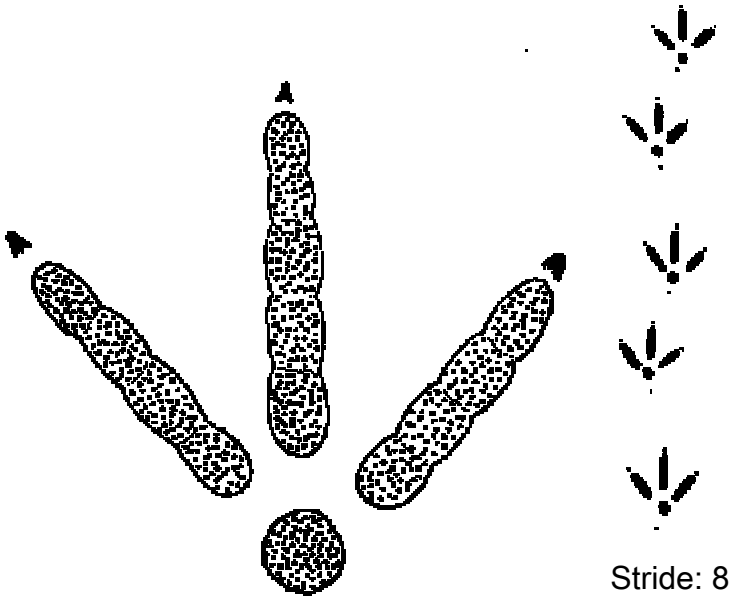
Wild Turkeys

Meleagris gallopavo silvestris



Size: 3.5 to 4.5 inches long
3.75 to 4.25 inches wide

Stride: 8 to 14 in. depending on speed

Wild Turkey, Track, and Trail Pattern

Natural History of Wild Turkeys

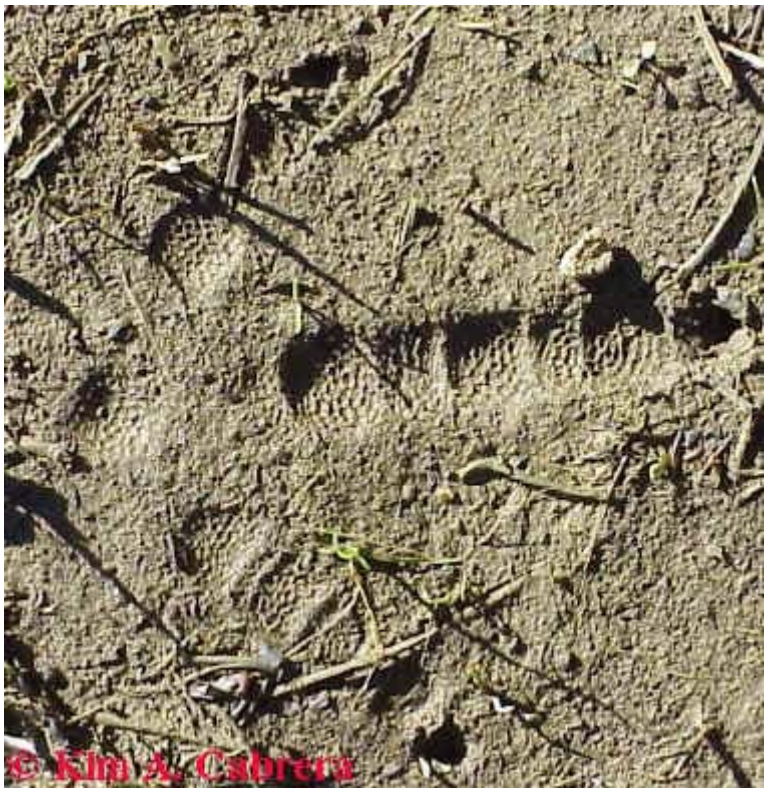
Wild turkeys are native to the southeastern United States. They have been introduced in many parts of the west, including California. They prefer oak woodlands, but are found in grasslands and pine forests as well.

They are swift runners and are wary of people. However, I have found them to be bold when they know there is food around. Turkeys have approached quite close to me when I am putting out food for other birds at feeders.

Turkeys are polygamous. The male struts with his tail fanned to attract a harem. He fluffs up his feathers and drags his wing tips along the ground. This makes him look bigger. See photos below.

Where they naturally occur, wild turkeys were used by Native Americans as food. Some tribes refused to eat turkeys, believing that the birds were stupid and cowardly. The people feared that eating the birds would cause them to acquire some of these characteristics.

Turkeys lay eight to ten buff colored eggs with brown spots. Eggs are laid in a shallow depression in the ground, lined with grass and leaves. I have found these nests in tall grass in spring. The typical call is a gobble.



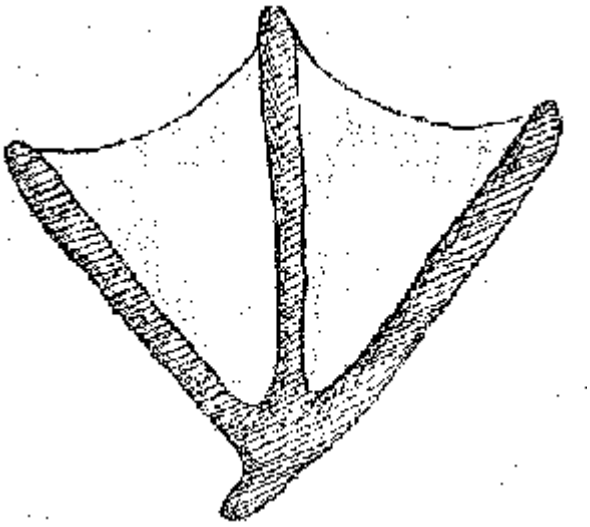
This wild turkey track shows the detail of the pattern on the toes very well. The pebbly texture of the toes is similar to that found on porcupine

and raven tracks. It is hard to see unless you find the track in good mud or fine soil. Three toes point forward. The round imprint where the three toes come together does not always show in the tracks. This is the metatarsal pad. Claw marks are visible on several toes in this picture. Turkeys have a fourth toe, which faces backward. But this does not always show in the tracks because they don't always place the foot entirely flat on the ground. Sometimes there will be a mark from the claw.

These holes in the ground were made by turkeys sticking their beaks into it to find something to eat.

Ducks

Anatidae



Duck Track

Above photo from Webseek 1997.

Ducks are members of the same family as swans and geese.

All ducks have webbed feet. Most live in aquatic environments, thus the need for the webbed feet.

Male ducks are generally more brightly colored than the females.

Some ducks are vegetarians, others eat such things as fish, insects, and snails.

