

Scales & Tails



PARKS, RECREATION,
AND CULTURAL
RESOURCES

Nature Preserves
parks.raleighnc.gov

What is Herpetology?



Green treefrog (*Hyla cinerea*)

Herpetology is the study of reptiles and amphibians. Reptiles and amphibians are vertebrates and rely on external heat sources, making them ectotherms. Reptiles have dry scales and include animals like turtles, snakes, alligators, and lizards. Amphibians have moist skin and include toads, frogs, and salamanders.



Spotted salamanders
(*Ambystoma maculatum*)



Yellow-bellied slider (*Trachemys scripta*)

Reptiles and amphibians can be found in just about every ecosystem on Earth. They are very diverse animals that eat many different things, including invertebrates, birds, small mammals, fish, and even other reptiles and amphibians! Some reptiles and amphibians live in the water, like newts and snapping turtles, while others live on land, like toads and lizards.

Why are Reptiles & Amphibians important?

There are countless reasons why reptiles and amphibians are important. Frogs and other amphibians can show if a body of water is healthy by being present in it. Snakes can eat rodents and the ticks they carry, providing great pest control. Venom from some snakes is used in breast cancer and arthritis medical research. Most significantly, all of these animals make up a part of the food web and are very important to have on our planet!

Frequently Asked Questions

What is the difference between a salamander and a lizard?

Salamanders are amphibians and lizards are reptiles. Salamanders have wet, porous skin that can absorb water while lizards are covered in scales. Salamanders often lay their eggs in or around water sources while lizards have thick-shelled eggs.

What should I do if I see a turtle crossing the road?

First, make sure that you are in a safe situation. Never put yourself in harm's way. If you are safe, please move the turtle to the side of the road it was heading. DO NOT move the turtle to a new location. Turtles have a very limited home range and don't want to be kidnapped! They'll spend the rest of their lives trying to find their original home, which increases their risk of being hit again.



Eastern box turtle (*Terrapene carolina*)

How can I attract reptiles and amphibians to my yard?

Great question! Create places for reptiles and amphibians (and their prey) to hide like log piles, overturned pots, rock stacks, or brush piles. Plant native plants and skip the chemicals to attract native insects that the reptiles and amphibians can eat. Provide a water source like a small pond.



Copperhead (*Agkistrodon contortrix*)

How do I tell if a snake is venomous?

It's very hard to tell if a snake is venomous from just one feature. Look for many characteristics, like pattern, head shape, and body shape. For example, our most common venomous snake, the copperhead, is identifiable by its Hershey's Kiss pattern, thick body, and triangular head with heat sensing pits.

What do I do if I see a snake nearby?

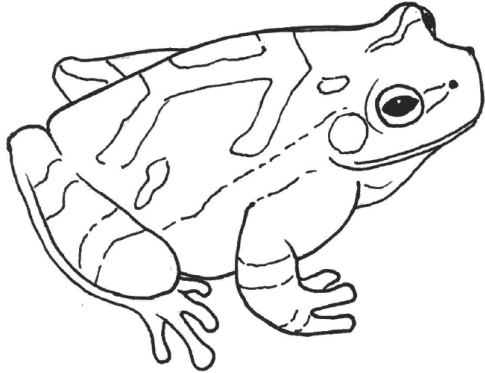
The best thing to do to keep yourself and the snake safe is to leave it alone. If a snake is somewhere that it shouldn't be, have an adult spray it with a water hose to encourage it to move along.

More questions? Check out HerpsOfNC.org OR ncparc.org.

Frog Calls

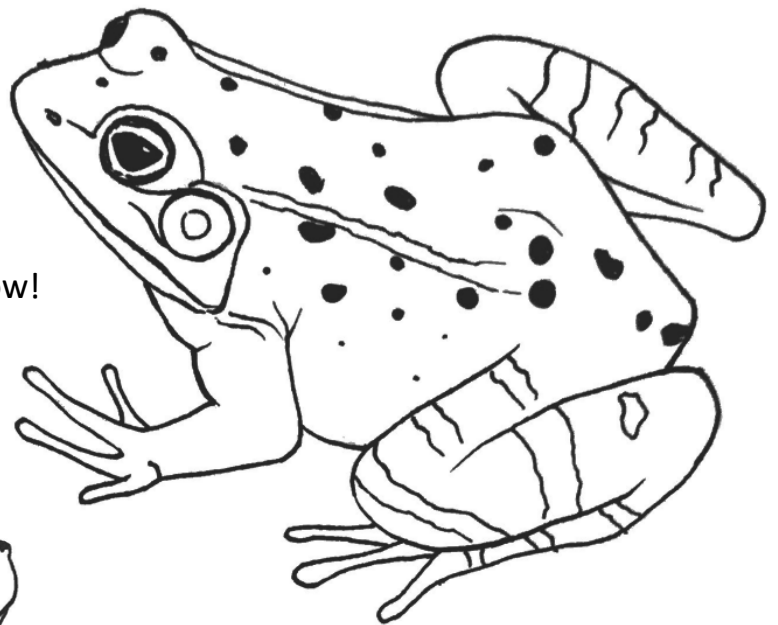
Color these frogs and toads, and learn what their calls sound like.

Listen for these amphibians when you are outside.



