

Wildlife Express

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Rabbits

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The Rabbit Family



Most of us know a rabbit when we see one. Long back legs, long ears and shaped a bit like ball, rabbits are found hopping around in many places. You can find rabbits all over the world living in forests, backyards, deserts and even in the Arctic. The only place you will not find a rabbit is Antarctica. Here in Idaho, you can see five different members of this family.

The rabbit family can be divided into rabbits and hares. Several characteristics can help you decide if the bunny you are observing is a rabbit or hare. Idaho's hares include black-tailed jackrabbit, white-tailed jackrabbit and snowshoe hare. As a group, hares tend to have larger ears and longer legs than rabbits. Their babies are called leverets. They are very well-developed when they are born. Leverets are covered with fur and their eyes are open. They can move around shortly after birth. Young hares stay near their nest for a short time. In a few days, they leave and follow their mother to new locations. Baby rabbits, also called kittens or kits, are born in a burrow in the ground. They are naked and their eyes are closed. It takes them several weeks to grow up enough to leave the safety of their nest. By the time the kits are five weeks old, they are independent and can live on their own. Idaho's rabbits include the mountain cottontail and pygmy rabbit.

Rabbits have many interesting adaptations that help them survive. Their large ears give them excellent hearing. Rabbits can turn their ears in many directions to pick up sound coming from different places. A rabbit's large eyes are located on the sides of its head. This gives rabbits a wide

range of vision for spotting danger. Hair that is brownish to grayish in color helps rabbits stay camouflaged against grasses and shrubs. The time-of-day when rabbits are active also helps keep them safe. They are often crepuscular (crepus-CUE-lar), meaning active at dusk and dawn. Some species are nocturnal or active at night. One of a rabbit's best adaptations is their long hind legs and big feet. These are adaptations for moving quickly. When a rabbit runs, it often zig-zags. This makes them harder to catch. Some rabbits, like jackrabbits, can run over 40 miles per hour. They can leap 20 feet in one bound!

Long ago, people thought rabbits and hares were a kind of rodent, like a squirrel or mouse. Without really knowing much about these animals, this made some sense. Rabbits and rodents eat similar things, and they both have large incisor teeth. They share similar coloration and habitats. When scientists began to take a closer look, they discovered that rabbits have four incisor teeth. Rodents have two incisors. In addition, rabbits do not hibernate, but many rodents do. In 1912, rabbits were removed from the rodent family. They were given their own family called the Leporidae (luh-PAW-ruh-dee). This family is part of the order Lagomorpha (lag-uh-MOR-fuh), which also includes pikas.



PIKA

Extreme extremities

Some things we notice about rabbits are their large ears and feet and their long back legs. For all rabbits, large ears and feet are adaptations for survival. Detecting and getting away from danger are obvious advantages for rabbits. But in some species of rabbits, these ears and feet also help in other important ways.

Jackrabbits are known for their enormous ears, up to seven inches long. While they give these large hares excellent hearing, they are also air conditioners. Jackrabbits tend to live in hot, dry places. This makes keeping cool very important. Their ears are filled with many small blood vessels. On a hot day, warm blood from inside a jackrabbit's body flows to these blood vessels. Since the skin of the hare's ears is thin, the heat from the blood moves away from the ear into the surrounding air. This helps keep the jackrabbit cool. It is kind of like how sweating makes you cool on a hot day.

On really hot days, the blood vessels in a jackrabbit's ear can get larger. This is called vasodilation (vas-O-die-lay-tion). When this happens, more blood circulates through the ears. The same thing happens to you when you exercise, and your cheeks get red. Your body is helping you get rid of extra heat. Since rabbits do not sweat, having ears for air conditioners is an important adaptation.

At the opposite end of their body, are long legs with large feet. They help rabbits bound quickly away from danger. Snowshoe hares are named for their large feet, which act like snowshoes. This hare lives in places that get a lot of snow. Being able to hop around on top of the snow makes life easier during the winter. A heavier predator looking for a meal will sink into the snow. With its hairy snowshoe-shaped feet, the hare can stay on top of the snow and quickly escape the predator. All the hair on their toes keeps out the cold. Snowshoe hare feet are so hairy that their tracks in the snow do not show toe marks.





Now You See Me?

Camouflage is an important way many animals stay hidden from danger. Being colored like the environment around you is a great way to hide. Rabbits sometimes stay motionless if they sense danger. This is called freezing. Because of their coloration, they are harder to see when they are still. If this does not work, then those long legs and big feet can quickly take them away. But what happens when the place you live in changes color for part of each year? When winter arrives, white snow can make a brown rabbit really stand out. For some animals, the answer is a change in color.

Quite a few animals can change their color to match their environment. Crab spiders, chameleons, some fishes, tree frogs, and several species of octopus are examples of animals that can change color. Animals that turn white in winter, however, are less common. These include snowshoe hare, short-tailed weasel, Arctic fox, Arctic hare and several species of grouse called ptarmigan. Here in Idaho, the snowshoe hare and short-tailed weasel are best known for changing from brown to white just before winter. They change back to brown in the spring when the snow melts. This color change gives the hares and weasels camouflage during all seasons.

