

Beartracker's Animal Tracks Den

WELCOME

The original online field guide to tracks and tracking - since 1997.

Last updated: April 18, 2004



My name is Beartracker (AKA Kim A. Cabrera). I invite you to explore the world of tracking with me. I am interested in both animal and SAR (Search and Rescue) tracking. When you explore this site, you will find information on animals and their tracks. I have also included links to my favorite tracking sites. As you follow the links below, you will find pictures of animal tracks and drawings. In addition to animal tracks, you will find pictures of the animals themselves and natural history information for each species. If you know how to identify animal tracks, you can tell who has visited the location. If you know about the habits of the animal, you will understand why it visited that place.

You cannot find tracks unless you go out and look for them. Therefore, I have included a few tips on where to find them and even some links to my favorite tracking and hiking areas.

This site is intended to be a source of information about North American animals and their tracks. I do not claim to be an expert tracker, just someone who loves tracking. The joy of tracking is in solving the mysteries out there. Every time you go tracking, you will find new stories written on the ground, just waiting for you to unlock their secrets. I learn more and more each time I go out for a walk. I invite you to explore this fascinating world with me. To get started, pick the type of animal you are interested in from the list below. I hope you have as much fun exploring this site as I'm having creating it.

Animal tracks, and tracking in general, are fascinating. You can share your tracking

experiences or just listen in to the discussions on my e-mail discussion forum for trackers and tracking. It's called the Signcutters List. If you wish to subscribe, click on the Join List button at the bottom of this page. Don't forget to sign my [Guestbook!](#)

Find a track and want to tell everyone about it? Want to find out what others have learned about tracking? Whether you track animals or humans, you can post a message to the [All Trackers Message Board](#). Open to all trackers, anywhere, for the discussion of anything related to tracking. Animal tracks, human tracks, or even bicycle tracks. It's a forum for all trackers.

Do you like this site? Want to tell others about it? Recommend the Animal Tracks Den to someone by clicking on this button:



Post a message on my Geocities message board.



Animals and Their Tracks

Animals don't cover their tracks.

[Mammals](#)



[Birds](#)



[Amphibians](#)

[Reptiles](#)



[Insects](#)



[Humans](#)

Now available: "**Animals Don't Cover Their Tracks - An Introduction to Animal Tracking**" on CD! (Version 3.0) New drawings, more species, more photos, more extensive sections on tracking humans, more detailed directions for plaster casting, mystery tracks section, tracking stories section, and more. The CD features over 100 species, including special bonus sections with the tracks of some African and Australian animals. A large section on tracking lost people for search and rescue is included, with over four pages of photos showing the details of tracks and signs people leave. Easy to use format. This web site is limited by bandwidth, but the CD-ROM is not. The CD is available in my online store at: www.cafepress.com/tracker Works with Mac or PC. Happy tracking!!



NEW Spring is here and the frogs are singing again! Check out the latest treefrog serenade on my [treefrog](#) page. Recorded March 2000 on Humboldt County's Eel River.

Anything that moves over the ground leaves signs of its passage. You can find these tracks and signs if you know what to look for. These pages will teach you to recognize the tracks and signs left by some common animals.

[Species List](#) | [Guidelines for Use of Material](#)

NEW ... Download my [free animal tracks guide](#). This is an Adobe PDF file a little over 2MB. The download will be slow over a dial-up connection. (This guide prints on two pages.) You need the free Acrobat Reader to open this file.

OR, download the brand new track guide for 2004. Three pages of tracks with all new drawings and a few extra spaces to draw your own. This one is a 463KB PDF file. [New 2004 animal tracks guide](#).

NEW! Beartracker's Animal Tracks Den now has an [online store!](#)
Browse for merchandise related to tracking. I provide the information on this web site for free. The site has grown so much that it can no longer be hosted on a free service, so I have to pay a monthly fee. Proceeds from any sales go to help maintain this site and pay the monthly fees. Thank you for checking out the store!



General Tracking Information

- [Where to find tracks.](#)
- [Tips for seeing tracks and following them.](#)
- [How to make and use a Tracking Stick.](#) **NEW!** (You may also [download this file](#) as a PDF.)
- [Tracking activities for teachers and naturalists.](#)
- [Plaster track casting procedure](#) **NEW!** (You may also [download this file](#) as a PDF.)
- [Canine vs. Feline tracks \(Is it a cat or a dog?\)](#)
- [Learn to be a Tracker! The PAWS Principle](#) **NEW for 2003!**
- [Tracking reference sources](#) (Also includes my new Amazon.com bookstore. Any percentages I earn from bookstore purchases help me pay the monthly fees for this web site. Your help is appreciated. Thank you.)
- [What is SAR Tracking?](#)
- [Real Animal Track Impressions from Sooted Bait Stations](#)
- [Quick Reference Animal Track Guide](#)

- [List of my Recent Animal Track Finds](#)
- [Tracking Adventure Stories](#)
- [Glossary of Tracking Terms](#)
- [Animal Scat Section](#)

This new section has photos of animal scat, or droppings. This is an important part of tracking and identifying species. However, if you are bothered by such things, you may not want to visit this section. I have put this information all in its own section for this reason. The intent of providing this information is not to offend anyone. This is simply information that I found a lack of on the 'net.

Join the [Tracking and Signcutting Club](#) and talk to other trackers. It's free. Includes trackers message board and our own private chat room.

NEW Or, join the new [Animal Tracking Club](#). It's also free. Includes same as above.

Or visit the [Trackers and Signcutters Trail](#) on DejaNews. It's free. This also includes a trackers message board.

Test your knowledge!	
• New Fun Tracks and Tracking Quiz	• Animal Tracks Quiz
• SAR Tracking Quiz	• Animals Quiz

Check this out! My track drawings are now in a book! "[Buckshot's Modern Trappers Guide](#)."

Written by an expert trapper. I highly recommend this book for anyone interested in trapping. It contains a complete tracking section with drawings that were done by me - Kim Cabrera. So I have more than one reason to recommend this book! Check it out for yourself. It's worth a look. It is ranked #1 in sales in the "Trapping" category on Amazon.com. Check out Buckshot's web site too. ([Buckshot's Camp](#))

Also, my opossum track drawings are featured on the cover of the new novel, "Possums Sing" by Marlina Claire. Check it out!



Links to Tracking Sites

Search and Rescue Tracking

• Universal Tracking Services Home Page	• International Society of Professional Trackers
• Pacific Northwest Trackers Association	• Western New Mexico Search and Rescue Trackers Association
• Search and Rescue Society of British Columbia	• Mountain Trackers Association
• SARINFO	• SARINFO's Name That Track Help law enforcement identify these tracks!
• Snohomish County Volunteer Search & Rescue Tracking Page	• Yahoo List of SAR Sites
• Lost Person Behavior Characteristics (From SARBC's page.)	• Local Search and Rescue Teams and other area resources
• Bay Area Search and Rescue Council	• National Association for Search and Rescue (NASAR)
• Human Tracker Discussion Forum (Thread)	• K-9 Emergency Response Teams, Inc.
• Hug-A-Tree National Headquarters	• Wisconsin Animal and Human Trackers Association
• Wisconsin Outdoor Survival and Tracking School	

Animal Tracking and Others

• Paul Rezendes Tracking Site	• A Naturalist's World
• Tom Brown Jr.'s Tracking, Nature, and Wilderness Survival School (official site)	• Tom Brown Jr.'s Tracking, Nature, and Wilderness Survival School (unofficial site)
• Tom Brown Jr. Tracker Home Page	• Keeping Track
• Wilderness Awareness School	

Tactical Tracking/Law Enforcement

• Tactical Tracking Operations School, Inc.	• C.A.S.T. (Footwear & Tire Track Impression Evidence)
• Basic Track Identification by Lieutenant222	• Selous Scouts



Other Links



Places to go Hiking

- [Humboldt Redwoods State Park](#) (My first web site. World's Greatest Redwood Park!)
- [California State Parks](#) (I work for them. Some great parks here.)
- [Redwood National Park](#) (My neighbors to the north. Good place to go hiking.)
- [Henry W. Coe State Park](#) (Near Morgan Hill, California.)
- [Henry Cowell Redwoods State Park](#) (Another great redwood state park.)
- [Grand Canyon National Park](#) (NPS summary) Fantastic place to explore. I used to work here.
- [Grand Canyon National Park](#) (Grand Canyon Association expanded web site)
- [San Geronio Volunteer Association](#) (San Bernardino National Forest and San Geronio Wilderness in southern California)
- [National Park Service](#) (ParkNet) Explore our National Parks! Many tracking opportunities here!
- [Park Rangers on the Web](#) (Good interpretive info.)
- [Yellowstone Park Net](#) (Yellowstone National Park Information)

Animals Reference Sites

- [Biosis - Internet Resource Guide for Zoology](#) (College level reference)
- [Animal Diversity Web](#) (Excellent resource - also college level)
- [Predator Guide](#)

Other Web Sites I Wrote

- [Humboldt Redwoods State Park](#) (My first web site. World's Greatest Redwood Park!)
- [Animal Tracks of Humboldt County](#) (Northern California Animal Tracks)
- [Tracking 1999 Conference - Photos of the first ever gathering of trackers](#)
- [Tracking How-To](#) (Learning to read tracks - the secret language of the wilderness.)

This site is under construction.

- [Temecula Valley Shotokan Karate](#) (Located in Riverside County, California.)
- [Myers Flat Community School](#) (Located in Myers Flat, California.)



🐟 **Favorite Christian Links** 🐟

- [Focus on the Family](#)
- [The Bible Gateway](#)
- [Christian Resources Page](#)
- [All In One Christian Index](#)

Bible Prophecy Links

- [Grant R. Jeffrey Ministries](#)
- [This Week In Bible Prophecy](#)
- [Trinity Broadcasting Network](#)
- [Gospel Communications Network](#)
- [Jack Van Impe Ministries](#)



If you have any questions, please e-mail me at:



tracker777@hotmail.com



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Thanks for stopping by! Come back soon! Just follow the tracks...



Click here to hear a [bear roar](#). (48K WAV file)



The old guestbook system was replaced by Geocities at the end of December 2000. You can still [View my old Guestbook entries from 1997 to 2000](#) here. Enjoy!

[View the January 2001 guestbook entries.](#)



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The logo for "The Tracking Ring" features the words "The", "Tracking", and "Ring" in a yellow, outlined font. The text is arranged vertically with "The" at the top, "Tracking" in the middle, and "Ring" at the bottom. Small paw prints are placed around the text.	<p>Tracking Ring site owned by Kim A. Cabrera</p> <p>[Next Page Random Next 5 List Sites]</p> <p>Want to join the ring? Go to this page.</p>	A photograph of a tracking ring site on a sandy surface. The words "Next Tracking Ring Site" are overlaid on the image in a yellow, outlined font.
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[Yosemite Campfire Ring](#)

Member name: [Kim A. Cabrera](#)

[Who is on your left - Who is on your right - Close Neighbors](#)

[Grab a cup of coffee and see who all is here!](#)

If you have a homestead in Yosemite, join the Campfire!!



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73 from KG6BFO!

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Mammals



What is a Mammal?







Mammals are animals that are born with fur or hair. Mammals produce live young which they nourish with milk. They are warm-blooded and have the most highly developed nervous system of all the animals. A mammal usually has four limbs and a four-chambered heart. The largest mammal is the blue whale at 100 feet in length. The smallest mammals are shrews, mice, and bats. Many are less than two inches long, excluding the tail length.



Click on the name of the animal below to see a picture of its tracks and some natural history information about it. I have also included some personal notes about each species. The species below are primarily those that can be found in northern California and the west. Some of them are found throughout the U. S. As I do more research, I will add species that are found in other areas. Keep checking this page for updates.



 <u>Black Bear</u>	 <u>Grizzly Bear</u>
 <u>Beaver</u>	 <u>Bobcat</u>
 <u>Domestic Cat</u>	 <u>Townsend's Chipmunk</u>
 <u>Coyote</u>	 <u>Black-tailed Deer</u>
 <u>Elk</u>	 <u>Gray Fox</u>

 <u>Red Fox</u>	 <u>Harbor Seal</u>
 <u>Black-tailed Jackrabbit</u>	 <u>Mountain Lion</u>
 <u>Mink</u>	 <u>Deer Mouse</u>
 <u>Opossum</u>	 <u>River Otter</u>
 <u>Wild Pig</u>	 <u>Porcupine</u>
 <u>Brush Rabbit</u>	 <u>Raccoon</u>
 <u>Ringtail</u>	 <u>Spotted Skunk</u>
 <u>Striped Skunk</u>	 <u>Douglas' Squirrel</u>
 <u>Gray Squirrel</u>	 <u>Gray Wolf</u>
 <u>Moose</u>	 <u>Domestic Dog</u>



Got a mammal story? E-mail me and tell me about it.



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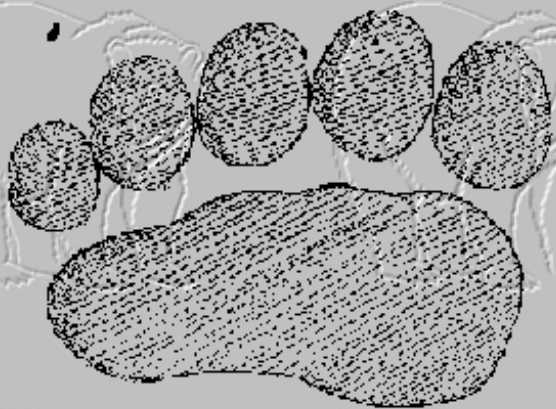
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Black Bears



Ursus americanus



5 in. L X 5 in. W



7 in L X 5 in. W

Black Bear Tracks

Front track on the left. Hind track on the right. Claw marks do not always show.

Click here to hear a [bear roar](#). (48K WAV)



Natural History of Black Bears



Black bears are the smallest American bears, and the most common. They are the only bears found in the wild in California. Although the grizzly bear is the state mammal, it has been extinct in California since 1922.

Black bears are usually nocturnal, but can be active during the day. Bears are strong, agile, and quick. They swim and climb trees well. A bear can run 30 miles per hour in short bursts.

Bears eat a wide variety of foods. A partial list includes: grass, leaves, nuts, berries, buds, twigs,

roots, corn, fruits, insects, plant sprouts, invertebrates, fish, carrion, fruit, succulent plants, eggs, birds, small mammals, and human garbage. Bears will dig up underground wasp nests to eat the insects, nest and all. They are extremely hungry when they emerge from their winter dormancy period in the spring and will often strip the bark off trees to eat the sugary cambium layer. The bears in the region do not hibernate all winter, but they do sleep away the harshest part of winter. Bears den in logs, beneath fallen trees, and in caves. Several days before entering the den, a bear consumes roughage, including leaves and bits of its own hair. These form a plug up to a foot long in the digestive system that is voided after the bear emerges from the den.

One or two young are born during the winter, usually in January or February. They weigh ½ pound at birth and grow quickly by nursing on the mother's milk, which can contain as much as 20% fat.

Bear droppings are over an inch thick, and tubular. The scat varies with diet, which can be 90% vegetable matter.

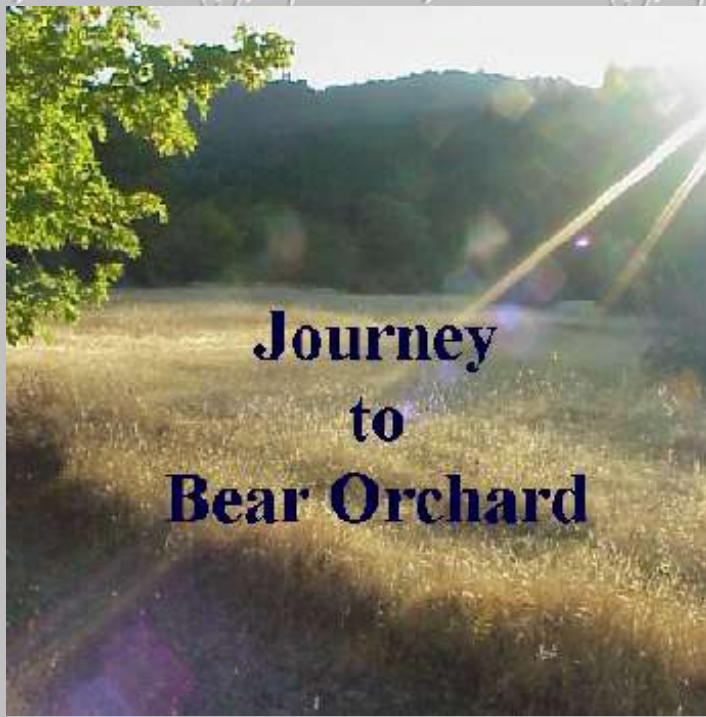
Bears are shy animals and will usually run from humans. They sometimes raid human garbage, compost piles, or pet food dishes that are left outside.

The inner toe in the track is the smallest toe. Bears walk plantigrade or flat-footed. Bears use the same trails over and over for generations. They tend to place their feet in exactly the same place every time they use the trail. You can find these trails where each footfall is in a depression worn into the ground by the passage of so many bears over the years.

The stride is about 36 to 42 in. The most common walking trail pattern is at right.



Black bear trail pattern



Journey to Bear Orchard

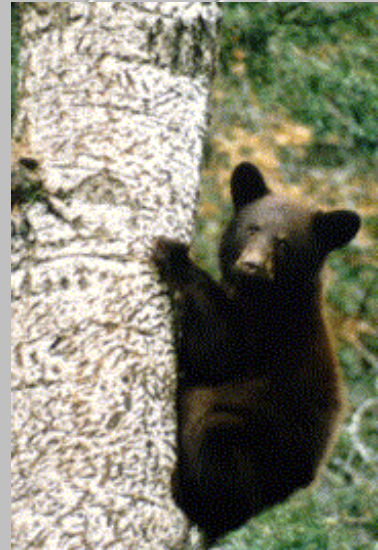
Click on the photo above to take a Journey to Bear Orchard.

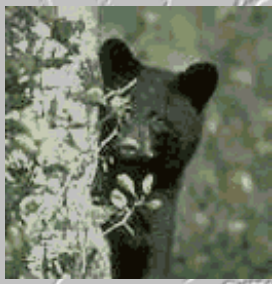


Personal Notes on Black Bears

I never lived in bear country until about fourteen years ago, when I moved to northern California. Black bears are abundant here. No grizzlies live in California (except in zoos). The last California grizzly was shot in 1922 in Tulare County. In Humboldt County, where I live, the first explorers through the area encountered numerous grizzlies as they made their way south. This was in late 1849 and early 1850. In fact, one of the explorers was attacked by a grizzly near the present-day town of Miranda.

I have seen several black bears close up. One was raiding my garbage cans one night. I heard noise outside and opened the door to see what it was. I startled the bear, who ran about 50 feet, then climbed up a tree and clung there, looking at me and grunting. I went back inside to watch what it would do. It climbed down from the tree and cautiously approached the garbage again. I flung open the door and the bear took off running. (Don't try this at home.)





The next bear I saw was a young one that had developed a taste for food from campsites that were unoccupied. (This happened in the park where I work summers.) I was working in the campground entrance one day when two guys came up and told me they'd seen a bear about 50 feet down the road. I went to look and, sure enough, there was the little bear. He stood still, thinking I hadn't seen him. When I began to move down the road, he took off running for the brush. He stopped after a short distance and put his paws up on a tree as if to climb. When he realized I wasn't following him, he sauntered off into the brush.

This same bear gave me an entertaining summer following his trails around the campground. Bears are fairly habitual and will stick around an area where there is easy food. This one decided that he liked the sort of foods people bring camping. He established a network of trails all the way around the campground perimeter, just out of sight. He'd keep himself hidden in the thick brush or up on an abandoned road that ran up a hill behind the camp. When someone left food out in a campsite, he would scurry down and grab it and cart it back up the hill, where he ate the prize.

His trail system provided him a highway between two campgrounds and some of his favorite resting areas. The best bear day bed that I've ever found was one this bear used. It was an old apple tree, overgrown with blackberry vines, and surrounded by brush and grass. The tree had a large, horizontal limb that provided the bear with a hammock in which to lounge away the warm summer days while he nibbled apples from the tree, or berries from the vines. The creek ran not 20 yards from the bear's hangout, providing fresh water anytime. It was the perfect bear hangout. It has been used several years in a row now.

