

Wildlife Express

VOLUME 39 | ISSUE 7

MARCH 2026

CANINES

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Coyote: CC-BY Trevor Jensen



idfg.idaho.gov



THE DOG FAMILY



“Huey”

People have played a major role in creating domestic dogs that fit our needs. In most areas of the world, dogs are highly regarded and kept for a variety of purposes.

Members of the dog family are called canines, and they are part of the “*Canidae*” family, of which there are 35 species worldwide. Members of this family include wolves, coyotes, foxes, jackals and African wild dogs.

It might surprise you that domestic dogs (*Canis lupus familiaris*) that we keep as pets first came from the gray wolf, and they are still considered a subspecies.

For more than 12,000 years domestic dogs have lived with humans as hunting companions, protectors and friends.

Wild dogs are found on every continent except Antarctica. There are nine species of canines in the United States, and four of those live in Idaho. Idaho is home to the gray wolf (*Canis lupus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*) and kit fox (*Vulpes macrotis*).

If you see a canine in the wild, remember it is a wild animal. Like all wild animals, canines need to be respected and observed from a distance, especially if you have your dog with you, because wild canines can be very territorial.

COMPARING CANINES



Canines have many physical similarities that help them to survive. Long muzzles, upright ears and sharp teeth help them hunt. All these traits are in relation to the size of their bodies.

Sizes of the adult canines are one way to tell the difference between the species. However, size can be deceiving because often wild canines are seen from a distance. Also different species of wild canines would not likely be seen together, so comparing size is tough. See the chart on next page for size differences.

Idaho wild canines coat and color variations also help us to identify them, but color can be tricky.

Wolves can vary in color. They can be white, gray, brown, black or a mix of these. Their fur is dense and helps them stay warm in the colder climates.

Coyotes can vary in color from shades of gray or brown to a reddish hue. Their fur is less dense but provides enough warmth and insulation in the climates they are found.

Red foxes are known for their vibrant red coats, but there are variations. Their fur is thick and fluffy. A fox can be recognized by its big fluffy tail. A “cross” fox is a red fox that has black stripes that run across the shoulders and down the back in the shape of a cross. A cross fox is a color variation of a red fox.

Kit foxes are the smallest canine in Idaho. Their coat colors vary with their habitat types. Mostly they are yellowish gray. The backside is usually darker than the rest of body.

COMPARING ...



4.5" L x 4" W



2.75" L x 2.25" W



2.25" L x 2.75" W



1" - 1.5" L

Wolf
(*Canis lupus*)

Coyote
(*Canis latrans*)

Red Fox
(*Vulpes vulpes*)

Kit Fox
(*Vulpes macrotis*)

Head	Broad muzzle	Slender muzzle	Long snout	Narrow, pointed muzzle
Height at shoulder	26 - 33 inches	24 inches	14 - 20 inches	10 - 12 inches
Length, nose to tip of tail	4.5 - 6.5 feet	3 to 4.5 feet	.5 - 3 feet	17 - 21 inches
Weight	70 - 145 lbs. (M) 60 - 100 lbs (F)	15 - 40 lbs (M) 10 - 40 lbs (F)	12- 15 lbs (M) 9 - 12 lbs (F)	3 - 6 lbs. (M) 3.5 - 6 lbs (F)
Fur Color	Various shades of gray, black, brown or white	Gray or brown to reddish brown	Red to deep reddish brown, lower legs black	Grizzled or yellowish gray, stiff guard hairs
Tail	Straight furry, bushy tail, will hold in line with body	Skinnier and more dog like, often will hold downward	Bushy red tail with white tip, can look bigger than body	Bushy, gray with black tip

Paw measurements are for front feet and include claw marks in measurement.

CANINE TEETH



Did you know that dogs were given the name canine from the impressive canine teeth they use to hunt and tear away meat while eating? A wolf's canine tooth can grow up to 2.5 inches in length. A coyote's canines are between 1.25 inches - 1.5 inches. In comparison, a fox's canine rarely reaches an inch.

Several other animals have long canine teeth but are not in the canine family. Bears, all types of cats and primates (including you) all have elongated canine teeth. These special teeth are also called dogteeth, fangs or cuspids. An interesting name is also the "eye teeth," because of the location directly below the eye. Run your tongue across your teeth to feel your canine teeth on top and bottom. Your canine teeth are the tallest and sharpest that you feel.

These teeth are used to bite and break up food you eat, similar to what wild dogs do.



CANINE EARS



Canines' upright ears are highly sensitive, which helps them hear sounds from a farther distance than most humans.

