

Tennessee's Extirpated Species

The following endangered and threatened species are believed to be extirpated from the state of Tennessee. Following this list are species descriptions of five extirpated species—the green pitcher plant, the eastern cougar, the red wolf, the American chaffseed, and the red-cockaded woodpecker.

Birds:

Bachman's warbler
Eskimo curlew
Ivory-billed woodpecker
Red-cockaded woodpecker

Fishes:

Palezone shiner

Insects:

American burying beetle

Mammals:

Eastern cougar
Florida panther
Gray wolf
Red wolf

Mussels:

Clubshell
Green-blossom pearlymussel
Southern acornshell
Turgid-blossom pearlymussel
Tubercled-blossom pearlymussel
Winged mapleleaf mussel
Yellow-blossom pearlymussel

Plants:

American chaffseed
Green pitcher plant
Running buffalo clover

Vermivora bachmanii

Numenius borealis
Campephilus principalis
Picoides borealis

Notropis albizonatus

Nicrophorus americanus

Felis concolor couguar
Felis concolor coryi
Canis lupus
Canis rufus

Pluerobema clava
Epioblasma torulosa gubernaculum
Epioblasma othcaloogensis
Epioblasma turgidula
Epioblasma torulosa torulosa
Quadrula fragosa
Epioblasma florentina florentina

Schwalbea americana
Sarracenia oreophila
Trifolium stoloniferum



American Chaffseed

Red-cockaded Woodpecker

(*Picoides borealis*)

You Can Help!

Share what you have learned about the red-cockaded woodpecker with your friends. Support conservation efforts for other endangered and threatened species in your State.



Status

The red-cockaded woodpecker was listed as endangered on October 13, 1970. It is believed to no longer exist in Tennessee. The last red-cockaded woodpecker was seen on the Cherokee National Forest in 1994.

Description

About the size of a cardinal, the red-cockaded woodpecker is approximately 7 inches long, with a wingspan of about 15 inches. Its back is barred with black and white horizontal stripes. Its most distinguishing feature is a black cap that extends down the neck and encircles large white cheek patches. Rarely visible, except perhaps during the breeding season and when defending its territory, the male has a small red streak on each side of its black cap, called a "cockade," hence its name.

Habitat

The red-cockaded woodpecker makes its home in mature pine forests; more specifically longleaf pines averaging 80 to 120 years of age and loblolly pines averaging 70 to 100 years of age. This is the only woodpecker species that makes its cavity in living pine trees.

Life History

Red-cockaded woodpeckers are cooperative breeders, which means some of the young birds stay with the parents, forming groups of usually four to five birds. All members of the group help raise the next nest of chicks and work on new cavities. Red-cockaded woodpeckers have the same mate for several years. They nest from April through June. The breeding female lays three to four eggs in the breeding male's roost cavity. The eggs are incubated for 10 to 12 days. Once hatched, the nestlings remain in the nest cavity for about 26 days. All the group members help incubate the eggs and

feed the chicks. They feed mainly on beetles, ants, roaches, caterpillars, wood-boring insects, and spiders. They will occasionally eat fruits and berries.

Role in the Ecosystem

The red-cockaded woodpecker plays a vital role in the intricate web of life in pine forests. By making their cavities in live pine trees, they create long-lasting shelter for numerous other species. A number of other birds and small mammals use the nest cavities made by the red-cockaded woodpecker, such as chickadees, bluebirds, titmice, and other woodpeckers. Sometime other birds enlarge the cavities and make them large enough for screech owls, wood ducks, and American kestrels. Flying squirrels, several species of reptiles and amphibians, and insects also use the red-cockaded woodpecker cavities.

Threats

At one time 250,000 family groups of red-cockaded woodpeckers lived on over 90 million acres of pine forests from New Jersey to Texas and inland to Tennessee and Kentucky. Today, only 4,700 family groups survive on less than 1 million acres of pine forests. The greatest threat to this species is loss of habitat due to development, agriculture, and some forestry practices.

Recovery

The U.S. Fish and Wildlife Service is working with many partners, including other Federal agencies (the U.S. Forest Service and Department of Defense military bases), State agencies, and private companies that own large areas of pine forests, to use special management guidelines for the woodpecker. There are also efforts to restore pine forests. Some populations on national forests are now stable, thanks to the special management guidelines and the restoration of their pine forests.