I find bears challenging to track because their feet are relatively flat. They walk plantigrade, or flat-footed. You would think that such a large animal would leave huge imprints. Actually, they don't. Most of the time, the tracks I find are indistinct flattenings of the soil. Every once in a while, I find a nice clear print showing all five toes and maybe the claws. Usually the claw marks are not visible. And, sometimes, the fifth toe doesn't make an imprint. Tracking bears is like tracking barefoot humans. There are no sharp edges on the feet to leave distinct impressions on the ground.

I've made plaster casts from numerous bear tracks. Recently, I made a cast of a print in fine river silt. The cast shows the hair on the foot!

Bears are intelligent animals and their trails will yield endless hours of entertainment, if you are willing



to spend the time. You'll learn a lot about bears just by following their tracks. It's time well spent.

Plaster cast of the hind track of a young black bear. This is from a mold. Note the short claws and the shape of the heel pad. Claws do not always show in tracks.



This tree was climbed repeatedly by a black bear cub. The claw marks are two years old in this photo. This tree is located next to a trail leading to a small (3 campsites) primitive campground in northern California's redwood country. The bears were seen frequently that summer and one tent was ripped open by a bear trying to get food while the people were away from the campsite.

The Bear in the Yard - A True Tale

A friend of mine is a park ranger at one of the California redwood state parks. He lives right in the park and has many species of wildlife that visit. One day, I went to visit and, as I drove up to their gate, I saw a covey of quail on the grass. I got out the camera and took a couple pictures of the quail. I had not looked up toward the gate because I was distracted by the quail. As the quail flew off, I turned my attention to the gate. Looking through it, I saw a big dark shadow under a tree moving. Sure enough, it was a bear! I got out of the car, walked up to the gate, and started taking photos of the bear. This was a black bear, the only species of bear found in the wild in California.



The bear was happily feeding on pears that had fallen off a tree in the yard. These trees are part of an orchard left over from the builders of the house, who lived here before the land belonged to the park.

The park's campground is just across the road that is visible behind the bear in the photo below. Occasionally, bears visit the campground in search of scraps of food. The park has a bear management program which includes requiring campers to properly store their food in bear-proof lockers, disposing of waste in bear-proof garbage cans, and not feeding wildlife. The rules are strictly enforced because bears are intelligent animals. Once a bear learns it can get food from people, it will keep coming back for more. By educating the campers about how to camp in bear country, bear problems can be avoided.



The fence that completely encloses the yard is meant to keep out the elk, who live on the prairie here. This is the first view I had of the bear. It didn't seem bothered by my presence at first. I stayed on my side of the fence and took a few photos. The bear must have decided it didn't like being watched because it decided to leave. It climbed up on the fencepost behind it in one big leap. (Black bears climb very quickly.) It then dropped down on the other side and bounded away. Take a look at the two videos below to watch the bear feeding and jumping the fence.

VIDEO: [Black bear feeding under a pear tree.](#) (632K)

VIDEO: [Black bear jumping over the fence and bounding away.](#) (539K)



Got a bear story? E-mail me and tell me about it.



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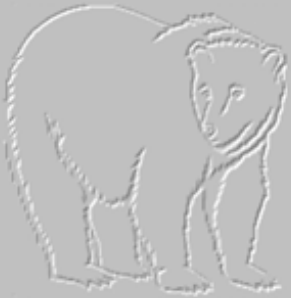
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*Except otherwise noted: Bear pictures from The Bear Den



Page updated: January 3, 2004



Beaver

Castor canadensis



Hind
Foot



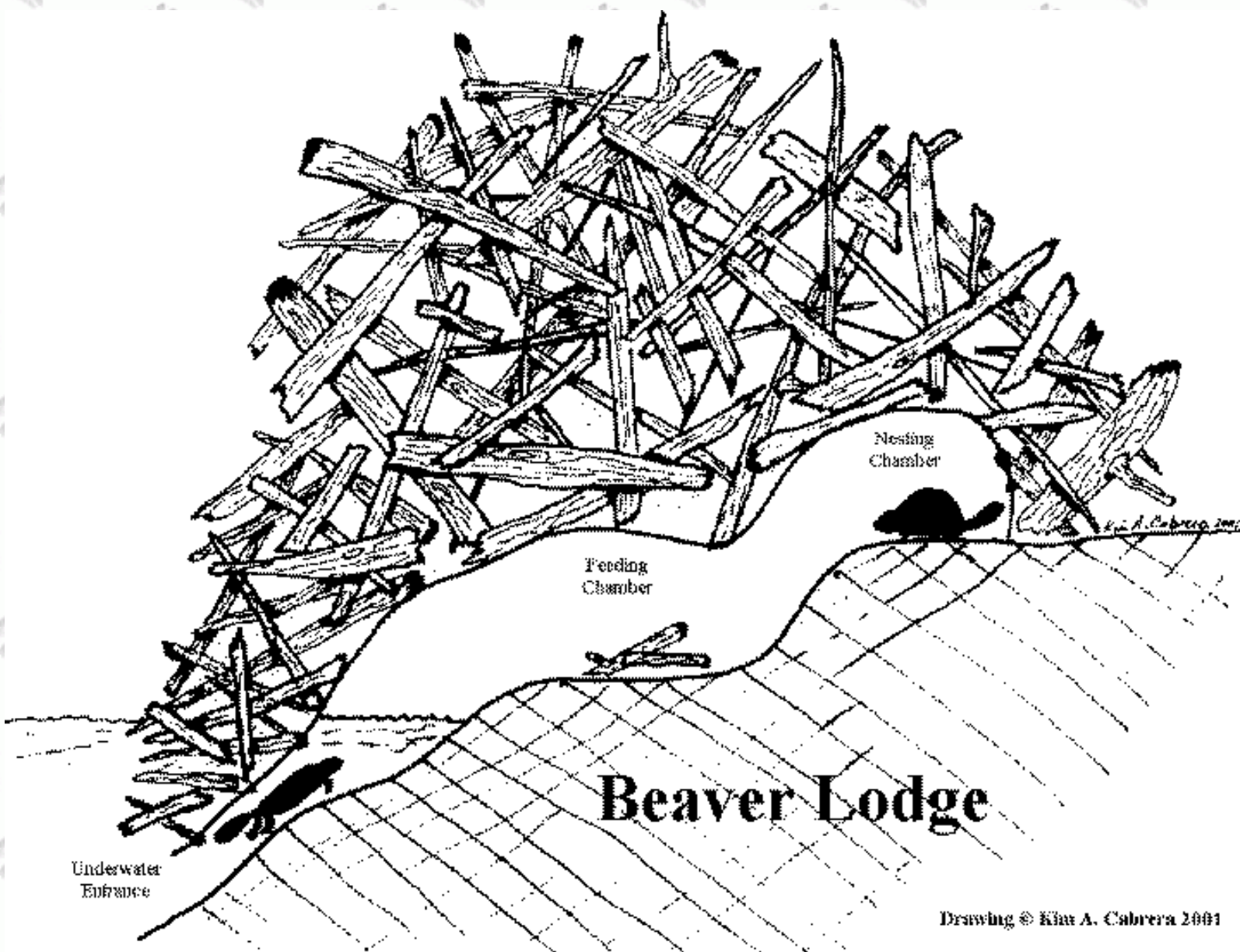
Front
Foot

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 and 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.



Got a beaver story? E-mail me and tell me about it.



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Beaver photo from Webseek

Domestic Cat

Felis domesticus

	
Left front	Right front
(Size: 1 1/2 in. L X 1 3/8 in. W)	(Size: 1 1/2 in. L X 1 3/8 in. W)
	
Left hind	Right hind
(Size: 1 5/16 in. L X 1 3/8 in. W)	(Size: 1 5/16 in. L X 1 3/8 in. W)



Domestic Cat Track



Natural History of Domestic Cats



Cat tracks show four toes on the front foot and four toes on the hind foot. Cats do not show their claws in their tracks because they are retractable. Cats, unlike dogs, keep their claws sharp by not walking on them. The two front toes in a cat track are not aligned right next to each other. The inner toe is set further out than the outer toe of the pair.

When we think of cats, we usually think of pets. However, there are many feral domestic cats running around. They can live singly or in colonies of cats.

A single sharp claw mark shows above the left outer toe in this perfect cat track. Perfect tracks are hard to find. You have to have almost perfect soil conditions. This was river silt, left behind after the high water had receded. The track looked the same one week later when I returned to plaster cast it. All the features that identify this as a cat track are clearly visible. For more about differentiating cat and dog tracks, see [Canine vs. Feline](#).

Cats are usually nocturnal, or active at night. They will get up early in the morning and have a "play time." (My cats always do this when I'm trying to sleep.) Afternoon is nap time. Play can consist of pouncing on toys, on other cats, on leaves, or any other moving object. Some cat play is actually practice for hunting.

Female cats are good hunters. This is because they feed the young. Cats are ambush predators. They don't chase down their prey in long chases. They tend to lie in wait or stalk their prey and pounce on it. They eat small mammals, birds, and anything else they can catch. Prey is killed with a bite to the back of the neck. Female cats will bring live prey back to young to teach them how to catch it.

Cats have sheathed claws (retractable). Keeping the claws sheathed until they need them helps keep them sharp. Dogs walk on their claws all the time and the claws get dull as the dog ages. However, a wild canine's hunting strategy is different. They chase down their prey over long distances. Cats rely on stealth and ambush in catching prey. Their claws must be sharp and ready when they need them.

Cats are territorial and have a variety of methods for marking their territory. They will spray urine on objects, scratch trees and posts, rub their faces on things, and leave scat, or droppings, as a marker to let other cats know whose territory they are in. Male cats do more spraying than females do, although females do sometimes spray. If a cat feels threatened by the presence of a new cat, it may go out and re-mark its territory. Scratching trees and upright objects is a way for a cat to display its size to other cats. The higher the scratches, the bigger the cat. When a cat rubs on something, scent glands on the side of the face leave behind odors for other cats to find. House cats do this a lot, even rubbing their faces on their owners to mark them. Cats will also butt heads in displays of affection for one another. Domestic cats bury their scat, but wild cats will sometimes leave it exposed as a way of claiming territory. Cat scat is in segments and is somewhat blunt on the ends.

Cats can breed any time of the year, and a single pair of cats can produce two or more litters a year. The mother cat will keep the kittens hidden until they are about five or six weeks old.

So, why does my cat have five toes?

Domestic cats have a fifth toe, with a claw, located higher up the "wrist," which does not usually leave an imprint in the tracks. This claw is called the "killer claw" and is sometimes used in hunting. There is also a sixth pad located even higher up the "wrist" that lacks a claw. Very rarely will you find either of these imprints in the tracks. If you do find them, it is usually because the animal is running. Take a look at the photo below of Junior's foot and you will see both of these structures. (Check the [Bobcat](#) page to see a photo of a bobcat track showing these features.) I don't know what function the sixth toe has, other than just being there. The fifth is used to help grip prey. Since cats lack an opposable thumb, it could possibly serve a similar purpose to them. If you do find these imprints in a track, look for other clues as to what the animal was doing. Sometimes you will find them where cats have been playing in damp sand, or running in mud.

There is also another phenomenon which could account for a cat track showing more than four toes. This is called polydactylism. Occasionally, a cat is born with five or six toes on all its feet, plus the "killer claw" and extra pad on the "wrist." This growth of extra toes happens frequently in populations of feral cats, and is also something that cats are bred for. Apparently, it doesn't affect their ability to survive. I once owned a six-toed cat. I now wish I had taken photos of its tracks!



Personal Notes on Domestic Cats

I have had many cats as pets. As any cat owner will say, they are great to have around. Not only do they catch mice, they have some amusing antics too. Most of my cats have been feral cats that I've tried to tame. (In fact, all except one were obtained this way.) Sometimes it works, sometimes it doesn't. By getting feral cats altered, then releasing them, the population of wild cats can be held somewhat in check.

The fine mud in this photo shows the details of the hair on the bottom of the cat's foot.

Mud like this tends to be sticky. That is why the patches of mud stuck to the cat's toe and heel pads and were picked up with the foot.

If you find tracks like this, look at the next few tracks and you may find where the mud has fallen off. When tracking humans, the mud that falls off a shoe often contains the pattern from the sole. This can be used to

positively identify a track.



At the top of the page is a fresh cat track, made by my cat, Bones. (Short for Skin-and-Bones. She used to be very skinny.) This is the right front foot. You can tell which foot it is by looking at the placement of the two front toes. One of them is a bit farther ahead of the other. That is the inside toe. Also, this track has a wider, more robust heel pad than the hind foot has. That tells you this is the front foot. Take a look at your cat's feet sometime and you will see that the four feet are not all alike.

Scratches made by a domestic cat digging. The purpose of the digging here was unclear. It was not to bury scat. Perhaps this cat, like some wild cats, was trying to scrape together a mound of debris to mark territory.





This is the left front foot of a domestic cat. (**NOTE:** *No cats were harmed to obtain this photo. My cat was sleeping when I snuck up on him and took the picture. See photo below.*) The heel pad on the front foot is larger than that of the hind foot. Front feet are generally larger than hind feet on many animals, including cats and dogs. The fifth 'toe' located further up on the left of the wrist does have a claw and it is used in hunting. This is called the "killer claw." Often it is assumed that cats only have four claws on their feet, but they actually do use this claw when hunting. Bobcats and mountain lions also have this extra claw. The pad on the right, furthest from the toes, is just a pad without a claw. Cat hind feet do not have any extra pads or claws, just the four toes with their claws.

This is Junior the cat. He is the offspring of Bones the cat. He gladly allowed me to take a picture of his foot to show the structure of the pads. (Actually, he didn't even know I did it. He was sound asleep in the warmth of the heater at the time.) Looks comfy, doesn't he? Cats spend incredible amounts of time napping.



Got a cat tracking story?
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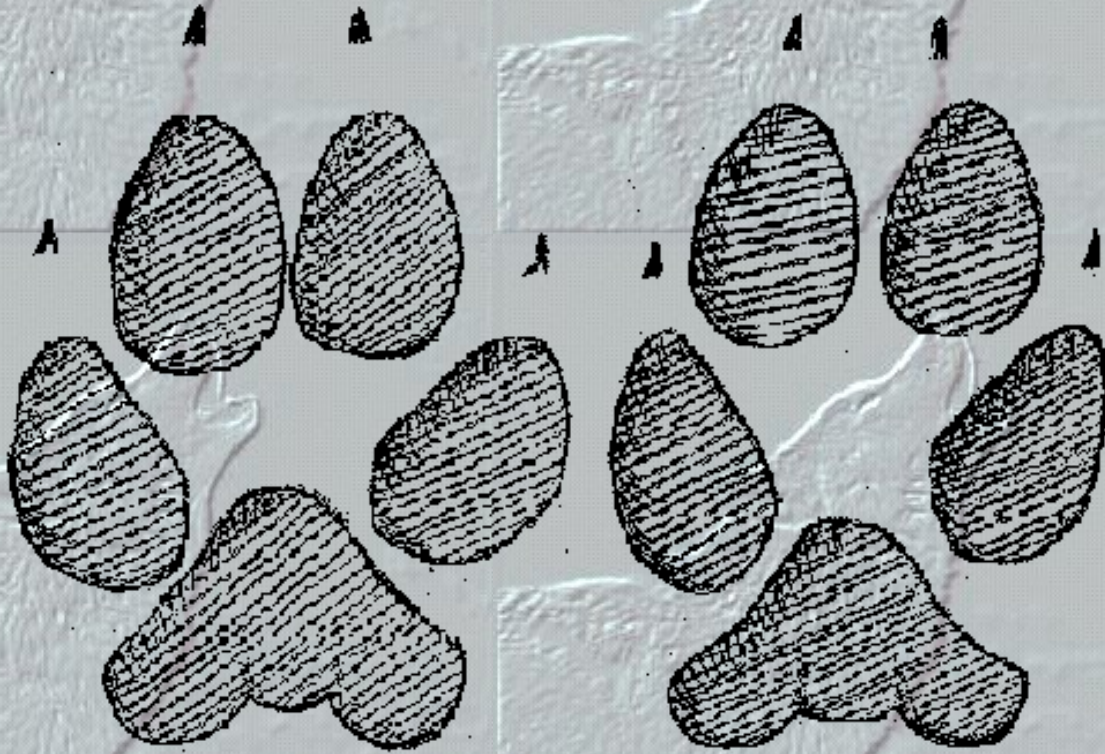
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Coyote




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.



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Front foot of a coyote cast in plaster of Paris.

Hind foot cast in plaster. Slightly smaller than front foot.

[Canine vs. Feline tracks \(Is it a cat or a dog?\)](#)





Personal Notes on Coyotes



The coyote has a wonderful voice. I remember many nights when I sat up late listening to the coyotes howling at each other. It is a spine-tingling sound. I heard my first coyotes in the Hacienda Heights area of southern California. There were some wild areas in those hills back then. Coyotes and mountain lions hunted for deer and small mammals.

Joshua Tree National Monument (now a National Park) was another of my favorite coyote listening areas when I lived in southern California. I'd get off work in Los Angeles and drive to Joshua Tree for a weekend of camping and exploring. Fascinating area.

Now, I'm up in the redwood country where coyotes are not as common. However, I do hear them occasionally in the Cuneo Creek area of Humboldt Redwoods State Park. (California's largest redwood state park and my personal favorite park. Not to mention my first web site.) Sometimes, on a quiet night, the coyotes will begin their song. It always stops me in my tracks. (No pun intended.)



Got a coyote story? E-mail me and tell me about it.



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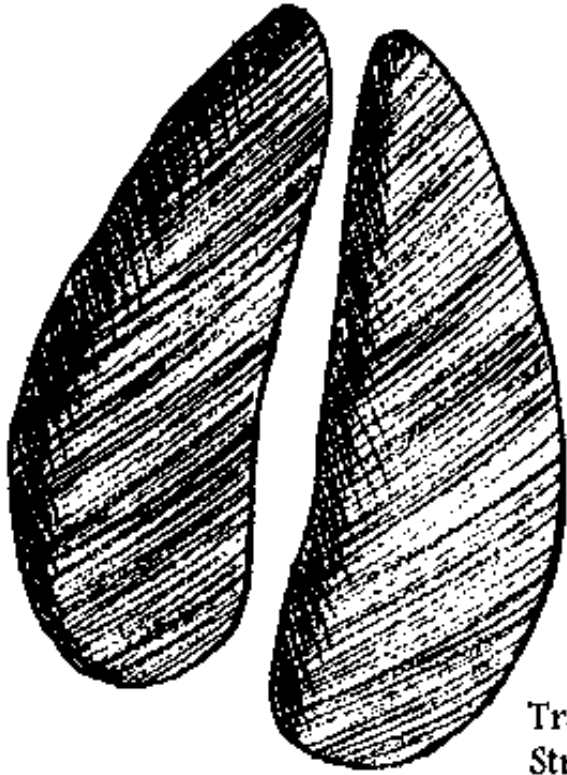
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Elk

Cervus elaphus

Elk



4³/₄" L x 3" W

Trail width: 8"
Stride length: 26"-28"



Trail Pattern

Elk Tracks



Natural History of Elk

The elk is also known as the *wapiti*, a Shawnee word meaning *white deer*. When they first saw elk, the early settlers thought the animals were moose, so they called them *elk* which is a British word for moose.

Both bull and cow elk have a distinctive light-colored rump patch. Bulls can stand as tall as five feet at the shoulders.

Elk tracks are longer and more robust than those of deer. Scat is similar to deer scat, but much larger. It can be $\frac{3}{4}$ inch long. Elk also leave distinctive wallows where they dig into the ground with their hooves and antlers and wallow in the dirt.



Elk cow

During rutting season, elk will tear apart shrubs and saplings with their antlers. They also rub their antlers on small trees to remove the velvet. The antlers branch off from a main beam that can be up to five feet long.

An adult bull can weigh over 1000 pounds. They feed on plants, leaves, bark, grasses, grains, and also eat lichen. In winter, they eat buds, bark, and twigs.

Despite their large size, bulls can run 35 miles per hour. Both bulls and cows are good swimmers.

Elk are active at dusk and dawn and are frequently seen feeding in prairies during the day. Elk can also be nocturnal. They inhabit woods and pastures.

The rutting season occurs from August until November. During this time, the bulls join the cows in a herd. They are the most polygamous member of the deer family in America. A bull can collect a harem of up to 60 cows.

In the fall, rutting bulls bugle or whistle as a challenge to other bulls. The whistle can carry for long distances.



Cows will leave the herd for about a week to bear their calves. They can have one or two calves, which weigh up to 40 pounds each. Calves can walk almost immediately after birth. Mountain lions and bears prey on the calves.