Most ducks prefer fresh water. You will find them in many riparian areas, from rivers and ponds, to coastal marshes.

Wood duck in the Eel River.

Male wood duck

Duck Track Gallery

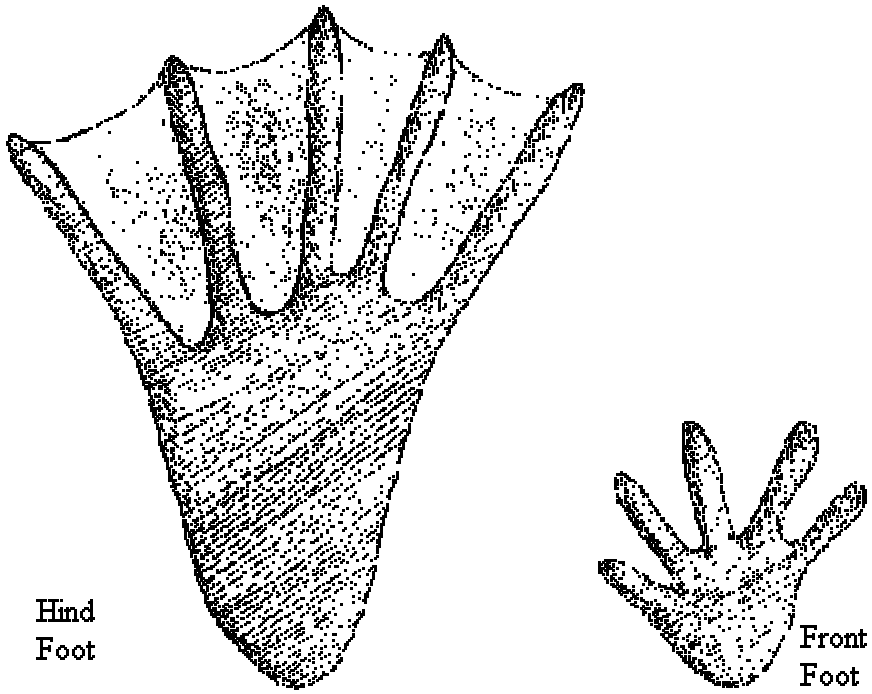
A duck track in mud. The webbing on the feet is clearly visible in this track. This helps the duck to swim. It probably also helps the duck stay on top of the deep mud frequently found in the riparian areas these birds inhabit.

Duck track with a ruler for size comparison. This print was three inches long.

Duck tracks in sand at Burlington river bar - Humboldt Redwoods State Park, California. These are the tracks of a merganser. Duck feet toe in and the stride can be much shorter than this. Stride here was about 5 inches.

Beaver

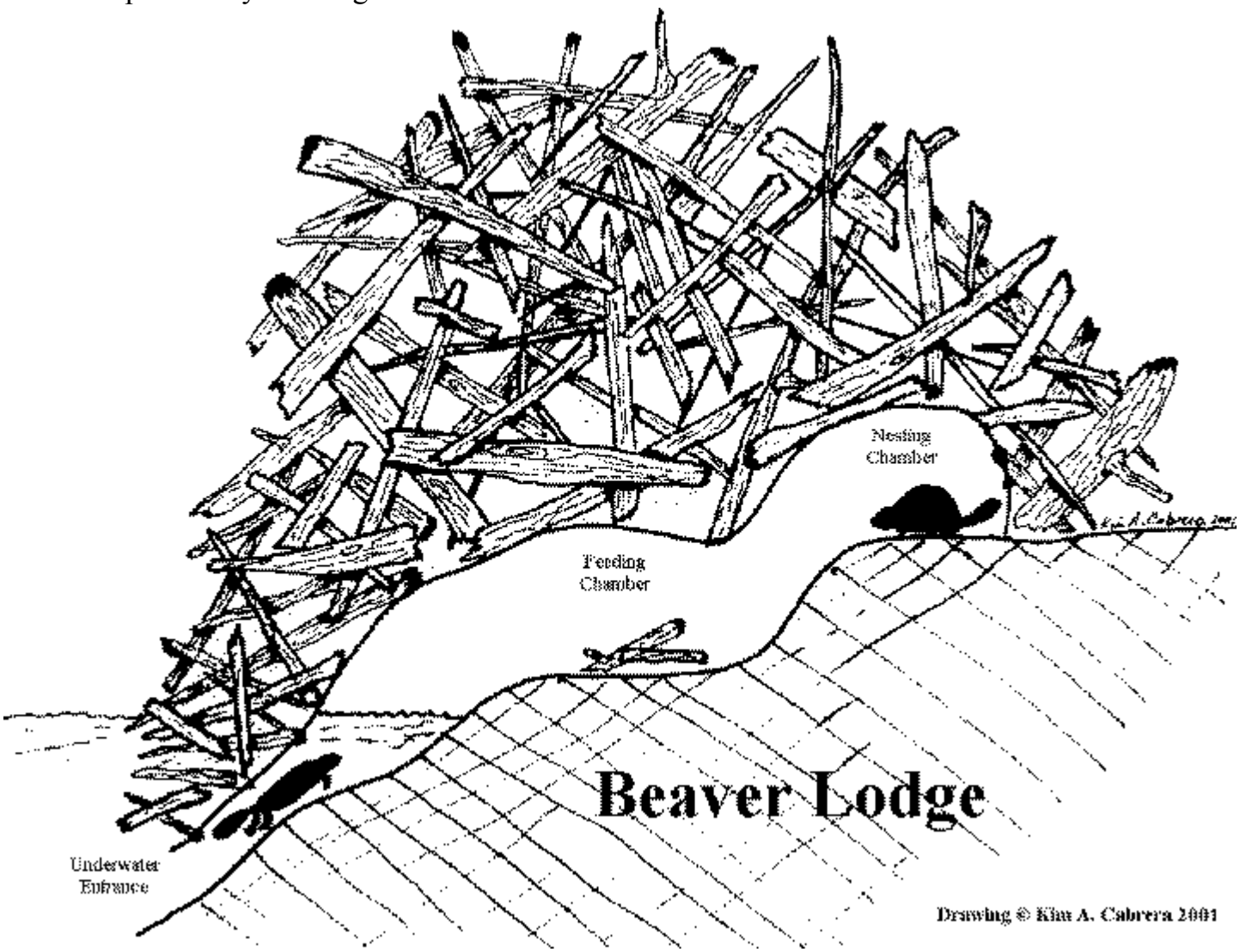
Castor canadensis



Beaver Tracks

The beaver is a familiar animal that inhabits most of the U. S. They are found just about everywhere except southern California, most of Florida and Nevada, and parts of Alaska. However, there are some isolated populations of beaver reported to be in Riverside County, California, in Temecula Creek. This is one of the largest rodents. Beavers weigh 45 to 60 pounds. Historically, beavers weighing over a hundred pounds were common.