American Chaffseed

(*Schwalbea americana*)

You Can Help!

Tell a friend about American chaffseed. Learn more about fire and its role in ecosystem management. Support conservation in your community and State.



Status

The American chaffseed was listed as an endangered species on September 29, 1972. Today populations exist in New Jersey, North Carolina, South Carolina, Georgia, and Florida. The species was last observed in Coffee County, Tennessee, in 1879.

Description

The American chaffseed varies in height from 12 to 24 inches. The leaves are lance-shaped. The flowers are tube-shaped, purplish, and grow on the upper portion of the stem.

Habitat

The chaffseed grows in sandy, acidic, seasonally moist soils in open grassy areas and partially open grassy forests. Historically, fire maintained the open grassy areas. It occurred in the barrens ecosystem in Tennessee.

Life History

The American chaffseed flowers from April through June. The flowers are pollinated by bumblebees, and the seeds are mature by early summer.

Role in the Ecosystem

It was part of the unique biodiversity of the barrens ecosystem. Since this species has been gone from Tennessee for so long, we may never know its complete role in the ecosystem or the effect its disappearance has had on the ecosystem and the species that live there. It is one strand in the barrens food web that has disappeared.

Threats

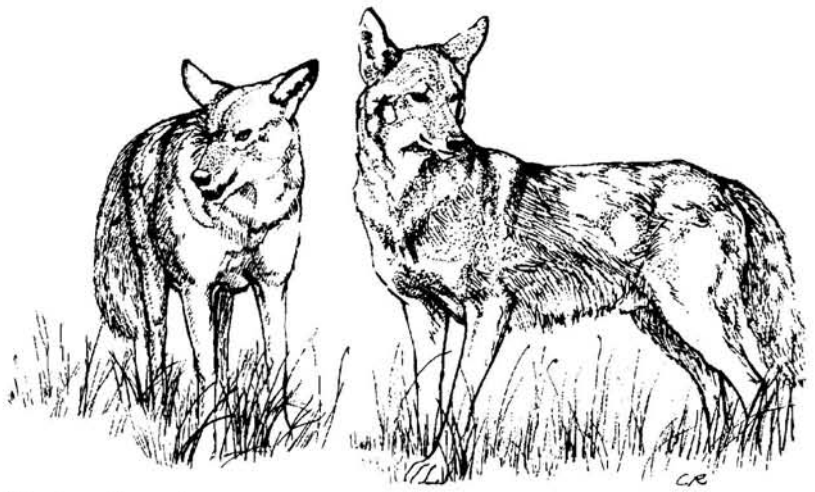
The primary threat to this species is lack of fire. Controlled fire by trained professionals is important to keep the habitat open. Without fire, shrubs and trees invade the grassland habitat that the American chaffseed depends on. Other threats are development and some farming and forestry practices.

Recovery

The main recovery goals for this species are habitat protection and management, reintroduction of the plant back into portions of its former habitat, and research to better understand the species.

Red Wolf

(*Canis rufus*)



Status

The red wolf was listed as endangered on March 11, 1967. One wild population of red wolves is located in eastern North Carolina, another is located on two islands off the Florida coast (St. Vincent Island and Cape St. George Island), and another is located on Bull's Island, off the South Carolina coast.

Description

The red wolf is in the same family as the gray wolf (*Canis lupus*). Red wolves are smaller than gray wolves but larger than coyotes. They average 24 to 30 inches in height at the shoulder and weigh 42 to 84 pounds. Females are usually slightly smaller than the males. Red wolves are mostly brown or buff in color, with some black and reddish hairs mixed in. Often their coats have rich chestnut or reddish tones on the head, ears, and backs of their legs. The head is broader than a coyote's but narrower than a gray wolf's. The red wolf's most distinguishing characteristics are the long ears and the long slim legs.

Habitat

The red wolf originally roamed as a top predator throughout the Eastern United States from Florida to central Texas and as far north as Pennsylvania. It lived in prairies, in forests and brush, on the coastal plains, and in swamps.

Life History

Red wolf packs are usually smaller than gray wolf packs. The pack is a family group consisting of the breeding pair, the young of the current year, and

some offspring of previous years.