At one time, "elk's teeth," the two upper canine teeth, were valued as watch fob charms. An elk will

mark territory by stripping the bark from saplings and rubbing the tree with its chin.



These three trees all show signs of elk rubbing them as territorial marking. The tree in the background had tattered bark hanging in strips. The two in the foreground have less damage. These trees were along a well-used elk trail along the edge of a large, frequently used feeding area.

This elk day bed was also located along the edge of the feeding area. There were several of these in the vicinity.





Elk track with penny for scale.

A smaller elk track, possibly from a cow.



A millipede crossing the rounded toes of an elk track.

Elk track in deep mud. Penny for scale.



Elk scat, possibly from feeding on succulent vegetation. Scat is normally in pellet form.



 **Personal Notes on Elk** 



© Ron Jones

I have seen a herd of elk up close. I don't recommend trying to get close to these animals, however. I happened to accidentally stumble upon the herd feeding in an open field. I came out of the trees and there they were. The bull was aware of my presence. Bulls have been known to charge people, but this one didn't. I didn't want to disturb them, so I retreated back out of sight and took a few pictures of them. They are huge animals. The tracks I found in the area were very deep. Elk live in the region where I live. There is a herd of elk that can be seen in California's Prairie Creek Redwoods State Park. This herd is frequently seen in Elk Prairie, near the campground. If you're ever in this area, it's really a fantastic sight to see all those elk out there feeding together. They can be seen right from the road too.



Got an elk story? E-mail me and tell me about it.



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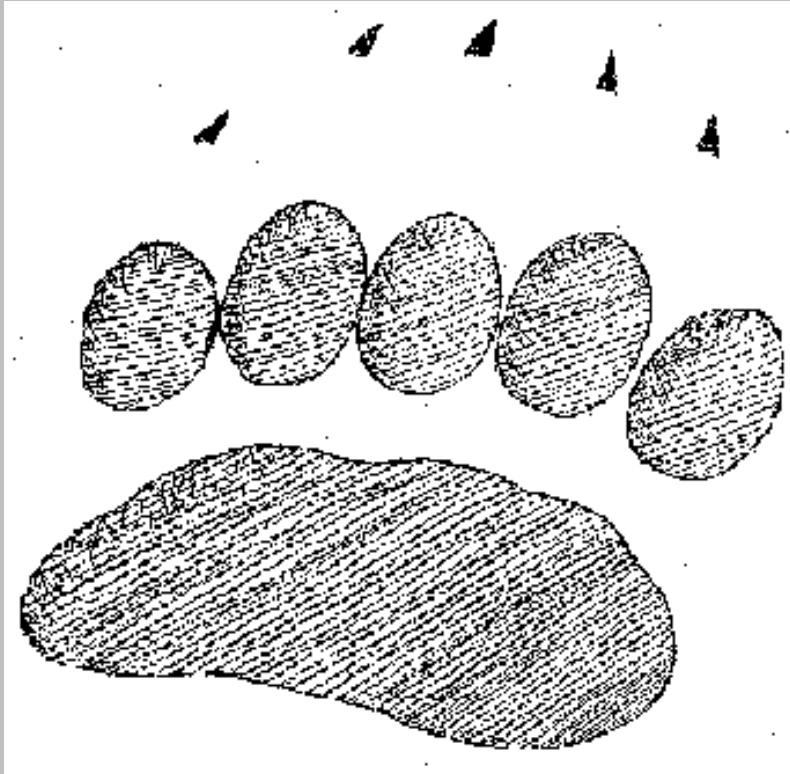
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Page updated: Monday, April 17, 2000.



Grizzly Bears

Ursus arctos horribilis



7 in. L X 5 in. W



11 in. L X 6 in. W

Grizzly Bear Tracks

Front track on the left. Hind track on the right. Claws longer on front foot for digging.

Click here to hear a [bear roar](#). (48K WAV file)



Natural History of Grizzly Bears



© Kim A. Cabrera

Grizzly bears are also called brown bears. They live in forested areas and do a lot of feeding along the edges where the forest meets open meadows. Their diet is similar to that of black bears. They rip open logs to get grubs and ants. They eat whole wasp nests, hive and all. They are also good hunters and can move very fast over short distances. Grizzlies are well-known for their love of salmon.

Tracks show five toes on both front and hind feet. The front foot has longer claws, used for digging. If you see a bear from a distance and you can clearly see the claws, it is most likely a grizzly. Another defining characteristic is the hump on the shoulders. The face of a grizzly is more pointed than that of a black bear. They get the name grizzly from the grizzled appearance of their fur.



Personal Notes on Grizzly Bears

No grizzlies live in California (except in zoos). The last California grizzly was shot in 1922 in Tulare County. In Humboldt County, where I live, the first explorers through the area encountered numerous grizzlies as they made their way south. This was in late 1849 and early 1850. In fact, one of the explorers was attacked by a grizzly near the present-day town of

Miranda. By 1868, there were no more grizzlies in Humboldt County.

I have never met a grizzly up close. I've visited grizzly country though. A friend of mine brought me a plaster cast of a grizzly bear track once. It is the biggest bear track I've ever seen. Dwarfs the black bear tracks I usually see!



Got a bear story? E-mail me and tell me about it.



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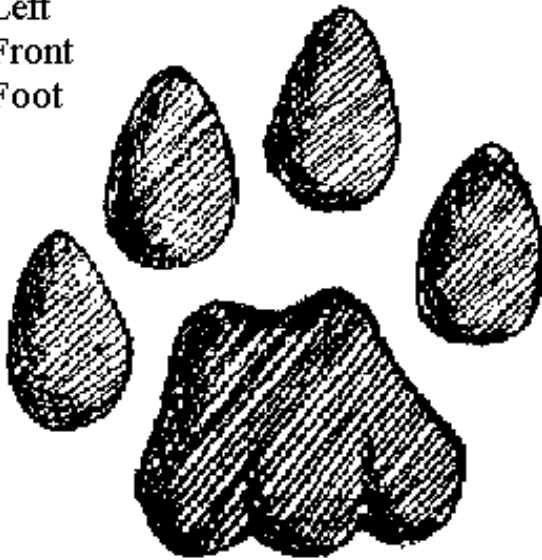
Y?GeoCities TAKE A TOUR
YOSEMITE



Bobcat

Lynx rufus

Left
Front
Foot



Left
Hind
Foot



Bobcat Tracks



Natural History of Bobcats



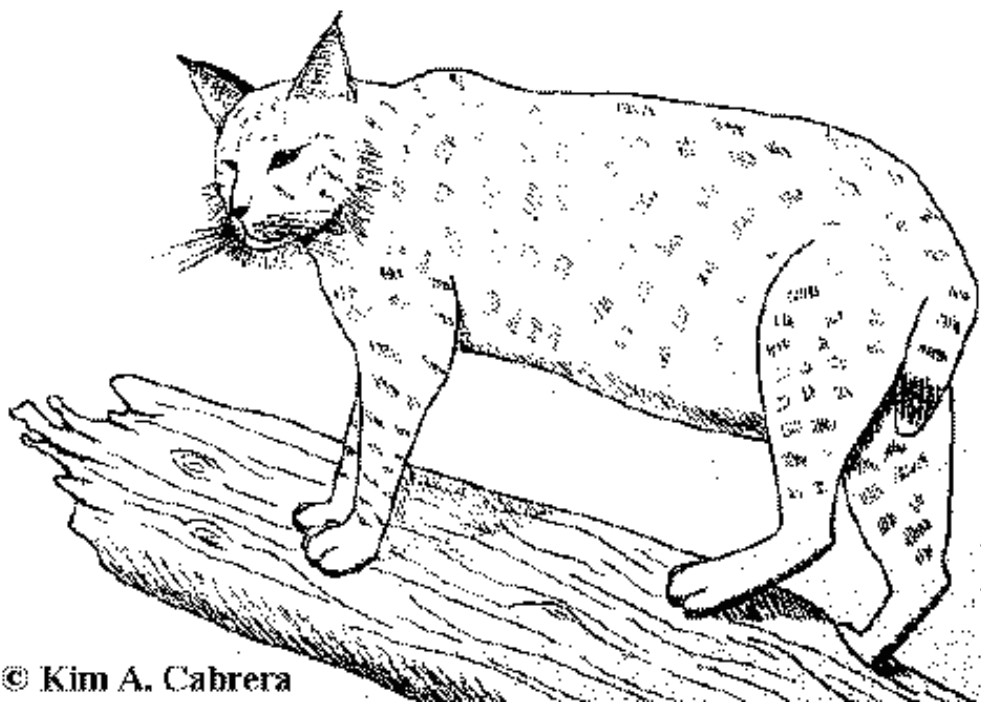
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Bobcat tracks show four toes on the front foot and four toes on the hind foot. Cats do not show their claws in their tracks because they are retractable. Cats, unlike dogs, keep their claws sharp by not walking on them.

Bobcats are active any time. They are seen in the daytime, but do a lot of hunting at night. They hunt small mammals, such as mice and squirrels, but can take an animal as large as a deer. Bobcats are shy animals and are not often seen by humans. They can range up to 50 miles a day while hunting, but usually hunt within an area of four to five square miles. They hunt from the ground, but will pounce on prey from trees.

Bobcat young are born in April or May. The average is three kittens per litter. They are born blind and stay with their mother until fall.

Bobcat scat is in segments and usually contains the hair and bones of its prey. Bobcats get up to about 30 pounds. They have short tails (six to seven inches long), while mountain lions have long ones. The end of the tail is black, tipped with white. The body is covered with spots, which can vary between dark and light. The feet have large, soft pads that help them move quietly while stalking prey.



Note: The bobcat paw photos below are from a road-killed animal. No animal was killed for these pictures. It was found dead on the side of the road. Photos taken at Walker Creek Ranch near Petaluma, California.



Front paw of a bobcat. Claws are not visible - they are retractable. Front feet are larger than hind feet. Front foot is usually wider than it is long. Notice the slightly different shape of the heel pad.



Hind paw of a bobcat. Notice the overall shape of the foot is longer than it is wide. Toes spread out when the animal is walking, but the hind track is usually smaller than the front.

[Canine vs. Feline tracks \(Is it a cat or a dog?\)](#)



Personal Notes on Bobcats

I have seen a few bobcats. One I saw from less than six feet away. I was working the entrance station at the state park where I work summers. I looked out and saw a bobcat coming up the road toward me. It was hunting the long grass by the side of the road. Right across the road from me, it stopped and crouched. Then, it pounced on something in the grass. Whatever it was, the bobcat missed. I grabbed my camera and went out to take some pictures. The bobcat knew I was there, but it ignored me and continued hunting. I took lots of pictures of it. Then, it went on up the hill. It didn't run away. Just went a ways up the hill and sat down and looked at me. It licked a paw, then turned and walked away. A very beautiful animal and very elusive. I have seen two in the past three years. Both were near roads. Doesn't mean the bobcats spend a lot of time near roads. It means I spend a lot of time on the roads. I have noticed that cat tracks (including bobcat and mountain lion) show the two front toes not side by side as some track books show them. Rather, the two front toes are slightly offset so that one is ahead of the other a bit. Don't know if this is true for all cats. Just something I noticed in the cat tracks I've found. They are asymmetrical rather than symmetrical like dog tracks usually are.

My Cat Escapes from a Bobcat Twice

This story is a little long, but it details the adventures of my cat, Bones, and her two narrow escapes from a bobcat. Following the story are photos of the tracks of the bobcat and Bones. The story appears here word for word, exactly as I wrote it right after the incident. I emailed this story around to other trackers, so you may have read it before. **Note: Of all the stories on this web site, this story has generated the most responses and some of the strangest. Read on...**

The Double Miracle Cat
April 13, 2000
Humboldt County, California

About an hour ago, I was sitting here checking my email with the door open and the cats running in and out to play and eat. One of the cats, Blackie, had been playing outside and he came running back inside. He ran and hid. Strange behavior, I thought. I looked outside, but saw nothing. Blackie kept acting strangely though. He sat at the door and wouldn't go outside. He was very alert and was watching something outside very intently. I thought it was the birds who were out there eating the grass seed I had placed out there for the turkeys. I didn't think anything more of it. It was just a normal day until I heard the sound that I do not ever want to hear again as long as I live. The sound of predation. The sound I heard the night my cat disappeared about two months ago and was gone so long I figured she was dead. It was a gurgling, strangling sound. I had heard it before, but it took a moment for my brain to catalog it and identify it. When I realized what it was, I was on my feet and moving toward the door. That's when I heard it again. I burst out the door and saw... nothing. Nothing, that is, until I looked to my right to the favorite perch of Bones the cat. There, scattered around on the torn up ground, were tufts of her white fur. Amidst the clumps of fur were tracks. Cat tracks. I turned the corner of the building and headed toward

the deck because that's where I thought the sound had last originated from. There were tracks, but I saw nothing. I looked under the deck and saw Junior, another cat. He looked at me, but he didn't move. He looked toward the river. I noticed a disturbance in the jays over by the river access trail below the lodge. No other birds were making such a racket. I figured that's where Bones, and whatever had hold of her, must have gone. I went back up toward my cabin and grabbed a flashlight, in case I had to search under the building. Outside again, I noticed more tracks and very torn up ground heading toward the Headquarters building. There were a couple of places where the bobcat (that's what I figured it was) must have stopped to struggle with Bones, or adjust its hold on her. I ran toward the river access. There at the corner was a long drag mark. Several pieces of white fur were on the ground. I got to the steps leading to the river trail and there was the scene of a huge struggle. The ground was torn up, leaves scattered everywhere and tufts of white fur all over. The amount of fur must have been shocking because I looked at the leaves and saw blood on them. I didn't stop to examine them closer. I ran for the river. I went crashing through the brush to see what the jays were squawking about, but found no more disturbed ground or tufts of fur. I made my way back to the river access and saw several possible tracks. It had rained today, so I knew the only fresh tracks would be from Bones or the bobcat. When I hit the river bar, I saw that there were now two separate sets of tracks. Bones and the bobcat in hot pursuit. The tracks were spaced far apart and both were in an all-out race. I found no more blood and hoped that Bones would be fast enough to get away. I followed the tracks until I got to gravel and river cobble. There I lost patience and started to run while signcutting for the tracks. I went first toward the south because that's the way the tracks appeared to have turned before I lost them. I went until I came to a clear, untouched patch of sand. No tracks. I backtracked and headed north on the river bar. By this point, I was starting to lose it because I was losing time. I figured, if the bobcat had Bones, I didn't have long to find them before it killed her. I ran back up the river bar, calling Bones. (Don't know why.) Nothing. No tracks north either. I went back to the gravel, but decided they may have run back through the brush toward camp. That's where I headed. I stopped by the last set of tracks. One Bones track and a huge bobcat track, with dewclaw and everything. I took a moment to wish her swift feet and I placed a big rock in front of the bobcat track and said, "Trip and stumble so Bones can get away." I hurried back up toward the lodge. I stopped to grab a tuft of Bones' fur at the site where the big struggle had taken place. That is where I am sure Bones got out of the bobcat's grip and started running. In my panic before, I had seen blood. Now, I looked closer and saw that the "blood" was actually the underside of the wet maple leaves. The moisture turned them dark and reddish. My brain had been so intent before on the fact that a predator was trying to kill my cat, that I had actually seen blood where there was none. This gave me a little bit of hope. She was alive where I had found the last tracks and she was running. If she was injured, it probably wasn't too badly. I hoped she was able to run swiftly enough. I hurried around the lodge to the parking area and started cutting for sign. No tracks on the road or on the other river access. I went all the way down it to the river again. By this time, I knew I was too far behind. I remembered that Bones had growled at something in the brush behind me this weekend when I had sat on a log by the river to sand a woodworking project. Maybe there's a bobcat den there, I thought. If the bobcat caught her, and if it had young, that's where it would take its prey. I headed toward that spot. As I was doing this, I realized how stupid it was of me to be following a wild bobcat around, especially one that may have prey and may have young around. They will defend both. I picked up a couple pieces of driftwood and continued. I was literally prepared to fight the thing and club it to death if need be. I again signcut the

perimeter of the riverbank, looking for any tracks, disturbance, fur, anything. It was almost dark and I had found nothing. I went back in the fading light to the last known tracks. All I could do was go step-by-step. The slowest method of tracking. I started out, but quickly realized that I could spend hours doing that and it might not get me very far. I kept calling for Bones, hoping she would answer. Hoping she had gotten away and was hiding in the brush. A couple times, I thought I heard a faint meow, but it was drowned out by other noises - trucks on the road above, the wind, the river, the birds. I was not certain of what I was hearing. I finally gave up when it got too dark. It had been almost an hour since she was carried off. All I could do was hope that she got away. I knew it might take weeks for her to come back (if she ever did), like it did last time. She must have run far last time. I went back up to the lodge and called for Bones. I tried to get the other cat to come inside, but he wouldn't go. I went inside the lodge to get something and, when I came out, I happened to glance toward the deck. There, half hidden around the corner, was the very wet rear end of a cat. A black tail...Bones!! I called her and headed that way. She was drenched and muddy and shaking, but alive and standing. She was still really freaked out and started to run away from me, but I stopped. I knelt down and called her. She kept alertly looking all around - searching for the bobcat. Finally, she ran to me. She didn't appear to be bloody. I picked her up and her heart was racing! I hurried up to my cabin and put her inside. Knowing the bobcat must still be around and that it was still hungry, I had to get Junior, the other cat, inside. He refused to come when called, so I lured him by opening a can of the "good stuff" - the canned cat food. He knows the sound of the can opening means he's in for a treat. That got him. He came up to the stairs and I lured him inside.

Bones does not appear to have any injuries. As before, she has patches of fur missing. There is a place on her leg where all the fur is scraped off. There is a scratch mark there. Overall, she appears to be OK. She is very shaken and tired, but I think she will be OK. She is sitting by my feet, cleaning her fur.

Can you believe that? Same cat gets taken by a bobcat twice and gets away twice! Probably the same bobcat. Bones got away again. Problem is, that bobcat came right up here while I was sitting in here with the door standing wide open. Fear of people? This bobcat is bold. That's dangerous for my cats. Of course, I wasn't being noisy either. Maybe it figured there weren't any humans around. Pretty scary. So, Bones is the double miracle cat. She did it again.

Pictures of the tracks from the bobcat chase

The bobcat track in the lower right of the photo and Bones' track in the upper left.



Close-up of the bobcat's left front foot. Note the mark from the "dewclaw" at about the 4 inch mark on the ruler. The bobcat was running and the toes spread out to give it more traction.



The bobcat's right front foot, also showing a mark from the "dewclaw." Note the sand disks pushed back by the outside toes, indicating fast forward motion. Claw mark barely visible on the far right toe.



A set of bobcat tracks in the sand. Tracks from Bones on the right.





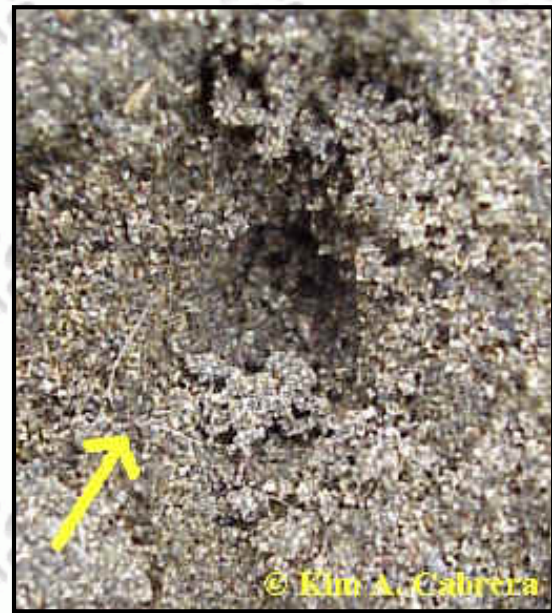
Close up of a bobcat track, showing claw marks as the cat dug in to gain speed.

Bones' track, also showing claw marks and toes spread out.



Tufts of Bones' fur at the site of torn up ground. Here was the struggle with the bobcat. A drag mark preceded this scene, where Bones was being dragged off by the bobcat. Bones got away at this point and they headed toward the river, with the bobcat in pursuit and me not far behind them.

A single bobcat toe print, with the arrow indicating a piece of Bones' fur that was carried here on the bobcat's foot.



