

Northern Bobwhite

Colinus virginianus



Photo by Joanna Ennis © Tall Timbers



Tall Timbers' mission is to foster exemplary land stewardship through research, conservation, and education.

Bachman's Sparrow

Aimophila aestivalis



Photo by Ross McGregor



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Red-headed Woodpecker

Melanerpes erythrocephalus



Photo by Doug Beach ©



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Red-cockaded Woodpecker

Picoides borealis



Photo by Pierson Hill ©



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Northern Bobwhite

Hunting bobwhite quail became very popular in the Red Hills region in the late 1800s. When quail populations began to decline into the 1920s, research by noted naturalist Herbert Stoddard revealed the decline was primarily due to efforts to eliminate the use of fire for forest and agricultural management. It turned out that frequent fire was a critical part of creating the habitat quail need.

Bobwhite quail forage on the ground for a wide variety of insects, grass seeds, and plants. Their preferred habitat includes ground cover with an even mix of grasses, leafy non-woody plants, and woody plants, with some area of bare ground to help them locate their food.

Quail hunting continues to be a popular activity in the Red Hills and the hunting community has lead the way to help research, manage and protect land for bobwhite quail and the many other local species who share very similar habitat needs.

KINGDOM Animalia	DIET Omnivore
PHYLUM Chordata	SIZE (L) 25 cm
CLASS Aves	STATUS No state or federal listing
ORDER Galliformes	
FAMILY Odontophoridae	
GENUS Colinus	

Bachman's Sparrow

The Bachman's sparrow is one of the most fire-dependent birds in North America. In the Red Hills region, preferred habitat conditions are available for a short window of time that begins two months after a prescribed fire and persists for another 14-16 months. Singing males may defend territories in areas that haven't been burned within the past 18 months, but ground cover conditions are generally too thick at that point for nesting.

Females construct a domed grass nest on the ground in a shallow depression they scrape out. They eat insects, such as grasshoppers and caterpillars, and seeds from the abundant grasses in their preferred open pine forest habitat.

The significance loss of open longleaf pine forests to development and the exclusion of fire have reduced the Bachman's sparrow population. However, efforts to expand the use of prescribed fire and replant longleaf pine forests benefit this unique singing sparrow.

KINGDOM Animalia	DIET Omnivore
PHYLUM Chordata	SIZE (L) 25 cm
CLASS Aves	STATUS No state or federal listing, but rare
ORDER Passeriformes	
FAMILY Passerellidae	
GENUS Aimophila	

Red-headed Woodpecker

The red-headed woodpecker is very recognizable with its bright red head and bold black and white body pattern. Its preferred habitat is lowland forests with dead trees for nesting and dead limbs for roosting and foraging from. Red-headed woodpeckers are very good hunters, collecting a significant portion of their diet by launching from branches to catch flying insects. They also eat fruit, acorns, and other seeds.

Red-headed woodpecker's stronger association with lowland forests means they are less dependent on the frequent prescribed fires necessary to maintain upland pine forests. When utilizing open pine forests they tend to prefer a thicker woody and herbaceous ground cover with an open midstory for insect hunting under the tree canopy. They can also be found using areas such as parks, gardens, and wooded urban areas.

Keeping standing dead trees in safe areas away from buildings and roads is an important part of maintaining habitat for this species.

KINGDOM Animalia	DIET Omnivore
PHYLUM Chordata	SIZE (L) 19-23 cm
CLASS Aves	STATUS No state or federal listing
ORDER Piciformes	
FAMILY Picidae	
GENUS Melanerpes	

Red-cockaded Woodpecker

Red-cockaded woodpeckers are an icon of the mature pine forests that make the Red Hills region famous, and the region supports the largest population of this threatened woodpecker found on private lands. These are the only woodpecker in North America to excavate their living quarters exclusively in mature, living pines. They select trees that are at least 80-100 years old and the process of chiseling out a new cavity can take months or years. Given the lengthy process, young birds depended on the cavities provided by their parents for shelter from predators and the weather. Installation of artificial nest cavities has been an important management tool in helping to increase their populations.

Red-cockaded woodpeckers eat spiders, ants, cockroaches, centipedes, and larval insects, in addition to a variety of fruit from woody trees and shrubs. They depend on regular prescribed fire to maintain pine forests with open to moderately thick groundcover including woody plants that fires keep below the level of the nest cavity.

KINGDOM Animalia	DIET Omnivore
PHYLUM Chordata	SIZE (L) 20-23 cm
CLASS Aves	STATUS Federally Listed Endangered Species
ORDER Piciformes	
FAMILY Picidae	
GENUS Picoides	

Sherman's Fox Squirrel

Sciurus niger shermani



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Florida Black Bear

Ursus americanus floridanus



Photo courtesy Florida Fish and Wildlife Conservation Commission, Public Domain



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Gopher Tortoise

Gopherus polyphemus



Photo by Pierson Hill ©



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Florida Pine Snake

Pituophis melanoleucus mugitus



Photo by Pierson Hill ©



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Sherman's Fox Squirrel

The Sherman's fox squirrel is one really big squirrel. They are known for their ability to leap a great distance and for their wide variations in color and pattern.