Foxes can hear a mouse squeak from 50 yards away which is about half a football field. A coyote can hear prey 200 yards away. More impressive is that gray wolves can hear sounds from over 6 miles away in forests, and even further over flat land.

Hearing also helps them be elusive. Canines often prefer to avoid people, and will leave an

area before being spotted if they hear noises they associate with people.

Wolves have shorter, rounder ears for their head size than coyotes. Coyotes have ears that you could say have a personality of their own. They use their ears to hear and to communicate with one another. Coyotes' ears are larger in relation to their heads than Idaho's other canines. Their ears are more triangularly shaped and pointed. Coyotes ears also sit a little higher on their head which makes them look alert. They're thought to have more exaggerated ear movements than the fox and wolf.

Photos: CC-BY Idaho Fish and Game

Because of the ability to hear, see and detect scent so well, many domestic dogs are bred to be hunting dogs. People train dogs to assist hunting waterfowl, game birds, and other larger species.



GOT MY EYES ON YOU



Canines have great eyesight. All canine eyes glow. Tapetum lucidum is a reflective layer located in the eye behind the retina. This helps the canines see in low light conditions. The glow in their eyes is the result of that reflective layer.

All canines also have a nictitating membrane in their eye that is sometimes called a “haw.” You may have seen this on a dog who is falling asleep, but still had their eyes open a little. It is a white or tan layer of wet skin inside their eye that helps keep their eyes clear and moist.

There are subtle differences in the canine eyes. Shape and size of pupils vary between canines because of when and where they hunt.

Wolves have a round pupil. Wolves often rely on teamwork, smell, hearing, and endurance when hunting. Their round pupils work well in a wide range of light conditions and help them see clearly while moving and chasing prey.

Foxes have thin, vertical pupils, more like a cat's. Foxes are usually solo hunters. They depend heavily on sight to detect small prey and judge distance before pouncing. Their narrow pupils help them control light and focus on small movements in grass and brush.

Coyotes also have round pupils. Because they are most active at dawn and dusk, their eyes are especially adapted for low light, helping them detect movement when visibility is limited.

The placement of canine's eyes also helps them when hunting. A canine's eyes are positioned on the sides of their heads to allow better peripheral, or side vision. Canines' field of vision is around 240 degrees which means they can see that far without moving their heads and helps them scan wide areas when hunting. By comparison, a person's field of vision is about 180 degrees.

CANINE TRACKS



When studying Idaho's canine tracks, there are several factors to consider.

Toes and claws

A canine's front paws are larger than their hind paws. They have four toes on each foot and on their front feet, they have a higher "toe" with a claw called a dewclaw.

All Idaho canines have non-retractable claws. This means that you can see their claws marks with the tracks they leave. Cats, on the other hand, usually retract their claws when they walk. Cats use their claws to help catch prey. Canines use their paws mostly for digging.

The overall shape of a dog track can provide helpful clues. Coyote tracks are usually smaller, long and narrow, with toe prints that look oval-shaped. Wolf and domestic dog tracks tend to be larger and rounder overall, with toe prints that appear more circular. Large dog tracks can look very similar to wolf tracks, so it can be difficult to tell them apart from a single footprint.

Location

When identifying tracks, think about where you are, but don't rely on location alone. Tracks in neighborhoods, parks, or along popular trails are often from domestic dogs, but wild canines may occasionally pass through these areas as well. Coyotes live in many types of environments, including near towns and cities, so their tracks can sometimes be found there too. In some remote areas, wolves may also be present.

Pattern and stride

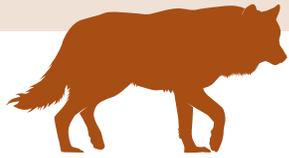
When you're looking at tracks, notice how they are arranged and how far apart they are.

Wolves tend to walk in a more direct path. Coyotes meander and foxes tend to place hind paws in the same spot where front landed, creating just two sets of tracks. When following a fox track, you might think you're following a cat track.

CANINE SCAT

If you're walking on a trail, you might come across the scat (droppings) of a canine. If you have a pet dog, you probably already know what dog poop looks like. Wild canines often leave scat that looks different because of what they eat. They consume whole prey animals and natural foods that are harder to digest than pet food, so their scat often contains hair, bones, seeds, or other undigested material from their prey.

As with tracks, the size of the scat generally reflects the size of the animal that produced it.



Wolf scat is probably just a bit bigger than a large pet dog's scat. Wolf scat is usually 1 to 1.5 inches in diameter with tapered ends. Usually there will be hair and pieces of bone in wolf scat. It can look a little twisty and less like a log.

