Wildlife Express

VOLUME 38 | ISSUE 7 MARCH 2025

Lizards

Inside

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The Lizards

Lizards are reptiles that first appeared on Earth about 200 million years ago. They are closely related to snakes. Over 4,675 different species of lizards can be found worldwide. This includes skinks, iguanas, monitors, geckos, Gila monsters and others. You can find lizards on every continent except Antarctica.

Lizards tend to have small heads and short necks. Their bodies and tails are long. Here in Idaho, you can find 11 different species of lizards. Most of them live in the southern part of the state where it is warmer. Two species, the western skink and northern alligator lizard, can be found living farther north in Idaho's panhandle.

Lizards around the world can be very large or tiny. At ten feet long, the Komodo dragon is a huge lizard. On the other hand, the dwarf gecko is just over a half inch in length. Idaho's lizards measure in the two to 10-inch range. Our smallest lizard is the side-blotched lizard and our largest is the Great Basin collared lizard.

Like snakes, lizards smell with their tongues. They pick up scent molecules on the air and bring it into their mouths. Specialized cells in the roof of the mouth detects these scent molecules. This is called the Jacobson's organ. It helps the lizard learn about its surroundings. Unlike snakes, lizards have ear openings for hearing. They are also sensitive to vibrations. If you watch a lizard, you will see it blink. That's because most lizards have eyelids. They clean and protect the lizard's eyes. Geckos are a lizard that does not have eyelids. Instead, they have a protective membrane covering their eyes. To keep its eyes clean, geckos lick their eyes.

Lizards eat a wide variety of things from plants to animals. Insects, ants, worms and other invertebrates, small mammals like mice, small birds, other lizards, fruits and flowers are all eaten by lizards. Not all lizards eat all of these things. Some are carnivores while others eat mainly plants. For example, the marine iguanas living in the Galapagos Islands eat algae. They swim underwater to graze on algae growing on rocks. All this eating gives lizards fat that they store in their bodies. This is especially important for lizards living in colder climates. Their stored fat will be used during winter when they are inactive. Stored fat is also important when food becomes scarce such as in early spring or late fall. Where do lizards store a lot of their body fat? In their tail! In fact, some lizard species store up to 60 percent of their body fat in their tail.

Speaking of tails, lizards are known for being able to break off their tails to escape a predator. This leaves the predator focused on the thrashing tail, and the lizard can escape. This is called tail autotomy (ah-TOT-o-ME). Lizard tails have structures called fracture planes. They cause the tail to break off if it is twisted. A lizard tail that is pulled is less likely to break off. This makes sure that when a lizard breaks off its tail, it really needs to do so. Over time, many lizards can grow back all or part of their tail.

Lizards really are cool animals!

Amazing Idaho Lizards ...

Photo: CC-BY Ron Wolf
at Flickr Creative Commons

Western skink

Great Basin collared lizard

Photo: CC-BY Chad Lane
at Flickr Creative Commons

Western fence lizard

Photo: CC-BY Louise Whitehead
at Flickr Creative Commons

Long-nosed leapard lizard

Female Long-nose: CC-BY
Conner Long at Wikipedia.com

Northern alligator lizard

Photo: CC-BY Max Seldes at
Flickr Creative Commons

Sagebrush lizard

Photo: CC-BY Renee Grayson at
Flickr Creative Commons

... More Cool Lizards!

Desert horned lizard

Photo: CC-BY Daniel Carhuff at Flickr Creative Commons

Photo: CC-BY Idaho Fish and Game

Western whiptail lizard

Photo: CC-BY rswinkleman at Flickr Creative Commons

Pygmy short-horned lizard

Photo: CC-BY Roger Uzan at Flickr Creative Commons

Side-blotched lizard

Photo: CC-BY Frank Portillo at Flickr Creative Commons

Greater short-horned lizard

What is a Reptile?