Sherman's fox squirrels live in pine forests with wide spaced trees and open to moderate ground cover with a mix of woody species that produce acorns, and grasses for cover from predators. Unlike the more common grey squirrel, the fox squirrel spends a considerable amount of time foraging for food on the forest floor. Fire is important for keeping the trees widely spaced so there is abundant sun light to help produce more pine seeds and acorns. However, too high of a fire frequency can reduce the amount of acorns on the forest floor. While fox squirrels primarily eat seeds, nuts, and fungi, they will occasionally eat eggs and insects.

The main threat to the Sherman's fox squirrel population is loss of open longleaf pine forests to development and the exclusion of fire.

KINGDOM Animalia	DIET Omnivore
PHYLUM Chordata	SIZE (L) 25 cm
CLASS Mammalia	STATUS No state or federal listing, but rare
ORDER Rodentia	
FAMILY Sciuridae	
GENUS <i>Sciurus niger</i>	

Gopher Tortoise

The gopher tortoise is considered a keystone species of the longleaf pine ecosystem because it digs long underground burrows that are then shared by over 350 other species. When you live in a forest with frequent fires, it's great to have underground areas to stay while the fire passes by. The gopher tortoise has back feet that look like elephant's feet and flat front legs like shovels for digging. They can live up to 60 years.

Gopher tortoises eat grasses, leaves, fruits, and seeds. They need areas with low tree canopy coverage to provide lots of sun to regulate their body temperature and to grow the grasses that are a big part of their diet. Frequent prescribed fire is important to suppress the growth of woody plant species that make it difficult for the tortoise to move around above ground, grow tough roots and make digging hard, and eventually grow to shade out the grasses that are an important part of the tortoise diet.

Increased use of prescribed fire is a critical part of stabilizing the gopher tortoise population.

KINGDOM Animalia	DIET Herbivore
PHYLUM Chordata	SIZE (L) 25 cm
CLASS Reptilia	STATUS Florida designated Threatened
ORDER Testudines	
FAMILY Testudinidae	
GENUS <i>Gopherus</i>	

Florida Black Bear

The Florida black bear is a subspecies of the American black bear. This subspecies historical range includes Florida and southern parts of Alabama, Georgia, and Mississippi. The subspecies was listed as threatened in Florida, but was removed from this list in 2012 due to continued growth in the population.

Florida black bears eat mostly fruits, nuts, and berries with a small portion of insects, small mammals, and carrion. Bears prefer a thicker understory with woody plants that produce the fruits, nuts, and berries that make up most of their diet.

Expanding human development is moving in on areas that were once remote rural lands. This has resulted in increased encounters between bears and humans. Smart growth policies that help keep new development within and close to already urbanized areas can help protect habitat for bears and other species. In rural areas, help protect bears by securing food sources like your garbage, pet food, and bird seed.

KINGDOM Animalia	DIET Omnivore
PHYLUM Chordata	SIZE (L) up to 200 cm
CLASS Mammalia	STATUS Removed from Florida Threatened designation in 2012, population growing
ORDER Carnivora	
FAMILY Ursidae	
GENUS <i>Ursus</i>	

Florida Pine Snake

Florida pine snakes can get big, up to seven feet long. Smaller individuals can look like the more common grey rat snake (also called oak snake), however pine snakes have a notable change in their pattern, with markings like a rat snake on the back half and a more even mottled pattern from the head to mid-body.

Florida pine snakes eat small mammals (moles, rabbits, mice, rats, squirrels, and pocket gophers), other reptiles and eggs. The snakes prefer pine forests with lower canopy cover to provide sunlight for temperature regulation and to support the plant communities that support their prey. Prescribed fire is an important part of managing habitat to support this species.

KINGDOM Animalia	DIET Carnivore
PHYLUM Chordata	SIZE (L) up to 210 cm
CLASS Reptilia	STATUS Florida designated Threatened
ORDER Squamata	
FAMILY Colubridae	
GENUS <i>Pituophis</i>	

