



# IT'S TIME TO EXPLORE YOUR POLK COUNTY BACKYARD



**4-H**   
**GROWS HERE**  
**WEEK THREE:**  
**THE REPTILES &  
AMPHIBIANS ISSUE**

- The Importance of Herps (p. 2)
- Understanding Ectotherms (p. 3)
- Herps in Hiding (p. 4)
- Safer Herp Hunting (p. 5)
- Remarkable Reptiles (p. 6)
- Awesome Amphibians (p. 7)

## Lizards & Frogs & Everything Nice

Dear 4-H Families,

If your backyard is anything like mine, over the years, I have seen a lot of different kinds of reptiles and amphibians. With the warmer weather, you may be spotting them already this spring.

This week, you will become a **herpotologist**, which is someone who studies these creatures. And we have a bunch of info and plenty of activities to keep you busy exploring the ones who live near your house. We even have some checklists so you can track the ones you find!

They hide well, though, as you will discover, so you'll definitely need to keep your eyes peeled!

**Polk County 4-H Youth  
Development Agent  
Helen Blackwell**



### Contact Helen

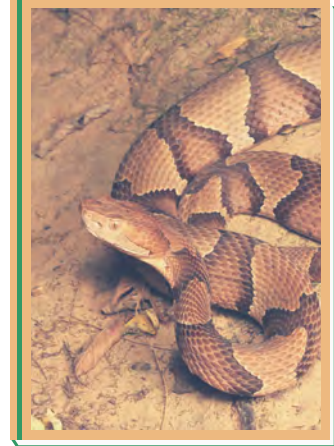
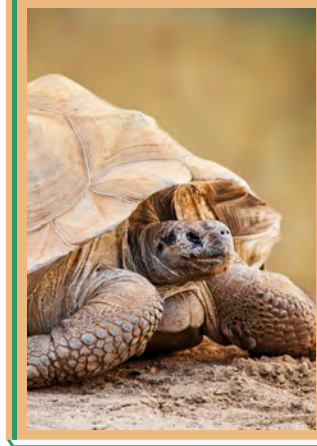
Some of the content for this newsletter was pulled from the NC State Extension "Reptiles and Amphibians in Your Backyard" publication.



# THE IMPORTANCE OF HERPS

Scientists put amphibians and reptiles into a group called **herpetofauna**, or "**herps**" for short.

Amphibians and reptiles are an important part of the ecosystem of North Carolina; in fact, they're an important part of any ecosystem where they live!




Some are predators that keep numbers of their prey in check, while on the other end of the food chain, they serve as food for important prey. A healthy, diverse herp community is a good indicator of environmental health. On the other hand, herp absence from an area where you would expect to find them can indicate that there is an environmental problem.

## So how can we encourage herps to hang out in our backyards?



Discover easy-to-make suggestions for creating welcoming areas for herps in your yard!

 **PRINT THE INSTRUCTIONS**

## UNDERSTANDING ECTOTHERMS

So why are reptiles and amphibians classified into the same group? The characteristic they share in common is that they are both **ectotherms**. That means that they are cold-blooded animals that can't physically control their body temperature through sweating and shivering. Instead, ectotherms use the environment to regulate body heat.



### Hands On Activity



**Explore what it is like to be cold-blooded like lizards by conducting an experiment about temperature change.**

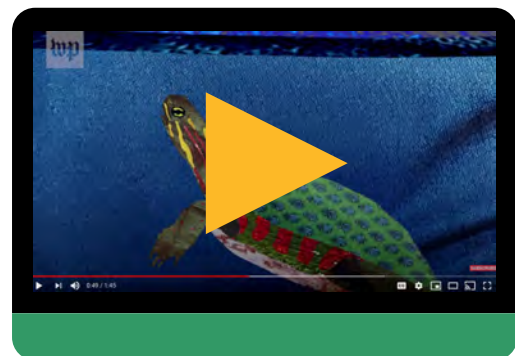
Place two identical glasses of ice water outside, one in the shade under a tree and one in full sunshine. Measure how long it takes for the temperature in each glass of water to change 10 degrees. Try placing two glasses of ice water on rocks and see how the experiment changes.

Put one glass on a dark rock and one on a light-colored rock next to each other in the same location. Which one changes temperature more quickly? Think of other physical locations where the water might warm up faster (in sand, for instance). Test your theories.

When they are cold you will find them sunning and when they are hot you will find them in shady places. You will see them doing this throughout the day. Some even hibernate during cold weather, drastically slowing down their body processes and remaining dormant and hidden until temperatures rise.

## How do turtles survive the winter?

**Watch this video to find out.**





## HERPS IN HIDING



Even when temperatures are favorable, reptiles and amphibians often remain hidden from view. Frogs like the American bullfrog spend much time in the water, where they quickly submerge when startled. Many snakes, such as the eastern hognose snake, box turtles, and toads are well camouflaged and blend easily into the color of the forest floor. Salamanders dwell under logs, leaves, and rocks.