Beavers are well-known as the builders of dams and lodges. Their long incisor teeth help them to cut down trees by gnawing their way all the way around the tree trunk. Beaver dams back up the water into ponds which change the habitat of that area. The ponds create marshy areas which allow certain trees to grow. These in turn support different species of wildlife that can live in a riparian environment. Over time, a beaver pond will become a meadow, then shrubs will begin to grow. The shrubs will provide shade that allows tree seedlings to get started. Once these trees grow tall enough, they shade out the shrubs. The trees will eventually grow into a mature forest. This cycle is called forest succession and many factors play a part, but the beaver helps to begin the process by building its dams.



Lodges are dome-shaped are built in deep water. Lodges are built with wide bases, sometimes up to 20 feet wide. The top can stand ten feet high. Entrances are under water and the beavers swim away

from the lodge before surfacing. Dams and lodges are constructed of interwoven branches. The water behind the dam generally is backed up to a depth of four to six feet. Dams can be wide, often five feet or more. The length of the dam depends upon the width of the stream.

Beaver ponds provide habitat for various species of fish, and other mammals, such as otters, that feed on the fish. Ospreys and other birds will nest in the dead snag trees that are killed by the flooding caused by the beaver pond. These birds feed on the fish in the pond.

Toppled trees are an obvious sign of beaver activity. A groove is gnawed all the way around the trunk in an hourglass shape. The downed trees are stripped of bark. Trees of a diameter approaching three feet can be felled by beavers.

Beaver pelts are thick and lustrous, factors which led to extensive trapping of beavers for both their pelts and their meat. The fatty tail, which is reputed to be very good tasting, was considered to be a delicacy. In many areas, beavers had been exterminated by trapping by the 1900s. Trapping regulations were enacted to protect beavers and this drove up the price of beaver pelts, making them unaffordable to most people.

The beaver's preferred habitat is near water. They love aspen, birch, willow, cottonwood, basswood, and poplar trees. The trees are used as building material as well as food. Beavers are vegetarians. They eat cattail shoots, parts of pond lilies and other aquatic vegetation, and trees. They don't really eat the wood, just the bark. An adult beaver can fell a tree 10 inches in diameter in about six minutes.

Beavers stash trees underwater for use during the winter. They will drag a limb down and plant the heavy end in the mud at the bottom of the pond. When the pond is frozen over and it is hard to find food, the beaver can take advantage of this stash.

Beaver kits are born in May and June. Litter size is usually about four. The health of the mother beaver influences how many kits are born. If she has had good nutrition and an abundance of food, a larger litter size is possible. The babies are about one pound at birth and are born with a full coat of fur and their eyes open. Kits can swim, but it may take them a month or more to figure out how to hold their breath and swim underwater. When they get tired, they catch a ride on their mother's back.

Beavers mate for life. The older kits may help care for and defend the younger ones. Because beavers are social animals, there can be as many as 18 beavers in one pond. When they are about two years old, beavers go in search of their own territory. They may wander ten miles to find a location to build a new pond.

Since beavers live near water, their tracks are often found in mud, which gives good detail to the prints. Beaver tracks show webbing on the hind feet. Hind tracks can easily be six to seven inches long. All feet have five toes. The prints show five toes on the hind feet and four toes on the front feet. The fifth front toe sometimes registers, but not on all surfaces. Front tracks can be two to three inches long. Claw marks show in the tracks. Beavers walk plantigrade, or flat-footed. The large tail sometimes leaves a drag mark in the trail. Beavers can run at six to eight miles per hour. Beavers groom their fur with an oily substance called *castoreum* which comes from glands. This is the substance that gives the animal's fur its waterproof qualities.

Beaver scat is commonly deposited in the water. When it is deposited on land, it is on the edge of the water. Scat appears composed of sawdust and is cylindrical. The segments are 1½ to 2½ inches long.

Beavers establish scent posts near their ponds. These are composed of a mound of mud, grass and sticks piled up into a dome-shaped mass. The beaver rubs castoreum on the mound. Some of these mounds can be huge, measuring a foot tall and three feet across.

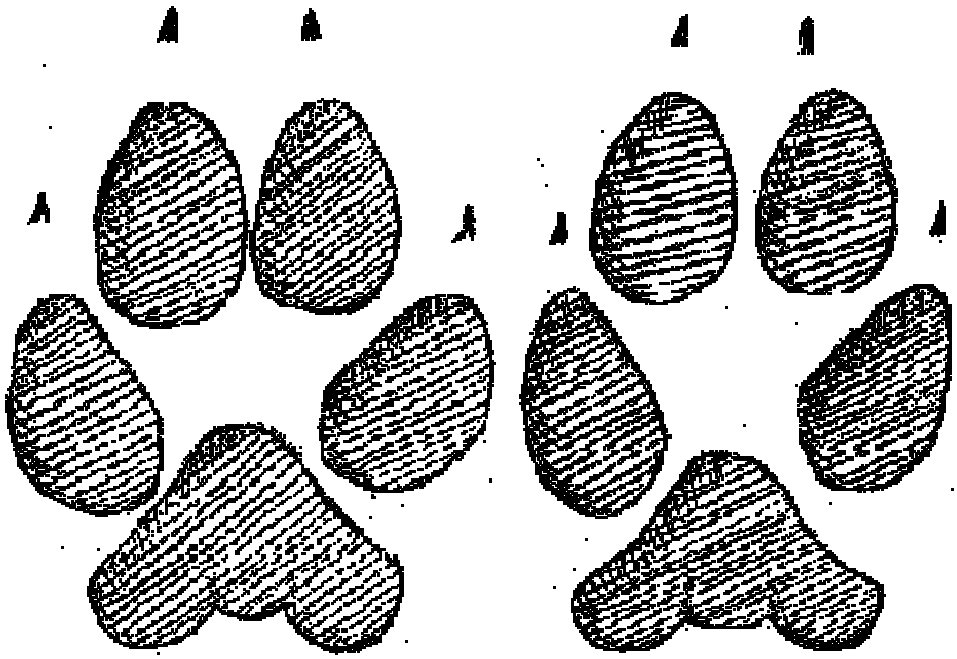
The main predators of beavers are foxes, owls, otters, hawks, alligators, bobcats, coyotes, and lynx. Adult beavers are good fighters and most predators leave them alone.

Beavers maintain their dams so that the pond water level stays up. If a dam breaks, the beavers will frantically rush to repair it before all the water rushes away.