Red wolves mate in January or February, and four or five pups are born in April and May. The adult builds a den in a sheltered area like a hollow log, a bank, or ditch. Like gray wolves, red wolves maintain a strict hierarchy of dominant and subordinate animals within the pack. This enables the pack to function as a unit. Red wolves hunt individually, in pairs, and possibly in packs. In northeastern North Carolina, most of their diet consists of white-tailed deer, raccoons, rabbits, and rodents.

Role in the Ecosystem

Predators play a positive role in maintaining healthy ecosystems. They are a necessary part of the food chain. They help to keep the prey populations, such as deer and raccoon, under control. For example, by helping to keep the deer populations under control, wolves also help keep the vegetation healthy by preventing overgrazing and overbrowsing. As a result, there is enough vegetation for deer and other animals to survive the winter. In addition, wolf kills become food for numerous other animals, such as crows, vultures, skunks, foxes, and weasels. The insects that infest the rotting carcass attract insect-eating birds.

Threats

Red wolves were eliminated from most of their range by the 1920s because of senseless killings, large-scale predator control programs, and destruction of their habitat. Many people believed the wolves were a threat to their families and livestock, such as cattle and sheep. By 1970, fewer than 100 red wolves remained in a small area of coastal Louisiana and Texas.

Recovery

To prevent the species from becoming extinct, in 1973 the U.S. Fish and Wildlife Service began capturing the remaining red wolves to establish a captive-breeding program. Biologists used strict standards to review each animal caught and found that only 14 animals of the 400 that were captured were truly red wolves. From this small group, they began a captive-breeding program. Today, the reintroduction of red wolves in eastern North Carolina has been successful. Many challenges still remain for the recovery of this species—persecution by people, lack of large areas of open land, and interbreeding with the coyote on the edge of their range. The reintroduction of red wolves in the Great Smoky Mountains National Park was not successful because the wolves failed to establish home ranges in the park. Biologists believe the wolves roamed outside the park because there was not enough prey in the steep heavily forested slopes. The wolves consistently wandered into agricultural fields and forest edges in the lower elevations where prey was abundant. In addition, the death rate of the pups (from disease, parasites, and malnutrition) was extremely high.

You Can Help!

Tell a friend about the red wolf and the important role predators play in our ecosystems. Support captive breeding in places like zoos, and support their reintroduction into the wild. Support local, State, and national wildlife conservation laws.

Green Pitcher Plant

(*Sarracenia oreophila*)

You Can Help!

Tell a friend about the green pitcher plant. Use caution when purchasing carnivorous plants; they may be endangered! Contact your local conservation agency if you suspect endangered plants are being sold. Learn more about fire and its role in ecosystem management. Support conservation in your community and state!

Status

The green pitcher plant was listed as endangered on April 7, 1980. This species is believed to be extirpated from the state of Tennessee.

Description

The green pitcher plant is a carnivorous plant with tall, hollow, trumpet-shaped leaves. These yellowish-green pitchers have purple veins and purple blotches around the base. Each leaf is partially capped with a pointed hood. The leaves are filled with sticky liquid. Yellow flowers bloom at the end of long, straight stems that are 18 to 28 inches long.

Habitat

The green pitcher plant is found in mountain bogs, seepy forest floors, and, occasionally, along stream banks. Periodic fires are believed to maintain the plant's habitat by preventing the spread of woody plants into the boggy areas. Stream-bank populations are maintained by gentle flooding. Presently there are 35 populations of the green pitcher plant in Alabama, Georgia, and North Carolina. Populations range in size from one to a few hundred individuals, although most have fewer than 50 plants. Green pitcher plants once occurred in the Cumberland Plateau Region of Tennessee.

Life History

Green pitcher plants flower from late April to late May. The flowers are pollinated by bumblebees, and seeds are released in mid- to late September. Seedlings require open, moist soil with plenty of light.

