

# Save the Indigo!

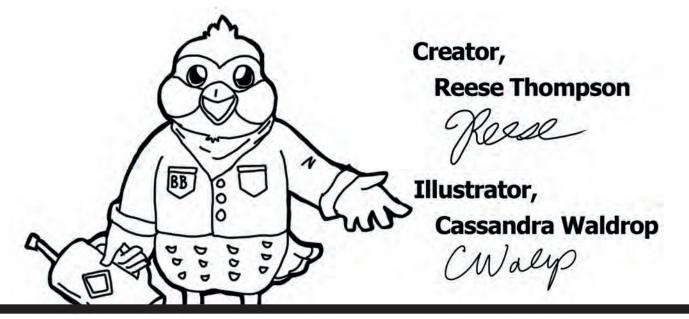


Once upon a time, long before he became a burner, a Bobwhite Quail named Bob lived with his covey family in a beautiful longleaf pine forest. His home was a grassland, carpeted with wiregrass, bluestems and Indian grasses. Towering above were large, old longleaf trees and scattered in the grasses were forbs that produced flowers of every color in the rainbow. All was good.

The forest was home to many other animals too. One of Bob's favorite neighbors was Gopher Tortoise, who dug deep burrows in the sandy soil. The burrow was warm in the winter and cool in the summer. Many other creatures lived in the burrow and enjoyed the gopher tortoise's hospitality.

One good friend who often stopped by the burrow was Indigo, an eastern indigo snake. Indigo would spend all winter in the burrow, telling Gopher Tortoise all about the things he saw and ate when he was away. Indigo's meals included birds, small mammals, frogs, toads, lizards, turtles, and even other snakes including venomous cottonmouths and rattlesnakes. Gopher Tortoise was a vegetarian, but she loved hearing about Indigo's adventures. In addition to exploring the longleaf pine grasslands, he travelled to bottomland hardwood forests. The cool creeks there led him to beautiful cypress swamps. All was good.

Occasionally, lightning would strike one of the tall longleaf pine trees. Although the tree would die, it soon attracted insects and the animals that ate them. Sometimes the lightning strike would leave holes in trees where raccoons, screech owls, or other animals could live in.



Every now and then, the lightning strike set the tree on fire and caused the surrounding forest to burn. This was nature's way of cleansing the forest. Pine straw, grass, leaves, and limbs were consumed by the fire, and the nutrients in those plants were returned to the soil to help new plants grow. Gopher Tortoise and many other animals were safe inside the burrow during these fires. Sometimes other creatures such as gopher frogs and spotted skunks would also take shelter there. Just a few days after the burn, new tender grass sprouts would appear, which Gopher Tortoise and many other animals loved to eat. The blackened forest would become bright green, and the burning and growing cycle was completed once again, as it had happened for many, many years. All was good.

Then one day, more humans moved into the forest. They cut down large areas to clear land for farms and houses, and later roads and cities. More people came and more forests were lost, including many longleaf pine grasslands and bottomland hardwood forests where Indigo once roamed for food.

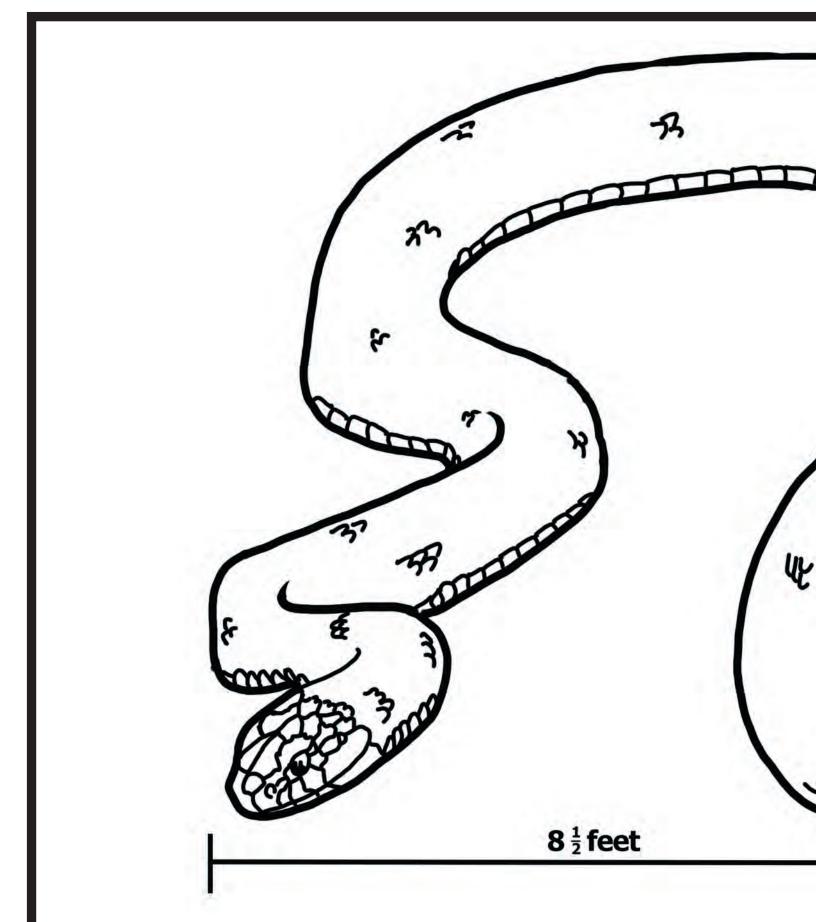
Gopher Tortoise worried as she saw Indigo less and less. The people were frightened of Indigo's large size, even though his appetite for snakes and rats and other small animals helped keep the ecosystem healthy and balanced.