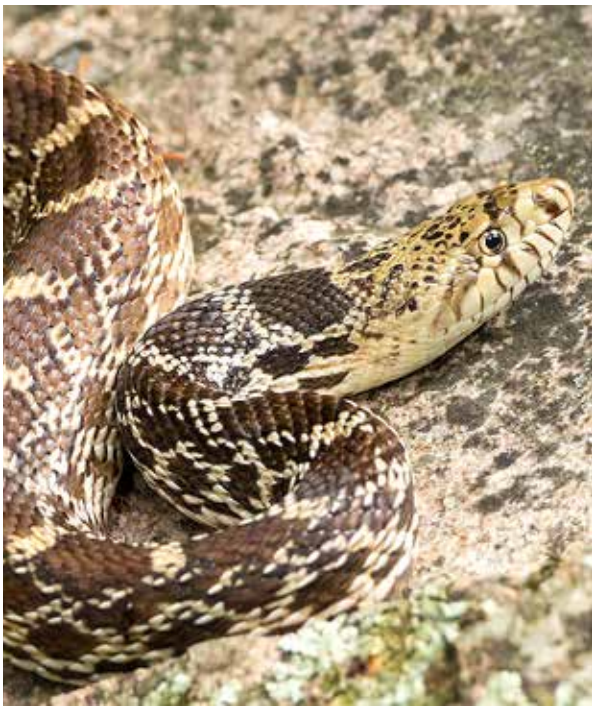
When you think of a reptile, you might think of something with scales. Or an animal that lives in the desert. Reptiles are these and so much more. They are an ancient group of animals that first appeared on Earth about 315 million years ago. The modern-day ancestors of these reptiles include turtles, snakes, lizards, and crocodilians.

Reptiles live on every continent except Antarctica. Since they are cold-blooded, cold habitats are not very good for reptiles. This is why you find more reptiles in warmer climates. While some reptile species call Idaho home, we do not have as many species as southern states. This is because our cooler climate.

As a group, reptiles are covered by a thick skin that is protected by scales. Some scales like those of skinks are smooth and shiny. Other scales can be rough and very hard. Scales are made up of dead cells. They form a hard covering on the animal's body kind of like armor. It protects the reptile from the sun and helps it keep water inside its body. Scales also help protect reptiles from predators looking for a meal. The patterns on some scales can also help reptiles hide. Sometimes, scales can be brightly colored. This is often seen in males and has to do with courtship. It is the guys' way of showing off for the girls.

Most reptiles lay eggs, but some reptiles give birth to live young. This includes four of Idaho's snakes and several species of lizard. Unlike birds or mammals, young reptiles are on their own as soon as they are born or hatch from an egg. An exception is the crocodilians. The females of some species protect their young after they hatch. Like other baby reptiles, they can move around and hunt for their own food.

Reptiles can be tiny or huge! Saltwater crocodiles can grow to be 23 feet long. Compare that to Idaho's smallest lizard, the side-blotched lizard. It might only be one and one-half inch long. Sea turtles can weigh as much as 2000 pounds. In comparison, Idaho's western painted turtle weighs around one pound. With all their different sizes, shapes and the varied habitats in which they live, reptiles are a fascinating group of animals.



Are Birds Reptiles?

Have you ever heard that birds descended from reptiles? Well, that's silly, you might say. Actually, it's not silly at all. By studying fossils, scientists have determined that birds are the closest living descendants to dinosaurs.

The first bird was once considered to be archaeopteryx (arr-KEY-op-ter-ICKS). This group of animals had clawed wings, feathers and a furcula or wishbone. They lived about 150 million years ago. But scientists started to find bird-specific features on other dinosaur fossils. Feathers and bird-like skulls were found in fossils much older than archaeopteryx. Scientists began to piece together the mystery of how these features started to be seen in dinosaurs.

The first feature was walking on two legs, called bipedal locomotion. This places bird ancestors in the theropod family of dinosaurs. Theropods included T. rex and velociraptor. Simple feathers were the next feature to be found. They are considered modified scales. Simple feathers were followed by a wishbone that strengthens the bones of the chest, making the skeleton stronger for flight. More complex feathers started to appear. Wings were one of the last features that were found.