Role in the Ecosystem

As mentioned earlier, green pitcher plants are carnivorous. The acidic soils of their boggy homes do not provide the nutrients the plants need to survive. They have evolved to obtain energy from insects instead. Their tubelike leaves serve as insect traps. Insects are attracted

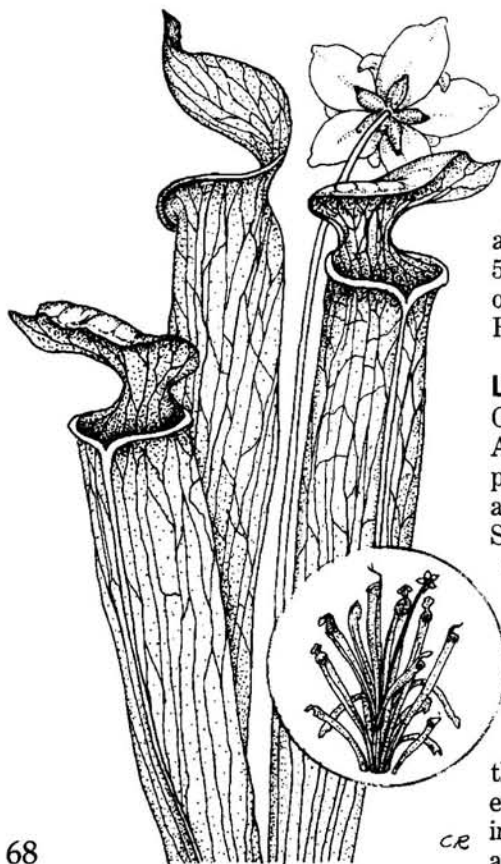
to the sticky nectar that is inside the pitchers. They crawl inside the tubes, only to become stuck and then drown. The plants then absorb nutrients from the insects as they decay. However, green pitcher plants also provide food for insects. At least five species of insects feed on their leaves. There is one species of moth that feeds on nothing else!

Threats

The green pitcher plant is often collected and sold. This practice has a heavy impact on the plant because of its limited range. In some areas collection has caused the species to completely disappear. Increased development, along with the suppression of habitat-maintaining fires, has further threatened this species.

Recovery

The main recovery goal for the green pitcher plant is to protect and manage existing populations. The search for undiscovered populations continues, and efforts are underway to develop methods to reintroduce the species into areas it once occupied.



Eastern Cougar

(*Felis concolor cougar*)

You Can Help!

Tell a friend about the eastern cougar. Learn more about predator/prey relationships and the important roles predators play in our ecosystems. Support conservation in your community and state!

Status

The eastern cougar was listed as endangered on June 4, 1973. This species is believed to be extirpated from the state of Tennessee.

Description

The eastern cougar is a large wildcat with a long tail. Its body and legs are a tawny reddish-yellow color, and its belly is pale reddish-white. The cat's ears are blackish with white on the inside. The cougar's close relative, the endangered Florida panther, *Felis concolor coryi*, has a pale brown or rusty back and a dull white belly.

Habitat

Eastern cougars need a large wilderness area with an adequate food supply. Little is known about this mysterious cat's needs, but male cats of closely related species in the Western United States are known to have territories of 25 or more square miles. Females require 5 to 20 square miles of wilderness. Historical records indicate that the eastern cougar once occurred from Eastern Canada southward into Tennessee and South Carolina, where its range merged with the endangered Florida panther. The Florida panther ranged southward from the southern portion of South Carolina to Florida. The remaining population of this species is very small; exact numbers are not known.

Life History

Female cougars begin breeding at 2 years of age and usually have two or three spotted kittens weighing

8 to 16 ounces (about as much as a can of soda pop). The kittens remain with the mother for up to 2 years. Females generally have one litter every 2 to 3 years.

Role in the Ecosystem

Cougars feed on deer, small mammals, wild turkeys, and, occasionally, domestic livestock. Populations of some creatures once preyed upon by the eastern cougar, such as deer, may become too large without predators like the cougar to maintain healthy populations. Large prey populations become unhealthy because there are more animals than an ecosystem can support. As a result, animals are at greater risk of disease and starvation.

Threats

The earliest European settlers in North America feared cougars. They were considered a threat to livestock and a possible threat to human safety. The cougars were hunted and trapped relentlessly until they were nearly eliminated from their range. Also, widespread deforestation caused much loss of habitat for the cougar and its prey species throughout the Eastern United States.

Recovery

Today the cougar is known to be an important, irreplaceable part of our ecosystems. Various surveys and projects have been undertaken in the past to locate populations of eastern cougars. The U.S. Fish and Wildlife Service and the U.S. Forest Service completed a 5-year survey for the cougar in the Southern Appalachians. No concrete evidence was found to indicate that a population exists in this area. It is hoped that the eastern cougar still survives in the remaining wilderness of the Eastern United States. Efforts continue to protect known populations of the eastern cougar's relative—the Florida panther—which still survives in southern Florida.