Beavers don’t make much sound. The young can make sounds that resemble a duck quacking. They also whine and make several other noises. Adults sometimes grunt while working, but are generally silent. One sound beavers are well-known for making is the tail slap. To warn other beavers of danger, the tail will be brought down flat against the water to make a loud slapping sound.

Coyote

Canis latrans



Coyote Tracks

Front track on the left. Hind track on the right.

Click to hear the coyotes howl. (51K .au)

Natural History of Coyotes

Coyotes are very intelligent animals that have been able to adapt to many different

environments. Some live in major cities such as Los Angeles, feeding off human garbage and hunting mice and rats. In fact, the city of Los Angeles is home to about 3000 coyotes who roam the streets at night. They have adapted so well to the urban environment, that few people even know the coyotes are there.

Their tracks average 2½ inches long. The hind print is smaller than the front one. The inner two toes are smaller than the outer two. Coyotes have great stamina. They are good runners and swimmers.

They can eat a wide variety of foods, such as small mammals, eggs, fruit, berries, nuts, rodents, fish, carrion, insects, grains, vegetation, and even human garbage.

Dens are usually located in hollow trees, stumps, rock piles, or in brush. A coyote digs its own den, but will sometimes enlarge the burrow of another animal.

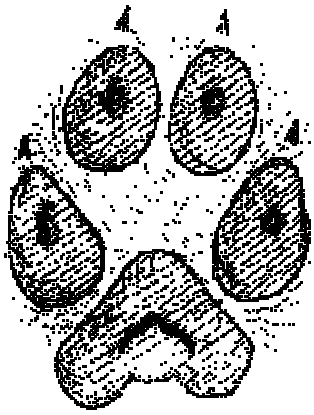
Young coyotes, usually three to nine pups per litter, are born in a den or shallow burrow in April or May. After they are about ten weeks old, the pups begin hunting together. By fall, they can survive on their own. Coyotes hunt both night and day.

Front foot of a coyote cast in plaster of Paris.

Hind foot cast in plaste

Red Fox

Vulpes fulva



Red Fox Front Track

Natural History of Red Foxes

Red fox tracks show four toes and claws. The foot of the red fox is covered with hair, so toes can be indistinct. Red foxes have callous pads on their toes that sometimes show up in the prints. There is also a chevron-shaped callous pad on the heel pad of the foot. No other canine has this, which makes identification of the red fox track easier. There is usually a lot of space between the toes and the heel pad, making the track appear open. Tracks commonly run in straight lines, one print in front of the other. The hair on the foot may be visible in the track. In winter, the hair is thicker, making the tracks more indistinct.

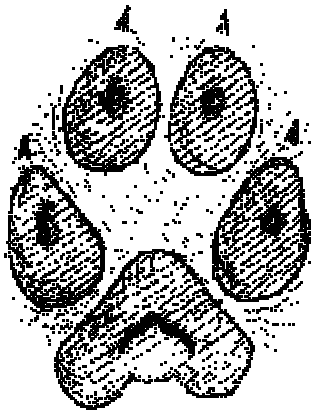
This red fox tracks shows several features that help to identify it. In the photo below, the features are indicated in color. Yellow encircles the claw marks that identify this as a canine track. (Four toes, somewhat oblong in shape.) The green lines show marks from the hair on the foot. The black lines encircle the chevron-shaped heel pad that identifies this as the track of a red fox.

Red foxes are primarily nocturnal, but will hunt by day. Foxes do not travel in packs as wolves do. They hunt alone or in family groups. Red foxes prefer forested or open country. They have been found in southern California, but are not native there.

Foxes are omnivorous. They eat small mammals, birds, insects, eggs, fruit, nuts, grains, and even human garbage. Rabbits are a preferred prey animal.

Red Fox

Vulpes fulva



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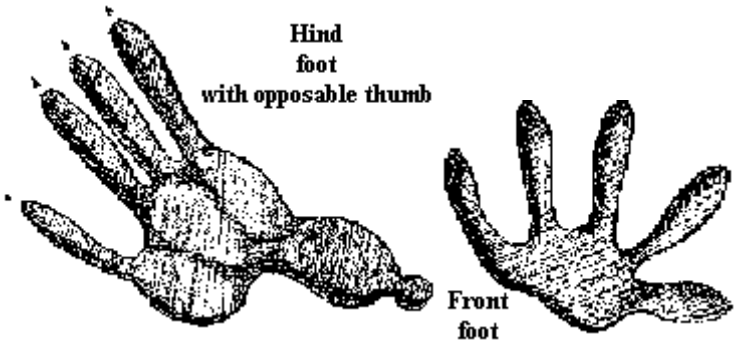
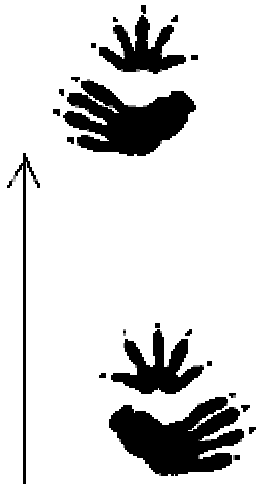
Opossum

Didelphis virginiana



Opossum Tracks

Opossum tracks in sand. Front foot at top and right hind foot on the bottom. The hind print partially covers the front one.



Opossum trail pattern diagram.

Natural History of Opossums

Opossums are the only North American marsupials. A marsupial is an animal with a pouch, like a kangaroo.

Opossums have pointed noses and naked tails. They are the only North American mammals with prehensile (grasping) tails. The tail is used to assist in climbing. It also stores extra fat reserves, enabling the animal to survive lean times.

Opossums have opposable thumbs on their hind feet which help them to grip branches and climb. They are the only non-primates with opposable thumbs.

Opossums have the most teeth of any North American mammal.

In the trail pattern at left, the two tracks, front and hind, overlap each other. Because the tracks are doubled, the trail can look like that of a much larger animal.

Early morning is the best time to find their tracks. The trails in fine, dry soil tend to age quickly, especially along riparian areas. Opossums can be found in many environments, including cities and wilderness. They are opportunistic feeders and can utilize many of the scraps people throw away, thus they are often found raiding pet food dishes and garbage cans.

When baby opossums are born, each one weighs 1/200 of an ounce, is less than ½ inch long, and lacks fully developed hind limbs. Up to 14 young are born after only 12 to 13 days of gestation. Of these 14 young, only about nine survive. The entire litter could fit into a teaspoon. They climb into the mother's pouch, where they remain for about ten weeks. When they are big enough, they ride around on their mother's back.