Cope's Gray Treefrog

"Prrrr! Prrrr! Prrrr!"



Green Frog

"Bow! Bow! Bow!"



Fowler's Toad

"Waaah! Waaah!"

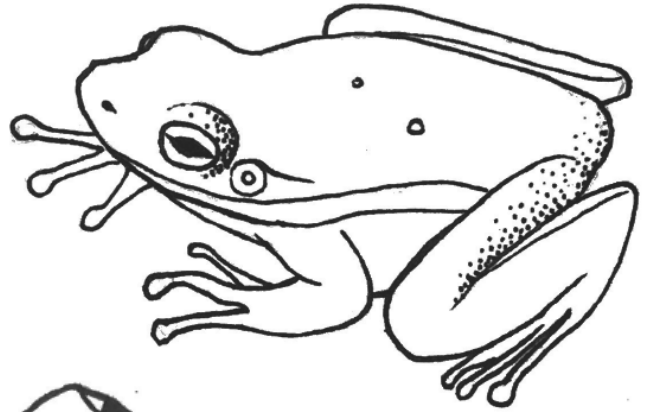


Northern Cricket Frog

"Clack clack clack clack!"

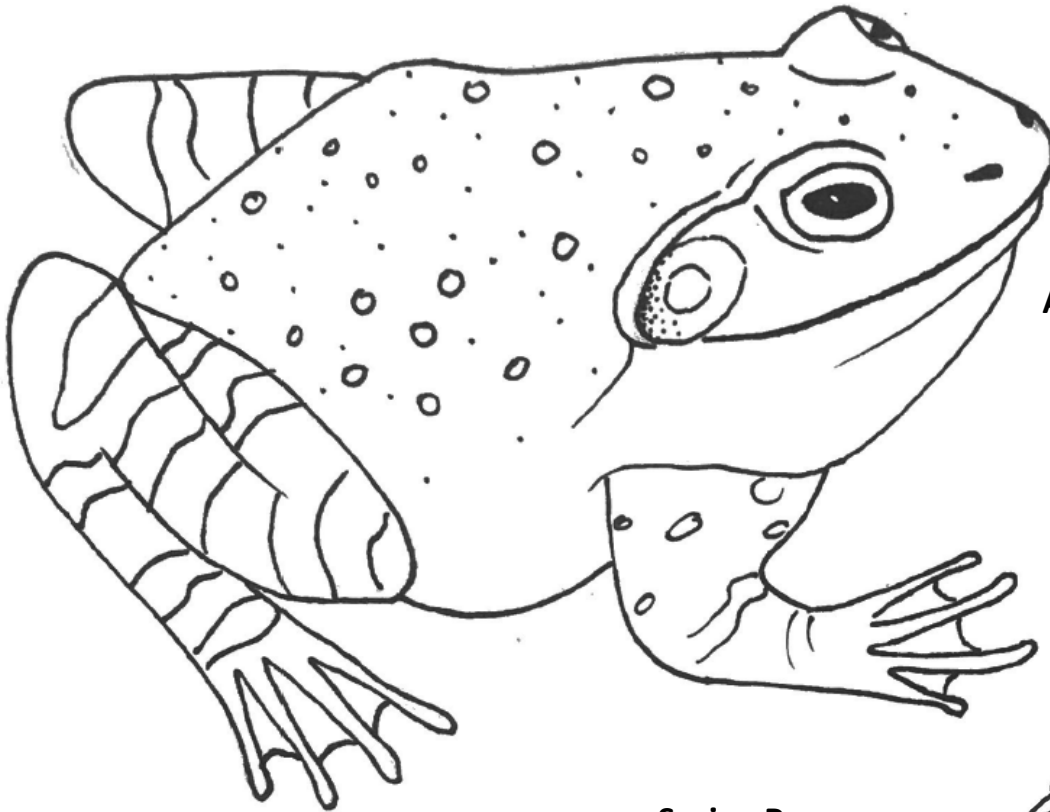
Green Treefrog

"Queenk! Queenk! Queenk! Queenk!"



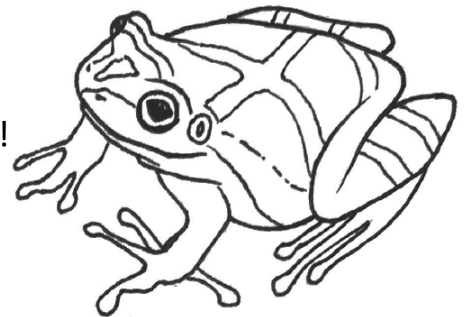
American Bullfrog

"Jerom! Jerom!"



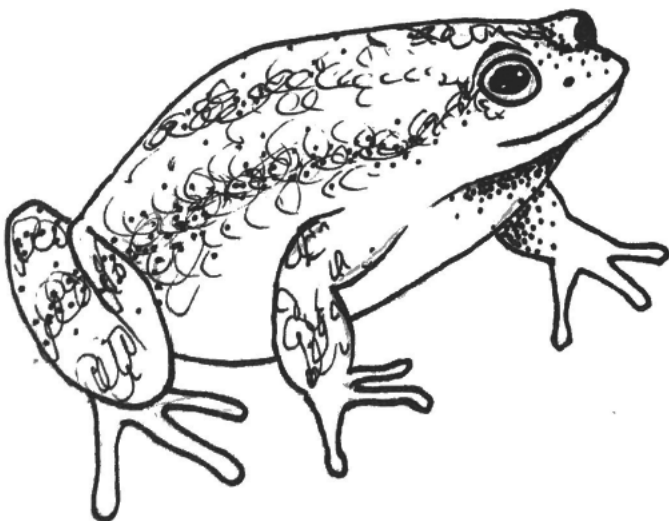
Spring Peeper

"Peep peep! Peep peep!
Peep peep!"