Once archaeopteryx and other ancient birds developed, this group started to change faster than other dinosaurs. The biggest change was in size. While many dinosaurs got larger, the ancestors of birds got smaller, and it happened very quickly. This let these bird ancestors take advantage of new habitats and food. Smaller animals were able to survive the great extinction event that killed most of the dinosaurs. Today, we see these dinosaur descendants flying and hopping around our yards and neighborhoods. It is amazing to think about how today's birds are modern day relatives of T. rex!

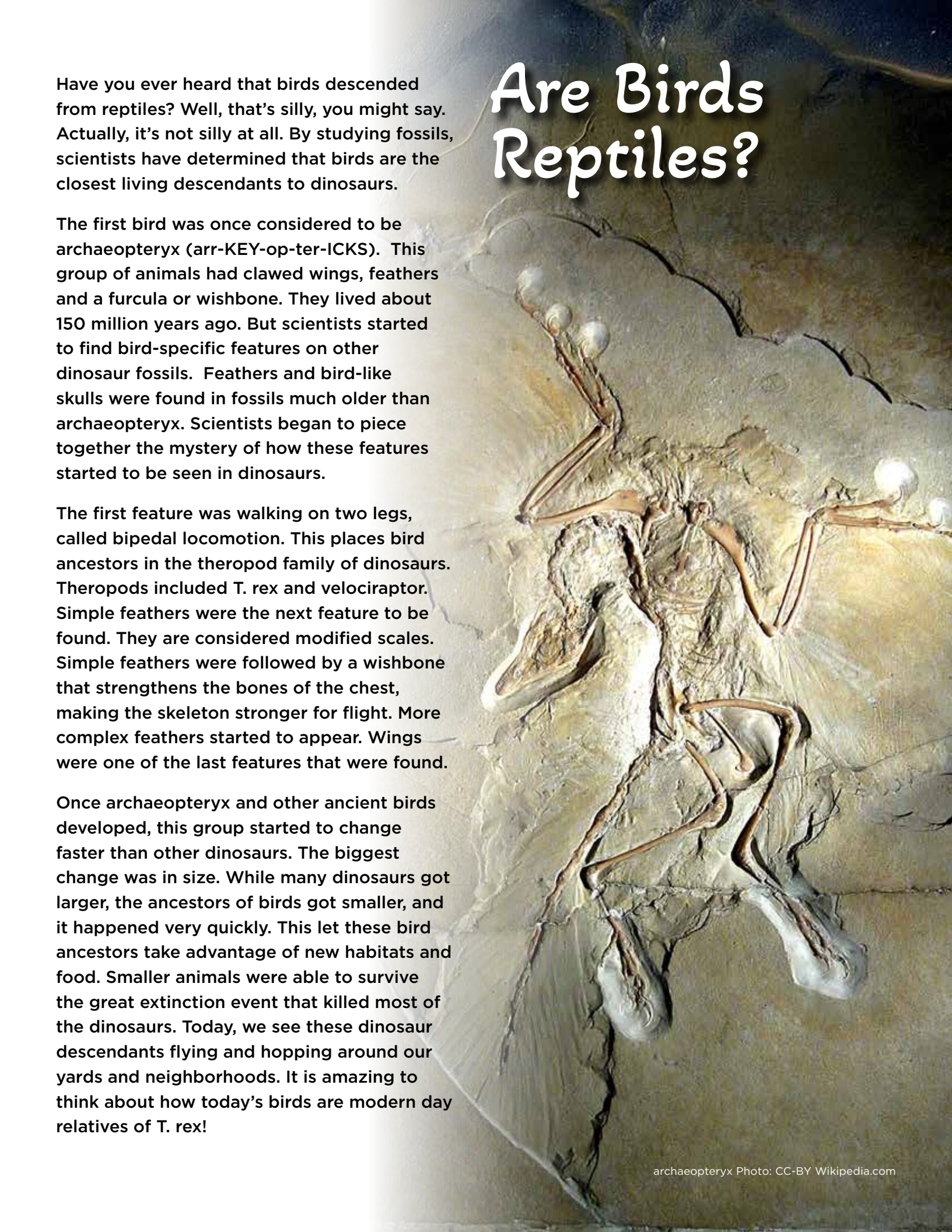


Photo: CC-BY Charles Peterson at Flickr Creative Commons

Animal Hide & Seek

When it comes to hiding, lizards are champions. Their drab colors help them hide. Splotches and stripes make patterns that can fool predators, keeping the lizard safe. This is camouflage at work. Camouflage means to blend in with your surroundings, helping you hide.