And here is a follow-up story that happened about 2 weeks later, on April 29, 2000. Again, this is word-for-word exactly as I emailed it out. Note that I take certain risks around wildlife and I do not encourage anyone to do these things. In other words, do not try this at home!

I saw it! I stalked it! I got to within 20 feet of it! The bobcat was here again! And I scared the daylights out of it. (I hope.)

I went outside because it was dark and Bones had not come in yet. I was worried about her. I went out and it took a lot of calling to get her to come in. She finally appeared over by the tool shed and ran to me. I picked her up and brought her inside. As I got near my door, I used my flashlight to scan the area. I picked up the reflection from a pair of eyes over near the flagpole below the lodge and headquarters building. I thought it might be a fox, but it didn't move like a fox, and when it got up and walked, I saw that it had no tail. My arch enemy! I put Bones inside and closed the door. All cats accounted for. Now, time for the showdown. I have to defend my territory and stake my claim or the bobcat will never leave. Not that I really want it to leave. I just want it to leave my cats alone. It is a magnificent animal. But it already killed one cat back in February... Anyway, I took the flashlight and started stalking the bobcat. I hit a few leaves and broke a stick, but it stayed there because it couldn't see me. I cheated and kept the big flashlight on its face so it wouldn't see me. I had a rock in my hand to use if necessary. I couldn't have missed from 20 feet away. I carefully negotiated the step down from the trail to the area with the plants outside the lodge. Then, there was a big step down of about 1 1/2 feet. I had to kneel down and do it slowly because there were leaves below. I got down there and had another step down from the rock wall to the path. Then, a short stretch of concrete and I was on the dirt and leaves. I went slowly, keeping the light in its eyes. I got to about 25 feet and it decided to go behind the bench. Darn! I crept closer. Then, it must have caught my scent. I was about 20 feet away and it popped its head up over the back of the bench. It probably heard me breathing. It looked at me for a minute, then, it turned to leave and I gave it a boost. I shouted and yowled my most horrible "big cat" yowl. I threw the rock, which bounced downhill through the leaves. I then listened and heard the bobcat retreating down the hill toward the river. I kept up the shouting and yowling. It sounded as horrible as I could make it. I hope the cat got the idea. "My territory!" I shouted. "Go away!" In a way, I feel bad, because bobcats aren't commonly seen. But, rare animal or no, it ate one of my cats and I have to defend my territory. The bobcat probably just thought I was a crazy human, and he's probably right, but I don't care what it thinks. I only want it to leave my cats alone. I wondered today what Junior kept meowing at. Now I know. He wouldn't have been meowing at Bones. It was the kind of meow he uses when he plays and wrestles with the other cats. Could he possibly be playing with the bobcat? Anyway, the adventure continues.

So, that's our story. Hope you have enjoyed reading it. Bones is healed from her adventure and is outside playing in the sun. Hopefully she will not encounter the bobcat again.

Update #3: November 2000. I found the bobcat tracks again. This time, it walked down the dirt road and turned off at the river access road. It didn't come near my home, but it was within easy sight from the window. Had I been looking out, I would have seen it. It was there at night though. I also found numerous bobcat territorial markings on the dirt road above the camp. It is claiming more and more of the place as its territory. Not long ago, I ran into the Fish and Game warden and he told me that he'd had to shoot cougar that was killing livestock. Inside its stomach, he found the remains of a domestic cat. Apparently, it is not uncommon for the large wild cats to prey on our domestic pet cats. There may be more to this story yet.

Update #4: December 29, 2000. I found more fresh scent posts on the road above the camp. Here are the pictures of the best one.



The bobcat scat was next to a scrape area in the dirt. This appeared to be fairly fresh as the scrape hadn't been rained on and it had rained in the last couple days. The coin is a penny for size comparison. It is 3/4 inch across. This scat is typical cat shape. There are sometimes deeper constrictions in the scat though. This one has a pointed end on the right, which is usually a trait seen in canine scat.

The scrape is visible in the lower portion of this photo. It is said that cats scrape in the direction they are facing or travelling. I don't know how true that is. In any case, there were two of these scent posts on the road and both were very fresh. Bones the cat had been following me on my walk, but she had refused to come up the trail to this area. There may have been other sign that she found and I missed. There were three older mounds like this, but the two fresh ones told me the bobcat had been here very recently.



Update #5: December 3, 2003 - December 16, 2003. The bobcat adventures continue....

On Dec. 3, after a very long day, I was driving down the dirt road toward home thinking about wildlife sightings I have had along there. When I passed the place where I had seen a bobcat recently, the thought crossed my mind that, "wouldn't it be interesting if I came around the corner down by the sewage plant and found a cougar devouring a deer right in the middle of the road." I don't know why that particular thought came to me at that time. I could even see it in my imagination, blood dripping off the cougar's teeth. But when I got there, I saw no cougar. Continuing down the road, I really didn't expect to see anything. I just figured it was my imagination being overly active. Then, something caught my attention out of the corner of my right eye. I hit the brakes and backed up. Whatever it was, it didn't belong there. I know every inch of that road. I thought it was a deer lying down, which seemed strange since it didn't get up and run away. I backed up enough that my headlights illuminated it. It WAS a deer, and it was lying down. And not moving. Uh oh. There was no blood visible on it, no branch laying on it as if it had been hit by a widowmaker, no poacher's arrow sticking out of it. Nothing to indicate why there was a dead deer lying by the side of the road. It was definitely not sleeping in that position, and I couldn't see its chest rise, so it probably wasn't breathing. I got the flashlight and went over to examine the body. My first thought was that a poacher had killed it, and I was looking for gunshot wounds or arrow holes. There was some blood on the mouth, and the neck was wet with saliva (not the deer's as it turns out). No other wounds were apparent. I then looked at the ground.

The deer had been dragged there. The surface showed clear drag marks. No human tracks around. Uh oh. Only one animal living near me is big enough to drag a full grown adult deer off the road like that and it was NOT the animal I wanted to meet in the foggy dark while hobbling around so soon after having surgery on my knee. I started to shine my light up into the trees and into the brush behind the deer. I found a bit of blood in the drag mark area, then a bigger spot of blood, maybe 6 inches across. Looking behind me and onto the road, there were places where hooves had dug up the ground and dirt had been kicked all over the place. It had rained a bit the day before, and none of this showed signs of rain. The tracks were fresh, and on top of the outgoing vehicle tracks I had left hours before. The deer carcass was still warm to the touch. The fur was not wet from rain. This had not been here when I had left for my appointment at 3:00p.m. It was now almost 8p.m. and fully dark. Fog closed everything in and I couldn't even see the lights from the house on top of the cliff across the river, my only neighbor. I shone my big light out into the meadow, looking for predator eye shine. There was a deer there, but it was not looking at me. It was looking at the hillside above me. (I flashed back to a very similar incident a couple months ago when two deer were in the meadow in the morning and I stopped the car and got out and walked to within 15 feet of them and took pictures, but they ignored me and intently concentrated on something on the hillside behind me. In that incident, I examined the madrone tree above the road when I got home that afternoon and found marks where something large had climbed the tree, knocking off pieces of moss. At the time, I figured it was either the bobcat or the mountain lion, the tracks both of which I had found not too far from this spot.) So, who killed the deer I had just found? Not a person. There was no arrow or gunshot wound. There were marks on the neck where it had been gripped to drag the animal off the road. There had been quite a struggle. I had inadvertently parked on top of some of the signs of this. When I went back to the car for the camera, I noticed blood on a coyote brush bush next to where I had parked. The ground under the bush was ripped up. I backed up the car and examined the road surface some more. There had been one heck of a big struggle. I thought that what killed the deer was possibly a young cougar. It may have been small enough that this doe could put up something of a fight. The angle at which the neck lay was unnatural. I think it finally managed to kill the deer by breaking its neck. But it didn't get off easy. I think I just happened to come down the road at the time it was dragging its kill off the road into the brush. I may have temporarily scared it off. After getting what photos I could in the dark with the flash, I got back in the car and left.

As I continued down the road toward home, I saw a big buck that has been in rut for the last three weeks chasing one doe out in the meadow. Another doe had been close to the sewage plant. As I drove by the buck and doe, I noticed that they were no longer looking up the hillside behind me. Of course, the buck hadn't been. He was too interested in that doe. Perhaps the cat decided to retreat until the human with the noisy car and big flashlight left. I was sure it would be back. It wouldn't leave that carcass for long.

I figured this was a good opportunity to see how a carcass progresses in the process of feeding other animals. Next day, I went up to check on it and see if anything had been eaten. It was my birthday and I got a nice surprise birthday present. I found the carcass partially buried with debris. Looking up, I saw the culprit watching me from about 20 feet away. His eyes gazed at me intently, unmoving. The only thing moving was his short tail, which kept twitching back and forth. It was not a young cougar; it was a bobcat. It surprised me that he was able to kill such a large deer. I raised the camera and got a couple still photos of him as well as a short video clip, before he melted into the brush and disappeared.

Since that day, I visited every day, once a day, to take photos of the progression and see what has changed. Although I looked carefully into the brush near the carcass, and up into the trees, I had yet to see the bobcat again. The carcass was covered up with more debris each day, so I knew he was still around.

Today, December 16, I went back to check on it again, thinking that, after 13 days and the carcass starting to smell, the cat would move on and find other prey. I didn't expect it to stay around this long, but maybe hunting isn't too good right now. There didn't appear to be much missing from the carcass this time, although half the ear had been eaten. I took a couple photos and stepped back and suddenly something caught my eye. It wasn't movement. It was a shape. Lying in the brush, about 8 feet from me, was the bobcat himself! He stared at me and looked away as if he didn't think I was a threat. I slowly raised the camera and started taking photos of him, some with the flash and some without. I started quietly talking to him. He looked at me a couple times and I looked away and pretended to be looking at the deer. Then he would look away, as if he didn't think I saw him. He stayed perfectly still. Only his eyes moved. I took a step closer and his eyes widened and looked directly into mine. He knew then that he had been seen. I began to very slowly raise the camera and he suddenly jumped up and disappeared. He was gone so fast, I could only listen to the crashing sounds as he jumped away through the brush. After he was gone, it hit me. I had been that close to a bobcat. Had I not moved, he probably would have stayed longer, relying on his camouflage and stillness to hide him. And he was well camouflaged. Later, looking through the photos of the deer carcass, in one of them I can see the bobcat in the brush.

I will post the photos of the bobcat and the deer carcass soon and provide a link on this page.



Got a bobcat story? E-mail me and tell me about it.



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Page updated: Tuesday, December 16, 2003.

Townsend's Chipmunk

Tamias spp.

Townsend's Chipmunk



Front feet

1/2" L x 1/2" W



Hind feet

1 1/8" L x 3/4" W



Trail Pattern

Trail width: 2"
Stride length: 4"-7"

Townsend's Chipmunk Tracks



Natural History of Townsend's Chipmunks



The closely related species of Townsend's chipmunk that inhabits northern California is the yellow-cheeked chipmunk. Chipmunks have stripes on the back and cheeks.

Chipmunks are relatively shy. They are active all day and often sun themselves in trees. They are good climbers, often running up trees to flee predators.

The home range is about 1½ acres. Chipmunks eat berries, acorns, maple seeds, conifer seeds, fungi, and insects.

Common predators include the bobcat, gray fox, weasel, and mink. Some of the chipmunks in campgrounds become bold and will raid picnic tables and carry off food after stuffing it into their cheek pouches. In winter, they will hole up with a food cache, but they don't hibernate.

Tracks are typical rodent tracks showing four toes on the front feet and five on the rear.



Kim A. Cabrera



 **Personal Notes on Townsend's Chipmunks** 



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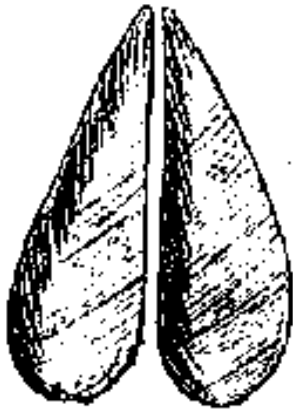
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Black-tailed Deer

Odocoileus hemionus columbianus

Black-tailed Deer



3½" L x 2½" W

Trail width: 6"
Stride length: 21"-24"

Toes spread when
in soft mud or when
the animal is
running. Dewclaws
show.



Trail Pattern

Black-tailed Deer Tracks



Natural History of Black-tailed Deer

© Kim A. Cabrera



Deer are common in my region of northern California. The deer here are a subspecies of mule deer known as black-tailed deer. They come out around dusk and dawn to feed in the edge areas, the transitions between forest and field. They may be active at mid-day as well. Deer are also commonly seen feeding in fruit orchards.

The two photos below show plants browsed by deer. Deer lack top incisor teeth and must grip vegetation in their teeth and tear it. This results in rough cuts as shown here. Animals with sharp incisors, such as rabbits, will leave neatly cut off plant tips.



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Young deer listens for danger.



© Kim A. Cabrera

Browsing by deer on a willow.



The heart-shaped prints of deer are easy to identify and common in many areas. The pointed end of the print indicates the direction of travel.

Deer scat is an oval pellet. The pellets are easy to recognize by the dimple on one end and the point on the other end.

Their large ears, from which mule deer get their name, can move independently.

When the young are born, they have spots and lack scent. This enables them to hide from predators. They spend a lot of time curled up on the forest floor, sleeping. The spots provide camouflage. The lack of scent means predators can't smell them. Fawns can walk when they are only a few hours old.

When deer are walking, you can tell whether the track maker was a buck or a doe. Males tend to have wider shoulders, so the hind tracks (the ones on top) will fall to the inside of the line of travel. The doe's wider hips will cause the hind tracks to fall to the outside of the line of travel. This is true only when they are walking. Bucks have antlers which are shed once a year. The antlers of black-tailed deer (and mule deer) are forked. They don't branch from one main beam like those of the white-tailed deer do.



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Dewclaws show in deer tracks when they are walking in soft mud, or when they are running. The toes spread and dewclaws leave imprints in these cases. The dewclaws on the hind feet are farther from the hooves than those on the front feet. This is a hind foot. If it was the front, the dewclaw marks would be closer to the rear part of the hoof.



Personal Notes on Black-tailed Deer

There is a high population of deer here where I live on the northern coast of California. I see them feeding along the busy highway, in pastures with the cattle, in orchards, and everywhere on the property I caretake. I've seen them out feeding in the rain and even lying down to rest in the open when its raining. They seem oblivious to it. Whenever I

arrive home after dark, I see the deer in the field near my place. Their eyes reflect my flashlight beam and show up as two bright dots in the darkness. It's always fun to see the does with their new fawns.



Young doe feeding in an apple orchard - Cuneo Creek Campground, Humboldt Redwoods State Park, California

This fawn was seen along with two others following its mother along Bull Creek in Humboldt Redwoods State Park, California. It is unusual for a doe to have three fawns. The usual number is one or two.



Got a deer story? E-mail me and tell me about it.



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Updated: November 24, 2002.



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.

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.



Sly the Fox

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.



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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.

[Canine vs. Feline tracks \(Is it a cat or a dog?\)](#)



🐾 **Personal Notes on Gray Foxes** 🐾

I have encountered numerous foxes while out hiking around dusk. They will usually bark their hoarse bark in surprise, then scamper off a short distance. Once they feel safe, they turn around and continue to bark at you to let you know their displeasure. It's always interesting to watch them move. They remind me of cats because they are so quiet and flexible.

Gray Fox Photo Gallery



This fox was hunting along the edge of a mowed field.

Foxes, like many other animals, will eat grass to aid their digestion.



This fox was sitting on a roadside outside a dining hall. The fox waited until the people had cleared out, then came closer to search for scraps.

Same fox, sniffing for food.





The fox patiently waited on the road, not bothered at all by the presence of people.



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This fox, encountered during the daytime, was a little more shy about being around humans.



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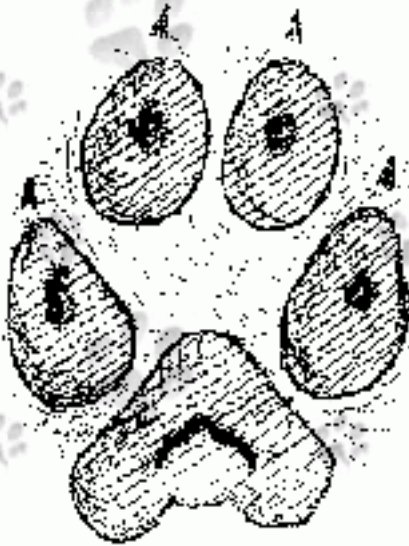
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Sly's fox pic was donated. Thank you!!

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.



© Mark Seaver

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.

Track photos courtesy of [Mark Seaver](#).

[Canine vs. Feline tracks \(Is it a cat or a dog?\)](#)



Personal Notes on Red Foxes



I have heard stories of red fox dens found beneath freeway overpasses in southern California, but have yet to track one. Foxes are fascinating animals and are very playful. Of all the canines, I think the red fox has the most colorful coat.




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Black-tailed Jackrabbit

Lepus californicus



Hind Feet



Front Feet



Trail Pattern

Black-tailed Jackrabbit Tracks



Natural History of Black-tailed Jackrabbits



The black-tailed jackrabbit is the most widespread jackrabbit. It lives on river bars, in meadows, barren areas, and sand dunes. The jackrabbit is a hare, which means its young are born with fur and with their eyes open. They are most active in the late afternoon, preferring to spend the day resting in a form, a shallow depression the size of its body that the animal scoops out of the dirt.

Jackrabbits eat grasses and leafy vegetation in the summer. In winter, they feed on woody or dried vegetation. Sometimes these social animals will feed in groups.

Jackrabbits have excellent hearing. Their ears can be 5 inches long. In addition to collecting sound, the large ears serve to disperse some of the animal's body heat on hot days.

Jackrabbits can weigh three to six pounds. Although they are larger than cottontails, the hind tracks may appear smaller because jackrabbits tend to run on the toes of the hind feet. The long heels do not leave marks when the animal is running like this. The hind feet can be $5\frac{3}{4}$ inches long. Jackrabbits rarely walk. They hop five to ten feet at a time. At top speed, the animal can leap 20 feet or more. They can run 30 to 35 miles per hour over a short distance. When running, the animal jumps exceptionally high every few leaps to get a look around.

The white underside of the tail is flashed when escaping from a predator. This may confuse the predator or warn other jackrabbits of danger. Jackrabbits will also thump the ground with their big hind feet to signal danger.

The home range of a jackrabbit is about ten acres. Jackrabbit young are born in a deep form lined with soft materials, including fur from the mother's chest. These animals are prolific, with one to four litters of up to eight young born each year. Sometimes the mother will place the young in separate forms to decrease the chances that a predator will find them all. She stays away from them during the daytime and returns several times a night to nurse the young. This is a way of avoiding attracting the attention of a predator. The young can take care of themselves in one month.

Common predators include foxes, owls, hawks, snakes, and coyotes.

Tracks in mud sometimes show the hair on the bottom of the feet. In sand, the trail pattern, stride length, and the size of the imprints are the best indicators of jackrabbit tracks.

Scat is a spherical pellet about ½ inch in diameter.



The front foot of a jackrabbit, cast in plaster of Paris. This cast shows details not usually seen in the tracks. The bottom of the foot is covered with hair and the toes are indistinct.

The hind foot of the jackrabbit is much longer than the front foot. When the animal moves, the entire foot surface is not usually in contact with the ground, so the tracks do not appear this large.



Personal Notes on Black-tailed Jackrabbit

I have seen many of these animals around at dusk. Their populations seem to fluctuate a lot. One year, there will be jackrabbits everywhere. Next year, there may be very few. They have startled me several times when I've been out walking in creekbeds. They freeze and stay very still until danger passes. However, when I inadvertently get too close, the animal will spring away and take off running. I was stepping over a log once when a jackrabbit sprung from underneath it, almost making me lose my balance.

Got a jackrabbit story? E-mail me and tell me about it.



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Mink

Mustela vison



Mink Tracks

Track photo courtesy of [Mark Seaver](#).



Natural History of Mink

Mink are mustelids - relatives of weasels. Mink are bigger than weasels and are aquatic. Mink weigh one to three pounds. Weasels are usually about half a pound. They eat fish, frogs, insects, mice, birds, and amphibians.

Mink have brown coats with a white patch under the chin. Weasels also have a white patch on the chest, but it often extends down the underside of the weasel.

Tracks can be found where the water meets the shore. Mink live near creeks, rivers, streams, ponds, and lakes. Mink tracks show five toes on both front and hind feet. The front track often shows only four toes. Tracks are a bit more than an inch long.