Eastern Narrow-mouthed Toad

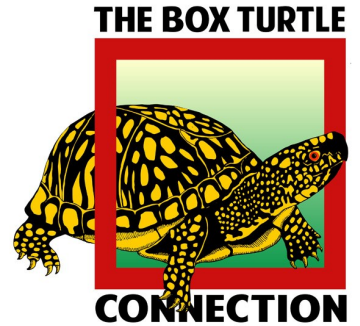
"Baaahhh!"



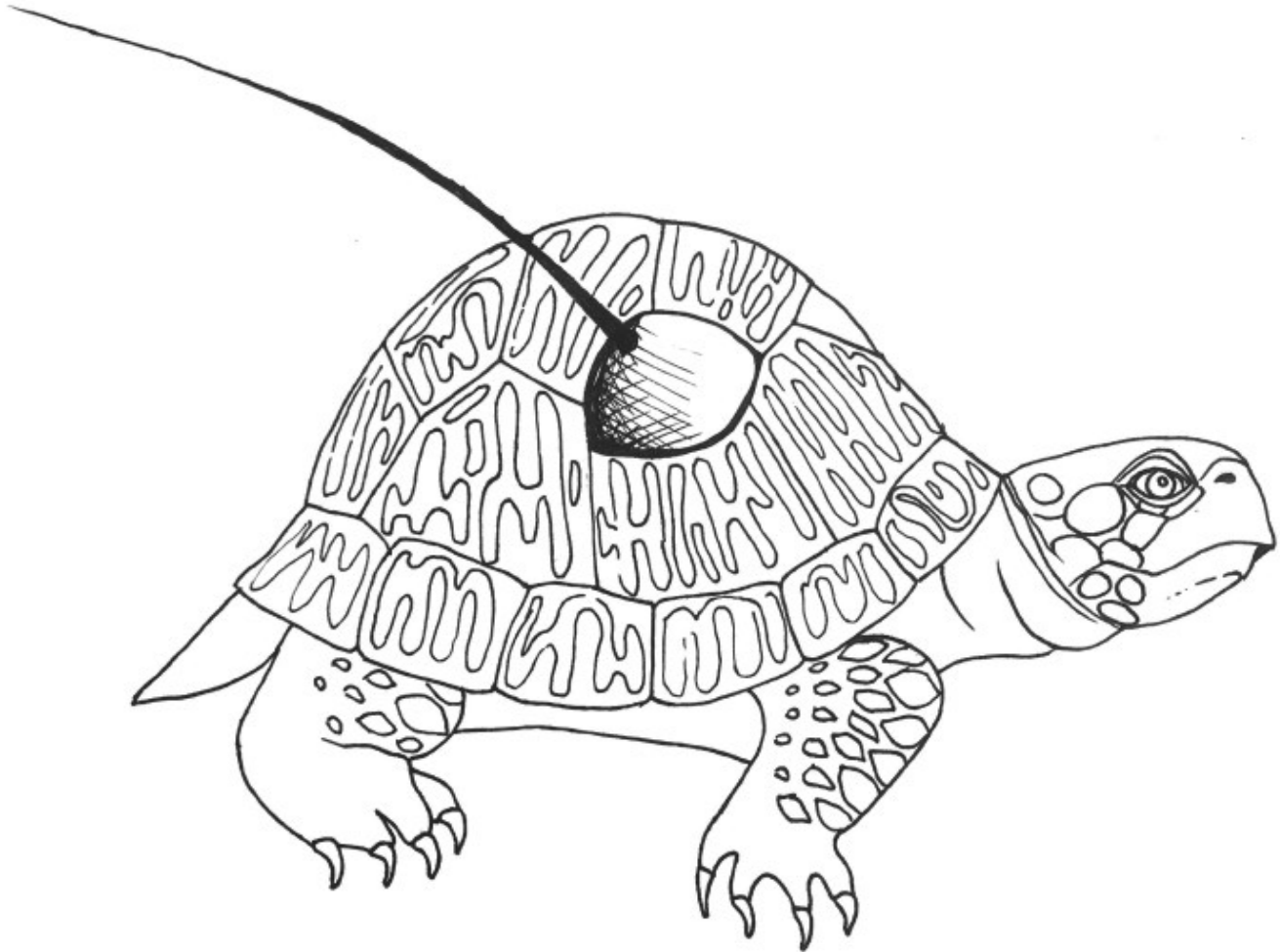
Eastern Box Turtles

The Box Turtle Connection Project

The Box Turtle Connection Project is a North Carolina state-wide research project on eastern box turtles. Biologists, educators, and volunteers work together to gather data on box turtle populations across the state. One method the project uses to monitor turtles is called radio telemetry, which involves attaching a radio transmitter with an antenna to the shells of turtles. The box turtles can then be tracked to monitor their movements, habitat preferences, and to help determine the size of their home range.