When attacked, an opossum can play dead, or "play possum." When using this defensive strategy, they drool and emit an unpleasant smell which discourages predators. They also climb to escape danger. When threatened, they will hiss and show their 50 sharp teeth.

They nest in abandoned burrows or fallen trees. Opossums eat a variety of foods and are able to adapt to many different environments, from cities to wilderness.

Their tracks show five toes on the front foot and five toes on the rear, including the opposable thumb. The thumb lacks a claw.

On the left is the trail pattern of an opossum in river sand. The tracks nearly overlap each other in the alternating pattern that is typical of a walking opossum. The opposable thumb is very prominent in some of these tracks.

Striped Skunk

Mephitis mephitis

Striped Skunk Tracks

Long front claws for digging.

Natural History of Striped Skunks

The striped skunk is a boldly colored nocturnal animal whose defense is a very strong smelling spray. It has glands which hold about a tablespoon of musky smelling methyl mercaptan. This is enough to allow the skunk to spray five or six times. It stamps its feet, growls, hisses, turns its back, and raises its tail straight up when it is about to spray. It can spray up to 15 feet and the smell can carry a mile. If the spray gets in the eyes, it causes pain.

Skunk tracks show five toes on the front foot and five on the hind foot. The front tracks usually show claw marks farther ahead of the toe marks than the rear prints do. This is because the skunk has longer claws on the front feet to use in digging up roots and insects.

They forage by digging. Sometimes, you will find these small holes dug out by skunks. They will also get into garbage cans.

It has been said that skunks can be discouraged from visiting by scattering a few mothballs around on the ground. They are supposed to be repelled by the smell of camphor.

Three to eight young are born blind and are weaned at six to seven weeks.

Skunks are omnivorous, eating mice, eggs, insects, grubs, fruit, carrion, and shrews.

Great horned owls are predators that commonly eat skunks.

Skunks find shelter under buildings or in ground burrows taken over from other animals. Skunks are active year-round.

Striped skunk hind foot cast from a mold. Note claw length.

Gray Squirrel

Sciurus griseus

Gray Squirrel Tracks

Natural History of Gray Squirrels

Gray squirrel, mouth full of acorn, looking down at me from his perch in a bay tree. He was gathering acorns, but took time out to scold me for entering his forest.

Gray squirrels are common in many regions. They have large bushy tails and gray fur. Since they love to eat acorns, they are found commonly in areas where oaks grow. They also eat nuts, berries, fungi, larvae, vegetation, and insects. The call is a hoarse bark. They make their bulky nests high up in trees from leaves, sticks, and bark. In winter, they find shelter in tree hollows. Gray squirrels do not hibernate. They are active year-round. Usually, four to six young are born per litter. Their tracks show four toes on the front foot and five on the hind foot. Clear tracks may sometimes be found along river edges, where the animals come down to drink. Gray squirrels are not as common in campgrounds as Douglas' squirrels and chipmunks.

The best time if year to see them is in the fall, when they are busy gathering and storing acorns for winter. Gray squirrels will scold intruders into their territory. They sit high on branches and make a chirring sound that is easily recognizable.

The gray squirrel on the right was trying to keep cool on a hot day. It was over 100 degrees out and the squirrel found a shady place on the dirt road to stretch out and cool off. As I drove down the road, I thought the squirrel had been hit by a car. But it was actually just laying there to get cool. It moved off as I approached.

Gray squirrel in an tree. It had been foraging on the ground and ran up the tree at my approach.

This squirrel was foraging for acorns on the ground.

Gray squirrel front track in sand.

Front track shows four toes.

Gray squirrel hind track in sand.

Hind track shows five toes.

Gray squirrrel trail pattern. Hind feet land ahead of front feet. Tracks will be in groups of four.

Hind track in dust.

Right front track in dust.

This track pattern is typical of rodents.

Gray squirrel hind track from a plaster cast. This mold shows details not normally found in casts made in the field. Note the toe pads.

Gray Fox

Urocyon cinereoargenteus

Hind Foot

Front Foot

Trail Pattern

Gray Fox Tracks

Natural History of Gray Foxes

Gray fox tracks show four toes and claws. Sometimes, the semi-retractable claws do not show. Their tracks average less than two inches in length. Tracks commonly run in straight lines, one print in front of the other. Front and hind prints overlap each other and appear as one print. Only foxes and members of the cat family walk in this manner. In fine mud, the hair on the foot may be visible in the track.

Sly the Fox

Gray foxes are primarily nocturnal and hunt small mammals. Sometimes, they hunt by day. They are the only canines that can climb trees. They seek refuge in trees and also climb to find food. The bark of the gray fox sounds like a hoarse cough. If you startle a fox, it may bark at you.

Foxes are omnivorous. They eat small mammals, birds, insects, eggs, fruit, nuts, grains, and even human garbage. Rabbits are a preferred prey animal. In campgrounds, you might see them at night, picking through fire rings in search of morsels from campers' meals. They are frequently seen crossing roads at night. In towns, they often eat pet food.

Foxes den in rock piles or hollow logs. About five young are born in spring. Both parents care for the young and teach them how to hunt.

Great series of photos of a gray fox climbing a tree. These photos were donated by J. Muse. Thanks! The object the fox is trying to get is a cone filled with peanut butter. It is used to feed the squirrels, but the fox decided it would make a nice snack. Gray foxes are the only canines that can climb trees.

The front track shown on left has a lot of space between the heel pad and the toes. You can tell it is a front track because the heel pad is more robust than that of the hind track. (See pair of tracks below.) Front tracks are larger than the hind ones.

Gray fox trail in alluvial river silt. This photo was taken in summer, when the details of the tracks are easily lost as the winds pick up over the course of a day. These tracks were found in the morning. By afternoon, only the rounded dots were left to indicate a fox had passed here.

The gray fox was walking along and paused to sit down and scratch. The actions are easily visible in this print. The fine hairs from the tail left marks behind where the fox sat. The fox's entire body left this track. The two prints in the upper right of the photo are the fox's approach trail. This type of soil is excellent for finding such detail. It is fragile and wind easily carries away these tracks. Getting out early in the morning increases your chances of finding complete stories like this one.

The photo on the right shows a fox-eye view of a fox trail along the river bar. Note how the prints overlap. Each print is actually a hind print on top of a front one.