The people also rushed to extinguish forest fires; fearful the fire would spread to their homes. Bob, Gopher Tortoise and Indigo saw the forest beginning to change, gradually, then completely. The pine straw, leaves and limbs piled up on the ground year after year. Bushes grew, shading out the plants on the forest floor. The tiny flowers and grasses disappeared, as did the bees and butterflies. The Red-Cockaded Woodpeckers and Bachman's Sparrows flew away in search of better homes, followed by the turkeys and quail. When Gopher Tortoise left because there was no food for her, so did the other animals, like Indigo, who depended on her burrow for food and shelter. All was not good.

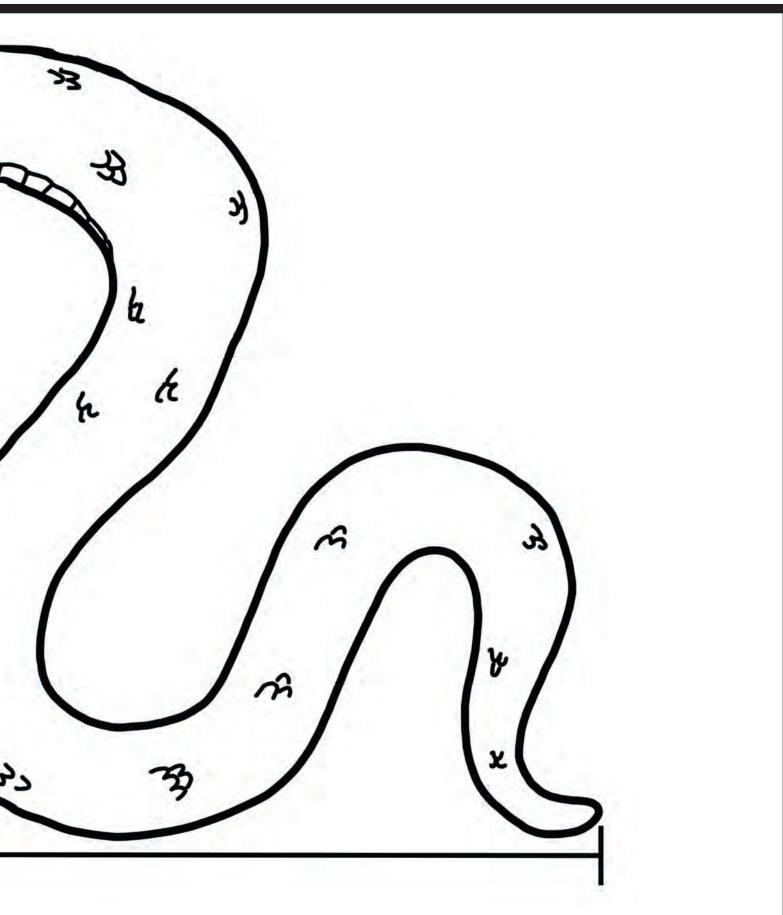
Bob realized that the beautiful longleaf pine forest was disappearing. He and his family and friends loved this ecosystem and needed it in order to survive. He wondered, "Could the forest ever be like it used to be, when all was good?" He came to understand that nature's way of cleansing and refreshing the forest was missing.

Bob decided to devote his life to explaining to people that the longleaf forest with its many plants and animals evolved over time to being burned regularly. The forest needed fire to not only survive but to thrive. He went about the land telling the story and showing people how to control fire and burn safely, thereby earning him the name "Burner Bob<sup>®</sup>." His friend Indigo and many other creatures benefit from this prescribed burning.

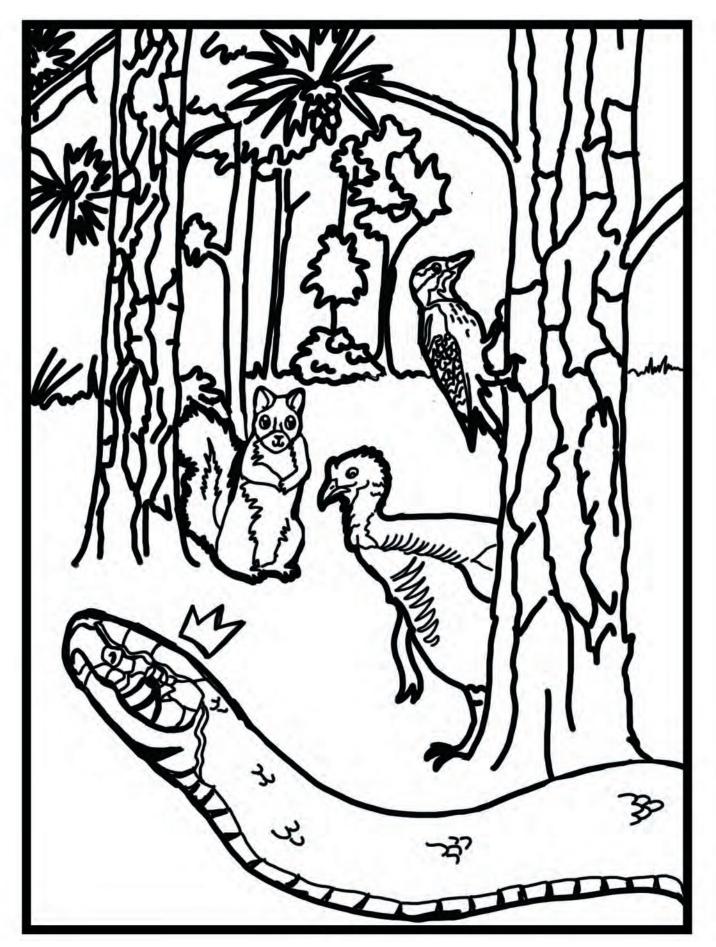
All was good.



