

# Animal Legs



by Mary Holland

# Animal Legs

Can you smell with your feet? Do you dig your claws into a river's muddy bank to climb up and bask in the sun? Animals' legs are different from humans' in so many ways! Find out why strong talons suit a raptor, or webbing is perfect for water dwellers as author Mary Holland continues her photographic *Animal Anatomy and Adaptations* series by exploring the ways insects, amphibians, reptiles, birds, and mammals move and explore their world.



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The *For Creative Minds* following the story includes

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- ° What Legs Can Do
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- ° Fun Facts

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**Mary Holland** is a naturalist, nature photographer, columnist, and award-winning author with a life-long passion for natural history. After graduating from the University of Michigan's School of Natural Resources, Mary worked as a naturalist at the Museum of the Hudson Highlands in New York state, directed the state-wide Environmental Learning for the Future program for the Vermont Institute of Natural Science, worked as a resource naturalist for the Massachusetts Audubon Society, and designed and presented her own "Knee-High Nature Programs" for libraries and elementary schools throughout Vermont and New Hampshire. Her other children's books with Arbordale include *Ferdinand Fox's First Summer* (NSTA / CBC Most Outstanding Science Trade Book and Moonbeam Children's Book Award), *The Beavers' Busy Year*, *Animal Eyes*, and *Animal Mouths* (NSTA / CBC Most Outstanding Science Trade Book). Mary's book *Naturally Curious: a Photographic Field Guide and Month-by-Month Journey Through the Fields, Woods and Marshes of New England* won the 2011 National Outdoor Book Award for the Nature Guidebook category. Mary lives in Vermont with her lab, Emma. Visit Mary's blog at [naturallycuriouswithmaryholland.wordpress.com](http://naturallycuriouswithmaryholland.wordpress.com).



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Legs and feet come in many shapes, numbers, and sizes. They are used to paddle, jump, cling, dig, warn others, catch food and even taste food! The way an animal's legs and feet look can tell you a lot about how it lives.

Like all insects, backswimmers have three pairs of legs. Each pair of legs has a different job. Backswimmers catch prey with their two front legs, hold the prey tight with their two middle legs, and row through the water with their two flat, hairy, hind legs.





Caterpillars may look like they have a lot of legs, but only the first three pairs are true legs. The others are called prolegs. True legs have several sections and often have a claw at the tip. Prolegs have tiny, curved hooks (crochets) that act like suction cups. These hooks allow caterpillars to climb smooth surfaces like plant stems and leaves. The true legs on this cecropia moth caterpillar are green. The feet on its prolegs are blue—can you find them?



When a caterpillar turns into a moth or a butterfly, it keeps its six true legs, but not its prolegs.



This insect is called a praying mantis because its two front legs are bent and held together which makes it look like the mantis is saying its prayers.

Praying mantises are predators and eat other insects like crickets, grasshoppers and flies. They use their front legs to grasp their prey. The spines on these legs interlock when they grab an insect, making it almost impossible for the insect to escape.

Most spiders and many insects, such as butterflies, houseflies, and mosquitoes, taste with their feet! When a spider or insect lands on a flower, leaf, or animal, its feet taste it. The spider or insect knows if it has landed on something that is good to eat or drink.



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## Special Feet

Most, but not all, animals have feet. Animals that don't have feet, like this milk snake, have strong muscles in their abdomen that grip the earth beneath their belly when they move.



The toe flaps (pectinations) of ruffed grouse that live in northern areas with long winters and deep snow are twice as long as those of grouse living further south.



In just one minute, a mole can dig a tunnel as long as your two hands put together. It uses its front feet to dig with while its hind feet kick the loose dirt above the ground.



A woodpecker spends a lot of time clinging to the bark of trees while it drills holes with its beak to reach insects or make nesting holes. Many birds have three toes pointing forward and one toe pointing backwards. Woodpeckers have two toes in front and two toes in back (zygodactyl feet), which gives them a much better grip on tree trunks and branches.



Some mammals, like the fisher, have scent glands (dark spots on pads) on their feet. They leave a little scent of themselves with every step they take.



## What Legs Can Do

Match the descriptions on the right with the animals on the left. Answers are below.



white-tailed deer



honey bee



red squirrel



mallard duckling



spider



dragonfly

1. My legs are a weapon. I kick predators so they'll leave me alone.

2. I use my legs to swim. Webbed toes help me paddle in the water.

3. My legs can catch my next meal. I have three pairs of legs

4. My legs and feet help me grip the bark and scurry up a tree.

5. I use all eight legs to walk along my web. My feet can taste food.

6. My legs have small pouches. I carry pollen from flower to flower.

Answers: 1: white-tailed deer. 2: mallard duckling. 3: dragonfly. 4: red squirrel. 5: spider. 6: honey bee.

## Match the Foot to the Animal

Match these feet with the animals they belong to. What can you tell about the animals by their feet? What do you think these animals use their feet for? Answers are below.



Answers: 1-B barred owl, 2-F dogbane beetle, 3-A millipede, 4-E red eft, 5-C red fox, 6-D wood turtle

## Fun Facts

Opossums have a special “thumb” on each hind foot that can touch each of the toes on the same foot. This opposable thumb helps an opossum grasp branches and climb.

Humans have opposable thumbs on our hands. Can you touch your thumb to the tips of your other fingers on the same hand? Imagine how hard it would be to climb a tree, brush your teeth or eat a sandwich if you didn’t have opposable thumbs.



Porcupines eat bark and spend a lot of time in trees. Their feet help them climb up tree trunks and out onto limbs where they eat leaves and buds. The claws on a porcupine’s foot are curved and grip the bark of a tree very well. The pad on the bottom of each foot is bumpy. These bumps help the foot hold onto the bark of a tree.

A beaver’s front feet are small and not webbed. Beavers use them to hold mud, sticks and stones, but they don’t paddle with them. A beaver’s hind feet are very large and have webbing between the toes. When a beaver swims, it paddles through the water with its hind feet and steers with its tail. Each hind foot has two nails, which are split. A beaver uses these nails to comb leaves, sticks, insects, and snarls out of its fur. A beaver uses the nails on all four feet to spread oil on its coat to make it waterproof.



All spiders spin silk, and their legs help guide the silk as they make things with it. Most spider legs end with two claws. With help from their legs some spiders weave silk webs, wrap prey, make egg sacs and create silk nurseries for their young. A spider’s eight legs and feet help it capture food, weave silk, stalk prey, and climb up plant stems.

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Bibliography:

Education Department. *Two Legs, Four Legs, Six Legs, More!* National Aquarium. 2012. Web.

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