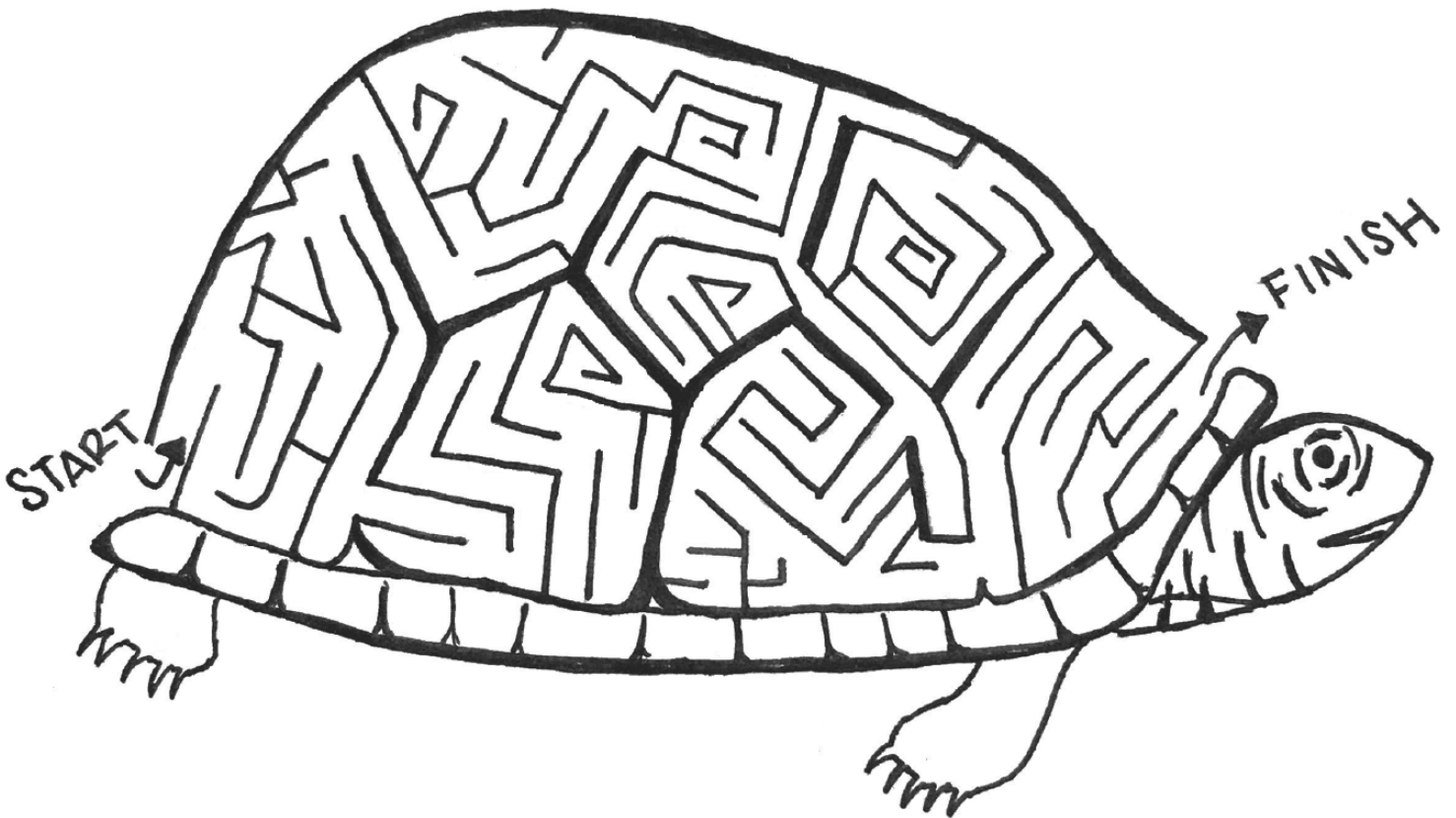


Below is an example of what a box turtle with a radio antenna looks like for you to color. You can find out more about the Box Turtle Connection Project and how you can participate at boxturtle.uncg.edu.



Scute Through the Maze

Eastern box turtles each have a unique pattern on the top of their shell, also called the carapace, which can be used to identify each individual turtle, just like your fingerprint. Can you navigate your way through the maze formed by this box turtle's special pattern?



Creature Features

Pudge—Cope's Gray Treefrog

Hi, my name is Pudge. I hatched from an egg in 2017 at Walnut Creek Wetland Park. I know I am pretty special because I hatched without any eyes. The nice people at Walnut Creek Wetland Park gave me a safe and cozy home where I can live safely as a blind frog. I like to spend time sitting on a nice rock and sometimes I will take a nap on a large piece of tree bark that is part of my home. I hear that I have some pretty bright yellow legs, like other Cope's gray treefrogs, and people tell me my bird-like chirping song makes them smile. I love to sing in the shower (when my human friends spray me with water). I hope that you will come visit me at Walnut Creek Wetland Park one day.