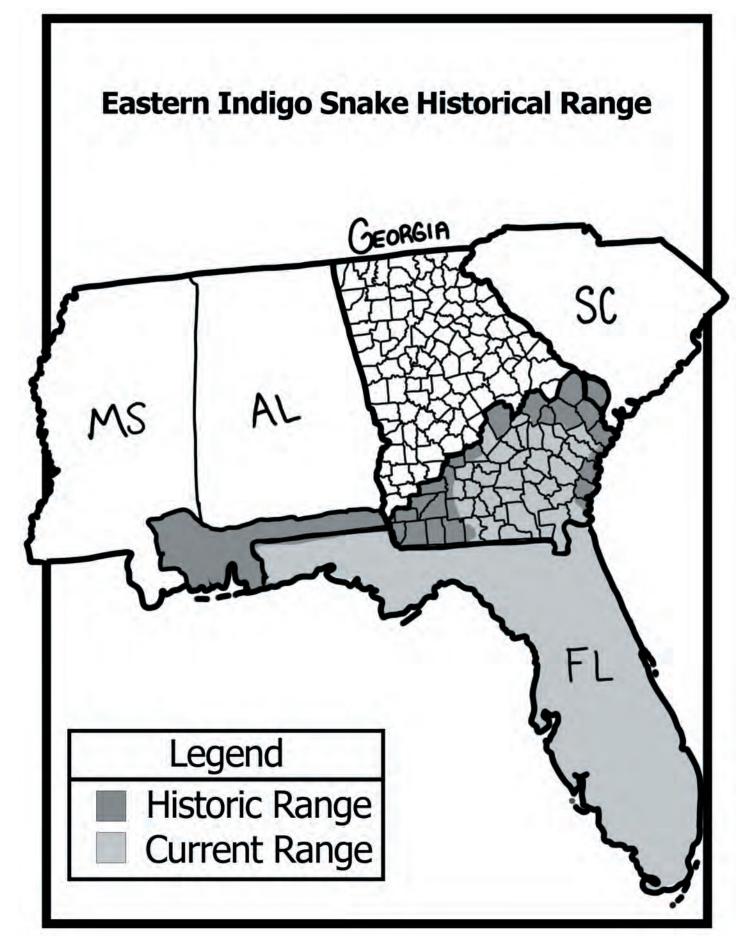
The eastern indigo snake is the longest snake native to North America. It is a black-blue muscular snake.



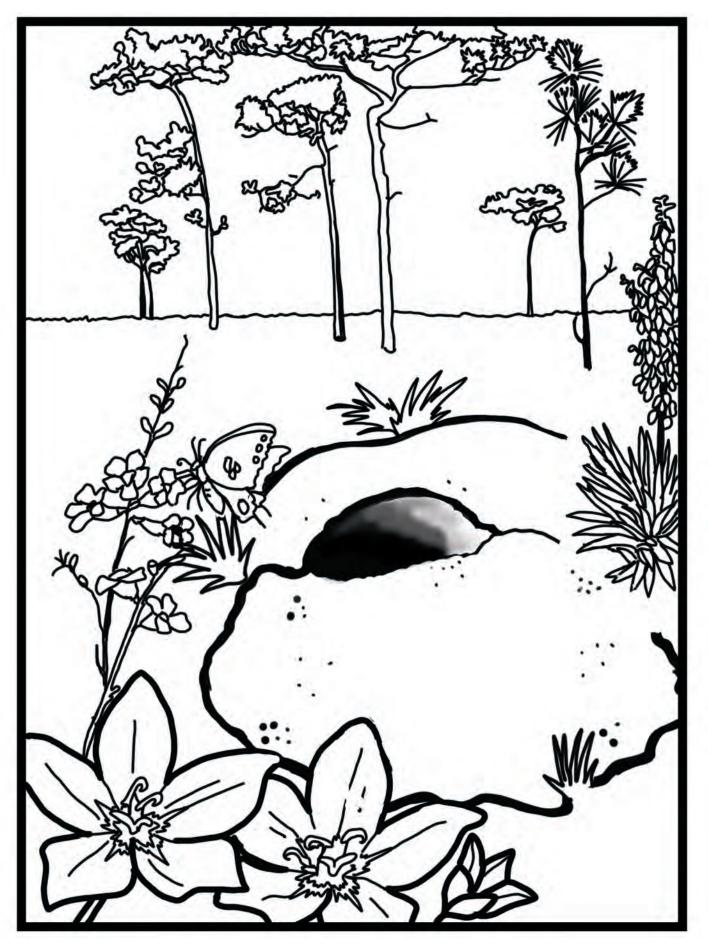
The United States Fish and Wildlife Service listed the indigo as a **threatened species** in 1978.



