Wildlife Express!

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Garter Snake

Inside:

- Reptiles
- Animal Hide & Seek
- Snakes—Sinister or Sacred?

IDAHO FISH & GAME

Let's Talk About Idaho's Garter Snakes

What goes through your mind when you hear someone yell, "Snake!?" Do you get nervous or scared? Or do you think, "Cool, snake!" Many people have mixed feelings about snakes.

If you see a snake while playing around water, the snake you probably saw was a garter snake. In Idaho, we have two different kinds of garter snakes—the common garter snake and the terrestrial garter snake. You are most likely to see the terrestrial garter snake. It is brown or dark gray on the back with a dull yellow or brown stripe running down the middle of the back. Often this stripe has black spots running through it. The common garter snake is not seen as frequently. It is usually black with red blotches on the side. It has a buff or yellow stripe on each side and a bright yellow stripe on its back. Most garter snakes are about 30 to 35 inches long, but they may be 18 inches to over 50 inches long.

Garter snakes are very comfortable in and around water. They are found around streams, rivers, ponds, lakes and wet meadows. Needless to say, they are excellent swimmers. They swim by moving their bodies from side to side just like when they move on land.

Garter snakes hunt in the water and on land. Fish, frogs, tadpoles, earthworms, slugs, mice or other small animals are all on the menu. They catch their prey by grabbing it with their mouths and swallowing it whole. They have small teeth that help them hold onto their prey. Garter snakes do not kill their prey with venom or by squeezing it.

Smell is one of the garter snake's strongest senses. Their excellent sense of smell helps them find food. Snakes do have noses, but they use noses for breathing, not smelling. Snakes use their tongues to smell. They flick their tongue out, pick up scents on the tongue and then pass the tongue over a special organ on the roof of the mouth called the Jacobson's organ. This is how a snake picks up the odor of food or danger, like predators.

Predators that eat garter snakes are hawks, raccoons, mink, foxes and other larger snakes. If a garter snake is threatened, it may strike or bite. Garter snakes also release a greasy liquid called musk. This helps to protect garter snakes from becoming lunch or from being grabbed by young excited hands! Musk not only smells bad, it tastes bad to predators.

Garter snakes are one of the few snakes in Idaho that give live birth to their young! Litter sizes vary depending on the size of the female; larger females have more young. In Idaho, usually 10 to 26 young are born between August and September. Newborn garter snakes are around five to seven inches long. They may stay around their mother for a few days after being born, but they are on their own when it comes to finding food and protecting themselves from danger. Garter snake mothers do not give their offspring any care.

A nice summer day is the best time to go looking for garter snakes. If the temperature is very hot, they may come out during the evening. During the winter, they go underground and hibernate. Garter snakes will often hibernate together. Hundreds of garter snakes may be found using the same den in the winter. By huddling together, they help to keep each other warm.

Hopefully, next time you see a garter snake slithering through the grass you won't be scared, but excited. They are pretty interesting. Garter snakes are great!

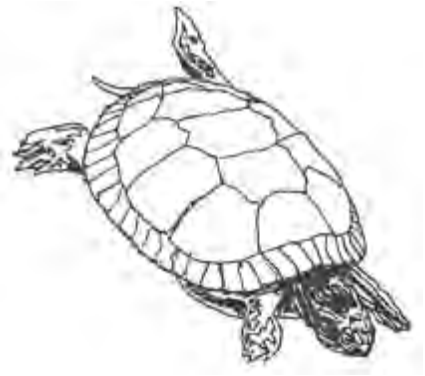
When you think of a reptile, you may think of a snake or lizard. Maybe a turtle pops into your mind. People often think of reptiles as scaly, cold-blooded animals that usually lay eggs.

Some scientists that group, or classify, animals are starting to look at reptiles a bit differently. Some divide reptiles into four groups. The first group includes turtles. The second group is lizards and snakes, and the third group would be crocodiles and their relatives. The last group is the birds!

Short-horned Lizard

For now, let's leave birds out of the reptile group and take a closer look at what makes a reptile, a reptile. You can find reptiles living on every continent except Antarctica. Most reptiles have a hard time staying warm. They can't make heat inside their bodies, so Antarctica would just be a giant freezer and graveyard for them. It is too cold! Since Idaho has pretty cold winters, we don't have as many reptiles as some other states. We have one turtle, 10 lizards and 11 snakes.