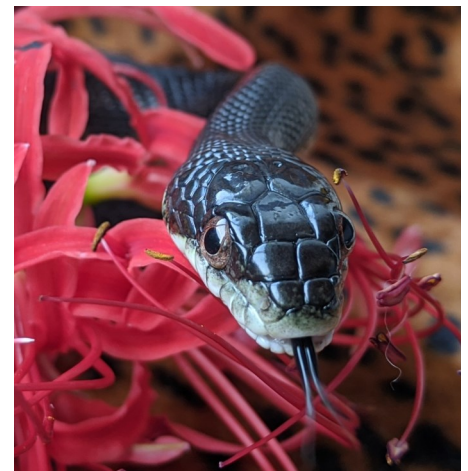
Scout—Eastern Box Turtle



Hi! My name is Scout. I live at Durant Nature Preserve. Durant became my home in 2018, because sadly, I got chewed on by a dog, which caused damage to my shell. This is why it's very important that you have your dog on a leash when you are outside with them! Because of this I can't fully close my shell and "box" up like us box turtles can do in the wild, which makes me not safe from predators outdoors! Lucky for me, the Turtle Rescue Team at NC State University were able to save me. Now I live at Durant, in a nice big enclosure with spots to hide and dirt to dig in, and they feed me yummy foods like greens, tomatoes, and my favorite food – slugs! Please come visit me at Durant Nature Preserve.

Brimley—Eastern Rat Snake

It's nice to meet you! I'm an eastern rat snake and I was born in 2018. Did you know snakes like me can get to be 6 feet long? Living at the nature center, I eat a thawed mouse every Sunday afternoon. In the wild, snakes like me eat mice, rats, eggs, fledgling birds, voles, and frogs. I am a nonvenomous snake and must constrict my food. Rat snakes are also excellent climbers. We spend a lot of time in trees and our belly scales are made for gripping bark. You can see my patterned scales when you visit me at Walnut Creek Wetland Park.



Creature Features



Lucky—California Kingsnake

Hi there, my name is Lucky! I was born as someone's pet — until they abandoned me on my own at Wilkerson Nature Preserve. With my white scales and yellow stripes, I don't blend in very well, and North Carolina isn't my native habitat. I earned my name when I was found, injured, and scared, by the park manager, and given a new home as an education animal. Now I'm healthy and happy again, helping park visitors learn that snakes like me are pretty cool!

Cornelius—Corn Snake

Nice to meet you — Cornelius is the name. I started out as a captive-bred classroom pet, and boy, did I get a lot of attention. While the park staff might be the ones talking, everyone knows I'm the real star of the show.

Being in the limelight isn't just for fun, though. I get to teach visitors how to tell the difference between harmless corn snakes like me and the copperheads we get mistaken for — just because we have stripes doesn't make us bad. We do important work by keeping rodent populations controlled, and I'm happy to give all my fans a crash course on snake ID — so come to Wilkerson and say hello!



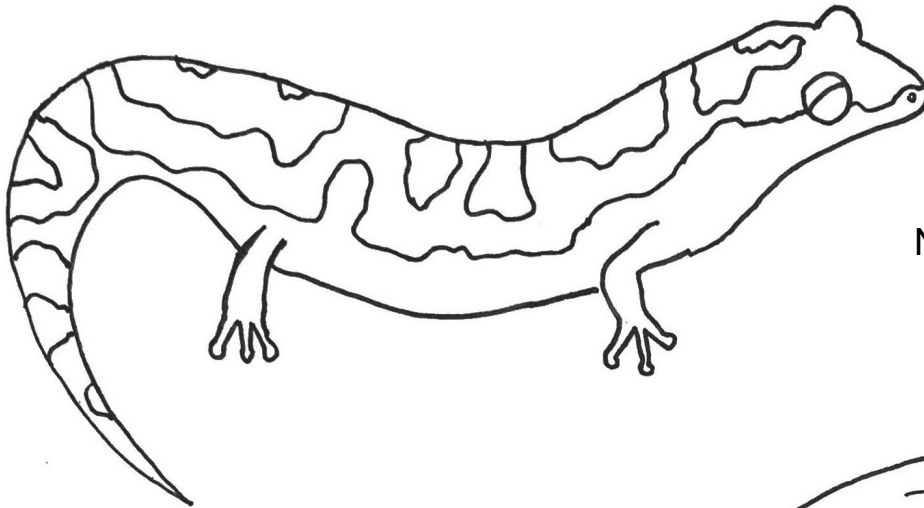
Norm—Eastern King Snake

Greetings, friends! I hope you are having a most excellent day. I am Norm, the eastern king snake, and I live at the Walnut Creek Wetland Center. I love to chill in my tunnels and to eat. My favorite foods are most delectable mice and other snakes. I could totally eat a venomous copperhead if I wanted to. That's why they call us king snakes. It would be outstanding to have you visit me soon. Catch ya later.

Salamanders Everywhere!