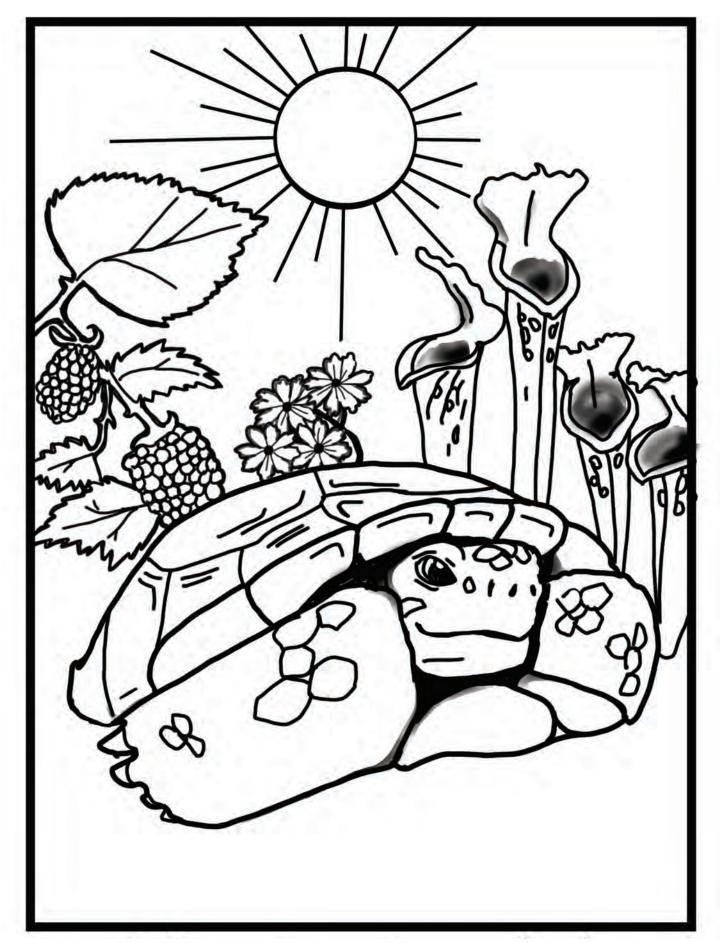
The **scientific name** for the eastern indigo snake is *Drymarchon couperi*, which means "Emperor of the Forest."



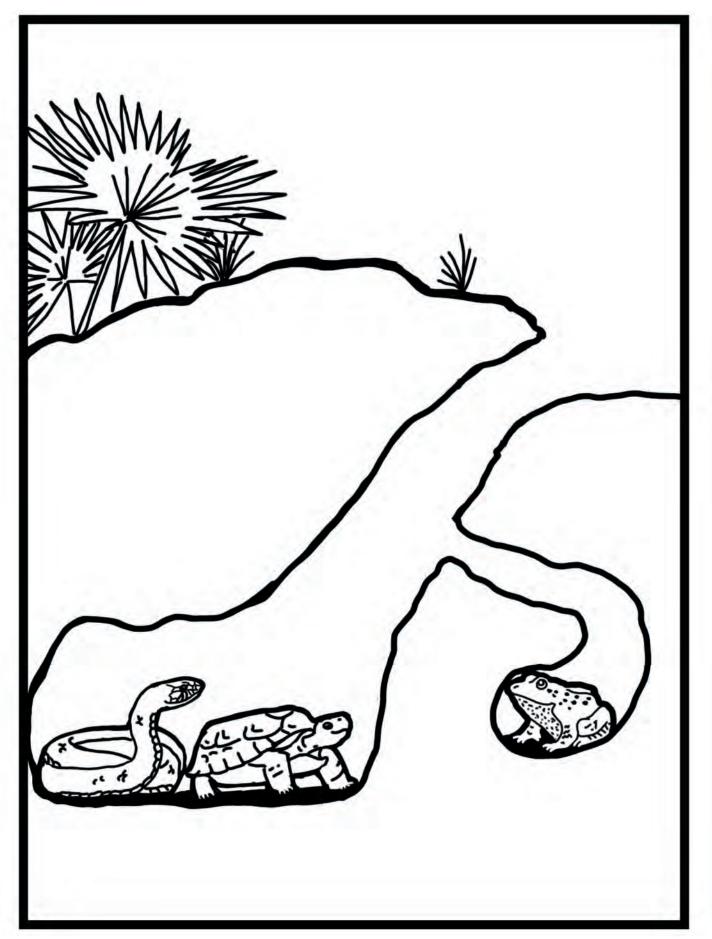
The indigo snake calls the Southeastern U.S. its home, including Georgia. Do you spot your county?



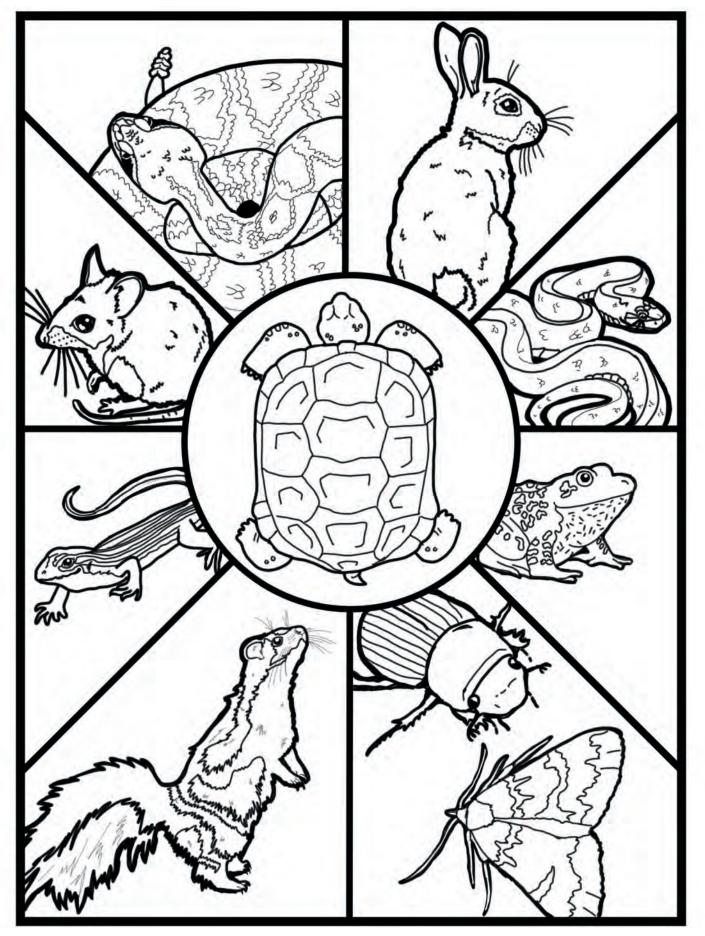
Indigo snakes live in sandhill **habitats**, often along sandy ridges with gopher tortoise burrows.