Making the change in fur color is a unique reaction to changes in the length of daylight. In the fall, we notice when the days start getting shorter. It gets darker earlier and is still dark when we get up in the morning. The bodies of snowshoe hares and short-tailed weasels notice the change in light, too.

As the light decreases, hormones in the animal's body begin to react. Hormones are special chemicals that act on specific cells in the body. In the case of a snowshoe hare or short-tailed weasel, the hormones cause changes in the amount of color in the animal's fur. Dark pigments, called melanin, decrease. As the fur grows, it no longer has enough melanin to stay brown. Instead, it becomes white. It takes about ten weeks for the animal to turn completely white. In the spring, the longer days trigger the hormones again. This time, dark colors are once again made in the body. The fur begins to turn brown as it grows. If you see a snowshoe hare in the spring or fall, you will see this process happening. The hare's body might be brown, but its feet are white. Being able to change from brown to white and back again is pretty cool. It allows for camouflage all year round.

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White-tailed jackrabbits

White-tailed jackrabbits can also turn white in winter. But they do not always make this change. Scientists discovered that these jackrabbits have three genes, giving them three color options. They can turn white. The hare can stay brown. Or it can have blotches of brown and white. Exactly what color a white-tailed jackrabbit turns in winter, depends on the amount of snow. Because this species lives in so many places, some with snow and others without snow, this is an important adaptation. It could also help these jackrabbits survive as climate change makes their habitats warmer. Higher temperatures mean less snow. A white jackrabbit against a brown background would be easy for a predator to spot. Being able to adapt by not turning completely white is an advantage in a warming climate.

Recycling, Rabbit Style!

One of the more unusual things that rabbits do is eat their poop. Seriously! While that sounds disgusting to us, it's very important for rabbits. All rabbits are herbivores. They eat plants of all kinds. Plants are high in fiber, making them hard to digest. Think about how long you have to chew a carrot or piece of celery. That's because of all the fiber in those vegetables. Rabbits have a hard time digesting fiber. A rabbit eating its poo is kind of like getting to digest its meal, twice.

Unlike animals such as cows, sheep, deer, or elk, rabbits do not have a chambered stomach. When those large animals eat plants, they don't chew much. They quickly swallow their food. Later, they spit their food back up from the first chamber of their stomach. Slowly and thoroughly, they chew their food before swallowing it again. This is what it means when someone says a cow is "chewing its cud."

Rabbits, on the other hand, take a different approach to digestion. A rabbit's stomach separates the digestible part of its food from all the fiber. It goes into a part of the stomach called the cecum. Here, it gets fermented by bacteria and turned into a special

kind of poo called a cecotrope (see-CO-trope). This is the poop that a rabbit eats.

Cecotrope droppings are rich in protein, nutrients and vitamins. Eating cecotropes is an adaptation for eating high fiber foods like plants. It might sound gross, but it's a great way for rabbits to get all the nutrition they need from their food. And those little round balls that rabbits also poop out—those are made of the indigestible fiber the rabbit cannot use.





Meet Idaho's Rabbits

Mountain Cottontail

- Named for their tail which looks like a cotton ball.
- Lives in brushy, rocky areas with thick plants or along edges of forests or streams.
- This is the rabbit you are most likely to see in your yard.
- Females can have several litters of kittens a year.





Snowshoe hare

- The only Idaho rabbit that regularly changes color from brown to white in winter.
- Lives in dense forests with thick shrubs and bushes in northern, central and eastern Idaho.
- Important prey for bobcats, lynx, red foxes, hawks, eagles and owls.
- Mainly nocturnal

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Pygmy rabbit

- North America's smallest rabbit, about the size of a large grapefruit.
- Is a sagebrush specialist, living in sagebrush steppe habitats. Sagebrush is the only plant they eat in winter.
- They are grayish in color with a buffy brownish tail.
- Is a species of greatest conservation need because of the loss of their sagebrush habitat.





Black-tailed jackrabbit

- Named for its black tail.
- Lives mainly in southern Idaho.
- Has huge ears, four to seven inches long.
- Sometimes gather in large groups to eat. This can cause problems for farmers if the jackrabbits eat crops.

White-tailed jackrabbit

- Named for its white tail.
- Can be seen in the lower half of the state in various habitats.
- Idaho's largest rabbit at nearly two feet long and weighing up to 13 pounds.
- Can turn white in winter. The amount of snow in its environment determines how much white the jackrabbit will have in its fur.