Mink are usually nocturnal, but are sometimes active around dawn and dusk. These animals usually hunt alone. They do not hibernate in the winter. They continue to hunt, sometimes even traveling under ice that has formed on the river surface.

Mink live in most of North America, except the southwest.



A mink track cast from a mold.



Personal Notes on Mink

I found mink tracks once along a creek called Bull Creek in Humboldt Redwoods State Park, California. They were almost perfect prints in mud. I made plaster casts of a couple of these. I have not found mink tracks in the park since then. They probably aren't as abundant in the area as otters. The tracks below were found just outside the park boundaries, along the Eel River.

These mink tracks were found along the south fork of the Eel River in February, 2001. The site where these were found is the same site that is frequented by the family of otters that live near my place. It is uncommon to find mink tracks here. They are



around, but are not often seen because of their nocturnal habits. Mink hunt near water. This photo shows a pair of overlapping mink tracks. The claw marks are barely visible on a couple of toes here. Early explorations of this area were driven by fur trappers looking for untrapped streams. They were followed by homesteaders and loggers. Mink were one of the furbearers found at that time.



Got a mink story? E-mail me and tell me about it.



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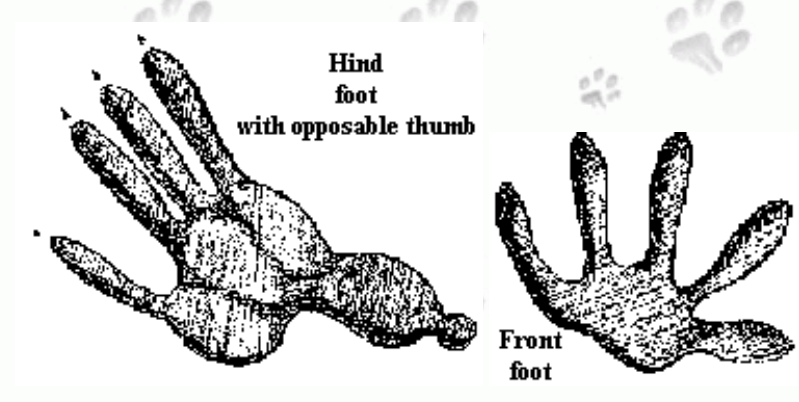
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Opossum

Didelphis virginiana



Opossum Tracks



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Direction of travel

Stride: 6 to 10 inches

Front: 1 1/2" L X 2" W

Hind: 2 1/2" L X 2 1/2" W

Opossum trail pattern diagram.

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



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.



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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.



Personal Notes on Opossums

I recently walked outside at night and happened to see a very small animal by the woodpile. Upon closer examination, I determined that it was a baby opossum. I watched on the following nights and was treated to the sight of three baby opossums making their first forays out into the world. Their little ears were pink and looked too large for their heads. They moved slowly and tried out their climbing skills in a nearby tree. Fascinating animals to watch. When I used to live in the city, opossums would come around at night and get into the garbage cans. They used overhead powerlines as a sort of aerial highway. Pretty smart.



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The left pair of tracks. Front track is ahead of the hind track. Note the opposable thumb in the hind track.



The right pair of opossum tracks. Quarter gives scale.



This plaster cast of the hind foot of an opossum shows details that normally don't show up in field casts. The structure of the opposable thumb is easy to see here.

This young opossum visited me one night when I left some snacks outside. Here he is devouring some tasty morsel.



Another young visitor. These young opossums were probably 8 or 10 weeks old.

Photos taken in summer 2000.

Still another of my opossum visitors.

Photo taken near Redway, California.



Got an opossum story? E-mail me and tell me about it.



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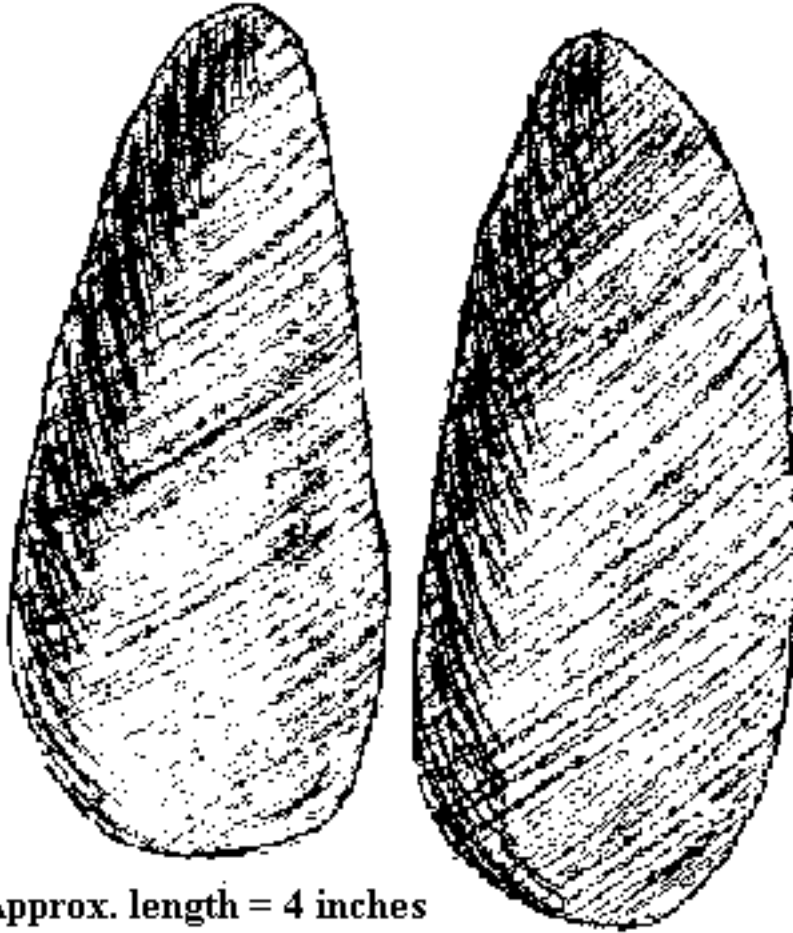


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Wild Pig

Sus scrofa



Approx. length = 4 inches



Wild Pig Tracks



Natural History of Wild Pigs

Wild pigs are not native animals in most areas. The wild pigs in most regions are descendants of domestic swine brought here by the original homesteaders. Over the years, some of these domestic animals escaped and went wild. Today, their descendants may be found in various locations.



Pigs can grow to 300 pounds or more. They dig for roots and eat acorns and fallen fruit. They also eat nuts, grasses, fruit, small amphibians, eggs, small mammals, and carrion. In the spring, a litter of piglets is born to each sow. There can be a dozen in the litter. The adult males have tusks and can be aggressive. If

you encounter a wild pig while hiking, keep your distance.

They are active dawn and dusk and are strong and agile. They move about in family groups and are strong swimmers and fast runners.



These two pig track pictures illustrate track aging. The first picture is a fresh pig track. I took this picture no more than five minutes after the pig left it. The picture on the right is the same track after 38 days. In that time, there had been rain, freezing temperatures, and even snow that stayed on the ground for six days. Even after all that, it is still recognizable as a pig track. This track lasted until the river level came up in a big rainstorm about a week after I took this picture. It would probably still be visible if it hadn't been washed away by high water.



Here's the track maker himself.



Personal Notes on Wild Pigs



I encountered one rather large sow one night as I drove down a dirt road in the horse campground. It heard me coming, but stood still until I was almost upon it. Then, it sauntered across the road and up a hill.



Some of the pig tracks I've found have been huge. One I measured was at least four inches long and very deep. The pigs in my area grow quite large!



I recently ran across a pig while I was walking toward the Eel River. It grunted and snorted as it dashed across my trail. Running away from me, it stopped every so often to look back and see if I was following it. I snapped off some pictures as I followed it down the river bar. It entered the water, swam the river, and climbed out on the opposite bank. Then, it sauntered off, knowing I couldn't follow it. This pig had small tusks, and probably weighed 200 pounds.

Here's the pig in the river, getting ready to climb out. Tusks are barely visible in this photo.



The photo below shows the pig tracks where it entered the river and swam across.





Got a wild pig story? E-mail me and tell me about it.



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Pig photos copyright © 1998 by Kim A. Cabrera



Brush Rabbit

Sylvilagus bachmani



Front Feet



Hind Feet



Trail Pattern

Brush Rabbit Tracks



Natural History of Brush Rabbits



Brush rabbits are cottontails, rabbits with white cottony tails. They are found in brushy areas. They are active dusk and dawn, but are primarily nocturnal. Sometimes, the young are active in the daytime.



Brush rabbits don't venture too far from cover.



This brush rabbit froze at my approach, another survival strategy. Movement will attract predators.

Brush rabbits do not dig burrows like European rabbits do. When escaping from predators, they will retreat into dense brush. They hide by day in brush piles and grassy depressions, resting in forms of their own construction.

Brush rabbits are small, weighing only two to four pounds. Like all rabbits, they are prolific. They can have five litters of up to seven young per year. The young are born with their eyes closed and lack fur. The mother hides them in a nest, which she covers with a blanket of grass before she leaves to feed. The babies are mature in four or five months.

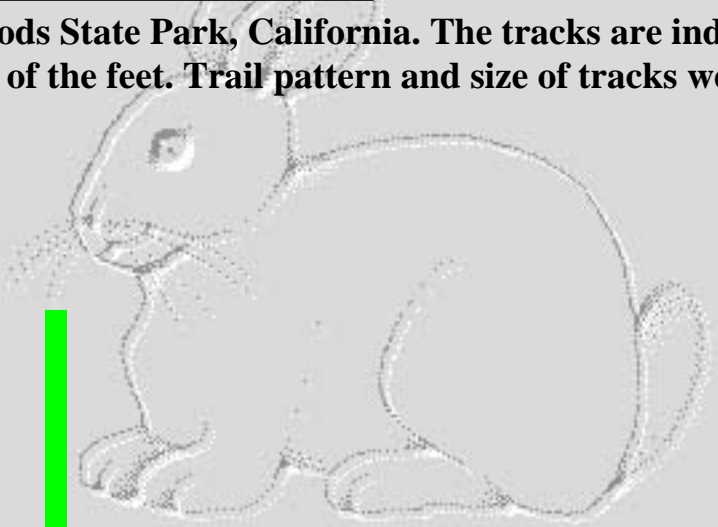
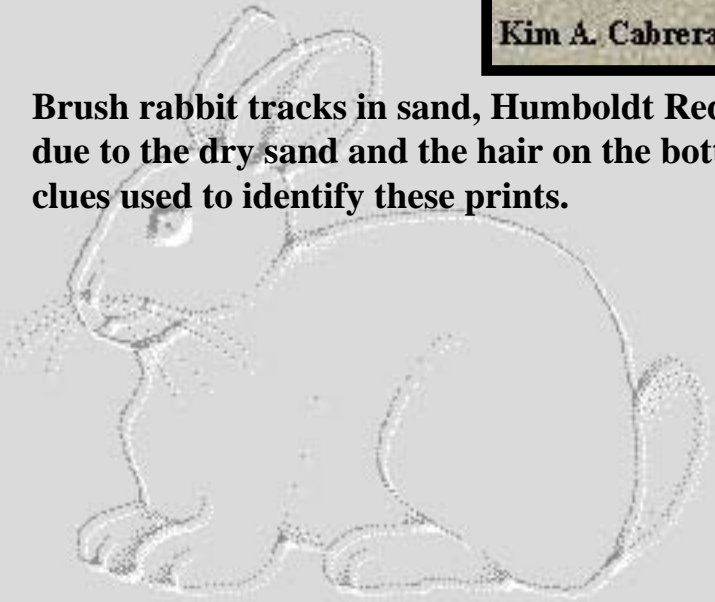
They eat woody vegetation in the winter, including bark, twigs, buds, Douglas fir, and salal. During the summer, the diet is more varied. They eat grasses, berries, plantain, clover, and other plants. Scat is a round pellet, $\frac{1}{4}$ to $\frac{1}{3}$ inch in diameter.

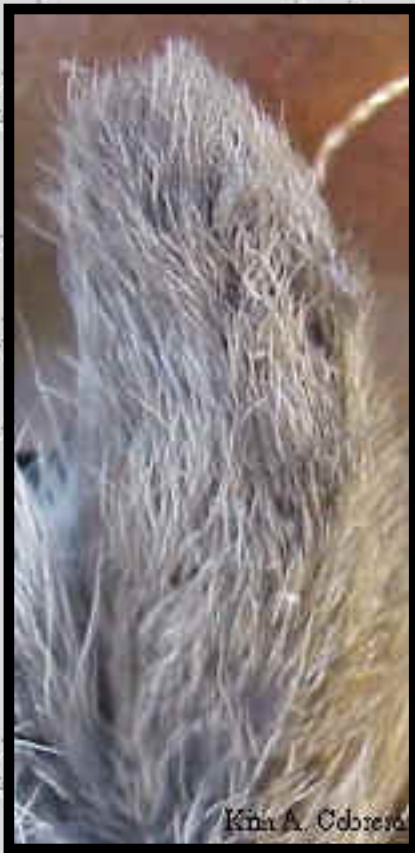
Common predators include foxes, coyotes, gopher snakes, and bobcats.

Tracks are often indistinct due to the hair on the bottom of the feet. Tracks are in groups of four prints, with the cluster usually measuring six to nine inches long.



Brush rabbit tracks in sand, Humboldt Redwoods State Park, California. The tracks are indistinct due to the dry sand and the hair on the bottom of the feet. Trail pattern and size of tracks were clues used to identify these prints.





Front foot of a brush rabbit.
Hair cover makes tracks indistinct.



Hind foot of a brush rabbit.
There are four toes on each foot,
but they are hard to distinguish.



Personal Notes on Brush Rabbits



One of the areas where I frequently visit and track has brush rabbits. I've noticed that their populations fluctuate. One year there will be many brush rabbit tracks, and the next year or two there may be few or none. The tracks never seem to be far from the underbrush and easy cover. They will venture no farther than that because they need to be able to quickly run back into the protective brush if a fox happens by. Perhaps the high numbers of foxes at this location can be attributed to the numbers of rabbits.



Got a rabbit story? E-mail me and tell me about it.



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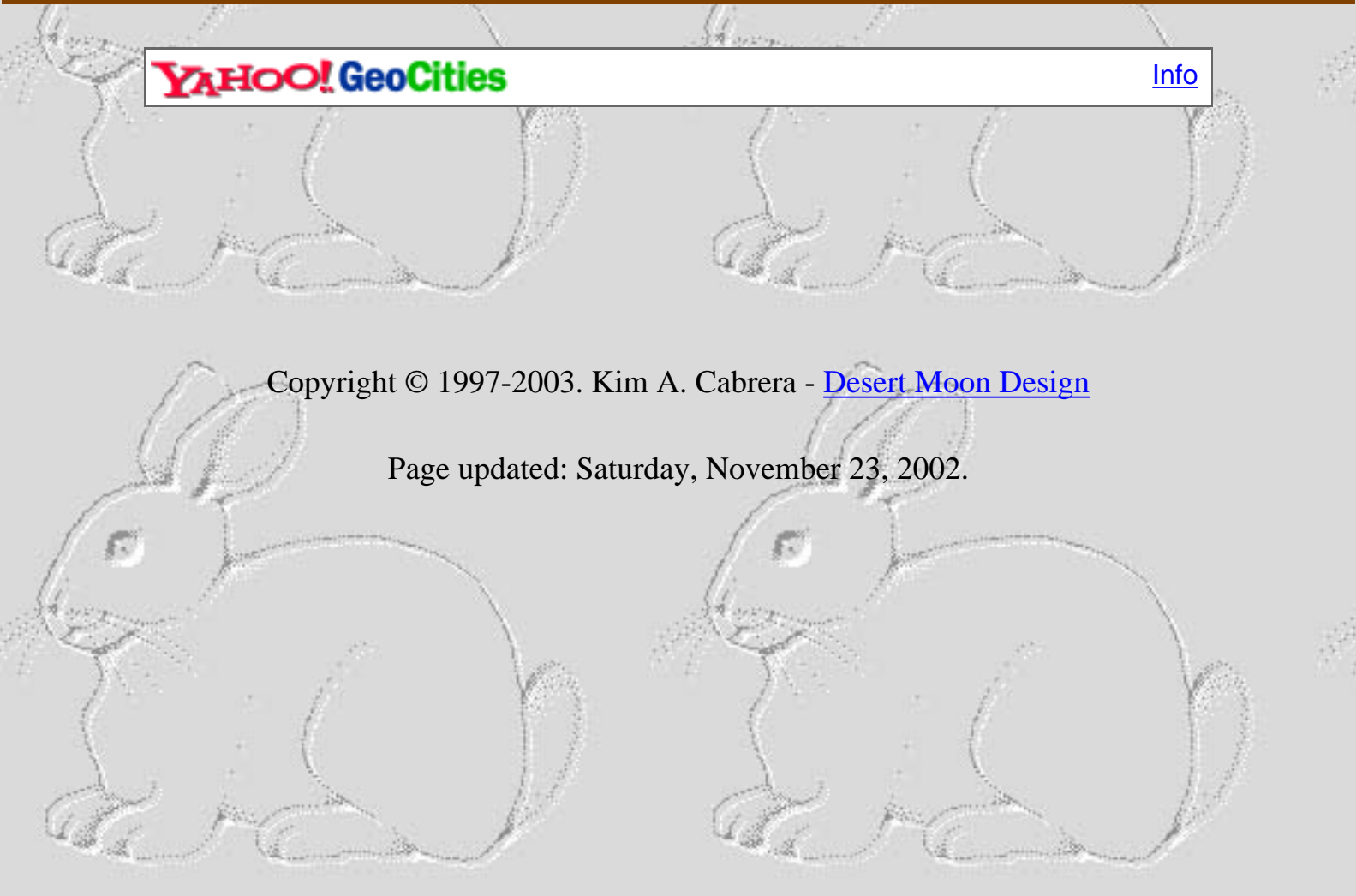


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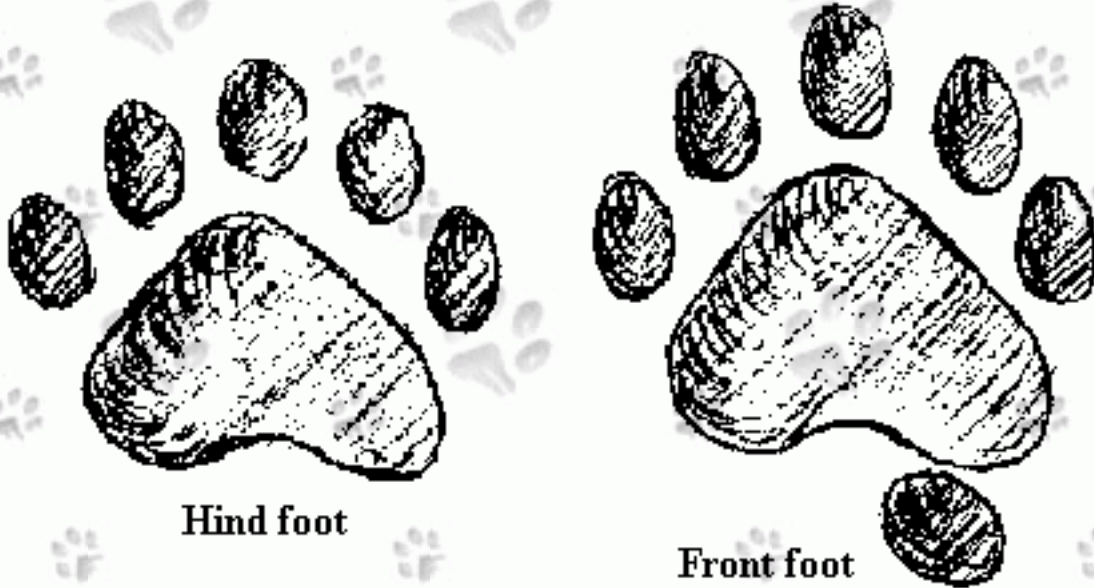
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Ringtail

Bassaricus astutus



Ringtail Tracks



Natural History of Ringtails

The ringtail is commonly called the ringtail cat, but it is not a cat. It has also been called *miner's cat*, *coon cat*, *cacomistle*, or *civet cat*.

Ringtails are related to raccoons. This nocturnal animal is very secretive and seldom seen.



It has a fox-like face and a ringed tail like a raccoon. The ringtail's tail is longer

than that of the raccoon. It has large eyes that help it see well at night.