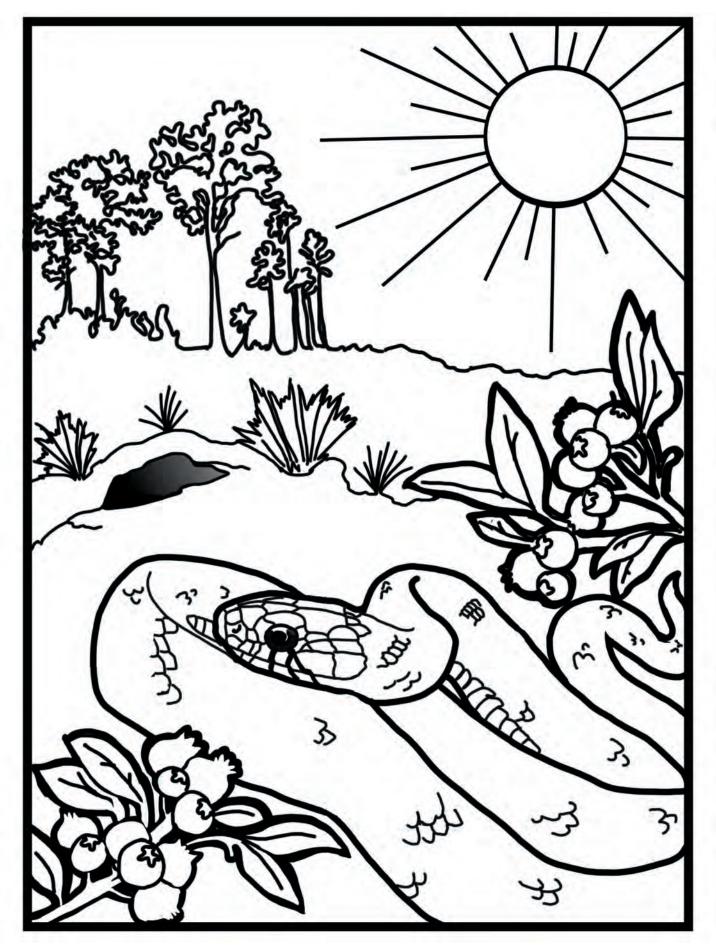
Gopher tortoises are important friends to the indigo snake. In some areas, gopher tortoises are a federally threatened species.



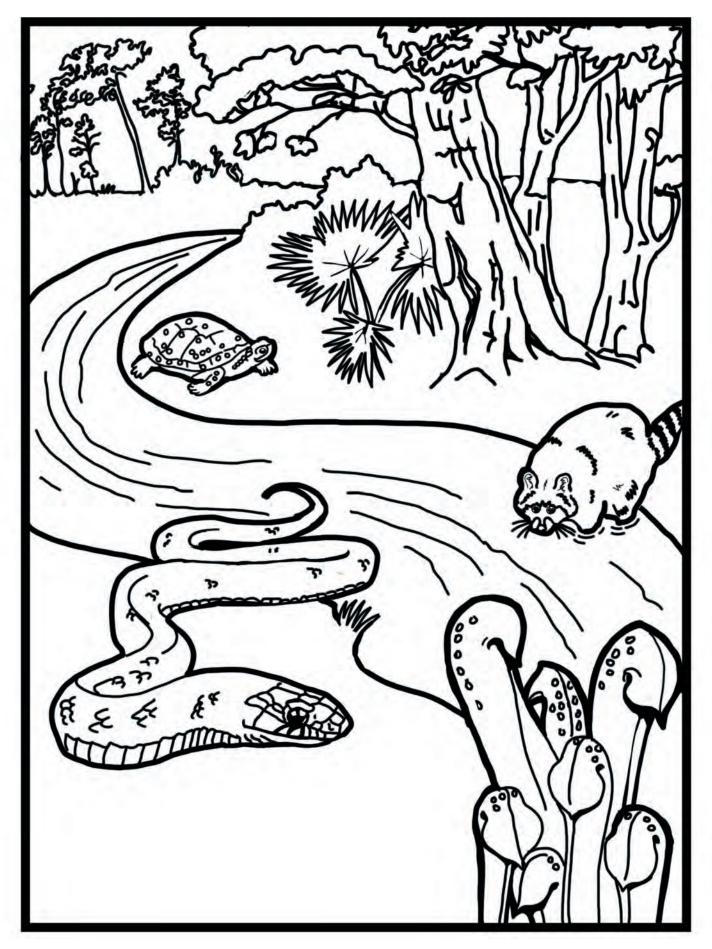
During the winter months, indigo snakes share the gopher tortoise burrows with many other species.



