



These Dogs Are

wild

Minnesota's wolves, coyotes, and foxes are very good dogs in their own special ways.

By **Mary Hoff**

FROM PUGS TO POODLES, from great Danes to golden retrievers—the dogs that live with people come in many types and sizes. Did you know that all of them are related to wild dogs?

Pet dogs, wolves, foxes, and coyotes are all members of Canidae, the dog family. This family includes nearly three dozen species that live in the wild on every continent except Antarctica. Four of these species live in Minnesota: the gray wolf, the coyote, the red fox, and the gray fox.

These animals share many traits with their domestic relatives—but they have some surprising differences too. Let's take a look at how the dogs that share our homes compare with their wild cousins.

Minnesota's wild members of the dog family are, clockwise from top left, the wolf, the coyote, the gray fox, and the red fox.

Super Senses

You've probably heard that dogs can hear sounds too high for people to hear. Members of the canid family are known for their excellent senses of hearing and smell. These senses help them find prey in the wild. They also help them learn about their world and each other.

Canids can't talk, but they still communicate. Doglike mammals rely on

sound and smell to share secret (to us) messages with each other.

You may have heard of dogs being used to find lost people or search for pollution, weapons, or illegal drugs using their sense of smell. Inside their long snouts, elaborate bone structures and lots of nerves give them a super sense of smell. Special glands under

Built for the Chase

Canids are predators. Many of the traits they have in common help them find, capture, and eat other animals.



Thick fur in winter makes a cozy coat

Tail gland produces a signature scent for friends and foes

Long snout and good sense of smell help sniff out animals to eat

Long legs chase fast prey for long distances

MINNESOTA CONSERVATION VOLUNTEER

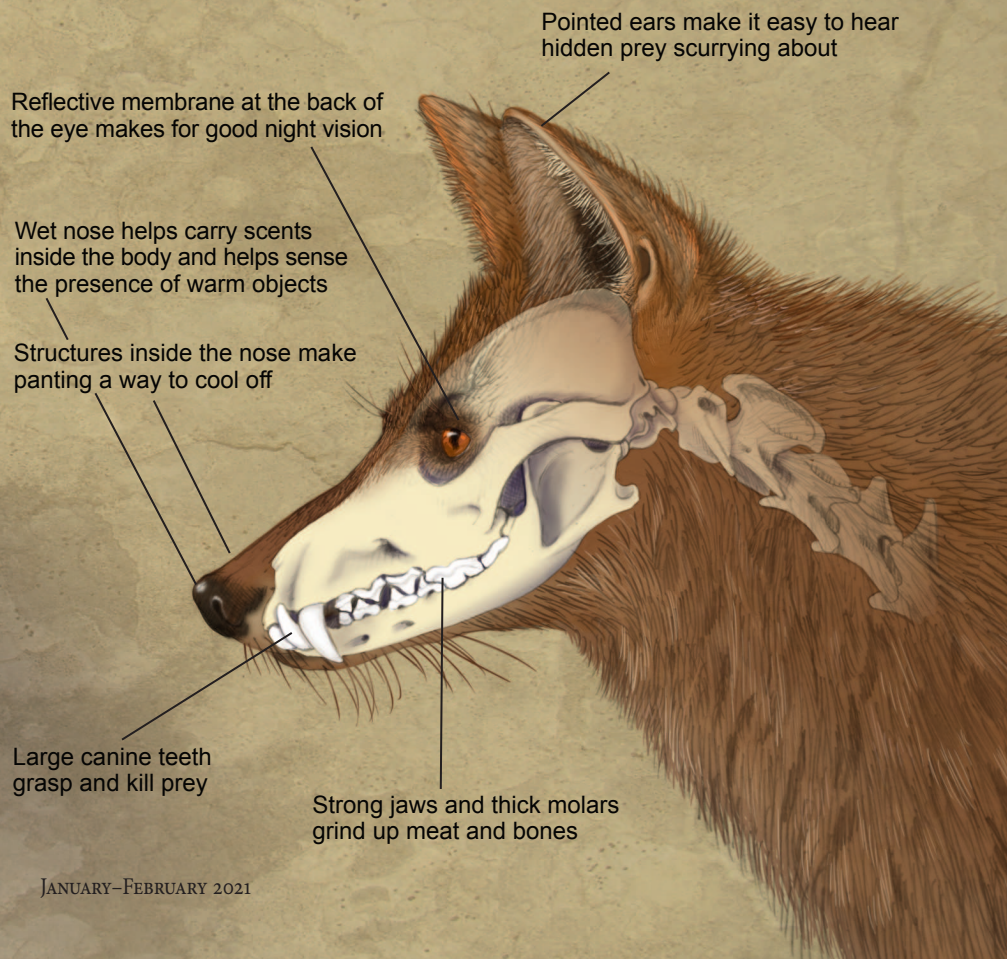
their tail produce a scent unique to them as individuals.