Coyote scat is mostly tubular, also with tapered ends. Each dropping may be up to 4 inches long and 1 inch in diameter. Color and appearance might vary with the different types of food they eat. Often, you can see berries and seeds in the scat. Coyotes often leave scat in visible places such as the middle of trails, or at trail intersections as a way of communicating with other coyotes.



Fox scat is smaller in size. It is usually 2 to 3 inches long and has pointy ends. It will contain undigested berry seeds and traces of hair and bone. Foxes frequently place their scat on prominent objects such as rocks, logs, or clumps of grass where it is easy for other foxes to notice.



Wolf Scat
(*Canis lupus*)

Coyote Scat
(*Canis latrans*)

Red Fox Scat
(*Vulpes vulpes*)

Kit Fox Scat
(*Vulpes macrotis*)

BUILT FOR SPEED



Which wild Idaho canine would you guess could run the fastest? Coyotes and gray wolves can run up to 40 miles per hour. Red foxes run 30 - 31 miles per hour. The amazing thing about gray wolves is that they can maintain a speed of about 5 to 8 miles per hour, covering about 30 miles in a day! Their ability to run fast for long distances is part of their hunting technique. They chase a large animal to wear it down, slow it down and be able to attack.

TAILS TELL A STORY



Canines' bushy tails help them in many ways. They wrap it around their bodies in the cold, and it acts as a blanket.

A wolf has a straight, furry, bushy tail that tends to be shorter compared to other wild dog tails. Wolves' tails come in many different colors and are often black tipped. When running and walking, they tend to hold their tail out in line with their bodies.

Coyote tails are bushy with a black tip and reach down to their ankle. When running and walking, they hold their tail down.

Red fox tails are very bushy and lengthy, half the length of the fox's body. Tails are usually red- orange with a white tip. Often, a fox's tail looks bigger around than their bodies. A kit fox's tail is bushy and gray with a black tip.

Tails help with balance when running and jumping. They create counterweight to provide stability and agility. Tails also help canines communicate. What does your dog do when they are happy? What do they do with their tail when they have done something wrong and are getting scolded?

Top Fox Photo: CC-BY Shutterstock #523551145

Wolf Photo: CC-BY Trevor Jensen



WHAT THEY EAT AND HOW

What comes to your mind when you think of what a wild dog eats? Meat? Wild dogs do eat meat for sure! Mammals, frogs and snakes are on the menu, but they also eat other things.

Wolves are mostly carnivores and eat a lot of meat. They probably prefer to eat something large like an elk or moose, but they are known to eat marmots, mice, beavers and squirrels as well as berries, grasses, and eggs. Coyotes also eat a lot of small animals but venture out to plants and other foods even more than wolves. A fox is an omnivore and will eat almost anything including meat, eggs, insects, nuts, and fruits. Canines that live near people will eat garbage!