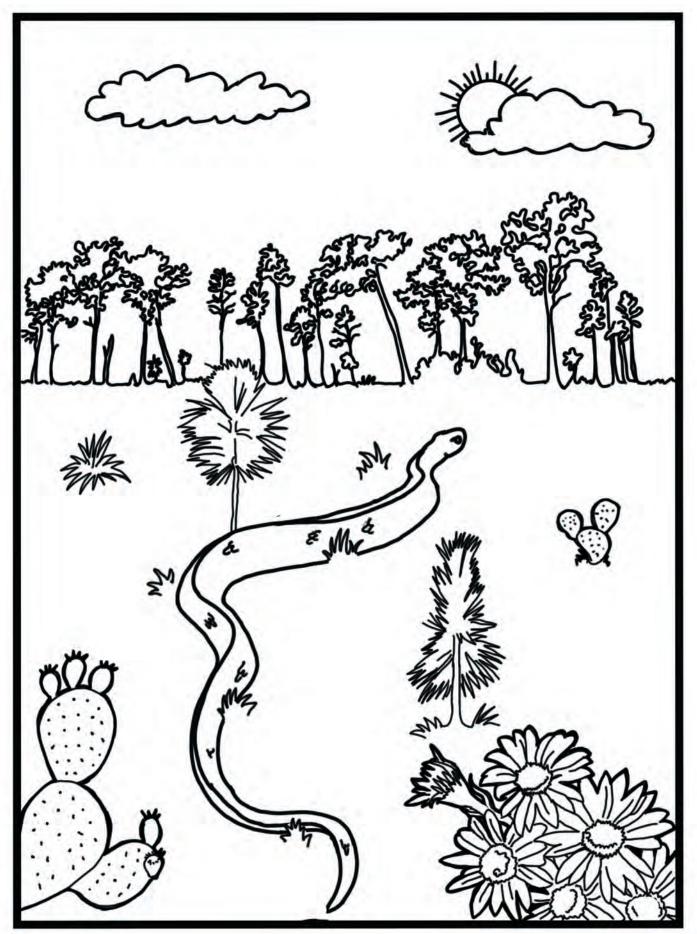
Over 300 species use gopher tortoise burrows, making the gopher tortoise a **keystone species**.



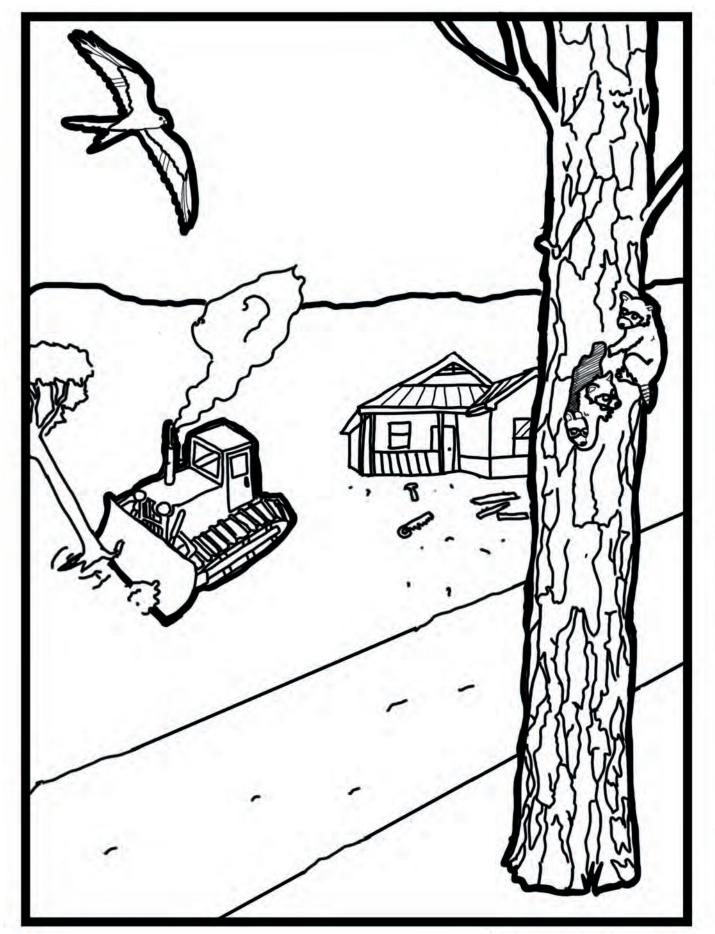
Indigo snakes crawl out and warm themselves on bright sunny days, because they are **ectotherms** or cold blooded.