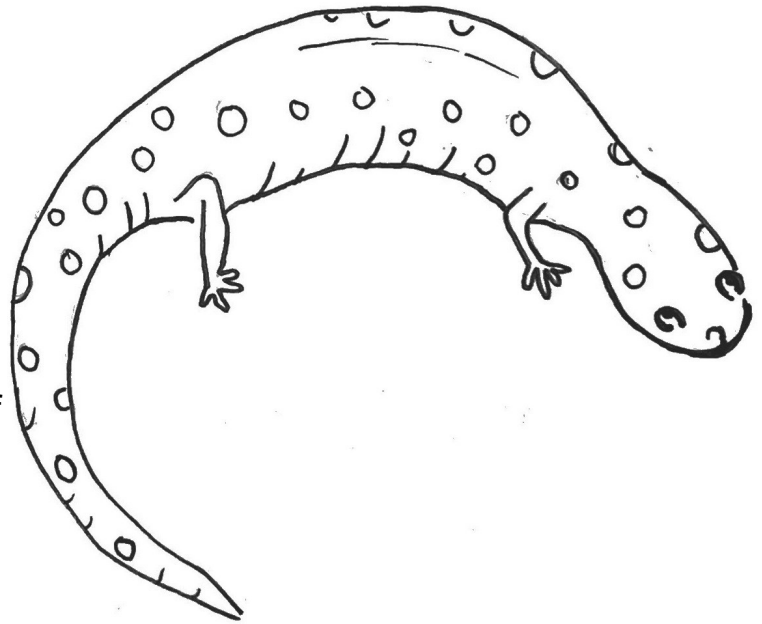
Salamanders like to hide in dark, moist places.

You could find these under logs, in rock crevices, or even buried underground.



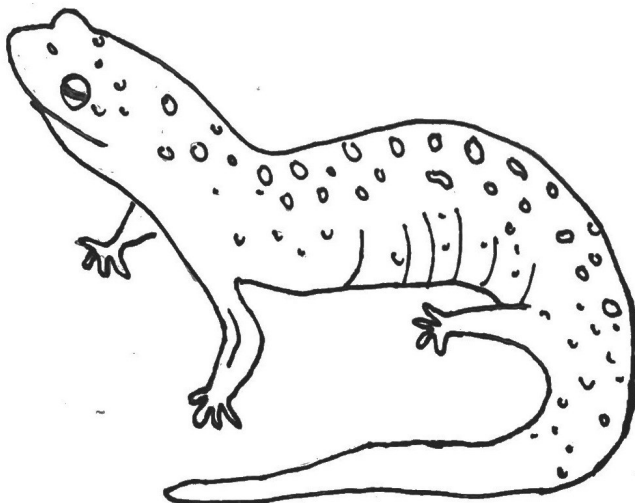
**Marbled
Salamander**

North Carolina's state
salamander!



**Spotted
Salamander**

Lays its eggs in
temporary pools of
water!