And because ectothermic animals do not expend energy to regulate their body temperatures, they eat less often than endotherms, so they are less likely to be seen foraging for food.

### Which is the Winner?

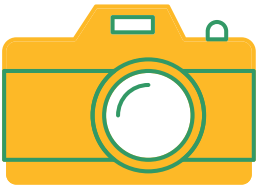
Take a look at the camouflaged herpetofauna in these images. Which one do you think does the best job of keeping itself hidden from predators?



## SAFER HERP HUNTING

So let's get outside in our yards and start exploring. You never know what you are going to see or experience. However, let's lay some ground rules to keep you and the animals you are exploring safe.

While you enjoy a front row seat to some of nature's most spectacular and unique creatures, do your part to help maintain them for future generations.



A safe way to enjoy the subjects you find is through **photography!**

Amphibians and reptiles make excellent photo subjects with a wide variety of color, shapes and reactions. They can be approached closely enough that specialized zoom lenses and equipment to photograph them are not necessary. Most species can be photographed with a digital camera, smartphone or point-and-shoot camera.



### The 4-H Herp Map

**We've created a local 4-H Google Map where you can take pictures of the reptiles and amphibians you spot around our county and share them for others to see!**

**What do you need to get started? Just a camera or smart phone and a Google account!**

**[Click here](#) to see the images already uploaded.**

**GET THE INSTRUCTIONS**

**Need help identifying the reptiles & amphibians you find? This site can help!**



**[Amphibians & Reptiles of NC](#)**

# REMARKABLE REPTILES

Reptiles are a class of vertebrates made up mostly of snakes, turtles, lizards, and crocodilians.

## LIZARDS

**North Carolina is home to many species of lizards, none of which are dangerous. Lizards can be very abundant in some areas but are often difficult to spot and even more difficult to capture. Because of their abundance, lizards play important roles in food chains and benefit humans by controlling insect populations.**



### Lizards to Look for in Polk County

- Green Anole
- Five Lined Skink
- Broad Headed Skink
- Eastern Fence Lizard
- Six Lined Racerunner
- Ground Skink,
- Southeastern Five Lined Skink

### Turtles to Look for in Polk County

- The Eastern Box Turtle ( the only land turtle in NC),
- Common Snapping Turtle
- Painted Turtle
- Bog Turtle
- Common Musk Turtle



## TURTLES

**Overall, twenty species of turtles, belonging to six different families inhabit North Carolina. Five of these species are sea turtles and one (the Eastern Box Turtle) is primarily terrestrial. The rest are semi-aquatic, inhabiting North Carolina's ponds, wetlands, and other water bodies. The greatest threat to turtles is habitat loss.**

## SNAKES

**Snakes lack external ear openings, moveable eyelids, and legs. They are meat-eaters and have a unique anatomy which allows them to swallow and digest large prey. There are only two venomous snakes in Western North Carolina, they are the Copperhead and the Timber Rattle Snake. In addition, there are 19 non-venomous snakes.**



### Non-Venomous Snakes to Look for in Polk County

- Worm snake
- Scarlet snake
- Racers
- Ring-necked Snake
- Corn Snake
- Rat Snake
- Eastern Hognose
- Queen Snake
- Pine Snake
- Rough Green Snake
- Eastern Milksnake
- Red-bellied Snake
- Southeastern Crowned Snake

# AWESOME AMPHIBIANS

Amphibians are small vertebrates that need water, or a moist environment, to survive. The species in this group include frogs, toads, and salamanders. All can breathe and absorb water through their very thin skin.

## FROGS/TOADS

**Frogs are known to have long legs which allow for excellent leaping ability. They also have smooth skin. Toads, on the other hand, have shorter legs which make hopping easier. Their skin is warty. Adult frogs and toads are carnivorous. Breeding usually occurs in the water, and generally eggs are laid in submerged vegetation.**



## Frogs & Toads to Look for in Polk County

### FROGS

- American Toad
- Fowler's Toad

### TOADS

- Spring Peeper
- Cricket Frog
- American Bullfrog
- Green Frog
- Wood Frog

## Salamanders to Look for in Polk County

- Eastern Hellbender
- Mole Salamander
- Marbled Salamander
- Red Spotted Newt
- Red Salamander
- Mud Salamander
- Spring Salamander
- Blue Ridge Two-Lined Salamander
- Four Toed Salamander



## SALAMANDERS

**Salamanders can be found in both aquatic and terrestrial habitats, though water is essential for survival. Most salamanders are nocturnal (come out at night) and can be found under rocks and fallen trees. NC has an amazing abundance of salamanders because of its diverse geography from mountains to coastal swamps.**

**Grab a Printable Checklist for your very own Polk County Herp Hunt!**