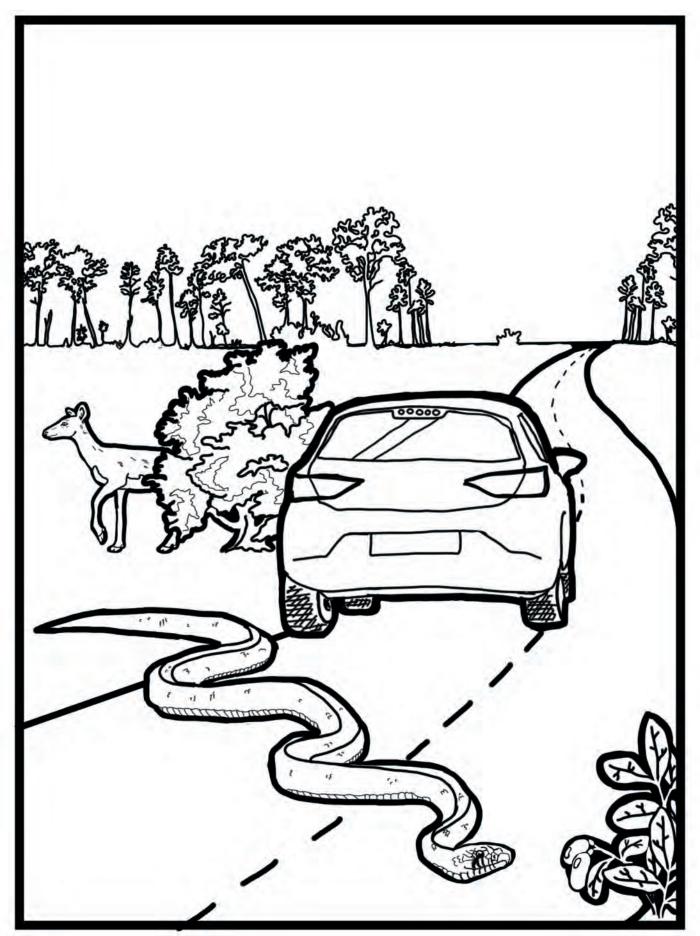
In the early spring, indigo snakes **migrate** to lowlands and creek bottoms to spend the summer in cooler habitats.



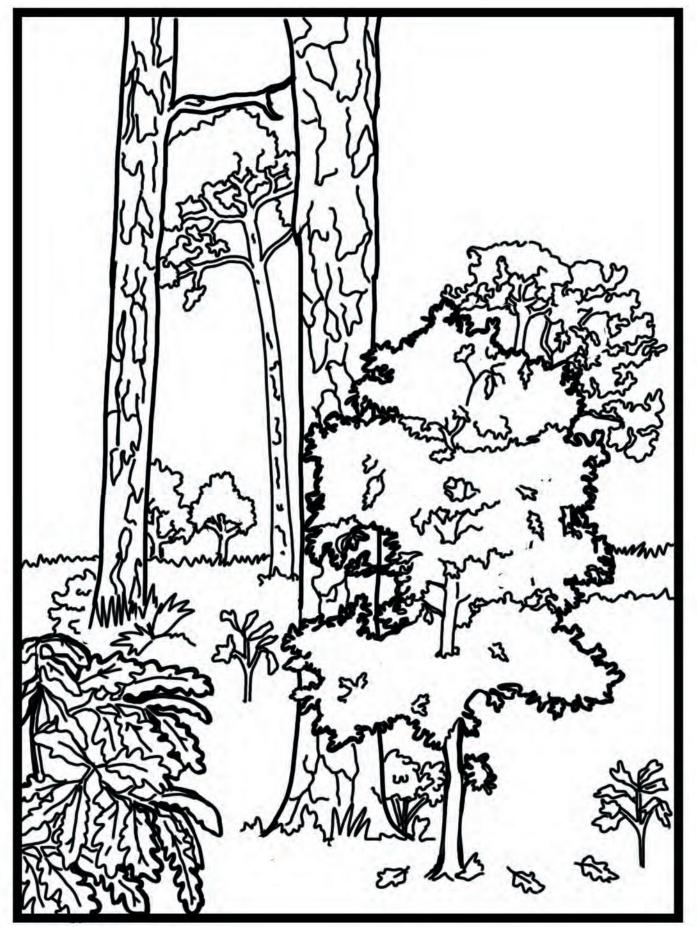
The indigo snake has the largest **home range** known of any snake in the United States. Indigos travel several miles each year moving between upland and lowland habitats.



Habitat loss and fragmentation is the main reason that the indigo snake is a threatened species. Clearing land for homes and roads destroys habitat.



When indigos get hit by cars, they usually die. Although these snakes cause no harm to humans, some people purposely run over them.



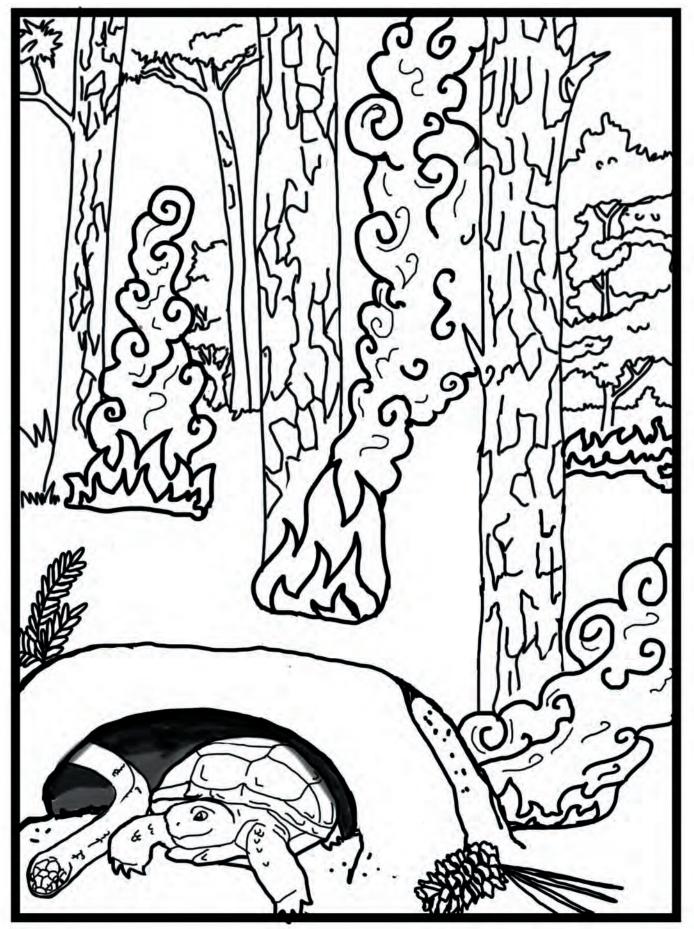
Another threat to indigo snakes is the lack of fire. Without fire, the habitat becomes overgrown and unhealthy.