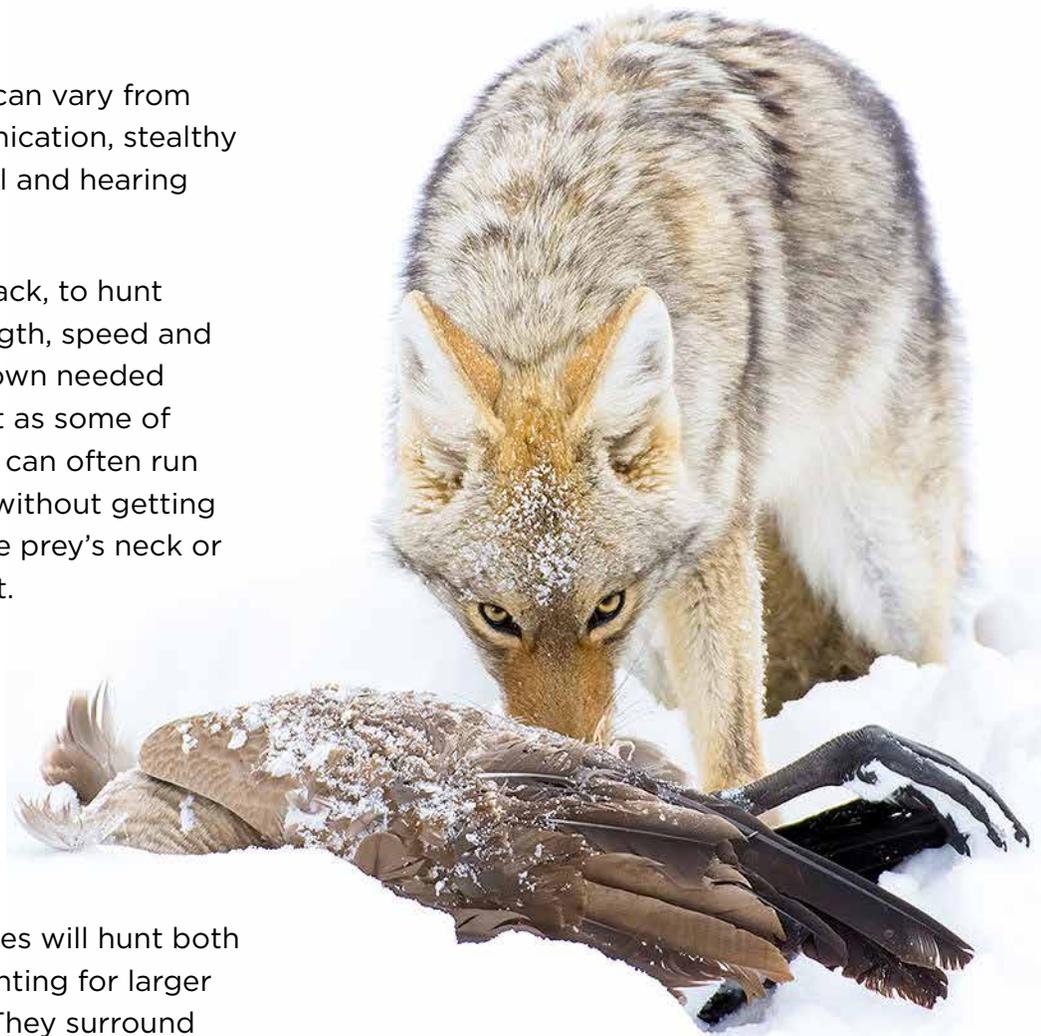
Methods of hunting in canines can vary from species to species, but communication, stealthy bodies, speed, strength of smell and hearing are necessary for success.

Wolves rely on their team, or pack, to hunt effectively. They use their strength, speed and communication skills to take down needed prey. Wolves may not be as fast as some of the animals they hunt, but they can often run for a longer time and distance without getting tired. The wolves latch on to the prey's neck or hindquarters when they catch it.

Wolves also have been known to use ambush tactics especially on smaller prey.

Coyotes are also opportunistic hunters and adapt their hunting strategies based on prey size and availability. Coyotes will hunt both in packs and alone. Coyotes hunting for larger prey will hunt in small groups. They surround their target and take turns chasing the prey.

Since foxes are smaller and eat a variety of foods, they will hunt by crouching low and listening carefully to locate and capture prey. When they locate it, they leap into the air and land on the prey with their front paws, biting them quickly to secure their meal. They can do this even if there is a thick layer of snow on the ground. They will stand still and listen closely for a mouse or vole to make a sound under the snow and they will dive, headfirst, down through the snow to catch their prey. They will also patrol their territory seeking prey with their smell and hearing.



HUNT



A predator is an animal that kills and eats other animals to survive. People usually think of large animals like wolves and mountain lions as predators, but predators come in all sizes, from big wolves to tiny spiders.

Would you think of a bluebird or great blue heron as a predator? Both are birds that eat other animals to survive. The heron eats fish, and the bluebird eats insects. They are predators even though some people may not see them that way.

The number of predators there are depends upon the number of animals they have to eat. The more rabbits there are, the more bobcats you may see. As soon as rabbit numbers drop, so will the bobcat numbers.

Predators are important parts of the ecosystem. They help maintain the balance of nature. We might be overrun with mice if it weren't for predators. Predators also often eat sick animals. Removing unhealthy members of the herd helps to keep the whole herd healthy and strong.

Predators are sometimes seen as vicious or bloodthirsty. Predators kill for the same reason bunnies eat carrots - to survive. Wildlife acts instinctively or naturally. They have no choice. Predators have a job to do in nature, and they do it very well. Sometimes they reduce prey populations too much. When this happens, the predators starve, die of disease or move.

... or be hunted

Animals that are hunted and eaten by other animals are called prey. Mice, most insects, deer and rabbits are just some of the examples of prey animals. Prey species are important links in the food web.

Some animals are both predators and prey. A dragonfly may eat an insect and then be eaten by a fish. Weasels eat mice and may be eaten by great-horned owls.

Prey species have adapted to survive in a world of predators. More than one type of predator may eat a prey species, so some prey animals need to have a lot of babies. This is a reproductive strategy to ensure that some members of their species will survive.