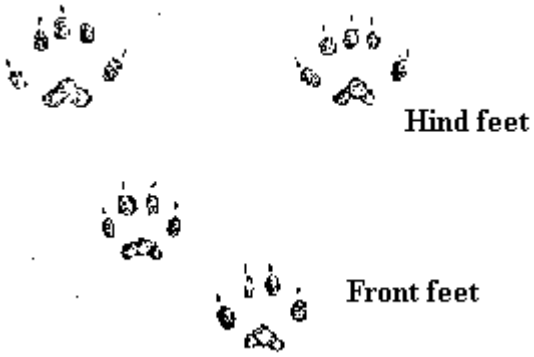
The front track is on the right and the hind track is on the left in this photo. Front track is larger. The hind track appears skinnier. The claw marks are far ahead of the toes, indicating fairly long claws. The gray fox is the only canine that can climb trees. Perhaps these long claws help it climb.

The hind track of a gray fox cast in plaster of Paris. This cast is from a mold and shows details that rarely show in casts made in the field.

Gray fox track in mud along the south fork of the Eel River near Redway, California. The tiny tracks in the upper right of the photo are mouse tracks. Note the hair visible in the fox track. This photo was taken December 20, 2000.

Deer Mouse

Peromyscus maniculatus



Deer Mouse Tracks

Natural History of Deer Mice

Deer mice are common nocturnal mammals. Adults are brownish gray. Juveniles are gray. Both have dark eyes and white feet and undersides. They have four toes on the forefeet and five toes on the hind feet. Their tracks are commonly found on the fine beach sand of river bars and in soft mud. Tracks are usually in groups of four with a trail width less than two inches. In firm sand, sometimes a whole print will show up clearly. Mice make nests lined with the softest materials they can find. Nests are located beneath rocks and logs, in burrows, or in trees. Three or four litters of four babies each may be born per year.

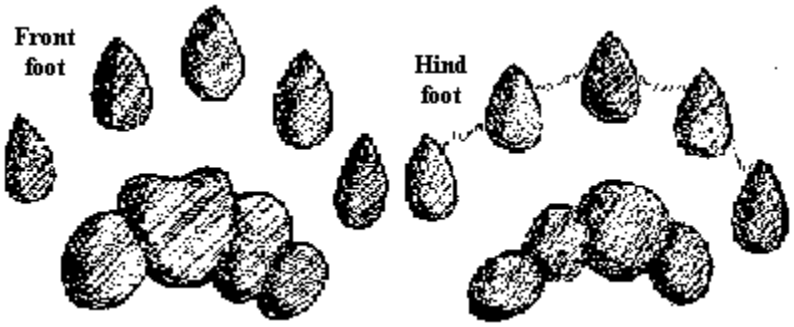
Mice will also gnaw on old bones and antlers to get the calcium. When you find a bone, look very closely at it and you may see tiny paired tooth marks where mice have scraped it. Mice eat seeds, mushrooms, fungi, berries, herbs, insects, larvae, and carrion. They are good climbers and will climb to escape danger. They are active year-round.

Since mice are prey for so many animals, they are somewhat nervous in their actions. They are often seen running or moving very fast. In order to survive, they have to be able to outrun or escape predators.

The two close-up photos above show the five toes of the hind foot. Front feet have four. Sometimes an imprint of the entire toe is visible, as in the photo on the left above. The photo at the top of the page shows five toes with just the toe pads leaving imprints.

River Otter

Lutra canadensis



River Otter Tracks

Click here for the River Otter Photo Gallery and videos

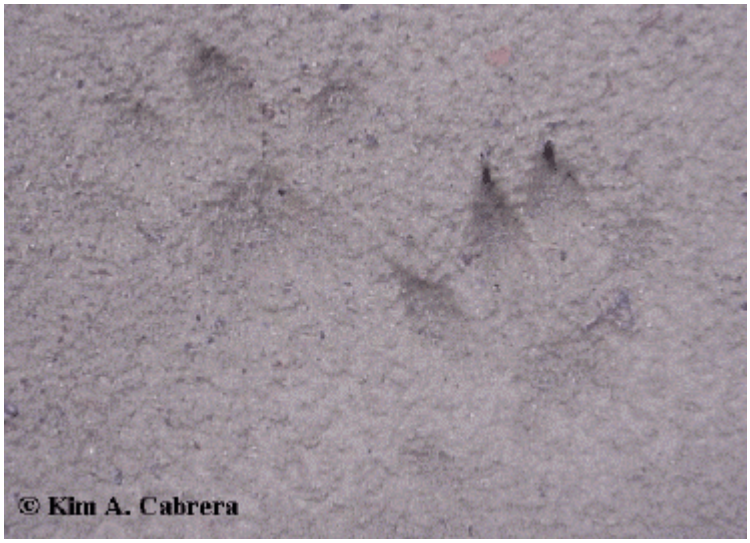
Natural History of River Otters

River otters are playful members of the weasel family who love to frolic in the water. They are common in rivers and are a joy to watch.

Otters can remain submerged for several minutes. They have valved ears and noses to keep water out. The fur is warm and thick. Since they spend a significant amount of time in the water, their tracks aren't often found.

The best places to look for tracks are muddy river banks. They have five toes on the front feet and

five toes on the hind feet.



Their toes are partially webbed, which helps them swim. Tracks in mud sometimes show this webbing. The claw marks are so close to the toes, they give the toes a characteristic pointed appearance.

Otters are well-known for their intelligence and their playful antics. They are excellent fishers, but also will eat small mammals, fish, shellfish, snakes, turtles, birds, eggs, amphibians, and lampreys. They feed primarily on amphibians and will range up to five miles up and down-river each day while hunting.

The tail drag is sometimes visible in an otter trail. Often, their prints are found in groups of four.

Otter scat commonly contains fish scales and is often found on prominent landmarks near water, including rocks, stumps, and boat docks. See scat photo below.