Burner Bob<sup>®</sup> was sad to see his home become overgrown. His forest family and friends were losing their habitat.



Burner Bob<sup>®</sup> set out to educate people about the proper use of prescribed fire to remove overgrown trees and shrubs and create and maintain good habitat.



These animals are used to fire and know where to safely hide. Thanks to prescribed burning, southern forests are healthy for Burner Bob<sup>®</sup> and his friends.

### Help the indigo snake!

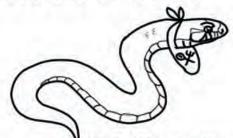
#### Give indigo snakes space.

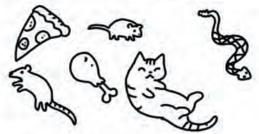
Indigo snakes are **non-venomous** and harmless to people and pets.



## 2. Tell family and friends about indigo snakes.

Indigo snakes are helpful to people; they eat rodents and **venomous** snakes.



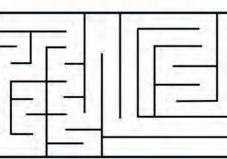


Help the indigo find its dinner by circling their favorite foods.

### Brake for snakes!

Do not run over indigos or other snakes while they are crossing the road.







Help the indigo safely migrate to the lowlands for the summer.

#### GLOSSARY

Look for BOLD terms throughout the coloring book and read their definitions.

**Ectotherm**: an animal that relies on its environment to keep its body temperature in a healthy range. These animals are also called cold-blooded because their body temperature will stay low unless they find a source of heat (for example, a sunny spot). Examples include amphibians, reptiles and fish.

The opposite is an **endotherm**, which is an animal that can make its own body heat. Endotherms are also called warm-blooded because they can keep themselves warm, even when it's cool outside. Examples include humans and other mammals as well as birds.

**Habitat**: a plant or animal's home. For an animal to survive, its habitat must have enough food, water, shelter, and space. A plant's habitat must have the type of soil and nutrients it needs to survive, as well as the proper amount of sunlight and water (moisture in the air and in the soil).

Habitat fragmentation: a process where large areas of habitat are divided, leaving remaining areas broken into smaller unconnected areas.

Habitat loss: the disappearance of an animal's home, either because it is changed or destroyed.

**Home range**: the amount of land that an animal needs to survive and where it lives most of the time.

**Keystone species**: a type of animal that is especially important to a habitat and many other species that live there. The removal of a keystone species from an area effects habitat type and quality and the survival of other species.

In architecture, a keystone is the wedge-shaped middle stone of an archway that holds most of the weight of the other stones and keeps them from falling. In a similar way, the gopher tortoise and its burrows support many other animals in longleaf pine habitats.

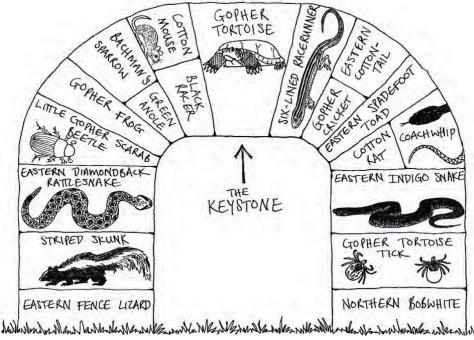


Illustration by Berkeley Boone, Georgia Department of Natural Resources

**Prescribed fire**: a fire that trained people plan and set on purpose to clear fallen leaves, downed tree limbs and unwanted plants from a habitat. The fire is kept inside a certain area. Therefore, a prescribed fire is also called a controlled burn. Prescribed fire helps to create and maintain healthy habitats for many plants and animals.

If fire is prevented or suppressed, some plants become overgrown and dead limbs, leaves, and pine needles build up on the ground. That means a future wildfire (set by lightning or by accident) could be very destructive and hard to control. One way to prevent wildfires is to use prescribed fire to reduce the fuel available to burn if a wildfire starts.

Migrate: the movement of an animal from one habitat to another, usually as the season changes.

Non-venomous: describes animals that do not make venom – see venomous.

**Threatened species**: a plant or animal whose population size is low enough to cause concern. If their numbers become even lower, a threatened species could become endangered. Endangered means that the species is in danger of becoming extinct meaning there is no more of its kind on the Earth.

**Scientific name**: a two-word Latin name that scientists worldwide (from different countries who speak different languages) call a specific type of plant or animal. The first part of the name is called the genus. The second part of the name is called the species. Plants and animals in the same genus are closely related and may look similar to each other.

**Venomous**: describes animals that produce and use venom to protect themselves, capture their prey, and/or digest their food.

Many people confuse poisonous for venomous. Both are toxic chemicals used for protection and to catch prey, but they work in different ways. Venom is injected into an animal by using a stinger or fangs. On the other hand, poison must be eaten, absorbed through the skin or eyes, or breathed in to cause illness.





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