Let Them Be

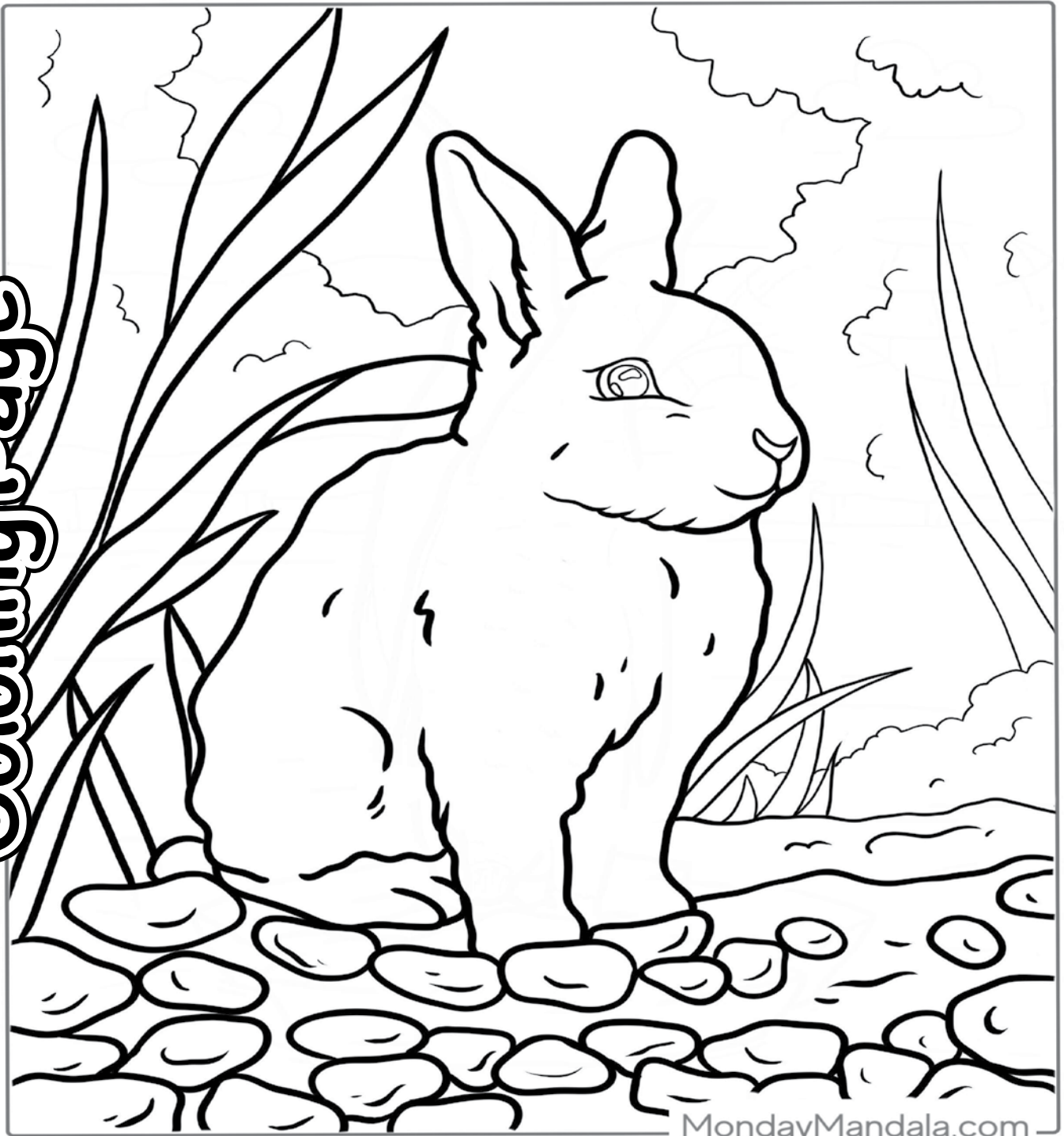
It's springtime! Warmer temperatures and sunshine brings us outside to enjoy exploring the outdoors. Spring is also the time when many young wild animals are born. This means that you and your family might see wild youngsters on your outings. Learning how to properly behave around these wild babies is an important part of being responsible in the outdoors.

If you see wildlife, never approach them closely. This is especially true for mothers and babies. People cause stress for wildlife. It is important that you enjoy your encounter from a distance. Use binoculars to observe wildlife without getting too close. Look for signs that your presence is upsetting the animals. These signs include the animal stopping what it was doing to watch you. Flicking ears, stomping feet or alarm calls are also signs that you are too close. If you see these signs, stop and quietly back away to give the animal more room.

Sometimes, we find a fawn or elk calf lying quietly near a trail. All too often, well-meaning people think the youngster has been abandoned by its mother. More often, the baby is doing exactly what it is supposed to do, waiting quietly for its mother to return. In fact, your approach might have caused her to leave in the first place. The best thing to do is immediately leave the area. This will allow the mother to return to her baby.

If you know that a baby wild animal is an orphan, contact your local Fish and Game office. They will be able to bring the youngster to a wildlife rehabilitation facility. These places have trained staff who know how to help a wild baby. Do not remove the young animal and try to raise it yourself. Young wildlife needs very special care that most of us cannot provide. As it turns out, Mother Nature really does know best.

Coloring Page



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Editor: Vicky Runnoe

Layout: Nancy Jasper

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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: victoria.runnoe@idfg.idaho.gov or Wildlife Express, Idaho Fish and Game PO Box 25, Boise, ID 83707