

Dedicated to the Memory of Commissioner Enoch S. "Inky" Moore Jr.

# PLAY

Pennsylvania • League • of • Angling • Youth  
SUMMER 2002

## Introduction to Reptiles

When asked to name a reptile, would you say a "dinosaur"? How about a crocodile? Would you say "fence lizard"? How about a stinkpot turtle? Even though dinosaurs lived long ago and crocodiles do not live in Pennsylvania, there are reptiles in

Pennsylvania. In fact, there are 39 reptile species in Pennsylvania. Pennsylvania reptiles inhabit woodlands, wetlands and our waters. This special issue of PLAY is about reptiles.

### What makes an animal a reptile?

All reptiles, including those long extinct, share characteristics. After reading this issue of PLAY, you can list those traits. Six reptile species are endangered and two are threatened. They are protected by law. Did you know, though, that the Commission protects all reptiles in some way? For example, there is an open fishing season for snapping turtles and a limit on how many you can keep.

Northern  
fence  
lizard—  
*Sceloporus  
undulatus  
hyacinthinus*

photo-Art Michaels

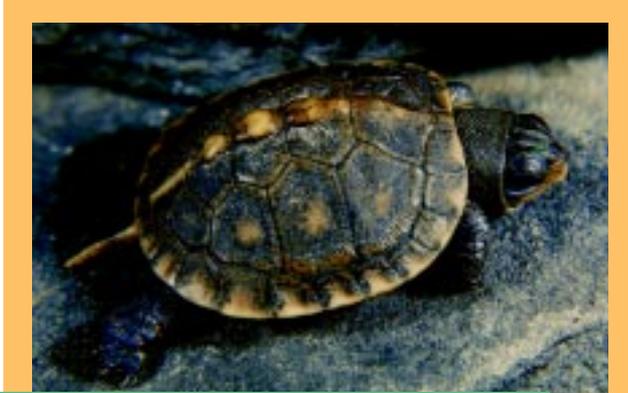
When you are done with this issue of PLAY, pass it on. Remember that subscriptions to the PLAY newsletter are free to other kids ages 8 to 12. Teachers and youth group leaders can also get PLAY newsletters. Contact the Fish & Boat Commission for more details on this program.

Don't forget to check out the Commission's web site, [www.fish.state.pa.us](http://www.fish.state.pa.us). The site is loaded with information on reptiles, amphibians, fish, fishing, boating and water safety.





# What is a “Reptile”?



Have you ever wondered what makes an animal a reptile? Here are some characteristics that can help you tell the difference between reptiles and other animals.

**Skeleton:** Reptiles are vertebrates. Reptiles have an internal skeleton, unlike insects, which have an external skeleton.



**Skin:** Reptiles have dry, scaly skin. Some reptiles such as lizards have small scales. Turtles have much larger scales called “scutes” (rhymes with “boots”). No reptiles have slimy skin, as do frogs and salamanders.



**Feet:** Reptiles have claws. Amphibians, such as frogs, toads and salamanders, do not have true claws.

**Breathing:** Reptiles have lungs. Most amphibians go through a life stage during which they have no lungs.



**Body temperature:** Reptiles are “ectotherms.” In reptiles the body temperature varies with the temperature of the environment. Mammals and birds regulate their own body temperature. They are called “endotherms.”



**Eggs and young:** Reptiles produce hard-shelled eggs or bear live young. Most amphibians lay eggs that require water to survive.

# Turtle TRICKERY

Turtles are unique. Can you name another critter with such a shell? Some animals have tough, leathery skin, like the armadillo. Others have heavy scales, like an alligator. But none has a covering as unusual as a turtle's shell. And it isn't just the simple outside cover that it appears to be. *Can you guess which body parts make up the shell?*

If you guessed spine and ribs, you were right. There is no trick here. A turtle's shell is nothing more than an external spine with fused ribs. Peek under a turtle shell and you'll notice that those "ribs" look more like bony plates. These bony plates are covered with scutes.

## Turtle tidbit:

Did you know that Native Americans also found turtles to be unique? They referred to their world as "turtle earth." Turtle shells were used as rattles in sacred ceremonies. They were even used as bowls or cups!



Eastern box turtle—*Terrapene carolina carolina*



Common snapping turtle (juvenile)—*Chelydra serpentina serpentina*



Stinkpot turtle—*Sternotherus odoratus*

# ECTO-EXPERIMENT

Like you, ectotherms die if their body temperature gets too warm or too cold. So ectotherms have several strategies to keep their body temperature within survival range.

You can try it for yourself! Conduct the following experiment.