Reptiles



Some scientists put birds in this group because bird skulls and eggs are so similar to those of reptiles. These scientists believe the similarities between bird skulls and eggs and reptile skulls and eggs are more important than the differences between the two. They are not as concerned about the fact that birds are warm-blooded, and all other reptiles are cold-blooded. Believe it or not, when we look at the cells of crocodiles, birds, and lizards, crocodiles actually have more in common with birds than they do with lizards. You may be wondering about the feathers on birds. They don't look much like scales, but they really are scales that have changed over time to help birds fly. What do you think? Do you think birds should be in the reptile group? More evidence may be needed before a clear answer is reached.

Alligator

Most reptiles lay eggs but not all. In Idaho, we have two lizards, the alligator and the short-horned, that give birth to live young. We also have four snakes that give birth to live young. The rubber boa, western rattlesnake, common garter snake and terrestrial garter snake all give birth to their young. The young of these lizards and snakes are given some protection from predators and weather compared to eggs.

Reptiles are covered by a thick skin protected by scales. Scales are similar to your fingernails. They are made up of dead cells and form a kind of tough armor around the body. Scales offer protection from the sun and help reptiles retain water in their bodies. Lizards and snakes have scales on their bodies, and turtles have scales on their shells.

Reptiles come in all shapes and sizes. They can be really big. Saltwater crocodiles can grow to be over 23 feet long. Other reptiles are small. A gecko that lives on the British Virgin Islands is less than an inch long! Reptiles may come in different shapes, sizes and live in many different habitats. One thing they all have in common is they are all interesting creatures!

Do snakes really have cold blood?

If you hear an animal is cold-blooded, does that mean the animal's blood is actually cold? Well, not really. It means they are the same temperature as their surroundings. If a snake is lying on sand that is 60 degrees, the snake will also be 60 degrees. Snakes, lizards, turtles, insects, fish and frogs are all cold-blooded animals.

Some people call cold-blooded animals ectothermic (ek-to-THER-mik) animals. Ecto means outside, and therm means heat. Ectothermic animals get heat from outside their bodies. You may also hear people call them poikilotherms (poy-KEE-lo-therms). This is just a fancy word for a cold-blooded animal.

Terrestrial Garter Snake, © 2009 William Flaxington

Cold-blooded animals are most active in warm weather. Cold weather slows down their muscles. That's why cold-blooded animals lay or bask in the sun. The sun helps to warm them up. If they get too warm, they need to move to a shady spot or go in a burrow. Colder weather can kill cold-blooded animals. They need to migrate to warmer places or move underground. Some cold-blooded animals, like bees and dragonflies, shiver to stay warm.

Cold-blooded animals have a real advantage in deserts. Deserts are warmer, and food is often harder to find. Cold-blooded animals don't need to eat as much as warm-blooded animals. Sometimes they can go months between meals. This is why you often see more cold-blooded animals living in deserts than warm-blooded animals.

Calling an animal cold-blooded may be a bit confusing. Next time you are talking about a "cold-blooded" animal, how about calling it an ectothermic animal or a poikilotherm? You may teach others a new word and teach them the true meaning of the term "cold-blooded."

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Grabbing Grub

Catching prey can be tricky for snakes. It's a challenge to catch animals without any legs to chase them down. How about trying to grab ahold of a dashing mouse without feet to pounce? Because of their lack of limbs, snakes have developed some intriguing methods to capture their prey.

Some snakes use venom to capture prey. Venoms are chemicals that have toxic effects in the bodies of other animals. Snake venoms either paralyze muscles or cause bleeding to destroy muscles. Snake venoms also have a bit of a digestive function. They start to break down the prey so it will be easier to eat, but this is not as important as making sure the prey cannot run away. Pit vipers, like our rattlesnake, have the most complex venoms of any snakes. Their venom will paralyze and destroy muscles. The snakes with the deadliest venoms are sea snakes. Their venom would instantly kill a human. Luckily for us, sea snakes are not aggressive snakes and rarely bite humans. Sometimes a snake will bite and not inject venom. Snakes can and do control the amount of venom that is released during a bite.