Staying still is an important part of making camouflage successful. Think about a deer fawn. They stay still, curled up on the ground. The fawn's spotted coat makes it look like the sun and shade dappling the nearby grasses. By staying still, the fawn's camouflage is perfect and can easily fool a predator. If the fawn jumped up and started to run, it may be seen. Camouflage would no longer help the fawn.

Camouflage also helps predators. Being hidden can help catch prey. A lizard camouflaged against a rock might look like just a rock to a juicy insect. This makes it easier for the lizard to get a meal.

Some animals do not look very camouflaged to our eyes. Zebras are a great example. Their bold black and white stripes seem obvious against the grasses of the African savannah. But this is not the case for a lion. These big cats do not see some colors very well. Grasses and trees look like shades of grey to lions. The zebras' stripes blend right in when a lion looks at them. A herd of zebra looks like a huge blob to a lion because the zebras' stripes blur together. This would make it harder for the lion to pick out one zebra to chase.

Whether hunter or hunted, camouflage helps animals survive.

Photo: CC-BY Richard Scenery at Flickr Creative Commons

Short-horned lizard Photo: CC-BY Frank Portillo at Flickr Creative Commons

Cold-blooded Critters

Animals are often described as being either cold-blooded or warm-blooded. Warm-blooded animals have blood that is warm. But does this mean that a cold-blooded animal has cold blood in its veins? Not exactly. What the term cold-blooded means is that the animal is the same temperature as its surroundings. A lizard basking on a rock in 80-degree temperatures will be 80 degrees. On a cool 50-degree fall day, that same lizard will be 50 degrees. The warmer the temperature, the more active a cold-blooded animal will be. Many reptiles bask in the sun to warm up their bodies. Their muscles work better when warm so they can move around and hunt for food.

It is possible for cold-blooded animals to get too hot. Even a cold-blooded lizard might not enjoy a 100-plus degree day. To avoid this, many cold-blooded animals are nocturnal, especially in the desert where temperatures can soar. They might be active only at dawn or dusk. Animals that are active at these times of day are called crepuscular (cre-PUS-cu-lar). Even in Idaho, reptiles avoid being active during the hottest parts of the day. They find shelter in the shade. Some lizards and snakes might crawl into the burrow of another animal to beat the heat.

Another term for cold-blooded is ectothermic (ek-toe-THER-mik). The prefix ecto means outside and the suffix therm, means heat. So, ectothermic means getting heat from outside. This is what cold-blooded animals do, they get their heat from outside their bodies.

Cold-blooded animals do not have to eat very often. This is because their metabolism is slower. Snakes might go for a week or even a few months between meals. In winter, reptiles like lizards and snakes go into a reptilian version of hibernation. This is called brumation (bru-MA-shen). It is like hibernation, except the reptiles stay somewhat active. On a sunny winter day, snakes can sometimes be seen sunning at their den entrance. As soon as the temperature falls, they go back into the den where they will hang out, waiting for the warmer days of spring.

Eggs and Live Young

When animals reproduce, they either lay eggs or give birth to live young. An animal that lays eggs is called oviparous (O-VIP-ar-us). An animal that gives birth to live young is called viviparous (vie-VIP-ar-us). Oviparous animals include amphibians, reptiles, fish and birds. Viviparous animals include mostly mammals. But like everything in nature, exceptions occur.

Lizard eggs
CC-BY Melinda at Flickr Creative Commons

About 20 percent of lizard species give birth to live young. Here in Idaho, this includes the northern alligator lizard, pygmy horned lizard and greater short-horned lizard. These baby lizards are born in mid-to-late summer and early fall. They can live on their own as soon as they are born.