## Equipment and materials needed:

- ✓ Outdoor thermometer
- ✓ One sheet of black paper
- ✓ One sheet of white paper
- ✓ A bowl, pot or tub of water

1. Assemble the materials and on a sunny day go outside.
2. The ideal spot for this experiment has a mix of sun and shade.
3. Your job is to keep the body of your thermometer "creature" between 60 and 75 degrees. By moving your thermometer to different locations outside, you should try to keep the temperature in this range. **Be creative!** Use the water and paper to help. On a notepad keep track of the temperature and the location of your thermometer. Record the temperature every five minutes, for about a half-hour.

4. Answer the following questions:
  - A. How long did it take to reach 60 degrees at first? How did you do it?
  - B. What did you do when the temperature rose too high?
  - C. What did you do when the temperature dropped too low?
  - D. Did the temperature ever go below 60 degrees or above 75 degrees? What would happen to animals in the wild that could not stay within their temperature range?
  - E. How did you use the white paper, black paper and water to help the temperature stay within the range?
  - F. Describe some ways that you've seen amphibians and reptiles trying to regulate their body temperature.



Adapted from "Hot 'n' Cool Herps," Ranger Rick's NatureScope: Let's Hear it for Herps! Washington, D.C.: National Wildlife Federation, 1987.  
Adapted for the Pennsylvania Amphibians and Reptiles Curriculum Guide, PA Fish & Boat Commission, with permission of the McGraw-Hill Companies.

# Ectotherms and Endotherms

What does your body do to keep you warm on a cold day? How does a dog stay cool on a hot summer day? What does a chickadee do to stay warm on a cold winter day? How does a snake shake off the cold of a spring night?

Your body generates heat when it uses up fuel like fat and carbohydrates. When you get cold, you shiver, and your body "burns up" more fuel. Dogs pant to help stay cool on hot days (you sweat). Birds fluff their feathers to help create more insulation around their bodies to stay warm (you get "goose bumps"). The bodies of people, dogs, other mammals and birds generate their own heat and maintain the body at a specific temperature. That temperature stays very constant and changes only a little when stressed (for instance, you get a fever of 100 degrees—2 degrees warmer than "normal" body temperature). These animals are called *endotherms*. "Endo" means "inner." "Therm" refers to temperature.



Reptiles are ectotherms. "Ecto" means "outer." Their body temperature isn't so steady—it changes with the temperature of the environment. Many people think that the body temperature of an ectotherm is the same as its environment. That's why some call these animals "cold-blooded." Even though the body temperature of an ectotherm is regulated mostly by its environment, internal heat is produced by body functions.

**Hold this section up to a mirror to read the answers!**

Answers: D. When an animal's body temperature rises too high or goes too low, body processes will stop and the animal will die. E. Water can be used to help cool the thermometer. White paper may be used to reflect the sun's rays and protect the thermometer from becoming too hot. Black paper can be laid over the thermometer to help raise the temperature. Black absorbs all light rays, including infrared or "heat" waves. F. Turtles bask on downed trees, rocks and shorelines. They can also burrow into mud or dead leaves. Snakes find shelter in rock dens where it is shaded and cool. They can also move onto exposed rocks warmed by the sun.

# There's a snake in my basement!

There are plenty of chances for most Pennsylvanians to have a "snakey" encounter. Snakes occasionally enter yards or buildings. This often happens when humans build where snakes live. Even though your basement isn't the preferred habitat of a black rat snake, it may be there because the basement offers shelter or food. Which would you prefer to have, a snake or mice and rats? Since the only good way to get a snake out of a building is physically moving it, prevention is the best approach.

If you find a snake on your patio or in your basement or garage, don't kill it! Snakes are important parts of Pennsylvania's biodiversity. Be sure the snake is nonvenomous before moving it—if you plan on doing so yourself. If you are uncomfortable removing a snake or if it's venomous, contact a local animal removal specialist. The phone numbers for these businesses are found in the yellow pages of your phone directory.



Black rat snake- *Elaphe obsoleta obsoleta*

## TIPS for keeping snakes out of buildings

- Move shelter or reproductive areas such as piles of firewood, stones and mulch away from buildings.



- Eliminate food sources for snakes such as mice, rats and voles.
- Snakes are poor climbers, so seal openings and cracks in buildings at ground level.



There is no known effective snake repellent that can be used safely without endangering humans and pets, and especially the snake!

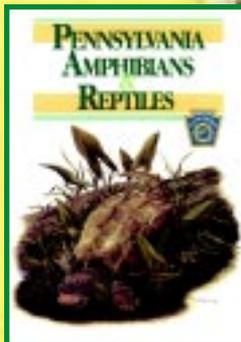


Visit the Commission's web site, [www.fish.state.pa.us](http://www.fish.state.pa.us), for information on snake identification.