Southern Magnolia

Magnolia grandiflora



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Longleaf Pine

Pinus palustris



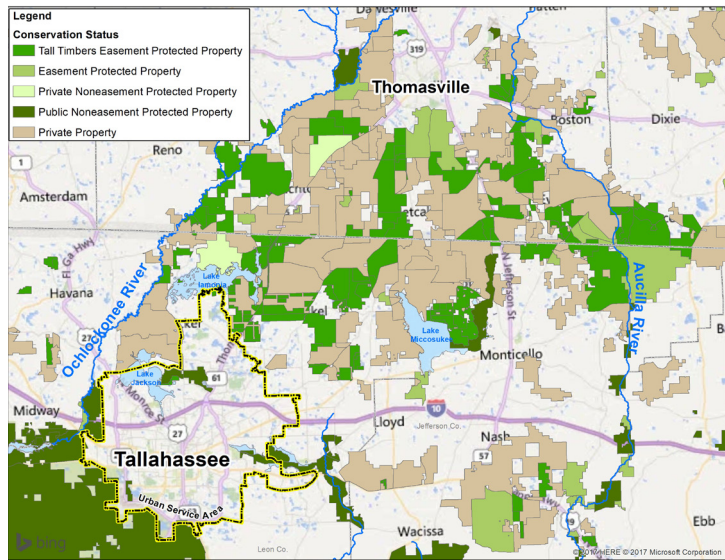
Photo by Brian Wiebler



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Red Hills Land Conservation

Protecting cherished land for the future



Map by Tall Timbers



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Prescribed Fire

A safe way to apply a natural process, ensure ecosystem health, and reduce wildfire risk.



Photo by Renee Bodine



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Southern Magnolia

Southern magnolia trees are a popular ornamental tree due to their characteristic deep green leaves and very large white flowers. Magnolias can be found in developed areas throughout the Red Hills region and beyond. Southern magnolias are also part of a natural forest type known as the beech-magnolia forest.

The beech-magnolia forest type includes American beech trees, southern magnolias, and a variety of other hardwood species. This forest type tends to develop on the steep moist slopes that occur adjacent to streams. These forests have heavy shade on the forest floor and shade tolerant plants in the understory. The high moisture level in these sites means that fire is not very common. Magnolias and many of the plants associated with this forest type are not fire tolerant.

When fire is excluded for many years from pine forests with clay soils, magnolias may begin to grow and change the site to a thicker shady forest that no longer supports the same diversity of wildlife.

KINGDOM Plantae	DIET Autotroph
PHYLUM Magnoliophyta	SIZE (H) up to 37 m
CLASS Magnoliopsida	STATUS No conservation concern, abundant
ORDER Magnoliales	
FAMILY Magnoliaceae	
GENUS Magnolia	

Red Hills Land Conservation

Tall Timbers Land Conservancy uses conservation easements to protect land that buffers our beautiful rivers and lakes, southern pine forests, and scenic vistas that distinguish the rural character of the Red Hills region in Southwest Georgia and North Florida.

A conservation easement is a voluntary legal agreement between a landowner and a land trust or government agency that permanently limits uses of the land in order to protect its conservation values. By limiting development rights on their property to provide public benefits such as water quality and habitat for declining species, landowners can claim the value of the easement as a tax-deductible charitable donation.

Easement properties stay in private ownership and balance some use of natural resources, such as selective timber harvest and hunting, with management for biodiversity.

TALL TIMBERS LAND CONSERVATION BY THE NUMBERS (2016)

Georgia easement acres	84,373
Florida easement acres	46,206
Tall Timbers owned and managed	13,057
Total protected lands	143,636

Longleaf Pine

Longleaf pine trees are the dominant canopy tree in the longleaf pine forest community that has been described as one of the most endangered ecosystems in North America. This ecosystem is home to more than 230 rare types of plants and animals.

The longleaf pine ecosystem once stretched for 90 million acres along the southeastern coastal plain from Virginia to East Texas. Only about 3 million acres of this ecosystem remains and a large portion of that is located in the Apalachicola National Forest and the private hunting preserves of the Red Hills region in Southwest Georgia and North Florida.

Longleaf is highly fire adapted with three different growth stages. The tree starts in the grass stage as a tuft of needles protecting its growing tip from fire. After holding in the grass stage for several years and storing energy in its roots, the longleaf surges upward with rapid growth to get the sensitive growing top above the typical height of frequent fire. After this burst of growth the tree is able to settle into a more regular pattern of growth.

KINGDOM Plantae	DIET Autotroph
PHYLUM Coniferophyta	SIZE (H) up to 47 m
CLASS Pinopsida	STATUS Significantly reduced range, important habitat for many threatened and endangered species
ORDER Pinales	
FAMILY Pinaceae	
GENUS Pinus	

Prescribed Fire

Prescribed fire (or controlled burning) is an essential tool for managing natural ecosystems in the southern United States. Many native plant and animal species depend on fire to maintain their habitat and have become rare and threatened because of human exclusion of fire in many places.

Tall Timbers seeks knowledge on how to use fire in such a way that is most effective in maintaining native biodiversity while minimizing smoke and wildfire risks that impact the general public. In pursuing these goals, we conduct research focusing on plant and wildlife ecology and fire science.

Historically, low intensity fires drifted around the landscape ignited by lightning and indigenous people, and extinguished by wet areas or a lack of plant material to fuel the fire. Modern prescribed fires use a variety of ignition techniques, fire breaks, and weather forecasting to control the fire and achieve management goals.

4% – Estimated remaining area of the fire dependent longleaf pine forest that once spread across the southeast from southern Virginia to eastern Texas.

14,400 Years Ago – An abundance of charcoal at the Page-Ladson archaeological site along the Aucilla River indicates an increase in regional fires starting from this time forward.