



Phone: 559-539-2944

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## Herpetology

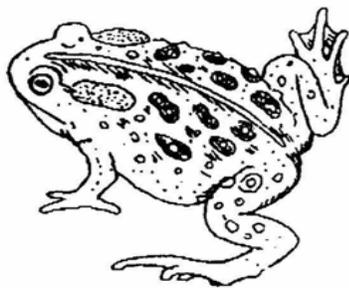
Herpetology is the study of two groups of animals, amphibians and reptiles. While these two groups are alike in many ways, they are also very different. Because of this, herpetologists usually specialize in one group or the other. Amphibians and reptiles are both VERTABRATE animals.

This means that they have a backbone.

Amphibians and reptiles are both EXTOTHERMIC animals. Another name for this is POIKILOTHERMIC. This means they are cold-blooded. You and I, and other mammals and birds, are ENDOTHERMIC. Our body temperature remains the same most of the time, and is kept the same by our metabolism. This is our body burning the food we eat to produce body heat and energy. Reptiles and amphibians, as well as fish, insects and other invertebrates, depend on outside sources for their body heat. A lizard will sit in the sun to keep warm. A turtle will bask on a log, storing up heat in its body from the sun. When the temperature of its surroundings gets too cold, a reptile will become inactive or even unable to move.

### AMPHIBIANS

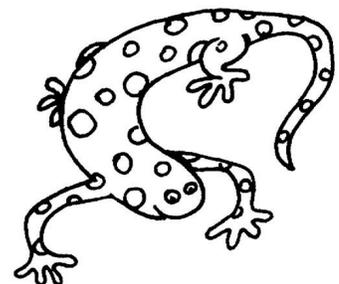
Amphibians have moist skin (not covered with fur, feathers, or scales), and have no true claws or nails. Some lay their eggs in water and go through an aquatic larval stage know as being a tadpole or polliwog. During this stage they breathe through gills and later develop lungs and emerge onto land. They need moisture to survive and will die if they dry out.



**Frogs** are the major group of amphibians. There are roughly 2,510 kinds of frogs in the world. This includes toads, treefrogs, spadefoots, and peepers. Adult frogs are tailless, and their hind legs are longer than their front for leaping or hopping.

**Salamanders** have tails, and generally resemble lizards. They do not have scales or claws though. Mudpuppies, Congo Eels, Water Dogs, and Newts are all types of salamanders. One group of animals called Sirens contains three species that have just two front legs and live in the water and breath with gills. Some scientists consider them salamanders, but other put them in a group of their own. A third group of amphibians are called **Caecilians**. These are legless and look like giant earthworms. However, they do have backbones! These are usually found in tropical regions of the world.

There are no Caecilians in the United States.





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### Reptiles

Reptiles were the first vertebrate animals to break ties with the water by developing dry, moisture-conserving, scale-covered skin and self-contained eggs they were able to lay on land. They are divided into four groups:



**Turtles** include tortoises, turtles, and terrapins. Their pelvic girdle and shoulder girdle are INSIDE their rib cage. This is a totally unique adaptation that has served them well for more than 200 million years. Their backbones and ribs are fused together to form the foundation of their shell. There are about 230 kinds of turtles in the world.

**Crocodylians** are large reptiles and include the crocodiles, alligators, caiman, and gharials. There are only 23 kinds of crocodylians in the world. Only two can be found in the United States – the American Alligator and the American Crocodile. Both are found in the Southeast and the crocodile is only found in Florida.

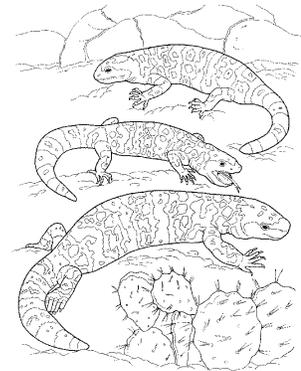
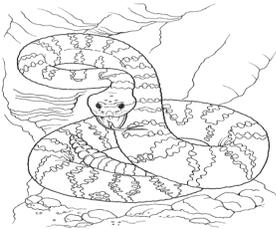
**Tuataras** are a reptile group all to themselves. It is the sole survivor of a group that once had many species, but all of them had died by the time the dinosaurs went extinct 65 million years ago. About 1500 of these reptiles live on a few islands off of New Zealand, and nowhere else in the world. It looks like a lizard, but on the inside it is much different.



**Snakes, Lizards, and Amphisbaenas** make up the largest group of reptiles. There are about 6,000 species throughout the world. These reptiles are grouped together because they share many characteristics. There are about 3,000 kinds of lizards, almost as many snakes, and 40 or so amphisbaenas. Amphisbaenas are typically legless, with a few having only very tiny front limbs.

There are only 3 venomous lizards in the world. The Komodo Dragon – found in the Komodo Islands, the Gila Monster – found in the Southwestern United States, and the Mexican Beaded Lizard.

Only about 10 % of the world's snakes are venomous. In California only the rattlesnake is dangerous to people. They are generally not deadly and typically wish to be left alone as much as you want to leave them alone. A bite is extremely painful however, and treatment can run upwards of \$100,000.



### **Conclusion**

Every animal has a place in this world and amphibians and reptiles play a vital roll in each of their specialized habitats. Many snakes will eat rodents that would be harmful to crops, as well as to humans through the carrying of disease. Frogs and lizards eat tons upon tons of insects that we consider to be pests. All animals have a job to do and we hope that you will do your job by helping to preserve these wonderful species and the homes they live in.