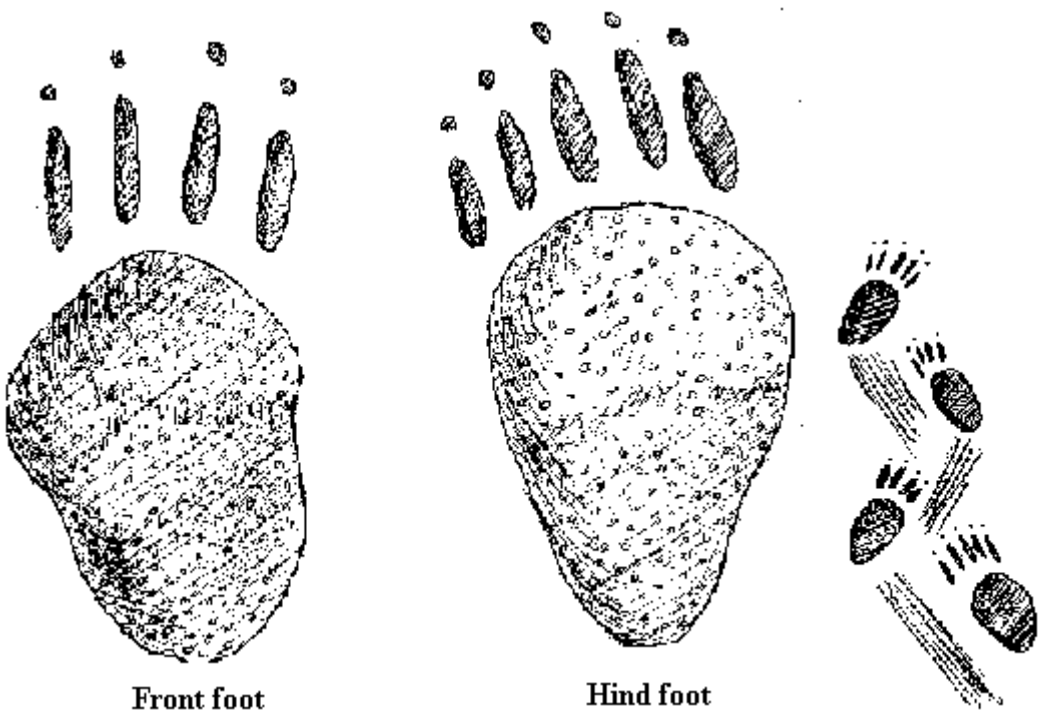
Otters roll on river banks and leave a musky scent. Dens are dug into banks, with underwater or above ground entrances. Nests are made inside the den out of leaves, sticks, and grass.

Otters will often travel overland, far from water. They are active during daylight.

Otters have two to three pups in late spring. Adult otters can weigh 30 pounds.

Porcupine

Erethizon dorsatum



Porcupine Tracks and Trail Pattern

Natural History of Porcupines

Porcupines are nocturnal vegetarians, but can be active by day. They eat the inner bark, or cambium, of trees. They will also eat foliage, twigs, bark, leaves, buds, fruits, berries, nuts, flowers, and will sometimes feed in fields.

They move slowly and don't see well. They climb trees to escape predators, but will use their quills if they have to.

Porcupines do not shoot their quills. The quills are loosely attached. If attacked, a porcupine slaps the attacker with its tail. Many dogs have ended up with a muzzle full of quills by getting too close to a porcupine. The quills have barbs and will work their way in deeper if left alone. A single porcupine may have 30,000 quills. Quills are modified hairs that have hollow shafts with solid tips and bases. The quills can be up to five inches long.
Newborn porcupines weigh more than grizzly bear cubs do at birth.

Their tracks show four toes on the front foot and five on the hind foot. Marks made by the long claws usually show. The heel pads have a pebbly texture. This acts as a non-slip surface and helps them climb trees. Sometimes, a tail drag mark is visible in the trail. Porcupine scat is in pellet form, and often found in piles at the base of a tree where the animal has been feeding. The picture above shows a tree damaged by a porcupine. This type of feeding sign is common.

Fishers are predators that can eat porcupines. They flip the porcupine over to

get at the soft underside, which lacks quills.

Porcupines love salt and will chew on wooden tool handles that have absorbed perspiration to get the salt

Front foot of porcupine cast in plaster.

Hind foot of porcupine. Note the pebbly texture on both feet.

Raccoon

Procyon lotor

Raccoon Tracks

(To see an animation of how this pattern is made, click on the picture.)

Natural History of Raccoons

Raccoons are familiar animals with masked faces and ringed tails. They have five toes on both the front and hind feet. Their long, dexterous fingers enable them to open latches, untie knots, turn doorknobs, and open jars. Their prints look like tiny human baby handprints and footprints.

They are primarily nocturnal and thrive in many cities as well as wilderness areas. In fact, the densest population of raccoons in New York is in New York City. They are very intelligent and adaptable animals.

They are omnivorous and eat a variety of foods, including frogs, fish, amphibians, shellfish, insects, birds, eggs, mice, carrion, berries, nuts, vegetation, salamanders, insects, berries, corn, cat food, and human garbage.

Their tracks are commonly found near water. Where you find water, you find mud, which is an excellent medium for studying tracks. The hind feet in the picture on the left sunk deeper into the mud due to the heavier hind end of the raccoon's body. It is widely believed that raccoons always "wash" their food. This is not true. They exhibit a behavior called "dabbling" in which they dunk their food in water. This helps enhance their sense of touch and helps them find food underwater by feeling with their sensitive fingers. It also enables them to sort out items that are not edible.

During cold weather, raccoons will sleep for several days, but do not hibernate.

Raccoon scat is tubular and blunt on the ends. Scat may contain parasites that can get into human lungs, so handling it is not advisable.

Three to six young are born in a

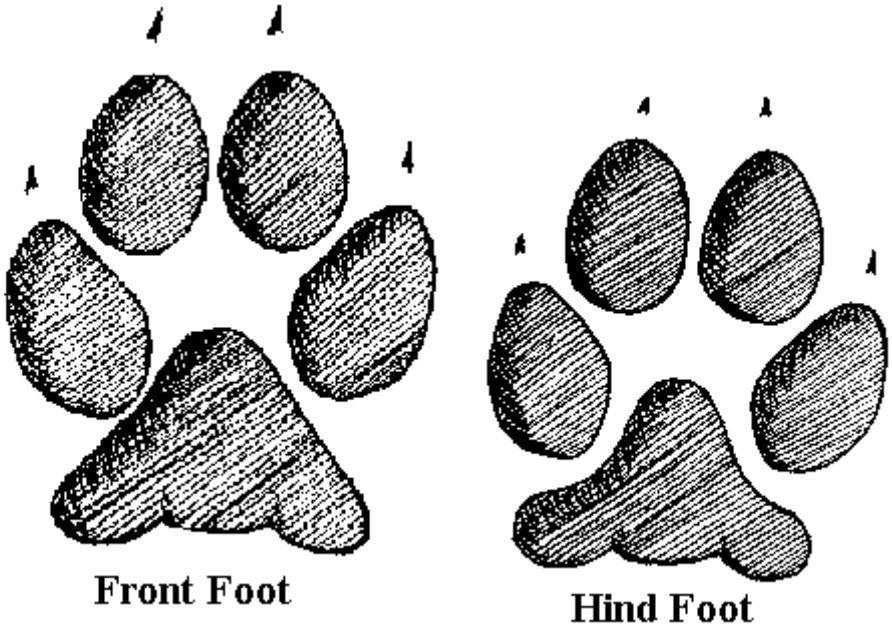
hollow tree den in April or May. Their eyes open at three weeks. They remain in the den for two months. Young stay with the mother until the following spring.

Raccoons are well known for their curiosity and mischievousness.

The photo above shows typical raccoon scat. Droppings are often left in "latrines" which the raccoon will repeatedly visit. This may be a way of staking out a territory.

Gray Wolf

Canis lupus



Gray Wolf Tracks

Click here to hear a wolf howl.

The gray wolf used to range throughout the U. S. Due to its predatory nature, it was seen as a threat to cattle. Many wolves were exterminated as part of government extermination programs aimed at protecting livestock. However, wolves were

blamed for a lot more than they actually were responsible for.

Wolves are now found in a few northern states, including parts of Minnesota, North Dakota, Montana, and the upper peninsula of Michigan. They live in Alaska and in most of Canada. The wolf is the largest wild canine in North America. Gray wolves can be gray, white, black or silvery. Some have facial markings that resemble those of huskies or malamutes. Gray wolves are also called timber wolves. They live in packs, although some animals will travel alone. Packs are nomadic and may range more than 250 miles. During the time when the alpha female has her pups in the den, the pack stays in one place. Other than that time, they are always on the move.

Their primary prey include deer, moose, and caribou, although they frequently eat small mammals. Rodents from a major part of their diet. They will also eat various kinds of plants to get needed vitamins and minerals. Wolves have good hearing and a well developed sense of smell. This helps them find prey in their forested environment. Wolves have sharp eyesight. A wolf can run at 30 mph. When wolf packs hunt, they often set up ambushes to catch prey. They cull out weak or sick animals as they don't have the speed to run down a healthy deer. The pack will charge a group of deer and quickly determine which is the weakest one. That is the animal they will try to catch. If a deer turns and fights, the wolf pack may move on to easier prey. Injury from a deer's sharp hooves can lead to the death of a wolf.

Wolf packs are territorial. If there is an abundance of prey, several packs may have overlapping territories. Each pack has a pair of leaders, known as the alpha pair. These are the only animals in the pack that breed. The pups are born between April and June. The average litter size is seven, but litters of up to 14 have been known. The entire pack helps feed and care for the pups. They bring food, which is then brought to the mother by the alpha male, the only other pack member who is allowed to approach the den. All pack members will take turns looking after the pups once they emerge from the den at about one month. Wolves are very social animals and have elaborate facial and body language displays that allow them to communicate to each other. The average life span of a wolf can be up to 18 years, but is more likely to be around 10 years.

Wolves don't hibernate in their dens. When the weather is bad, they may curl up in a ball and let snow drift over them to provide extra insulation. They sleep in the open as they don't have many predators to fear. One member of the pack will stay alert and act as a sentinel to warn the others of danger.

Wolf tracks, like those of all canids, show four toes on each foot with claw marks present. Wolf tracks are robust, often measuring 4¼ to 4¾ inches long. Wolf tracks can be difficult to distinguish from those of large dogs. The main difference is in habitat. Wolves are found farther from human habitation than dogs are. The stride of a wolf can be 26 to 30 inches. Wolves can run 30 to35 mph. At top running speed, the distance between groups of tracks can be six to eight feet.

Plaster cast of gray wolf track. This is from a mold.

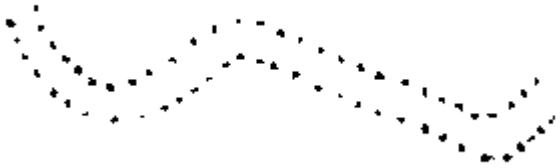
Wolf scat will usually have the hair and bones of its prey. Scat can be 1½ to 2 inches in diameter. Some plant material may be present, such as grass or seeds.

Wolves will mark their territory with scent markings. Scentposts on prominent landmarks tell other canids who is around. Wolves, as do most canids, use urine to mark the prominent landmarks. They also leave droppings in the middle of trails to advertise their presence. Canids will scrape near the scent deposit to spread the scent around and let other canids know whose territory they're in.

Wolves and other animals, including bears and cougars, will cover partially eaten meat with dirt. You should never approach one of these camouflaged carcasses because the animal may not be far away. Bears and cougars will defend these partially eaten carcasses. Wolf packs may or may not, but it's best not to take the chance.

Wolves have a complex vocal communication system. They use yelps, whines, growls and body language to communicate amongst themselves. Posture is used to indicate the wolf's position in the pack. Submission to a dominant pack member is indicated by a cowering stance and whining. The submissive wolf will lick the dominant wolf's face. A wolf will growl, snarl, lay back its ears, and raise the hair on its back to let another wolf know to back off. Wolf howling serves as a communication between the entire pack. Wolves tend to give long howls instead of the yapping calls that coyotes are known for. When hunting, the pack will scatter out and use howls to keep in contact with each other. If a wolf finds prey or food, it will call the others with a special howl.

Beetles

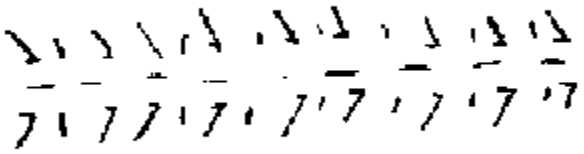


Beetle Tracks

This is the largest order of insects. Beetles are found almost everywhere, in all sorts of environments. Some dig tunnels under tree bark and bore their way into wood. Others live in the water and prey upon other water creatures. Some live in fungi. Others feed on carrion. Some beetles are parasitic. Some of the plant-eating beetles are considered to be serious pests to crops. Other beetles are beneficial to mankind because they feed on insects that damage crops. Beetles can live on or in the ground, on vegetation, or in water.

Beetles tracks can be found in just about as many environments as the beetles themselves. However, some of these environments are not the type that tracks show up in well. The best places I've found to look for beetle tracks are near the water's edge, or in fine silty soil near water. Their tracks are also easy to find in dry, sandy environments. I have often found the tracks of the "stinkbug" in desert environments. Since most beetles don't weigh much, their tracks can be hard to see. Start out by looking for them in these easy soils, then try to find them in the more difficult soils. Soon, you'll be able to see them even in difficult soil conditions.

Grasshoppers



Grasshopper Tracks

Grasshoppers are in the same family as crickets, katydids, mantids and walkingsticks. Some grasshoppers are able to "sing" by rubbing the edge of a wing across a file-like ridge on another wing. Some make noise by snapping their wings. Others rub their legs against the thickened front wing to make sound. Usually, it is the males that do the singing. Some females of some species can produce noises. The frequently heard calling song, is used to attract a mate. Some can produce more than one kind of sound.

Some grasshoppers are destructive to crops. Most of them feed on plants, but a few are predators, and some are omnivorous, eating almost anything.