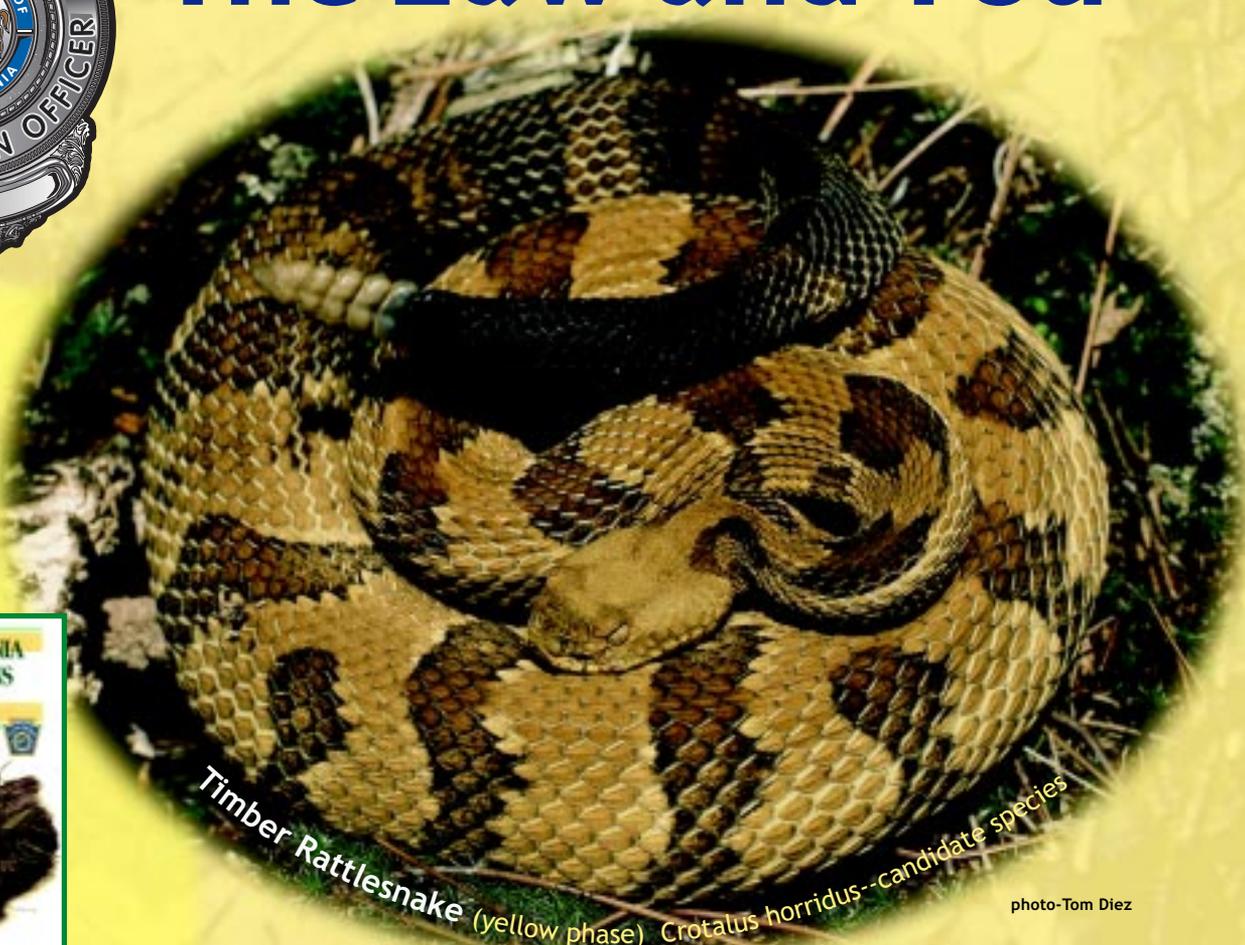
# Reptiles in Pennsylvania— The Law and You

Stay  
within  
the law  
and  
know  
your  
species!



*Pennsylvania Amphibians & Reptiles* is a 161-page full-color book that contains information and identification details on Pennsylvania's amphibians and reptiles. The book sells for \$9.43 plus 57 cents PA state sales tax and \$3.00 shipping and handling (total of \$13).

*Please send orders to:* PA Fish & Boat Commission, Educational Media Services, P.O. Box 67000, Harrisburg, PA 17106-7000.



Timber Rattlesnake (yellow phase) *Crotalus horridus*--candidate species

photo-Tom Diez

A fishing license is not required to take, catch or possess reptiles in Pennsylvania. It is unlawful to disrupt the nest or possess the eggs of any wild reptile in Pennsylvania. Except for snapping turtles, reptiles taken in Pennsylvania may not be offered for sale. Except for endangered and threatened species, snapping turtles and timber rattlesnakes, the reptile season is open year-round, and both the daily limit and possession limit is two (2). Consult the current *Summary Of Fishing Regulations and Laws* for additional clarification and information.

## I Found a Reptile—Should I Keep It?

Wild turtles and snakes are difficult reptiles to keep as pets. In captivity it is hard to re-create wild conditions, and animals usually

don't remain healthy. If you wish to keep a reptile as a pet, visit a pet store and purchase a captive-bred species.