Dogs and their relatives love to poop and pee. That's because it's not just about getting rid of body wastes. It's also a way of communicating with others of their kind. They use pee and poop to mark their territory and let their friends and family

members know where they've been.

Members of the dog family also communicate through sound. Depending on the species, barks, yips, and howls carry different messages. The various sounds help them mark their territory, let their friends and family members know where they are, and coordinate group hunting activities.

TAINA LITWAK





Gray Wolf (*Canis lupus*)

On a cold winter's night, a lone howl breaks the chill, still air. From far away, another answers. Soon the dark is filled with the sound of wolves calling to each other and to the universe: *I'm here, and I'm hungry*. The hunt is on.

Weighing up to 110 pounds, the gray wolf is Minnesota's largest canid. It's also the one most closely related to the dogs we keep as pets. Gray wolves live mainly in forests and open lands in the north-eastern part of the state. They can travel over hundreds of miles as they search

for deer and other prey, including moose, snowshoe hares, and beavers.

Gray wolves, sometimes called timber wolves, can range in color from light gray to black (top center). Wolves usually live in groups of four to six close relatives called *packs*. The wolves in a pack work together to find, capture, and eat other animals. A pack will occupy a specific area called a *territory*. Members of the pack warn other wolves to stay out of their territory by leaving their scent in the form of pee and poop. They



FUN FACT: Minnesota is home to close to 3,000 wolves, more than any other state except Alaska.

also howl to announce their presence and to broadcast the message, “This territory is taken!”

Baby wolves are born in April and May in dens hollowed into the ground. At first the mom feeds her four to seven pups with milk. As the pups get older, the parents chew food, swallow it, and regurgitate it for them to eat. Eventually the parents start to bring pup-size food treats such as small mammals or birds. The pups squeak and the parents squeak back.

An adult wolf often eats 5 to 7 pounds of meat in a day, but a large wolf can eat up to 22 pounds in just one feeding. Wolves can go for weeks without eating if they need to.

Gray wolves are good at doing winter. Guard hairs in their fur help protect them from rain, sleet, and snow. Big paws act like snowshoes to help them run through deep snow. Tiny blood vessels inside the bottoms of their feet carry warmth that helps protect them from frostbite.



Coyote (*Canis latrans*)

A swift-footed, doglike shadow zips across a grassy area into the nearby trees. Is it your imagination? Maybe! Or maybe it's a coyote.

Coyotes are wild canids that look a little bit like a small German shepherd. Long ago they lived mainly in the parts of Minnesota that were covered with prairie. Today you can find them throughout much of the state, even in cities. They are around 4 feet long and weigh 25 to 35 pounds, about as much as a cocker spaniel.

FUN FACT: Coyotes have the best sense of hearing of all wild dogs. They use sound to find food.

Coyotes are true omnivores: They eat almost anything! Their typical diet includes small mammals such as mice, fruit, and birds. Sometimes they eat farm animals. A coyote will even eat a porcupine if given the chance, rolling it over onto its back to bite into the soft parts that don't have stiff quills. Coyotes also eat dead things such as

road kill or bits of a meal left by another predator.

Coyotes pair for many years. The mom coyote gives birth to five to seven pups in April in a den in the ground. Both parents care for the young. When the pups are about three weeks old, their parents start feeding them solid food. When they are about 8 to 12 weeks of age, their parents begin to teach them to hunt on their own.

Coyotes may range over many miles of land. They are more likely than wolves to live alone. They also may hunt for small prey alone. However, family groups may hunt together for larger prey like deer.

Members of a coyote family use their voices to let each other know where they are, to coordinate hunting, to find each other after they've been off hunting separately, and to let other coyote families know that their territory is taken. Calls include a bark, a yip, a lone howl, a group howl, and a group yip howl. If you listen carefully on a moonlit night in an area where coyotes are common, you might hear one of the most magical sounds of Minnesota's outdoors: coyotes yipping and howling in unison as they regroup at the end of a hunt.

How Big Is That Dog?

Canids—members of the dog family—come in different shapes and sizes. Here are how Minnesota's four wild dogs and two well-known domestic ones compare.