Ringtails are very agile and have sharp claws which enable them to climb trees and even scale walls.

They hunt by night, pouncing on their prey from ambush. The ringtail primarily eats small rodents, but will also consume fruit, berries, small animals, bats, birds, insects, and acorns. Ringtails spend the day in a den which is often lined with soft moss, leaves, or grass.

Young, usually two to four per litter, are born in May or June. Their eyes do not open for 30 days. Parents bring them food in the nest.

Tracks show five toes on the front foot and five toes on the hind foot. Claws do not usually show in the tracks.



Personal Notes on Ringtails



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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.



A striped skunk that visited me, looking for food.
No, I didn't get sprayed after taking the photo! :)



I once lived in a house that had a family of skunks denning underneath. The smell got to be pretty strong after a while, but it was still tolerable. Eventually, they moved out on their own. I have had several close encounters with skunks, but have been fortunate enough to have not been sprayed by one. I came close one night though. I accidentally startled a skunk that was raiding my cat's food dish. The skunk's tail went up and I went the opposite direction - fast!



Got a skunk story? E-mail me and tell me about it.



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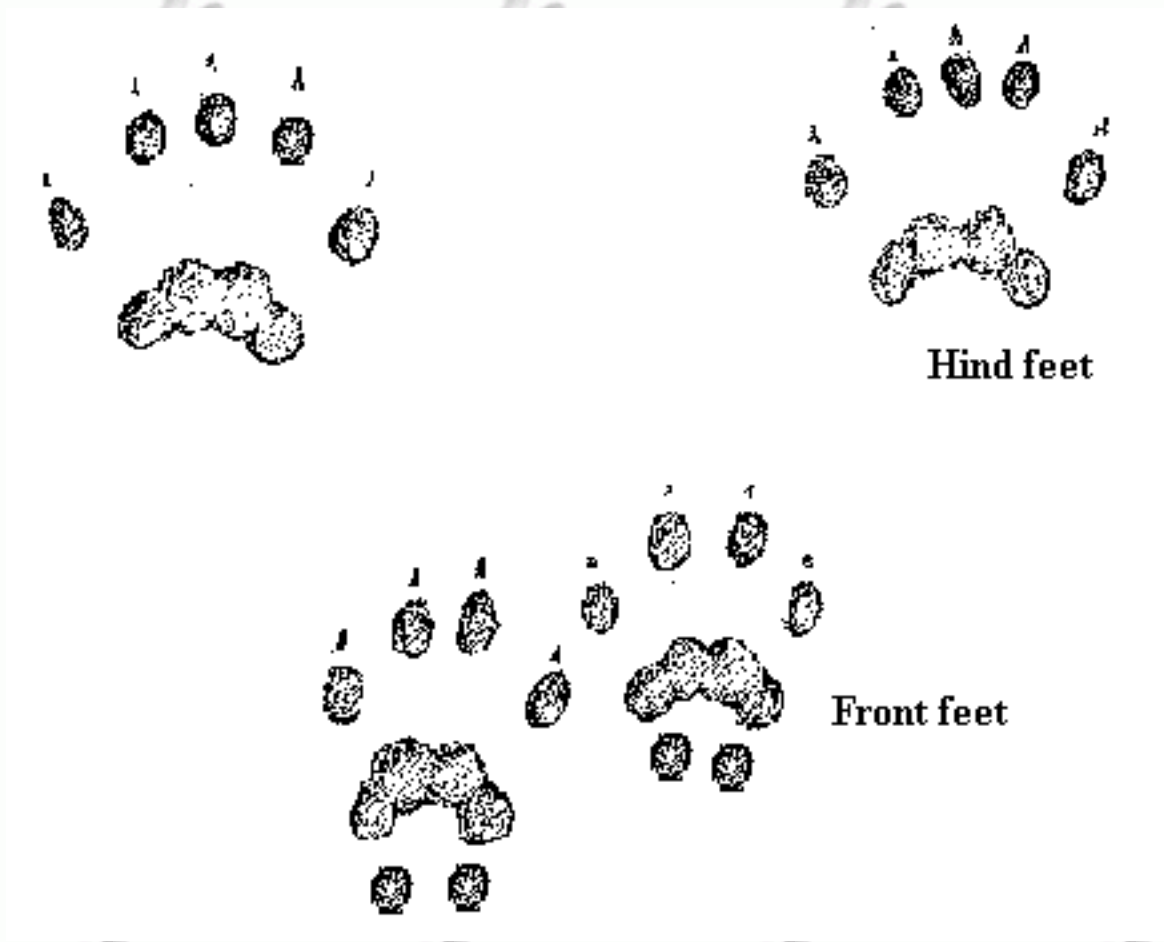


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Gray Squirrel

Sciurus griseus



Gray Squirrel Tracks



Natural History of Gray Squirrels

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.



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.

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 front track in sand.
Front track shows four toes.



Gray squirrel hind track in sand.
Hind track shows five toes.



Gray squirrel 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.





Personal Notes on Gray Squirrels



I like watching squirrels run. They seem to hold the tail level as they run so the body bobs up and down and the tail just trails along at the same level over the ground. Gray squirrels like to hide acorns and nuts for later use. I've watched them dig holes to bury acorns only to have ground squirrels follow right behind them and dig up the prize!

Got a squirrel story? E-mail me and tell me about it.



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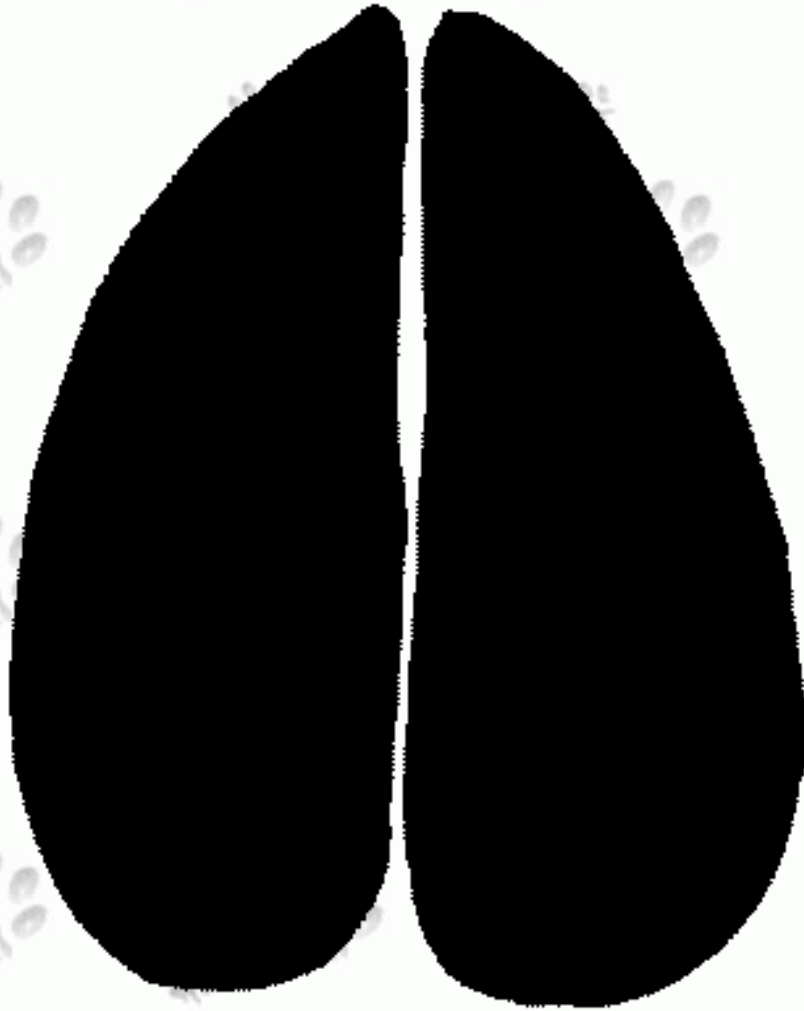
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Moose

Alces alces



Length: 5 1/4 inches

Moose Track



Natural History of Moose

Being written... check back later...

Moose are the largest deer in North America. They are herbivores, preferring to eat such species as willow, cottonwood, fir, and others. Moose feed in water during summer, eating aquatic plants found there.

Moose tracks are bigger than elk tracks. When running, moose tracks often show dewclaws, as do other members of the deer family.



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Harbor Seal

Phoca vitulina



Harbor Seal Tracks
(Flipper marks and drag mark from body)



Natural History of Harbor Seals

The harbor seal lives in the north Atlantic and north Pacific oceans. It is the most widely distributed seal, or pinniped. It is found in temperate, arctic and subarctic coastal areas. The photos on this page were taken in Redwood National Park, California.

The male harbor seal is usually larger than the female. They can get up to 6 feet long and weigh 375 pounds. They have a coat of thick, short hair that helps keep them warm.

The forefeet are webbed and have five toes, or digits. The forefeet have claws which the seals can use for defense, or just for scratching. The hind flippers are used to help them swim and to move around on land. On land, they move around somewhat like caterpillars, hitching forward with their flippers.

Seals will swallow their prey whole or tear it into chunks. They eat fish, squid, crustaceans and mollusks. They have well-developed molar teeth that help them to crush shells. Adult seals can eat 5 or 6 percent of their body weight each day.

Late spring through fall is the seal mating season. There is usually only one pup born each year and gestation lasts from 9 to 11 months. Harbor seals will use the same breeding grounds year after year. When there are pups around, it is best to leave the seals alone. You should watch from a distance and not approach the animals.

Harbor seals will come out of the water to bask on beaches, rocks, islands and sandbars, but they usually remain near the water.

Humans have hunted harbor seals for their meat, oil and skins. Some see seals as competition for fish. Seals can get caught in commercial fishing nets on occasion. They will eat the fish that have been caught in the nets.

There are five subspecies of harbor seal. Their scientific name means 'sea dog.'



 **Personal Notes on Harbor Seals** 

Harbor Seal tracks found at Redwood National Park, near Orick, California
December 17, 2000
Photos by Kim A. Cabrera



This is the mark of one flipper. The claws dug into the sand and left very prominent marks. This sand was not as soft as the sand in some of the other photos.

Here is the trail of a seal, showing the mark in the middle from the hind flippers. The outer marks are from the front flippers. The ham radio in photo is about 12 inches long for scale. Direction of movement is from right to left.



A seal trail in soft sand showing the drag mark from the animal's body in the middle of the marks from the front flippers. Direction of travel is toward the camera.

This is a single flipper mark. The outer area shows some claw marks. The coin in the photo is a quarter for scale. It is 15/16 inch wide.





Here is a trail with the marks in the middle representing the hind flippers.

Crossing the photo from upper right to lower left are the tracks of a raven. The dark area in the upper middle is a place where a seal urinated on the sand. Seal scat is not often found because they deposit it in the water. There is a flipper mark below and to the left of the dark area.



Got a harbor seal story? E-mail me and tell me about it.



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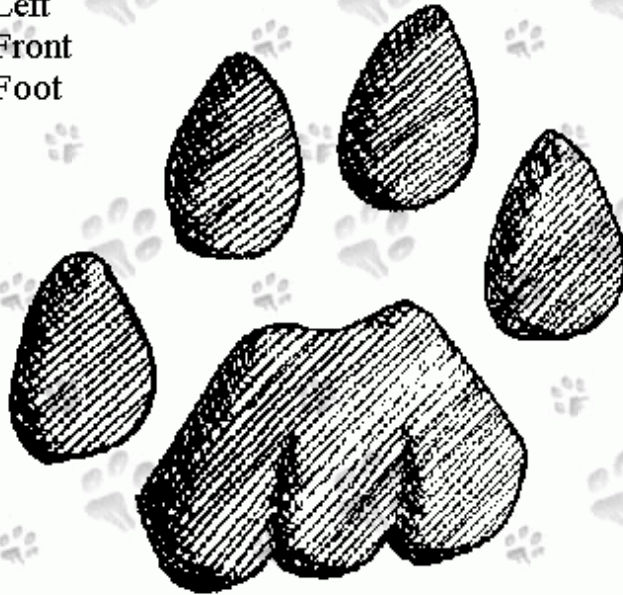
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Page updated: Monday, January 1, 2001.

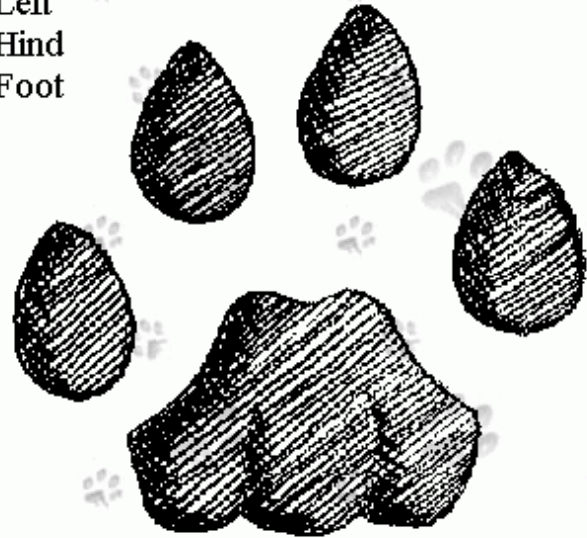
Mountain Lion (Cougar)

Puma concolor


Left
Front
Foot



Left
Hind
Foot

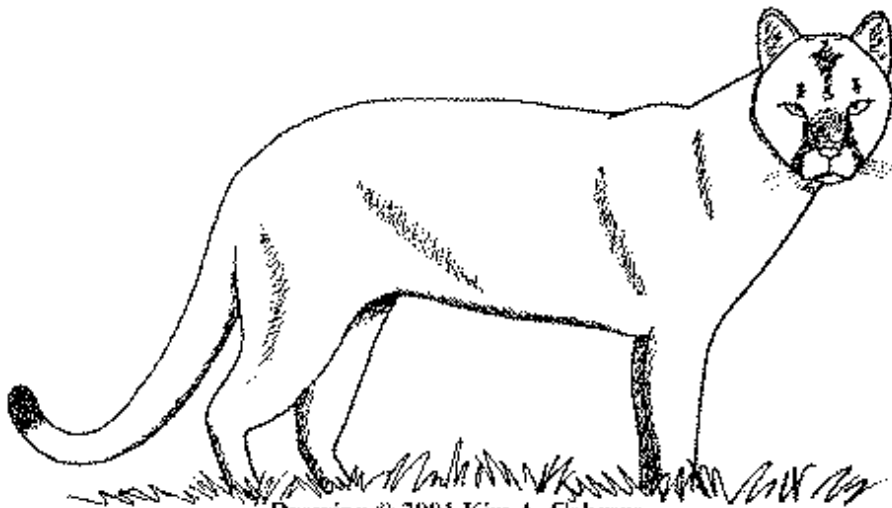


Cougar Tracks

Click here to hear a lion roar.  (26K WAV)



Natural History of Cougars



Drawing © 2001 Kim A. Cabrera

Mountain lions are also called cougars, panthers, catamounts, or pumas. These big cats have many common names. They are the largest wild cats in North America.

These solitary animals avoid people if they can. Their primary prey is deer, but they do eat porcupines, raccoons, birds, small mammals, foxes, mice, and grass.

The lion is a magnificent animal which was hunted to near extinction and is now making a comeback. There have even been reported mountain lion sightings in the eastern U.S., where they were once thought extinct.

A single male lion may require up to 175 square miles of territory for its home range. They prefer wild areas frequented by deer. One lion will consume about one deer per week. A lion will cover the remains of its prey and return to the kill to feed until the meat begins to turn. If you find a lion kill, don't hang around the area. The animal may still be nearby. An adult can weigh up to 200 pounds.

Young mountain lions have spots and a ringed tail, and thus are sometimes mistaken for bobcats. (The bobcat has a short tail, while the lion has a long tail.) A litter of one to six young are born between late winter and mid-summer. The cubs stay with their mother for one or two years.

Lion tracks show four toes on the front foot and four toes on the hind foot. The retractable claws do not show in the prints. Lion tracks can be over four inches long.

They are good climbers and can leap more than 20 feet up into a tree from a standstill. They can jump to the ground from as high as 60 feet up a tree. A single male lion may travel 25 miles a night when hunting. Lions may be active by day in areas far from humans. They are most active at dawn and dusk, the times when deer are out feeding.



Below is a lion track I found near Albee Creek Campground in Humboldt Redwoods State Park (California) in April, 1998. It was a good print in mud and I made a plaster cast of it.





On the left is a mountain lion track cast in plaster of Paris. This cast shows all the details of the foot. It was cast from a mold. Casts made in the field are rarely this defined, and usually have soil stuck to them which cannot be removed without destroying details of the cast. This cast represents the right front foot.

[Canine vs. Feline tracks \(Is it a cat or a dog?\)](#)

More Cougar Sounds

[Female cougar in heat sound \(167KB WAV\)](#)

[Cougar purring sound \(68KB WAV\)](#)



Personal Notes on Cougars

I have found cougar tracks many times. Many of the tracks belong to a young lion who has moved into one of my favorite tracking areas. I have heard many cougar stories from people who have lived in this area for many years. There is a town near here called Panther Gap, supposedly because of all the cougars that lived there when this area was first settled. (Don't bother looking on a map. Even on local maps, there is nothing to indicate Panther Gap. It's just too small.)

This lion can leap pretty high. I found tracks once where it leaped up onto a big redwood log from the ground. A pretty good leap from a standstill. Despite all the negative stories about cougars, I still enjoy finding their tracks. I saw my first lion in July, 1998. It ran across Highway 101 right in front of me. This was about four miles south of the town of Weott, California. It was a young lion.

In July 2002, I saw another mountain lion. This one was crossing the road near Elk Prairie Campground in Prairie Creek Redwoods State Park at 11p.m. The lion paused in the road, then sauntered off into the brush and disappeared. My friend and I gave each other "High Fives" because we were so happy to have seen one. I wished I had my flashlight handy so I could get out of the car and see more of the cougar. But we decided to leave it alone and continue our journey.

Here's a cougar story that happened to me February 5, 1999:

I went out exploring an old washed-out road this evening. The sun was low in the sky when I started out. I crossed a creek and continued up the old, overgrown road. In some places, there were washouts and slides. There was a place where there was actually some old asphalt, but the road had long-ago subsided, leaving little islands of asphalt atop pillars of soil protected from the rain by their asphalt caps. It was at the base of one of these asphalt-capped pillars of soil that I found the cougar tracks. The cat had jumped down from atop the pillar. There were several good prints in the soft soil.



I followed these on up the road. I began to notice a lot of cougar scats in the road. Some were very old and scattered, and some newer. I kept an eye on the sun as it sank out of sight below the ridge. The road continued on and I wanted to see where it went. As it got darker, I decided this wasn't such a good idea after all. It had rained off and on yesterday and today and those tracks weren't really that old. So, I turned around and started back the way I had come up. I got past the spot where I first found the tracks and, in the fading light, saw something that got me moving a little quicker. There was a cougar print, a fresh one. The dirt at the edges had not even begun to dry yet and this track had not been rained on at all. It hadn't been there when I started up the road. Looking around at the sandstone bluffs above me, I searched in vain for a glimpse of the elusive tawny-coated critter. Sadly, I was not to see one this day. I turned and headed back home, disappointed not to have seen the cougar that had been following me. Maybe next time.



That's one big kitty!

This is the right front foot. Notice how the second toe (from left) is farther ahead of the others? This toe is analogous to our index finger. Since the track is an imprint of the actual foot, that would make this the right foot. The large heel pad tells you it is the front foot. To see how a penny compares in size to a domestic cat track, visit the [domestic cat](#) page. A cougar track can be four inches long. Domestic cat tracks are usually only about an inch long. A penny is 3/4 inch wide.

The Cougar on the Beach

December 28, 2000

Black Sands Beach, Shelter Cove, California

The location of this track find - Black Sands Beach in the King Range National Conservation Area, Shelter Cove, California. Also known as the "Lost Coast." This wild stretch of coastline stretches north for over 30 miles. There are no roads, only trails. It is a great place to hike if you want to really get away from it all. It is the longest wild, undeveloped stretch of coastline in California.



I was walking along the beach looking at and photographing skunk tracks and trail patterns when I turned around and saw the distinctive shape of this heel pad in the sand. The light was rapidly fading as the sun sunk below the horizon, so I quickly began photographing the mountain lion tracks. The lion had hopped down from a bluff and walked along the base of the bluff toward a freshwater creek that emptied onto the beach here. The track on top is the hind track. Size is about three inches.