Other snakes constrict or squeeze their prey to death. Constricting snakes strike and grab animals with their mouths. Then they wrap their bodies around the animal and squeeze. Some people think that snakes crush the animal to death, but they don't. The snakes don't even break the animal's bones. They hold tightly to prevent the animal from breathing or put so much pressure on the chest cavity that the heart stops beating. Snakes will monitor their prey's heartbeat, so they know when their prey is dead.

Garter snakes don't use venom or constriction to subdue their prey. They hunt by peering and craning their necks and bodies around obstacles in their habitat. Once they locate prey, they use their quick reflexes to ambush the prey and grab it with their sharp teeth. Their saliva is slightly toxic to their prey, so it helps to immobilize the prey. This makes it easier for garter snakes to swallow their meal. Like all snakes, garter snakes swallow their prey whole.

Even with a lack of limbs, snakes are efficient predators. Whether they use venoms, constriction or stealthy grab and go methods, snakes have ways to keep their prey from slipping away.

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Animal Hide & Seek

Sometimes sticks walk, leaves hop and rocks slither. Of course, these things really can't hop or crawl, but sometimes it sure looks like they're moving. Often when we are seeing a rock slither or crawl, it's actually an animal.

Camouflage (KAM-e-flazh) means to blend in with your surroundings and hide. It is a type of disguise. Camouflage may be a certain color, pattern of colors, or a special shape that fools the eye. The brown, gray and black colors on garter snakes help them to blend in with rocks and soil. Even the yellowish stripes look like dried grass. The outlines of their bodies blur, and they seem to disappear. Camouflage may help an animal to hide, help a hunter to sneak up on its prey, or both.

Many animals change their colors with the seasons. Animals that change color to match their background are using cryptic (KRIP-tik) coloration. When snow starts to fall, the snowshoe hare's coat gradually turns white to match its habitat. Then in the spring, the snowshoe hare's white fur will fall out and be replaced with a brown colored fur. No matter what the season happens to be, the snowshoe hare has a coat that helps it to hide from predators.

Animals may even change colors and patterns throughout their lives. Deer fawns are born with tan coats that have white spots. The spots match the sun and shade that dapple the tall grasses where the fawns hide. As long as the fawns do not move, predators will have a difficult time seeing them. As deer fawns grow older and can run faster to escape danger, the spots fade away.

Do you think zebras are camouflaged? They are not camouflaged for our eyes. Their black and white stripes stick out against the grasses of Africa, but this is not true for lions' eyes. Lions have a difficult time seeing some colors. Grasses and trees look like shades of gray, so the zebras' stripes help them to blend into the tall grasses. This helps the zebras avoid becoming a lion's meal. Whether hunter or hunted, camouflage helps animals to survive.

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Marble relief of Asclepius and his daughter Hygieia.

Snakes—Sinister or Sacred?

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Throughout time, snakes have conjured deep feelings within people. Snakes have played many roles in myths, legends and literature around the world. While some people may see snakes as evil, others see them as good. Snakes have represented both life and death.

Sometimes snakes are seen as a life force associated with water and the earth. Snakes live on land, in burrows and in water. Many people thought snakes were directly connected to water, rain or the earth. Ancient Chinese thought that snakes brought life-giving rain. During a rainstorm, water would flood into the snake burrows and force the snakes to crawl up on land. The people saw the snakes when it rained and thought the snakes were responsible for the rain falling. In Australia, India, Africa and North America, some native people connected snakes with rainbows.

As snakes grow, they shed their skin revealing a new skin underneath. Because of this, snakes have been seen as symbols of rebirth, immortality and healing. Ancient Greeks respected snakes; they thought snakes were sacred. The Greek God Asclepius carried a staff with one or two snakes wrapped around it. This symbol, the staff wrapped in snakes, has become the symbol for doctors today. Both Ancient Greeks and Egyptians thought the snake represented ever-lasting life. The Greek symbol for eternity is a snake curled into a circle biting its own tail.

Sometimes snakes are seen as frightening or evil. They are often portrayed as enemies of humans or keepers of the underworld. Maybe this is because some snakes are venomous, and their bites are dangerous. Snakes are often depicted in Aboriginal paintings in Australia. Australia has some of the deadliest snakes in the world.