The rest of Idaho's lizard species lay eggs. Female lizards find dark, moist places for their eggs such as under rocks, in the soil or sand, beneath plants or in other protected spots. While lizard eggs are leathery to the touch, they are still fragile. This is why female lizards find protected places to lay their eggs. After about 60 days, the lizards hatch out from their eggs. The hatchlings can live on their own as soon as they hatch. Most lizards lay a clutch of four to seven eggs. Larger lizards can lay more eggs. If food is plentiful, female lizards might lay several clutches of eggs each year.

Scientists recently discovered that the yellow-bellied three-toed skink from Australia can lay eggs and give birth during the same pregnancy. It was known that the species laid eggs in some areas and gave live birth in others. But a particular female gave scientists quite a surprise when she laid eggs and several weeks later gave birth to a live skinklet. It appears that this species can shift how it reproduces depending on the situation! This could be good in changing habitats. If it gets too cold or too dry, being able to shift how reproduction occurs could be helpful.

Stink Bug protecting the eggs.
CC-BY Stephen Mudge at Flickr Creative Commons

Northern alligator lizard

CC-BY Jonathan Coffin at Flickr CreativeCommons

Do Reptiles Make Good Pets?

With all their fascinating behaviors and interesting colorations, reptiles sound like awesome pets. Actually, they are not well-suited to life in captivity. Many species have very specific habitat requirements. Their enclosures must be heated just the right way. They need a place to get warm but also a way to cool off if they get too hot. Humidity is another important part of proper reptile care. Not enough moisture or too much can quickly kill a reptile. Being able to provide the proper food can also be a challenge. Many reptiles do not like to be handled; they might bite or scratch. Some reptiles are fragile and can easily be hurt if handled too much or improperly.

If you decide to get a reptile as a pet, make sure to find someone who has experience raising reptiles. They can help you learn proper reptile care. In addition, it is very important that you get your reptile from a reputable source. This means someone who has been breeding reptiles in captivity for many years.

Taking reptiles out of the wild is not a good idea. Wild animals are just that, wild. They do not easily adapt to living in a cage. They often die. Idaho has laws to protect wild reptiles. It is important to check with Idaho Fish and Game to learn about and understand the rules protecting wild reptiles. Help Idaho's wild reptiles by enjoying seeing them in their native habitat and leaving them where they belong.

Western skink

CC-BY Charles Peterson at Flickr Creative Commons

Go Herping!

BE OUTSIDE
IDAHO CHILDREN IN NATURE

Have you ever heard of herpetology? In Greek, herp means creeping, so herpetology is the study of creeping things. It is the study of reptiles and amphibians. Many people just call them “herps” for short.