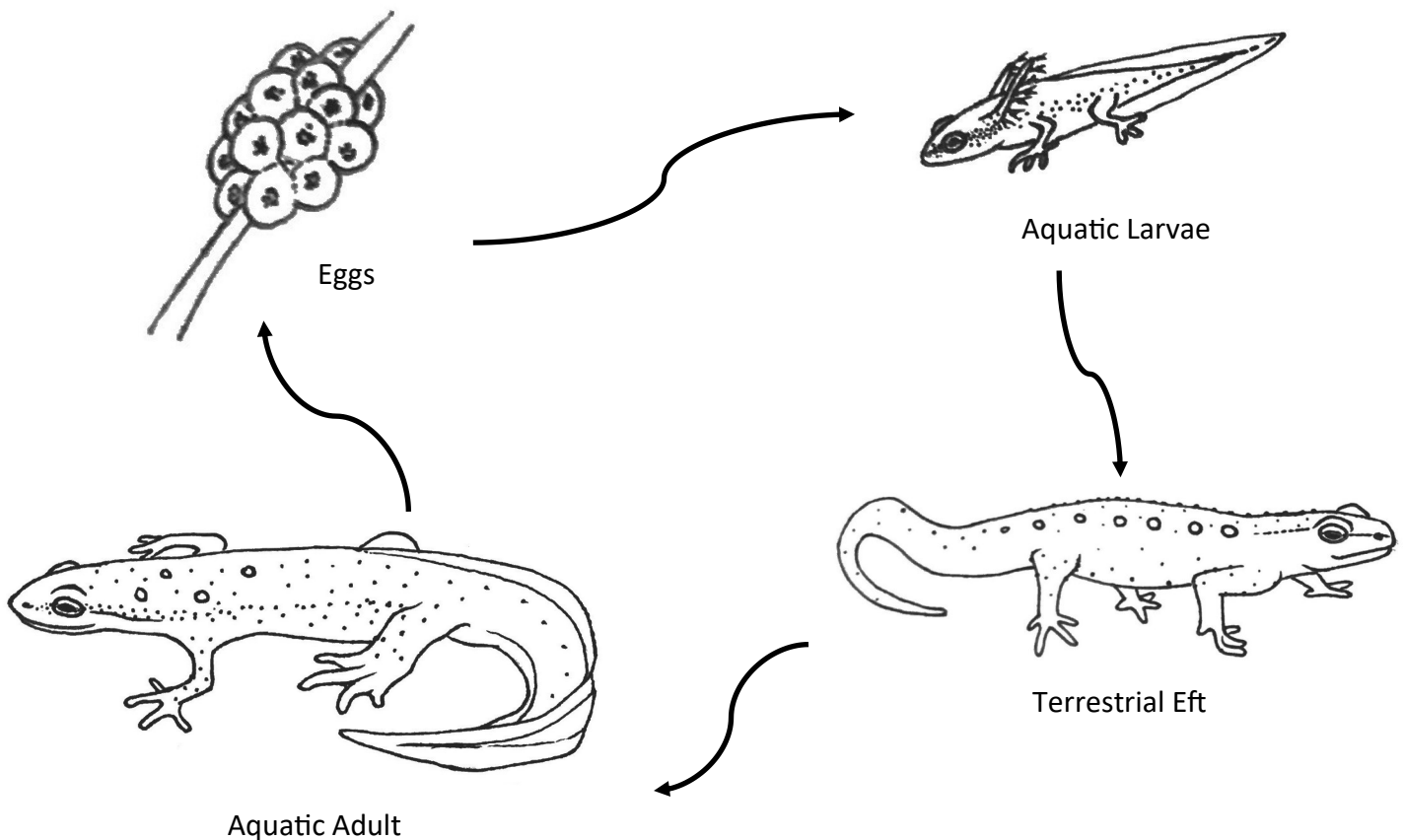
**Red
Salamander**

Red to imitate
poisonous red efts!

Red-spotted Newt

Amphibians, like frogs and salamanders, grow up in a special way called *metamorphosis*. Have you ever heard about frogs starting their lives as tadpoles in the water? Most salamanders have a similar life cycle. Many salamanders lay their eggs in or around water. The eggs hatch and babies called *larvae* emerge. The larvae have gills and live in the water. Depending on the type of salamander, they can grow up to live on land or they can keep their gills and live in the water their whole lives.

Newts are a special type of salamander. Their eggs hatch into aquatic larvae. Then, the gills disappear and they leave the water to become a terrestrial juvenile phase called an *eft*, which are bright red or orange. They can be efts for many years. Then, the adults develop flatter tails, slimier skin, and darker colors and return to the water.



Green Anole

Green anoles are lizards that eat small insects. They can change color from bright green, to brown, or gray. The dewlap is red, which is a flap under the chin that male anoles can fold out to display to other anoles when defending their territory. Can you color this green anole with a red dewlap and choose which color the body is?

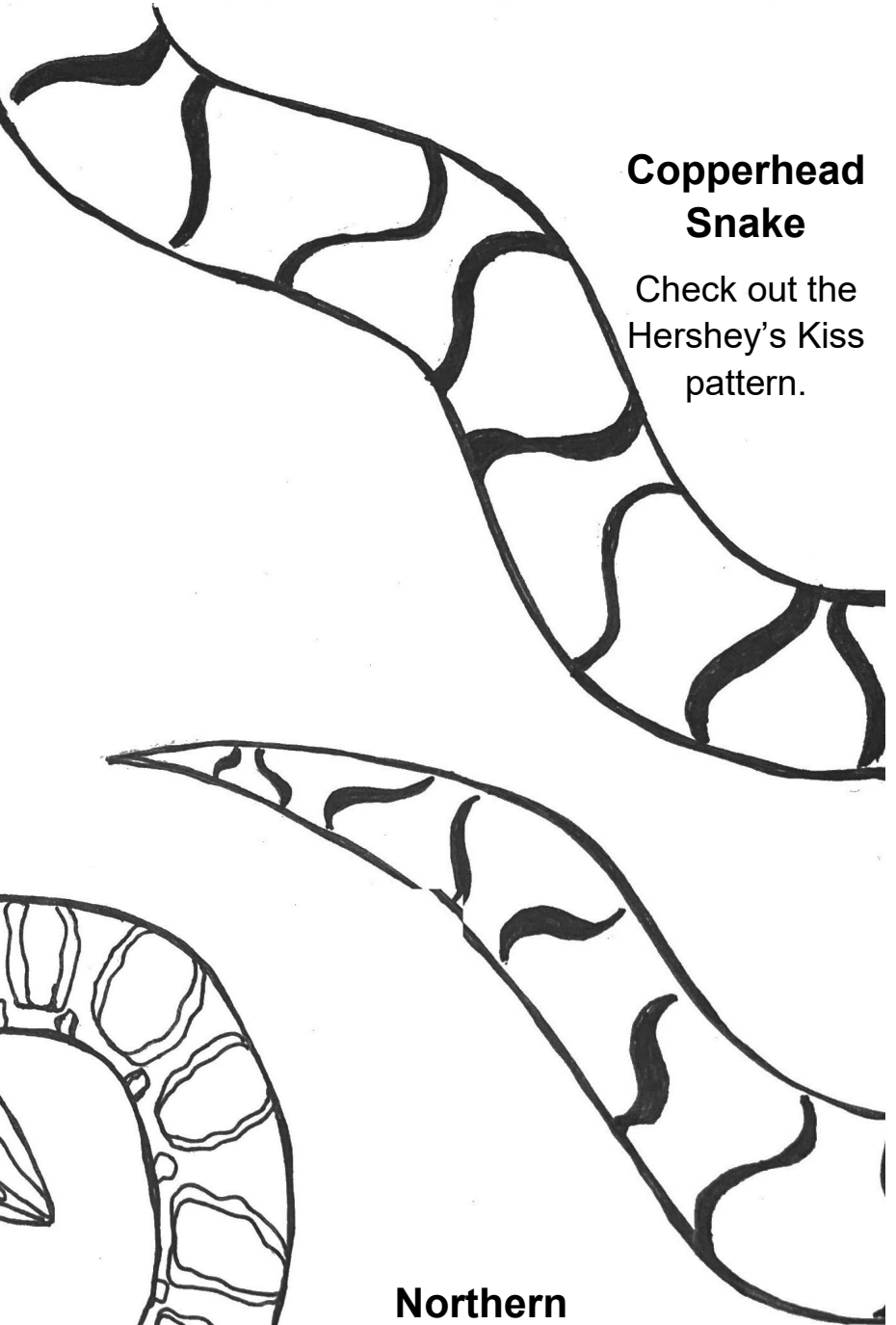


Snakes Galore!