In Norse mythology, the monster Nidhogg, or dread biter, was an evil serpent. It coiled around one of the roots of the World Tree. Nidhogg was forever trying to kill the tree by biting or squeezing the roots.

In medieval Europe, people were told tales of the basilisk. The basilisk could kill people just by looking or breathing on them. The basilisk was also used in the book Harry Potter and the Chamber of Secrets to do the bidding of the evil Lord Voldemort.

Snakes have played many roles in myths, legends and literature—some good, some bad. No doubt these stories have influenced people's feelings toward snakes. How do you feel about snakes?

Níðhöggr gnaws the roots of Yggdrasill in this illustration from a 17th-century Icelandic manuscript.

Be Outside Go Herping!

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 and learn about what they need to survive. If you want to go “herping” and look for reptiles or amphibians, here are some things to keep in mind. You are more likely to see an amphibian or reptile in the spring during breeding seasons, so now is a good time to go looking. Use a good sturdy stick to flip things over. Many herps hide under rocks, logs and leaves, so looking under things is a good place to start. Look for amphibians when the sun is going down and at night; reptiles are usually seen during the day.

If you would like to get a close look at an amphibian or reptile, place the animal in a clear plastic box. Amphibians will probably need a bit of water in the box. Herps can bite! Use a net and wear thick leather gloves when handling animals and never handle a rattlesnake. Once you are done looking at your herp, put it back where you found it. Although it may seem fun to keep herps as pets, it can be tricky keeping them alive. Wild animals belong in the wild.

Herpetology can be a fun! Read books and watch videos to learn more about amphibians and reptiles. Then go exploring and look for herps around your neighborhood.

BE OUTSIDE

IDAHO CHILDREN IN NATURE

Garter Snake Criss-Cross

Across

1. Garter snakes give _____ to their young.

3. Snakes cannot control their _____ temperatures.

5. In Idaho, we have _____ different garter snakes.

6. Garter snakes just _____ their prey with their mouths and swallow.

7. Garter snakes are found around _____.

9. This helps a garter snake hide from prey and predators.

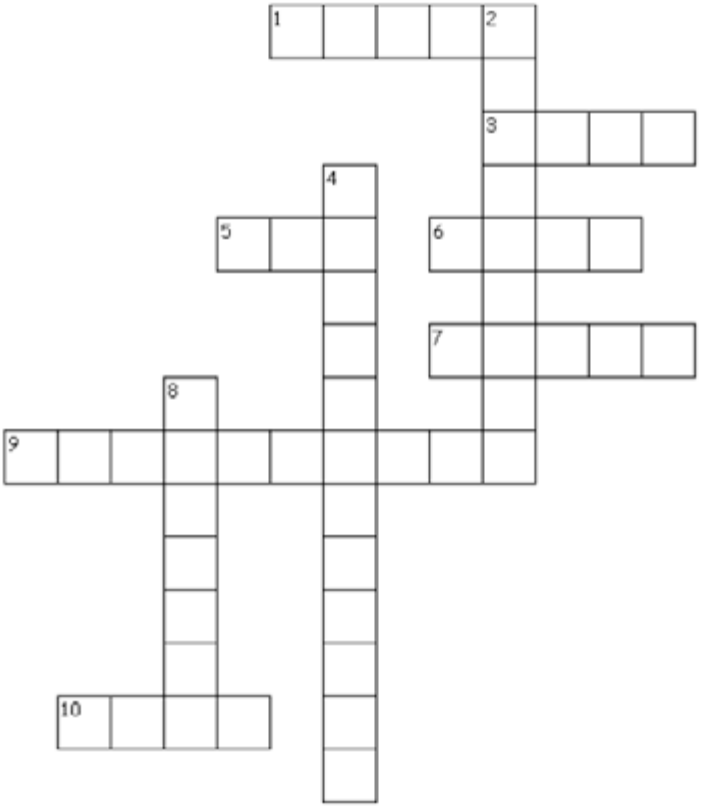
10. Stinky _____ protects garter snakes when threatened.

Down

2. During the winter, garter snakes _____.

4. Another word for a cold-blooded animal.

8. Snakes smell with their _____.



WORDS

Birth	Musk
Body	Poikilotherm
Camouflage	Tongues
Grab	Two
Hibernate	Water

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