The tracks on the far left and far right are mountain lion tracks. The pair in the middle are raccoon tracks. The straight mark in the sand at the top of the photo is where I rested the stick to take a photo. However, the shadow from the stick was cast over the tracks, so I moved it. The stride here is about 16 inches. The light was perfect for photographing these tracks. The sun was very low in the sky, giving long shadows in the tracks.



© Kim A. Cabrera

As I walked along, I circled the tracks just for fun. Who knows? Maybe someone will come along and find them and wonder why they are circled. If they look closely, they will probably see what kind of animal it was. I often wonder if anyone has ever found the tracks that I sometimes draw circles around. It is my hope that they look a little more closely at the tracks in the circle and maybe try to identify them. It's always good to get more people interested in tracking. This is one way I try to generate interest. Sometimes, I will even draw the name of the animal next to the circled tracks.

The tracking stick in the photo is a little over three feet long. The stride is between 16 and 18 inches.

It is always a special experience for me to find the tracks of this elusive creature. The experience is heightened by standing in a place where I know a big predator walked not too long ago as the sun sets and it gets dark. That's the time to saunter on home.

The Cougar that Visited Me

January 4-6, 2001
Near Redway, California

My next cougar tracking experience occurred less than a week after the Cougar on the Beach incident. I was exploring the river bar below my place when I again found the distinctive tracks of a cougar. This one had passed by within the last day or two. It was almost dark when I found the first set of tracks. I followed it along the river bar until it climbed up the bluff overlooking the river. I ran back home for some plaster of Paris. There was the possibility that it would rain overnight and I wanted to cast some of the excellent tracks I had found. I poured the plaster and waited. And waited... and waited ...as it got darker and darker. As I waited, I thought about how close this animal had been to my place. Had I been standing on the porch when it walked by, I would easily have seen it. I finally decided to go get a flashlight and lantern and a noise-maker. It was not a good place to be - out on the river bar alone at night when a cougar had been in the area not too long ago. I had no idea where it was at that moment, so it was best to go get some light. By the time I had hurried up the hill to get my lights, it was fully dark. I waited about 15 more minutes to give the plaster a chance to dry, then headed out with my bright lights to pick up the tracks. I retrieved them and got home safely, but there still remained the rest of the trail. Where did it go? How far would I be able to follow the cat? I decided to try again after work the next day. This was winter, so it got dark around 5:30p.m. Luckily, the weekend was coming. But, if it rained before then, these beautiful tracks would be gone.

The next day, I hurried home from work and grabbed some plaster and my camera. I was determined to follow this cat. I found the place where the cougar had climbed to the top of the bluff. Then, it had followed a trail at the top of the bluff that paralleled the river. This led to a grove of redwood trees. Behind the grove, the lion had climbed down the bluff to another river bar. There, the tracks were easily visible as the cat had walked across some nice flat sand. I found the best tracks yet and jumped up shouting, "Treasure!" They were almost perfect tracks. That yell alone was probably enough to scare the cougar off had it been anywhere near.



By this time, I was pretty sure I knew where it was going. This might have been the same lion I had encountered in February 1999. (See story above.) It was heading for the mouth of the creek where it had been before. I'm fairly sure it spends most of its time up in that drainage. I followed the trail until I came to a jumble of rocks at the mouth of the creek. Here, the cat had jumped up on one rock, hopped to another, and hopped over the water to the sand on the other side. I stopped following here. It was again getting dark and I had to get back and take some photos. It was not supposed to rain and the next day was Saturday, so I planned to bring some plaster and return then. In the photo on the left, you can see the river on the right. The mouth of this creek is beyond the largest rock, behind the little mound of gravel. The arrows point to the places I found cougar tracks. It left some sand transfer on top of the two rocks it hopped on. The little backwater lagoon runs between the rocks and the sand on the other side, not visible in this photo. Two sets of tracks led up to the first rock.

The stride varied from 18 to 20 inches when walking. This part of the trail followed open sand until it arrived at a small creek. Cats like to avoid obstacles like sticks, leaves and debris which can cause noise when stepped on. They are very careful about where they place their feet. Watch your pet cat walk sometime and you'll see how this works.



The cat jumped over the small creek and landed in a sand dune. That was where I found the deepest and best tracks. This one of the prints from where it landed.

The tracks along the edge of the sand dune. The location proved to be a difficult one to make castings on due to the slope of the dune.



Here is how I overcame the problem of casting tracks on a slope. I built little sand walls to contain the plaster on the downhill side. I built up the walls high enough that the plaster could flow into all parts of the track. Some parts were deeper than others in the final cast, but at least I was able to make casts of them. Notice the walls prepared around the tracks I haven't cast yet. The plaster takes about 1/2 hour to dry. The trail continues off the lower right corner of the photo. I also found one set of bobcat tracks that crossed the mountain lion trail on this dune.

A real treasure - an almost-perfect mountain lion track. It is rare to see these animals, but finding their tracks is almost as good an experience as a sighting.



While tracking the cougar, I felt a little like Calvin must have felt above. Potential cougar food!

The Cougar that Stayed for a While

October 25-28, 2001
Near Redway, California

October 25, 2001
Thursday...

I went for a walk today, just because I wanted to look for tracks on the sandy patch on the river bar. (Curiosity outweighed my need to keep my ears warm and not freeze them off on the windy river bar.) I had heard a strange noise last night long after dark. My cat, Tiger, was outside, as usual. He likes to stay outside, even at night. The others all come inside, but he refuses to do so. Even when it is cold. Well, last night, I heard a thump and what sounded like a hissing sound. Now, that usually means Tiger has encountered a raccoon or a skunk. He usually runs from the raccoons, hisses at the skunks. This was a big thump though and I immediately grabbed my flashlight and was out the door less than 10 seconds after I heard it. I saw nothing, although Tiger was not at his usual post on the porch. He doesn't go far from the source of his food. I called him several times and waited a few minutes. I

looked under the cabin and looked for tracks, thinking all the while of the night Bones was dragged off by the bobcat. Finally, he came trotting down the hillside. He was way up there for some reason. Something had scared him off. I couldn't see any tracks out there, so I figured he had made the thump when he jumped off the boards under the cabin. I didn't think anything more about it until I was walking along the river bar and happened to decide to go up the big river access trail. I had been down by the water and had found the sand patch torn up and some black and white clumps of fur scattered about. It looked like something had attacked a skunk and torn out pieces of its tail fur. I headed up the gravel and got to the bottom of the access trail where a shape caught my eye. Two tracks side-by-side, worn by the wind until the edges were rounded. They were unmistakable. Not a bobcat... too big for that. Mountain lion. A young one too. Eagerly, I took photos of them and then followed them backward. I wanted to see where the lion had come from. I found tracks here and there in patches of sand interspersed with rocks as I went toward Redway beach. I found where the lion had come down the rock on the southern part of the camp property. I stopped there and decided to follow it the other direction and see where he had gone. It was dusk and the sun had long ago gone behind the ridge. It would be too dark soon. The wind had kicked up a bit and was rustling the leaves enough to cause me to keep looking back over my shoulder. I went back to the river access trail where I had first picked up the trail. Following along, I found tracks going in both directions. There was an area where the lion appeared to have stayed for a while because there were numerous tracks. I got near a log that had been washed up by the river and had since overgrown with berry vines. There, I stopped to examine some scat that may be porcupine scat. Then I noticed the smell. It smelled like something was dead nearby. Ick! I moved on rather than crash into the brush to examine what might be the mountain lion's food cache. Perhaps Tiger had heard something last night. Maybe he heard the cat kill a skunk? I found another place not too far away where the cat's tracks were crisscrossing each other. It had spent some time here. Looking up, I saw the window of my cabin about 100 feet away through the trees. This summer, the maintenance guy had cut some trees here and it is now very easy to see most of the camp from the river. Had I been looking out that window last night, I would have seen the lion. The tracks showed no rain pock marks. In sheltered places, the tracks looked almost fresh. In unprotected areas, the wind had worked on them and flattened some out until only the shape remained. But they were no more than a day old. One of them had some lizard tracks inside, in the heel mark left by the cougar. I found one nearly perfect track. The light was almost gone, but I tried to take a picture anyway. I hope it comes out. I then stacked a few rocks around this track, hoping to protect it from the wind so I can come back tomorrow with better light and get another photo. I followed the trail on. At the smaller river access trail, where I had come down, I found more tracks. I had been focused earlier on getting to the sand patch because I had seen ravens there and wanted photos of their tracks. Had I looked at my feet, I would have found much more exciting tracks. The cat had paused here too, perhaps considering whether to go up that trail, or continue on the river bar. It apparently decided on the latter because the trail led north on the river bar, toward where I had seen lion tracks last January. This one followed the same path. It could have even been the same lion. I didn't go up the hillside to see if it had climbed up there. The light was fading fast and there wasn't time. I headed back and stopped to examine a pair of shoes and a shirt that was laying on the rocks. This hadn't been here several weeks ago. Maybe the lion ate the shoes' owner? Time to get outta here! I hurried back to the trail and on up to camp, checking the trail for telltale tracks. There were none. A raccoon had gone down the trail to the river, but no lion had come up that way. There were numerous tracks from my cats on the sandy trail. Tomorrow, I think I will go to the place where I found the lion tracks in January at "Effluent Creek." If I am correct, he will have gone that way and up into the drainage of Leggett Creek. In a way, I want it to come back, although I worry about Tiger. He refuses to come inside, or to come near enough so I can grab him and bring him inside. But, I want to hear a mountain lion scream. I have been told what it sounds like, but never had the privilege of experiencing it for myself. I want to hear that sound that is supposed to send

shivers up your spine and make you glance nervously at the locks on the doors and the shadows under the trees. Of course, I don't want to be on an empty river bar in the dark when I hear it.....

October 26, 2001

Friday....

The mountain lion tracks I had found yesterday had proved too enticing to ignore. So, earache or no, I had to go back and see what the story was. The river bar was already in full shadow as the sun had just dipped below the ridgeline. The first place I went was where I had placed rocks around the most perfect track I had found yesterday. There, I stopped to move the rocks aside. The track had been protected from the wind and was still in good shape. I took numerous photos of it from different angles, with and without a penny for scale. Then I moved on looking for more tracks. I got several more photos. Soon, I ended up at the place where I had first detected that smell yesterday. I sniffed around and looked at the vegetation. There were some trampled areas and broken branches. I decided to go on in. Cautiously, of course. There were numerous deer trails in there and I took what appeared to be the most heavily used one. Under an old rotting alder branch, I found some sawdust and chunks of wood. Thinking I might be following a porcupine, I looked up to find where the material had come from. There, staring me in the face, was a pair of gaping holes left by a pileated woodpecker. I have been hearing one calling near here for several weeks. It had chosen a good place. The hole was on the underside of a branch where it would be sheltered from the rain. How do animals know such things? I came to a place where I smelled the familiar scent very strongly. I moved in through the brush. There was a wider trail here, much wider than a normal deer trail. Bear? I continued on and found a place where an animal had laid down, matting the grass down in an oval shape. The trail led back toward the camp. I was right underneath the parking area near the dumpster. Suddenly, I saw something ahead. It was a dark form resting in some matted down grass. It wasn't moving, so I continued my approach. As I drew closer, the first thing that hit me was the smell. I had found the source. I took photos as I approached. It was a doe. She had been killed with a bite to the back of the neck. There were marks in the grass where the carcass had been dragged. The hunter had begun to consume the prey from the hindquarters. The bones appeared to be all there, save a few ribs that had been eaten.

This kill had not been abandoned very long. The other animals would have scattered the bones. I believe those mountain lion tracks I found yesterday were made that morning or late that night. This kill was probably abandoned around the same time. I had followed the tracks yesterday to the north end of the river bar. I didn't get a chance today to follow them further to see if they ended up where the ones in January had. This find took precedence over trailing the lion to the mouth of the creek.

I took numerous photos from all angles. I got close-ups of the hooves and feet. I then backtracked to the scene of the actual kill. It was not far away. The lion had briefly chased the deer, then killed it. There was torn-up vegetation. There had been a little struggle, but not much. The lion had then dragged the carcass under a log and out into the patch of grass on the other side. It had then spent quite a long time laying next to its kill, feeding when it was hungry. The grass was matted down in a big circle around the carcass. It had probably been there for several days. There was little meat left for the scavengers. I kicked myself for not seeing the lion that was all of 150 feet from my door!

It will be interesting over the next few days to watch the behavior of the turkey vultures and ravens. I wonder how long it will take until the bones are picked clean. The skunks and raccoons and foxes will probably join in as well.

I took the trail up to camp. This new trail comes out by the clothesline. There, I noticed something I had seen when I hung up laundry two days ago. A mound of dirt scraped together. I had noted it in passing several days ago. Now I looked a little closer. There, near the mound, was a cougar print. And the mound itself contained cougar scat. A scrape pile! Territorial marking! I looked up. My truck was parked not 30 feet away. I guess that ends any trips to the clothesline to retrieve my laundry after dark. I will have to pay attention and remember to bring in the laundry before dark from now on. Just in case.

October 28, 2001
Sunday...

I spent half the day today tracking the mountain lion. I first went to the north end of the property and found that it had indeed followed the same route back to the creek drainage as it, or another lion, had taken in January. I found only the one set of tracks there, headed back to the creek. So I went back to the scene of the first tracks I had found below the lodge. I returned to where the kill was to check on the scavengers' progress. They had been busy and had dragged the carcass about ten feet. Most of the bones have been picked clean, but there is still more left for the really desperate scavengers. The tracks there told me that two coyotes had been there. I then followed a well-worn path up the embankment toward the camp. I found a place up there where the lion had laid down. The vegetation was matted down in a circle. It had a perfect view of the carcass below. It probably went up there after eating its fill just to sleep it off. Just as my cats do. The thing is, I looked up and there was the clothesline about 20 feet away. There was my car about 20 feet beyond that. There was my window not too far from there. This lion had lain there when I was walking around not 50 feet from it. I know I had done laundry during that time, and had hung it on those lines. In fact, there was some hung there now. I found several tawny, stiff hairs snagged on berry vines where the lion had walked through to get to the open space by the clothesline. So, that scat mound I found there did belong to this cat. I took a photo from the cat's eye view of my place. Very interesting what he could see from there. And kinda scary in a way. I definitely won't be making trips to the clothesline after dark anymore. I cut off a short berry vine that had a lot of hair snagged on it. I am going to tape the hairs in a notebook or something to keep them. Not every day that a big kitty visits you so close. I found a total of four places where the cat laid down to nap and digest his meal. I also found several exits he had used to get to the river from the brush where he was spending so much time. I looked all over, but didn't find any more scent mounds or scat.

I walked around the dirt parking area, looking for coyote tracks. I found them. Two coyotes. They had briefly harassed a deer right near where I park. I followed the tracks and found them coming down the road. They had been there before I got home last night. I got home really late. Their tracks were under, or partially under, the incoming vehicle tracks I had made late last night.

The other scavengers who have been hanging around are the ravens and turkey vultures. The ravens are much more noisy about their activities than the vultures are though. I hear them over there near the site of the carcass in the morning.

So many critters to track. So little time. When you think about how many animals are out there, and that each has four feet, that's a lot of tracks. All just waiting for me to come along and find them.... Tracking is the only really fun thing to do. If I didn't recognize those tracks as mountain lion tracks, I wouldn't have found all this and would have been totally oblivious to the story that was played out so

close to home. A brief glimpse into the life of a cougar. One more reason to learn how to track anything that moves....

More Cougar Track Photos



Cougar track in shade, illuminated by the reflection from a camping mirror. This technique allows you to control your light source and makes subtle tracks stand out from the surrounding soil. Hold the light as close to the ground as possible to create an oblique angle. This makes good shadows in the track itself. This is the left hind foot.

Two cougar tracks overlapping on a dusty dirt road in Humboldt Redwoods State Park. Direction of travel in the photo is from right to left. The full track on top is the right hind print.



Three bobcat tracks and two cougar tracks on a dusty backcountry road at Humboldt Redwoods State Park, California. Photo taken in August 2002. Bull Creek Fire Road, south of junction with Kemp Fire Road. The cougar was walking toward the top of the photo and the bobcat was going the opposite direction. Notice the size difference between the tracks of the two species.

Cougar paw in a Visitor Center display at Humboldt Redwoods State Park, California. The characteristics of a cat track are visible here. The leading toe indicates that this is the left foot. The shape of the heel pad indicates it is the front foot. Two lobes on the leading edge and three on the hind edge of the heel pad further help to identify it as a cat track.



Got a cougar story? E-mail me and tell me about it.

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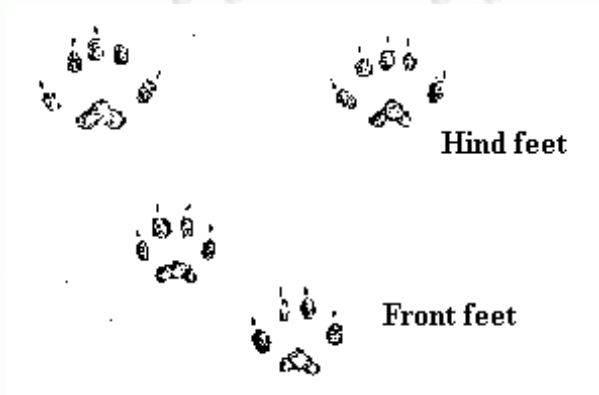
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Page updated: Sunday, February 1, 2003.

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.



Track photo on right courtesy of [Mark Seaver](#).



Personal Notes on Deer Mice



Deer mice are very common. I've found their tracks in fine mud and in dry river silt. Out on the river bar, they seem to stick to the same routes. There will be little trails between areas of cover with hundreds of little mouse prints on them. Sometimes, there will be a line of mouse tracks going off to a feeding place alone. The tail sometimes drags in the trail, leaving a mark like the one in the photo above. Mice seem to nest any dry place that is sheltered from predators. I've found nests in abandoned sheds, in food lockers in campgrounds, even inside old walls. Although mice are certainly cute and fuzzy creatures, they can bite!

The photo here shows a sunflower seed for scale alongside the hind print of a mouse. The two lines running diagonally from left to right are the trail of an insect. These tracks were found in find river silt in Humboldt Redwoods

State Park, California.

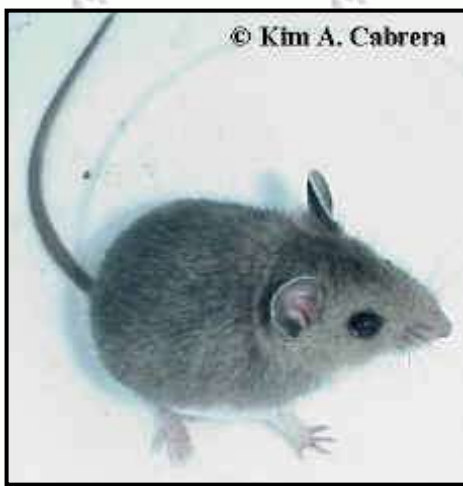
Mouse and Track Photo Gallery



A mouse that I found nesting in the back of my truck. After posing for these photos, he was released into the tall grass to find himself a home in his natural environment.

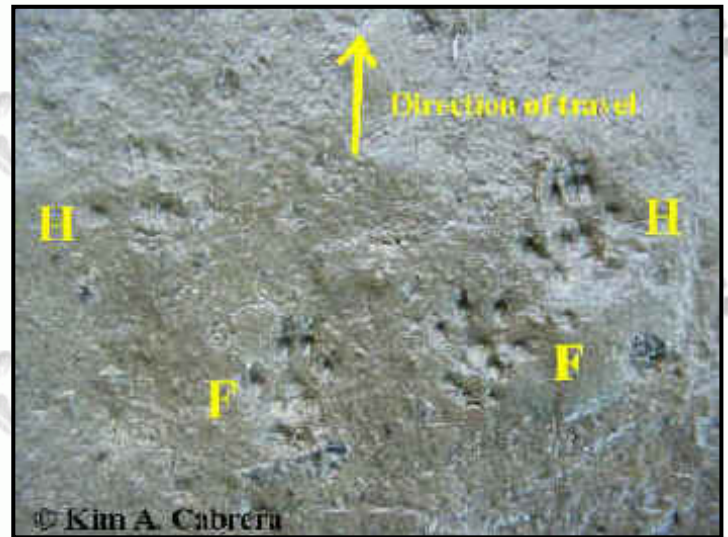
After painting a shelf in the garage, I found these tracks of a tiny night-time visitor on the cement near the shelf.