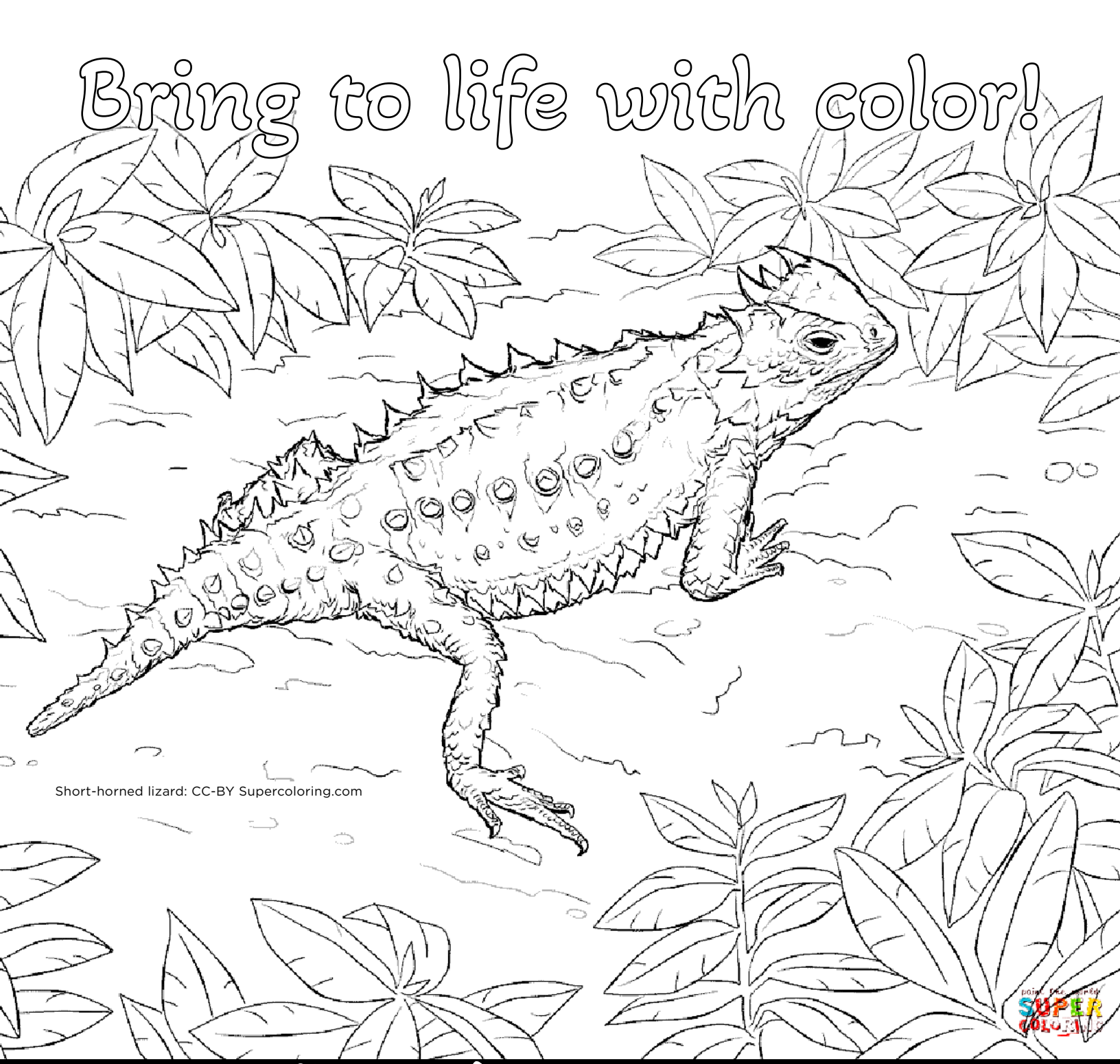
It is fun to look for amphibians and reptiles like lizards. Going “herping” to observe these animals can help you learn a lot about them. Make sure to be safe when herping. Always tell an adult where you are going and when you will be back. Also, never go alone; bring a friend. This gives you more eyes to spot herps and someone to help you if something happens.

Spring is a good time to go herping. Many amphibians and reptiles are more active because it is the breeding season. Scan rocks for lizards basking in the sun. Walk slowly and quietly to get a closer look. If you have a phone or camera, see if you can get a picture of the herp you are observing. Bring art supplies and make a drawing or painting. While it is tempting to try to catch herps, they sometimes bite and scratch. They can also be injured as they try to escape. This is why it is best to just observe. When you use your best wildlife observation skills, you will be amazed at the variety of herps you can see.

Herpetology is fascinating. Check out books or videos from your school or local library to learn more. You can also learn a lot from online sources about reptiles and amphibians. Zoos, museums, agencies and organizations also have good information.

Have fun herpin’ and learnin’!

Bring to life with color!



Short-horned lizard: CC-BY Supercoloring.com

Wildlife Express

Volume 38 • Issue 7
Lizards
March 2025

Wildlife Express is published by the Idaho Department of Fish and Game
Editor: Sara Focht, Lori Wilson
Layout: Nancy Jasper
Lead Writer: Vicky Runnoe

WE WOULD LIKE TO HEAR FROM YOU!

If you have a letter, poem or question for Wildlife Express, it may be included in a future issue!
Send it to: **lori.wilson@idfg.idaho.gov**
or
Wildlife Express, Idaho Fish and Game
PO Box 25, Boise, ID 83707