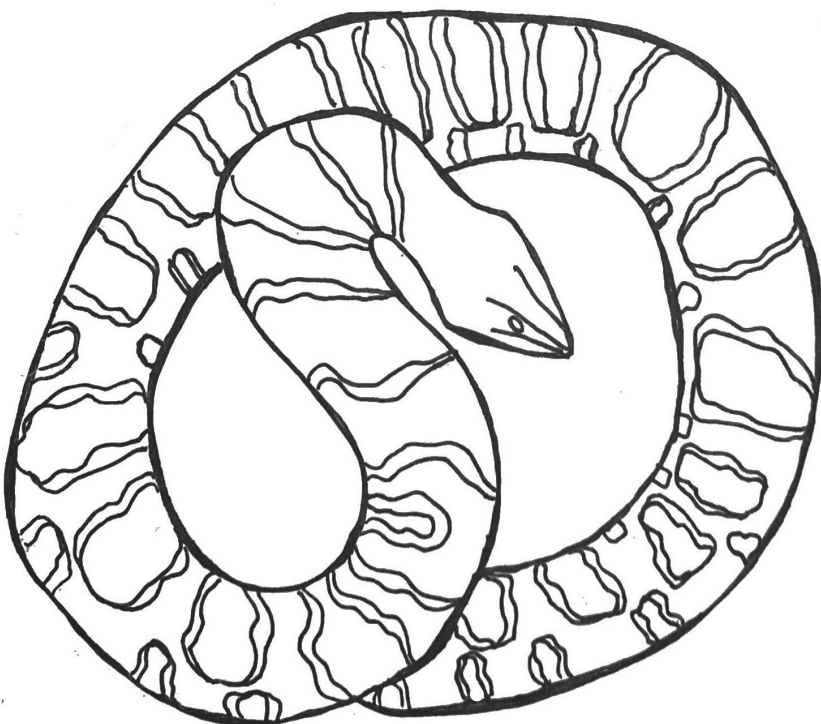
Eastern Garter Snake

Gets its name from the stripes on its back.



Copperhead Snake

Check out the Hershey's Kiss pattern.



Northern Water Snake

Look for it in a creek near you.

Learn More about Your Nature Preserves



Want to Learn More? Visit one of your Nature Preserves!

Annie Louise Wilkerson, MD Nature Preserve

5229 Awls Haven Drive Raleigh, NC 27614
919-996-6764

Durant Nature Preserve

8305 Camp Durant Rd (North Entrance), Raleigh, NC 27614
3237 Spottswood St (South Entrance), Raleigh, NC 27615
919-878-9116

Horseshoe Farm Nature Preserve

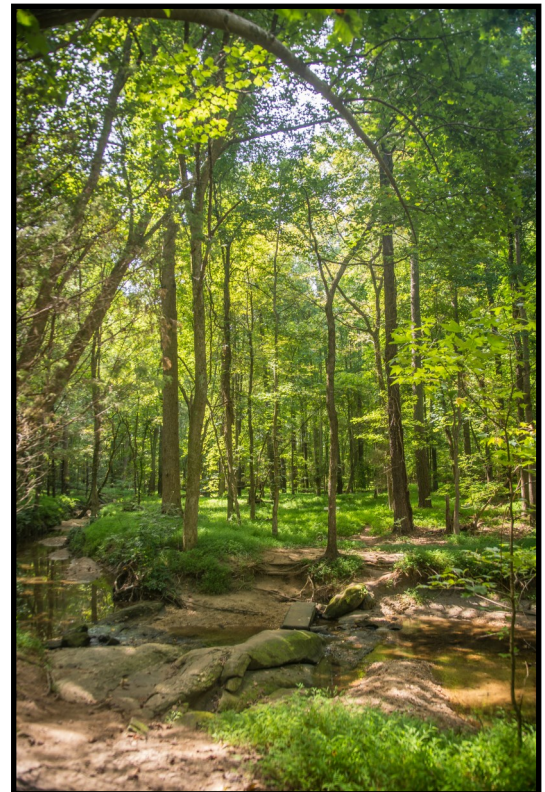
2900 Horseshoe Farm Road, Wake Forest, NC 27587
919-878-9116

Walnut Creek Wetland Park

950 Peterson Street Raleigh, NC 27610
919-996-2760

Or find a park close to you:

<https://maps.raleighnc.gov/parklocator/>



For more virtual educational resources, visit:

<https://raleighnc.gov/play-anywhere>



Sign up for our **Nature Preserves Newsletter** with engaging activities by visiting our webpage or scanning the QR code.

<https://raleighnc.gov/parks/content/PRecRecreation/Articles/NaturePrograms.html>

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