Prey may also live together in groups to help them outsmart a predator. It's much easier to see danger with many eyes looking than just one pair. By living in a group, female elk also have an easier time raising their young. Elk will babysit for each other. One female will watch over the calves while the other mothers eat and rest. When danger does threaten the herd, the elk will be rested and ready to defend themselves and their calves.

It might be easy to feel sorry for a prey animal when it is eaten, but that is part of its role in a natural ecosystem.

A photograph of a wolf standing in a snowy, mountainous landscape, howling with its mouth open and head tilted back. The background shows snow-covered trees and a clear sky. The title 'CANINE COMMUNICATION' is overlaid on the left side of the image, with 'CANINE' in a smaller font above 'COMMUNICATION' in a larger font. The text is white with a slight shadow, set against a brown, textured rectangular background.

CANINE COMMUNICATION

It's important for canines to communicate with one another. Vocalizations, ears, tails and scent marking are techniques used for canine communication.

Howling

The long low howl of a wolf can be heard over a long distance. It's the most recognized vocalization of wolves. Howls are used to announce the pack's presence or locate pack members. Howling strengthens the social bonds within a pack and often the howls are done in unison.

Coyotes are active during dawn and dusk and often at night. This is when you hear them howling or yipping. Like the wolf howl, a coyote's howl is used to warn others to stay away from their territory and as long-distance communication to locate pack members and confirm their positions. Yipping and yelping are used to gather attention among pack members, especially during play. Yelping can mean many different things. A rapid burst of yelps can signify a distress call. Other yelps may be a greeting or invitation to play.

What does the fox say? Red foxes howl for similar reasons as coyotes and wolves. One difference with the fox is the female will give off a loud high-pitched howl when looking for a mate. If you hear it, you might think it's a woman screaming. During mating season, you

might hear a wow-wow-wow call. This call is used to say, "Here I am, where are you?"

When an intruder is close, foxes may also produce a rapid chattering sound known as "gekkering," which is used during aggressive encounters or fights over territory.

In the den, canines use soft, close-range vocalizations such as murmuring or cooing to calm the pups or kits. Don't forget growling and snarling, which signifies displeasure in canines.

Scent Glands

Canines use scent as an important way to communicate. One scent gland is located on the top side of the tail a short distance down from the body. This gland produces a strong, musky odor that helps other canines recognize individuals and learn who has been in an area. In foxes, this tail gland, called the "violet gland," is especially large compared to other canines and may appear as a darker patch of fur. Wolves and domestic dogs have the same type of gland, but it is much smaller and less noticeable. Foxes often live alone, so scent is an important way for them to communicate without direct contact. Despite its pleasant-sounding name, the smell is not like perfume to people, but it carries important information for other canines.

SOCIAL STRUCTURE



Wolf packs have an extensive social structure. The alpha male and female of the pack are the primary breeders. The rest of the pack will include some of the offspring from various years.

Coyotes have a social structure too, but they're not as strong as the wolf packs. Coyotes might live alone or in mated pairs. Sometimes, you will see a small family group. The way a coyote travels usually depends on its food availability and habitat.

Foxes, on the other hand, usually prefer to travel alone. During breeding season, you may see committed pairs, but they typically hunt and feed alone.



REPRODUCTION AND LIFESTYLE



Puppies are something that we all love! In the wild dog family, coyote and wolf pups are born about 2 months after mating. The number of pups they have are different. A female wolf will birth between four and six pups. A female coyote can have a litter of pups ranging from four to seven. In both cases, male and female wolves care for the pups.

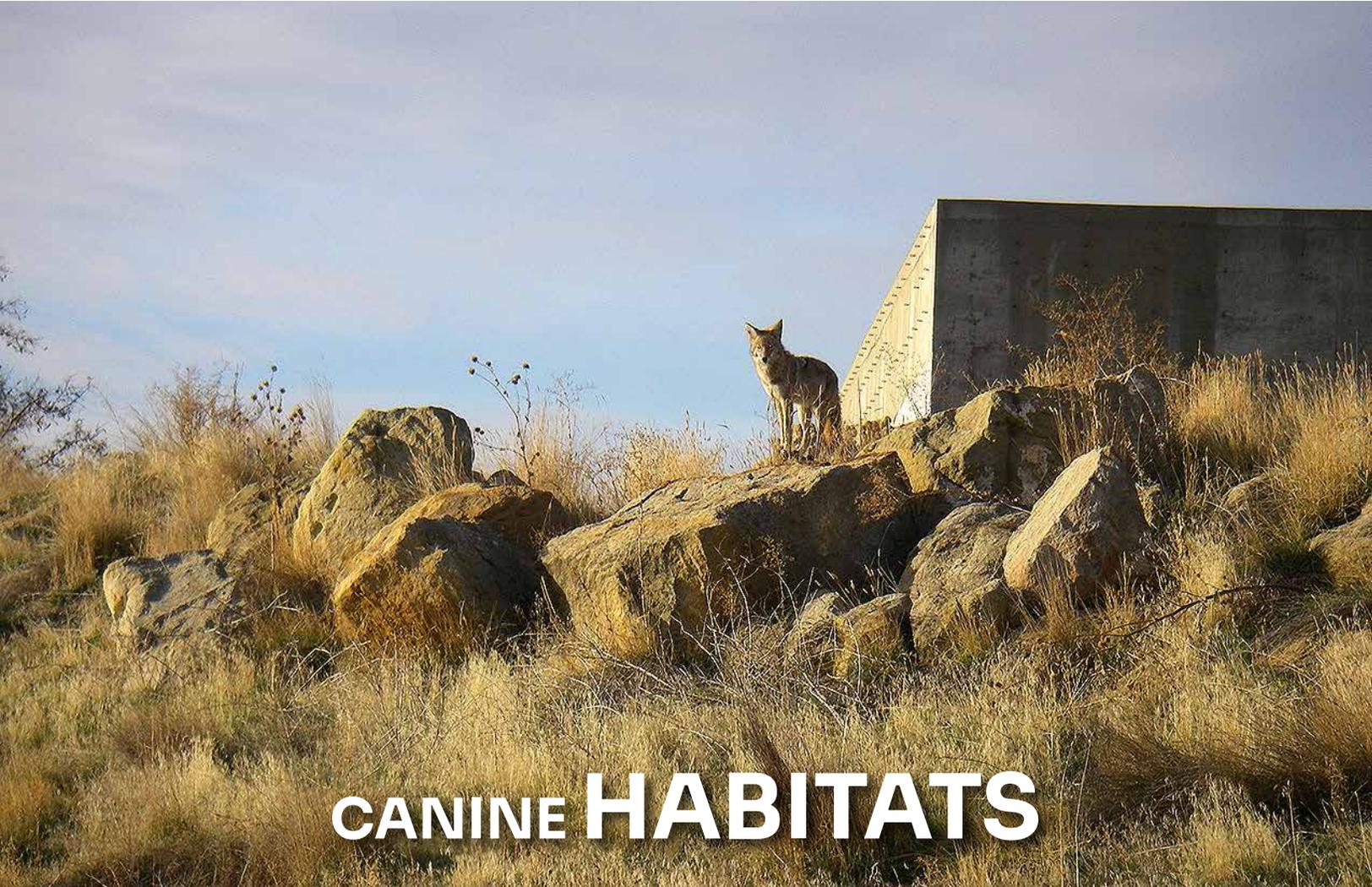
Wolves involve their whole pack in raising the pups. Their social status determines who does what. Alpha male and female are the top dogs. The rest of the pack includes their offspring. Before the puppies get big enough to hunt, the pack will leave a babysitter to stay with the puppies.

All canines are born blind, deaf and helpless and rely on parents for survival. They grow

quickly. By late summer they are weaned and learning survival skills from their parents. Between six and nine months, young canines become more independent, often forming small packs with siblings.

Red foxes breed once a year, as well. Their gestation period is a little shorter and the female, called a vixen, gives birth the four to six babies. The young foxes are called kits or cubs or pups. The vixen and the male fox will raise the kits together.

All of Idaho's canines raise their young in dens that can be self-dug or repurposed. They may even use a natural cavity like a rock crevice. Once pups are able, canines will move to other locations throughout the year.

A photograph of a coyote standing on a rocky, grassy hillside. In the background, there is a large, dark building with a light-colored roof. The sky is clear and blue.

CANINE HABITATS

Different animals need different kinds of habitats. A place that is perfect for one species may not work at all for another. All wildlife needs food, water, shelter, and enough space to survive, but each species requires these things in its own way.