The suspected culprit in the case of the painted tracks looks like this... four toes on the front foot and five toes on the hind foot.

An entire set of all four tracks. The letters indicate front (F) and hind (H) tracks. This pattern, with the hind feet ahead of the front feet, is typical for rodents.



The left front track. The vestigial toe pad is visible in this photo if you look closely.



The right front foot with the vestigial toe pad indicated by arrow. If you look closely, you can find this on mouse tracks in very fine soil.



Although this print looks a little larger than the other mouse tracks, it isn't. The paint spread out, making the track look bigger. The same happens in mud.

Just how big are mouse tracks? Well, that quarter is almost 1 inch wide. It's actually 15/16", but who's counting?



Quiz time: Which track is this?
Hint: look for the location of that vestigial toe imprint.



Predator and prey: mouse track in the upper right next to a gray fox track.



Mouse track in upper left with a killdeer track. A killdeer is a shorebird similar to a plover.



Due to their tiny size, mice are prey for just about all predators out there. Consequently, they can have several litters a year to keep up their populations.

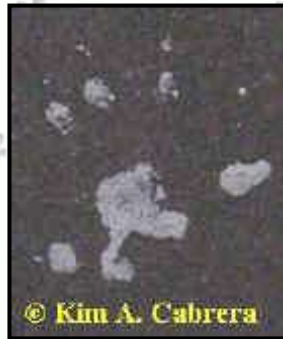
A curious nose and whiskers. Mice eat many things, as I found out when this one got into my truck and started nesting in various materials. First place it built a nest was in the ventilation system, chewing the foam to shreds.





Look closely at the feet in the photo above. Can you see evidence of the vestigial toe? While not visible in the photo, it can easily be seen in the photo to the right. This toe is similar to the dewclaw that dogs and cats have higher up on the wrist.

The hind track in paint. Note the tiny claw marks. On the toe in the upper left corner, you can see some of the ridges that are on the bottom of the foot.



The hind foot in mud. The heel pads are visible here. This grouping of the five toes (1-3-1) is typical.



A group of all four tracks with quarter for scale. This is one complete set. Front tracks are in the lower part of the photo. The direction of travel is from bottom to top of photo.

Two complete sets of mouse tracks in a trail. The mouse was moving from right to left in this photo.



More tracks found in the paint.

**An older front track found along the Eel River
in Humboldt County, California.**



Got a mouse story? E-mail me and tell me about it.



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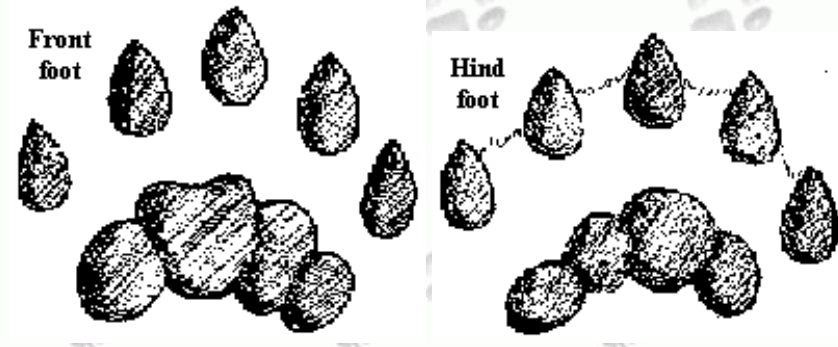


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River Otter

Lutra canadensis



River Otter Tracks



Click here for the [River Otter Photo Gallery](#) and videos

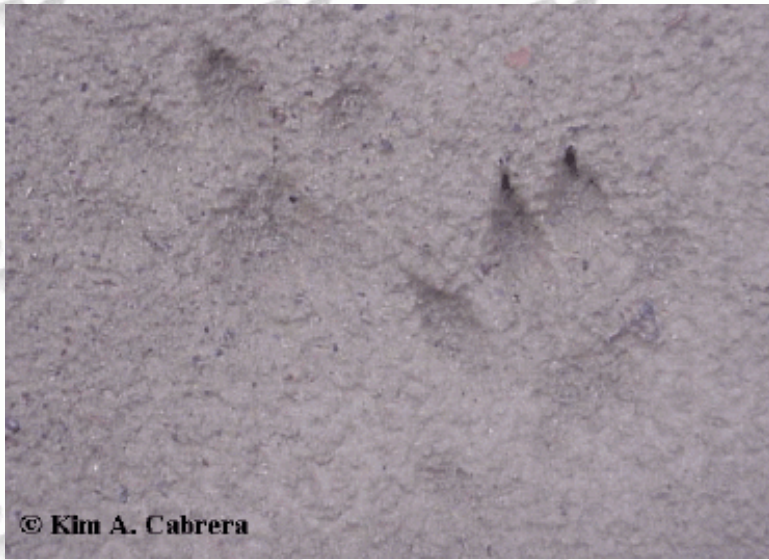
Natural History of River Otters

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.





© Kim A. Cabrera

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.



Personal Notes on River Otters

A family of otters lives in the Eel River near the property I caretake. Every time I walk along the river banks, I find otter tracks. They love nothing better than to chase each other out of the water and up the bank, where they roll around and wrestle.

For some reason, dogs seem attracted to otter scent. I have walked dogs on the river bar before and the dogs will invariably find the otter scent posts and roll in them. I don't know what purpose this serves.



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Otter swimming in the Eel River

I saw my first otter on an early spring morning along California's Van Duzen River. No one else was in the campground that morning and the otter seemed unperturbed by the lone human who stood on the opposite bank and watched him hunt. He was quite a sight as he slipped easily in and out of the water in pursuit of prey. I watched and followed along the opposite bank until he disappeared far upriver. They can swim many miles each day. I, on the other hand, was stopped when I ran out of river bar to walk on. The otter is one of my favorite animals. I'm always happy when I find their tracks.

I saw a young otter along Bull Creek in Humboldt Redwoods State Park, California, not too long ago. It was busy exploring the shoreline and didn't notice my approach. I got to within 25 feet of it before it realized I was there and took off running upstream.

Otter Tracks and Sign



This track shows slight aging. It had rained very lightly since this track was made.

A nice clear otter print in muddy silt. This is fine soil and leaves detailed tracks. The webbing is somewhat visible in this photo, but is difficult to see.





The pointed appearance of the toes is due to the claw marks being so close to the toes. The heel pad is well-defined in this photo.

A set of four otter prints. These were found along the bank of the south fork of the Eel River in Humboldt County, California. The otters were seen in the river nearby. It was a family of four otters and they were playing along the opposite shore. This is the first time I have heard otter vocalizations. The pups were making noises at each other as they wrestled.

November 10, 2000.



Otter scat containing the remains of a snake. There are bones and snake parts visible here. This was found on top of a rock along the bank of Bull Creek in Humboldt Redwoods State Park, California.



October 9, 2000.

A very clear pair of otter tracks in fine mud.



Otter track cast in dental stone. This material is superior to plaster of Paris because it is more durable and it cleans up better. A plaster cast would have more soil clinging to it. I did not have to scrub this cast. I just washed it under a hose.

Got a river otter story? E-mail me and tell me about it.

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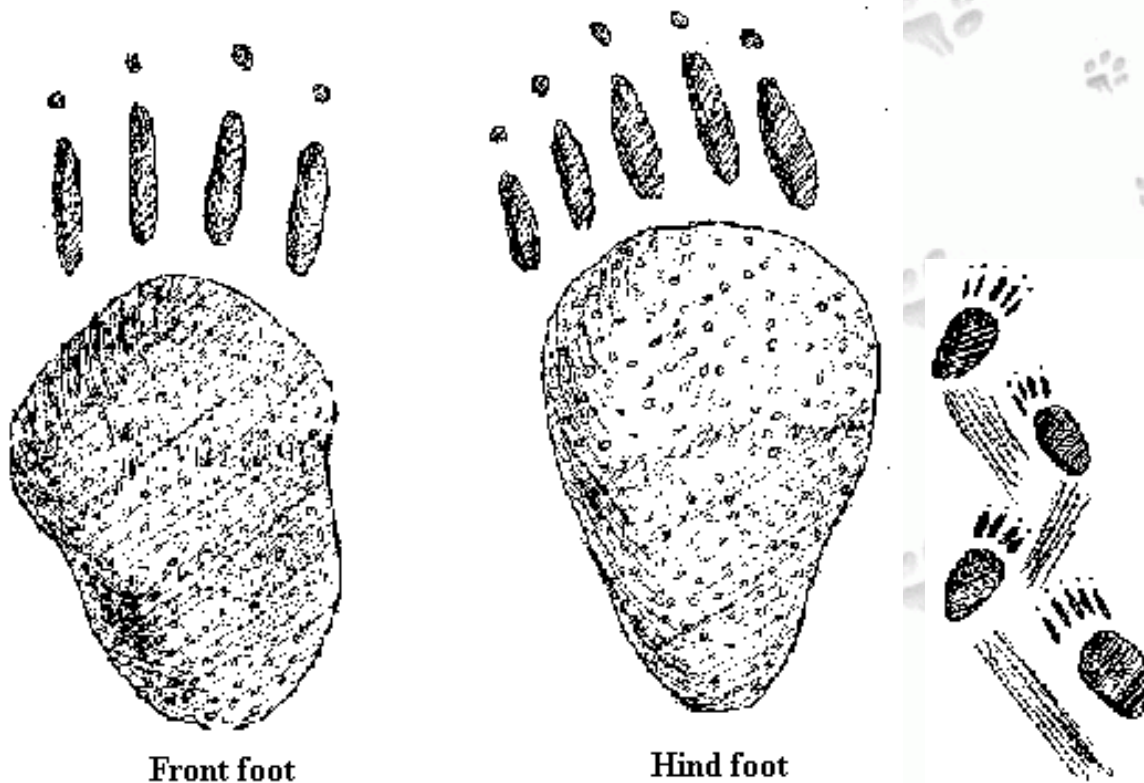


Page updated: Sunday, February 1, 2003.

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Porcupine

Erethizon dorsatum



Front foot

Hind foot

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



© Kim A. Cabrera

Front foot of porcupine cast in plaster.



© Kim A. Cabrera

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



Personal Notes on Porcupines

The first porcupine I encountered was on the ground at Albee Creek Campground at Humboldt Redwoods State Park. It was winter, so the campground was closed. I was walking with a dog toward the creek when the dog started barking at something in the tall grass. I went to investigate and saw the porcupine with its back to me, quills showing. The dog had never seen one of these before and was curious. After I told the dog to back off several times, it got the idea and left the porcupine alone. The dog's curiosity could easily have resulted in a muzzle full of quills. The porcupine slowly waddled away.



Got a porcupine story? E-mail me and tell me about it.



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Raccoon

Procyon lotor



Hind Foot



Front Foot

Raccoon Tracks



Trail Pattern

(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.

Raccoon track photo on left above courtesy of [Mark Seaver](#).



Personal Notes on Raccoons

I have tracked many raccoons in different environments. They seem to be found almost everywhere I've lived, from the desert to the



northern California redwood forests. The raccoon is one of my favorite animals.

The coon to the left was in a tree outside my house one night. He sniffed the air, hoping I would toss him something good to eat.

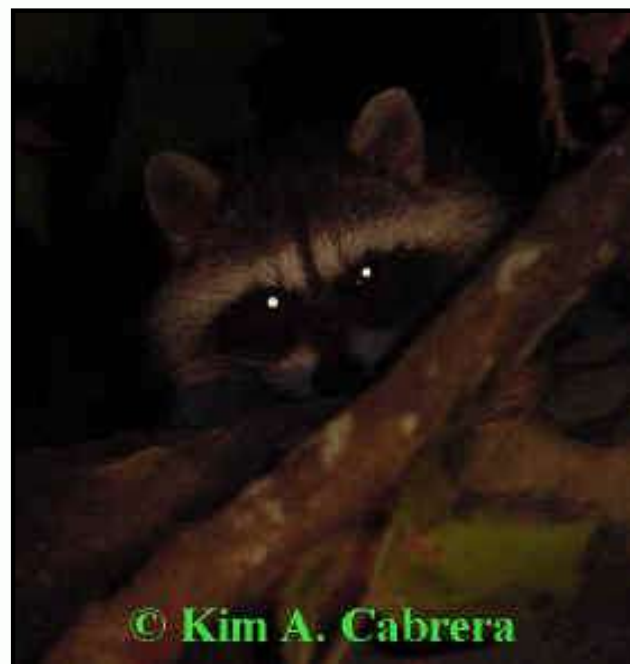
Here is a picture of a raccoon print on my truck window.



I was camping at Patrick's Point State Park and had some food in the car. When I looked around the campsite in the morning, I found raccoon tracks all over my truck. This print was on a window. Looking for a way to get to the food, the 'coon had tried every window to see if any were open. Pretty smart raccoon!

I have had the opportunity to see them up close, feed them, and even touch a baby raccoon. They are intelligent animals and learn quickly how to get food from gullible humans such as myself. I lived near one family of raccoons who learned to come by my place just after dark for a handout. When I wasn't waiting for them, they would scratch at the door and bang things around outside to get my attention. The following summer, a new raccoon family showed up. They must have been the children of one of the first raccoons because they knew how to get my attention when they wanted food. These were the raccoons

who let me touch them. Maybe, after two years of getting handouts from me, they decided to trust me enough to let me get that close.



© Kim A. Cabrera

Raccoon in a tree.

Here are some pictures of the raccoon family.



The first raccoon was camera shy, but the others thought nothing of raiding my picnic table with me standing right by it. They are now the most famous raccoons in Humboldt Redwoods State Park. (Probably the only park raccoons on the Web.)

As I stated earlier, I have found raccoon tracks in numerous places. Two of the most unlikely places were the backyard of my home in Whittier, California, and in the riverbed of the Los Angeles River in downtown Los Angeles. Both locations were far from the wilderness areas we usually expect to see these animals in.

I was a young naturalist when I found the prints in Whittier. The raccoon had climbed over a cinderblock wall to get into our backyard. It left several good prints in the soft garden soil. It then went over to the plastic swimming pool cover, which was full of water because it was winter. In the dirt that had accumulated under the water on top of the pool cover, I found the trail of the raccoon. All five toes were clear. The animal had walked around, curiously investigating this new body of water. Perhaps it took a drink before it climbed back over the wall and went on its way. I had a hard time convincing people that those really were raccoon tracks. They couldn't believe that such animals were found in the suburbs. They, like most of us, believe that animals live in the wilderness, that the city is too sterile for animals to live there. (As a side note, no one believed me when I saw a coyote run down the street in front of the house either. Neither did they believe that there were opossums climbing around on the telephone lines outside.)



But, the animals are there. If you know what their tracks look like and learn a little bit about their habits, you may be able to find them near your home too. In the bed of the Los Angeles River, with a busy freeway overpass humming with traffic above, train tracks along both banks, and cars and people everywhere, I found the tracks of a raccoon. The trail led to a culvert, which I assumed was the animal's home. There were other raccoon tracks as well. These animals were living surrounded by humanity and civilization, yet their existence was secret. Why? Because most of us don't know how to recognize the signs of their presence. Hopefully, this web page will help you learn how to recognize those signs.

Raccoon Track Gallery

I really like raccoon tracks. Those long fingers have led my raccoon neighbors into some pretty nifty adventures. They also seem to get the 'coons in trouble from time to time. (Like when they try to get into campers' food.) I included this gallery of raccoon tracks to show some of the neat features of their dexterous hands and feet.



Here is an example of the longer heel on the hind foot. (The one on the left.) Part of the front wrist left an imprint on the print on the right. The inner toe is a bit smaller than the others.

In this picture, the raccoon had been walking along the river bank. It decided to sit here for a moment before continuing on. The two longer prints in the upper right of the photo are the hind feet. The other two are the front feet. I didn't find any indication of why the 'coon decided to sit here. Maybe it just wanted to rest or check out the river, looking for something to eat.



The tips of the toes are bulbous. Claws may or may not leave marks.

The palms have an almost C-shaped appearance. The claw marks in this print appear almost round. It's easy to see the resemblance to human baby hands.





This raccoon visited my door in search of cat food.

The raccoon above walked off a short distance when I opened the door.



A hind track that shows all the details.

This baby raccoon was with the bigger raccoon above. The youngster hid under the porch while the older raccoon checked out the situation.



Got a raccoon story? E-mail me and tell me about it.



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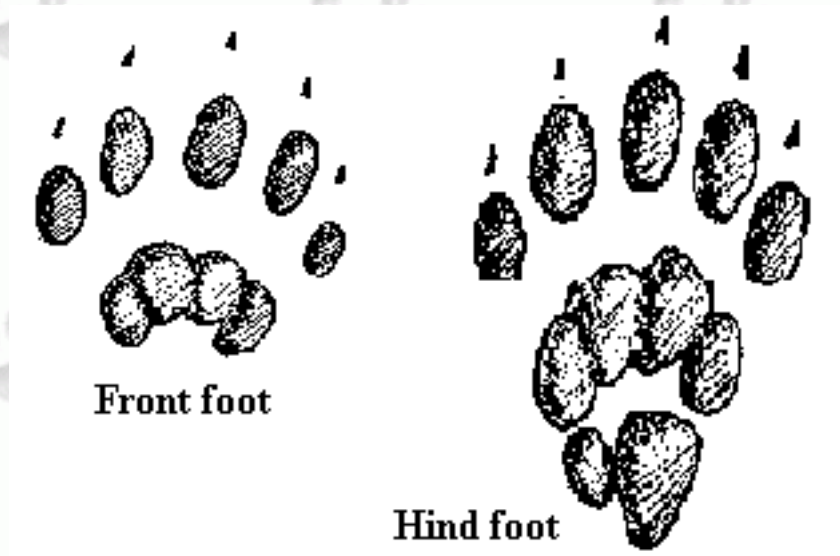
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Other 'coon pics from Webseek. Special thanks to Mark Seaver.

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Page updated: November 24, 2002.

Spotted Skunk

Spirogale putorius



Spotted Skunk Tracks



Natural History of Spotted Skunks

The spotted skunk, also known as the *hydrophobia cat* or the *civet cat*, is the size of a small domestic cat, about half the size of a striped skunk.

They are more social than other skunks. Several may share a den over the winter. They den in hollow logs, brush piles, and the burrows of other animals.

The spotted skunk is the most carnivorous of all skunks. It eats small mammals, insects, rats, mice, grapes, fruit, corn, and grubs.

Owls are the primary predator of skunks. Owls can strike silently from above and carry off a young skunk before the parent can use its defensive spray.

Spotted skunks are good climbers and will climb trees to escape from predators. They are faster and more agile than striped skunks.

In early spring, four to six blind, furred young are born. They don't have the distinctive black and white spotted fur coloration until early summer.

The spotted skunk has a unique spraying behavior. When threatened, it will turn its back, do a handstand on its forefeet, raise its tail, and spray. It can accurately spray a predator 12 to 20 feet away. Most predators are wary and will back off when the skunk begins this display. Skunk scent comes from a chemical called methyl mercaptan and is carried in glands near the animal's tail.

Spotted skunk tracks show five toes on each foot, with claw marks. The heel pad of the hind print is distinctively lobed.

These skunks were hunted for their fine, silky pelts, which are very valuable.

Spotted skunks have a home range of about 150 acres. They weigh one to two pounds and are about 1½ feet long from nose to tip of tail. They den in dry places, beneath buildings, in tree cavities, or in rock piles.



Personal Notes on Spotted Skunks



Got a skunk story? E-mail me and tell me about it.



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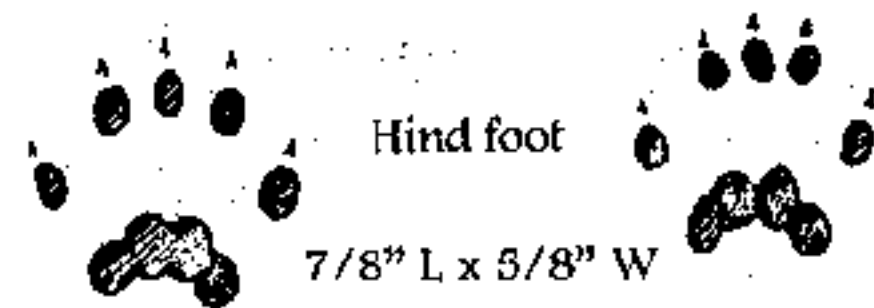
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Douglas' Squirrel

Tamiasciurus douglasii

Douglas' