityopsis ruthii</i>	E
	Small whorled pogonia	<i>Isotria medeoloides</i>	T
	Spreading avens	<i>Geum radiatum</i>	E
	Spring Creek bladder pod	<i>Lesquerella perforata</i>	E
	Tennessee purple coneflower	<i>Echinacea tennesseensis</i>	E
	Tennessee yellow-eyed grass	<i>Xyris tennesseensis</i>	E
	Virginia spiraea	<i>Spiraea virginiana</i>	T
Snail	Anthony's riversnail	<i>Athearnia anthonyi</i>	E
	Painted snake coiled forest snail	<i>Anguispira picta</i>	T
	Royal snail	<i>Pyrgulopsis ogmorhaphis</i>	E
Reptile	Bog turtle	<i>Clemmys muhlenbergii</i>	T (S/A)*

(This list is correct as of August 2000)