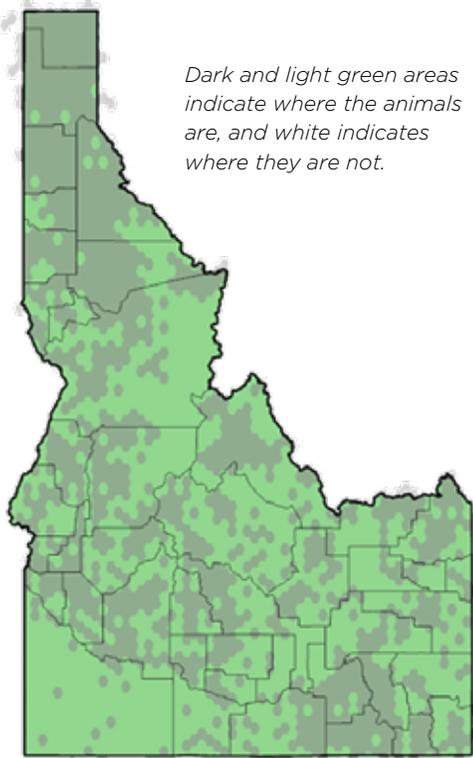
Wolves roam over large areas of habitat. They are found in remote parts of North America, Europe and Asia. Wolves in Idaho are most commonly found in the forested mountains of the central and northern parts of the state.

This habitat provides large, connected landscapes with the space and cover needed for travel, denning and raising pups. Wolves use a variety of terrain within these areas including forests, rugged mountains, and open valleys, and a single pack may range across many miles.

In North America, wolves are found in many states and provinces. The highest population of wolves, as you may have guessed, is Alaska. It's estimated between 7,000 to 11,000 wolves are found there.

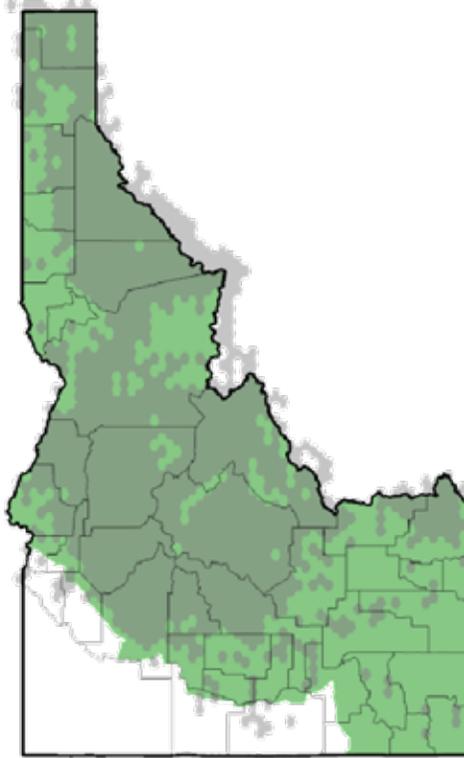
Coyotes are found in every state except Hawaii. Coyotes are highly adaptable and can make a living in many different landscapes across Idaho. They are found in deserts, sagebrush-steppe, farmland, forests, mountains, and sometimes near towns and cities. Rather than depending on one specific type of habitat coyotes use whatever resources are available and adjust their behavior to local conditions. This flexibility allows them to live in places where other wild canines cannot. Coyotes occur throughout North America and are found in every U.S. state except Hawaii.

CANINE HABITATS

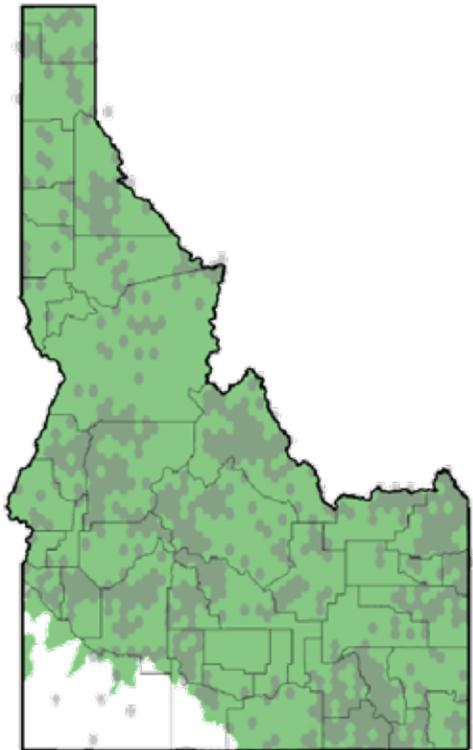


Dark and light green areas indicate where the animals are, and white indicates where they are not.

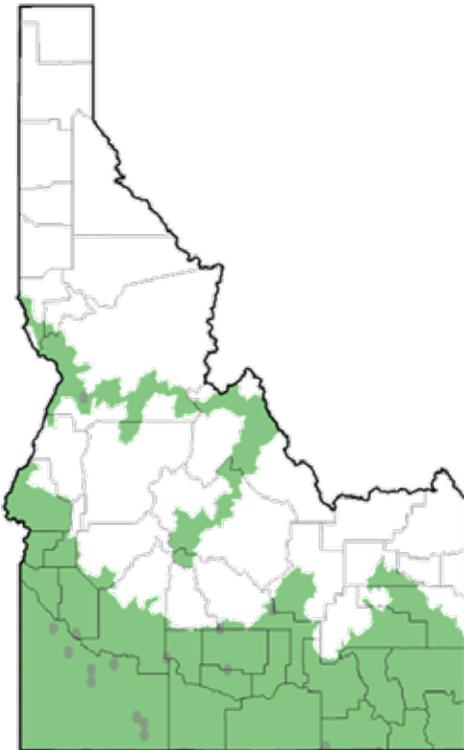
COYOTE



WOLF



RED FOX



KIT FOX

Red foxes are also adaptable, but they prefer areas that provide both open ground for hunting and nearby cover for hiding and denning. In Idaho they live in habitats such as mountain meadows, forest edges, farmland, and some suburban areas. Foxes often use thick vegetation, brush, or rough terrain for cover, which helps them stay hidden from larger predators while they hunt.

Kit foxes live in the dry deserts and open plains of southern Idaho. They prefer flat or gently rolling areas with sandy or loose soils where they can dig dens. These foxes are closely associated with sagebrush-steppe and desert grasslands and are rarely found in forests or mountains.

Unlike coyotes and red foxes, kit foxes depend on wide, open landscapes and spend much of the day underground to avoid heat and predators. Because they specialize in living in these dry, open habitats, kit foxes are usually found only in southern Idaho.

Even though these canines all live in Idaho, they can share some of the same places by using different features of the landscape to meet their habitat needs.

IDAHO FISH AND GAME K9 TEAM



“K9 RILEY” OF TWIN FALLS

Idaho Fish and Game has a team of officers who make sure people are following hunting, fishing and trapping laws. These men and women are called Conservation Officers. Like other law enforcement agencies, some Fish and Game officers work with specially trained dogs to form a special unit called the K9 Team.

K9s (dogs) are commonly used at hunting and fishing check stations, and at crime scenes. The main activities of the K9s are to help IDFG officers find evidence and help solve wildlife crimes. The K9s are trained to locate harvested wildlife by scent, and to locate evidence where a wildlife violation has occurred.

For example, a dog might smell and alert its handler to an animal that was illegally harvested and hidden inside a vehicle. The dogs are also trained to smell firearms, burnt gun powder, shell casings and wildlife parts/pieces. They can also sniff out items with human odor, such as clothing, or a knife left by



“K9 BEAR” WITH KOLBY WHITE

IDAHO FISH AND GAME K9 TEAM



“K9 PEPPER”

WITH JIM STIRLING,
MAGIC VALLEY OFFICER



K9 Pepper was the first dog trained, and he set the standard for the program. During his time, K9 Pepper found evidence that allowed officers to solve crimes and was even involved in helping locate a lost child during a search. Other dogs on the K9 Team were K9 Dexter, K9 Hudson and K9 Blue. Right now, there are two active dogs, K9 Riley, (Twin Falls) and K9 Bear (Montpelier).

a hunter. These critical pieces of evidence can often link an individual person to an illegally harvested animal.

Another duty for the dogs and their handlers is to “meet and greet” people at public events, such as community parades and fairs. The K9s are also shown at school events showcasing the skills they use in the field. People love to meet the dogs and see them use their skills.

In addition, IDFG K9s assist other police departments when needed to locate spent shell casings and/or firearms from crime scenes that are not wildlife related. The K9 Teams are good partners to other agencies when they need help.

The K9 Team was modeled after other wildlife agencies that used dogs to help with enforcement. Fish and Game’s Senior Conservation Officer Jim Stirling helped start the program in 2010. Over the years, there have been five canines.

Extensive training is required for these dogs and their handlers. In the past, the dogs would attend training in Indiana. The Conservation Officers as handlers must be certified to work with these highly trained dogs.

It costs money to feed dogs, pay for vet visits, kennel costs and training equipment. At IDFG, the K9 unit is funded primarily through donations from the Pogue family, Idaho Conservation Officers Association and the Idaho Fish and Wildlife Foundation. To donate to this K9 unit, look for the Idaho Gives campaign with the Idaho Fish and Wildlife Foundation.



Photo: CC-BY Trevor Jensen

Wildlife Express

Volume 39 • Issue 7
Canines
March 2026

Wildlife Express
is published by the Idaho Department
of Fish and Game



Editor: Sara Focht, Lori Wilson,
Shawn Szabo and Roger Phillips
Layout: Nancy Jasper