Gray Wolf

- shoulder height 31–33 inches
- length to tail tip 54–78 inches



Coyote

- shoulder height 21–24 inches
- length to tail tip 40–48 inches



Golden Retriever, dog

- shoulder height 21–24 inches
- length to tail tip 37–42 inches



Red Fox

- shoulder height 14–20 inches
- length to tail tip 36–42 inches



Gray Fox

- shoulder height 12–17 inches
- length to tail tip 30–41 inches



Dachshund, dog

- shoulder height 8–9 inches
- length to tail tip 20–22 inches





Red Fox (*Vulpes vulpes*)

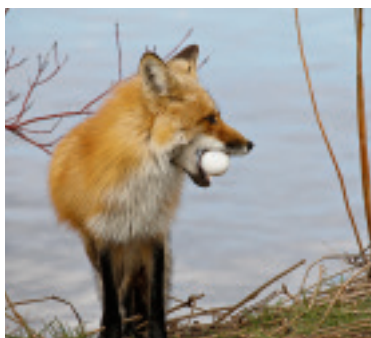
With its pointy, upturned nose, furry white bib, and fluffy, white-tipped tail, the red fox could win the cute contest among Minnesota's wild dogs. Smaller than a wolf or coyote, an adult red fox weighs in at around 10 pounds—about as much as a Shih Tzu—and stands just over a foot tall.

Like coyotes, red foxes live throughout much of Minnesota. In fact, they are found in more places around the world than any other carnivore. They

prefer spending time in open areas rather than in thick forests.

Red foxes mainly are active in the evening and at night. During the daytime, they hang out in burrows or piles of brush that help them hide from predators such as cougars, lynx, and coyotes.

Red foxes tend to spend their time alone rather than in packs as wolves do. They emerge from their hiding places in the evening to hunt mice, squirrels, snakes, fish, and other small



FUN FACT: A red fox sometimes will hide food and come back later to finish its meal.

animals, often using their sense of hearing to find their prey. Sometimes they eat berries, seeds, and nuts too.

In March or April, a mother red fox will give birth to three to seven young, called *kits*. When they are old enough to leave their den, the kits learn to hunt their own food. They stay together as a family until the fall, when they go off to make their own way in the world.

Unlike wolves and coyotes, foxes do not howl. They warn each other of

danger by making a coughing sound. Other sounds red foxes make include a bark to inform or alarm, a growl to show aggression, a whine that lets other foxes know they want to connect, and a scream when they are frightened.

Even though “red” is part of their name, red foxes come in a variety of colors. Some are almost black. Others are silvery black. And a variety known as a “cross fox” (top right) is red with dark coloration on its shoulders and back.

FUN FACT: A gray fox can pull its claws back into its skin similar to the way a cat does.



MICHAEL FURTMAN

Gray Fox (*Urocyon cinereoargenteus*)

It's hard to imagine a dog climbing trees. But this canine can do just that. Found in forests in western and southern Minnesota, the gray fox will claw its way up a tree trunk to escape predators such as coyotes and bobcats.

Gray foxes tend to be a little smaller than red foxes. Other than that, they look a lot like red foxes except they are (surprise!) mostly gray with orange on their chest, neck, and shoul-

ders instead of orange all around. They also have a black-tipped tail. They mainly hang out by themselves or with other members of their immediate family.

Like other wild members of the dog family, gray foxes give birth to their kits in the spring. The mother fox feeds them milk until they are old enough to eat solid food. Then the father fox teaches them to hunt.

TEACHERS RESOURCES. Find a Teachers Guide and other resources for this and other Young Naturalists stories at mndnr.gov/young_naturalists.



FUN FACT: Domestic dogs bark louder than their wild relatives do.

From Wolf to Dog

If you think your dog looks a lot like a wolf, there's a reason: The dogs we keep as pets today descended from wild wolves. Scientists think that people and wolves began to befriend each other at least 11,000 years ago, and maybe even as long as 40,000 years ago.

No one knows exactly when, how, or why. Maybe a hunter shared the kill with an injured wolf and nursed it back to health. Maybe a family adopted orphan wolf pups. What do you think? Whenever and wherever it all started, over time people and the ancestors of today's domesticated dogs began to share food, shelter, and companionship.

These ancient wolf-dogs had many traits that humans found helpful. They were good hunters. They defended their territory. They could travel long distances. They had keen hearing and could sense things using scents too subtle for people to smell.

Over time, humans found different ways to tap wolf-dogs' special abilities.

Some people kept wolf-dogs that were friendly and loyal. Some kept wolf-dogs that could help them track and capture various kinds of prey. Some kept wolf-dogs that could help round up their livestock. Some kept wolf-dogs that could help carry things long distances from one place to another. Different groups of people kept wolf-dogs that best fit their particular needs. Because they kept and bred the wolf-dogs that best met their needs, the wolf-dogs evolved to meet their needs even better. Over thousands of years, these choices led to the 200-some breeds of domestic dogs (*Canis lupus familiaris*) we have today.

Some pet dogs still look a lot like their wild relatives. Others look very different. But all have many traits that harken back to their wolf ancestors. Whether it's barking at strangers, pricking up ears at a sound you can't hear, following the scent of a rabbit, or peeing on a bush, dogs will be dogs, wild or tame. 🐾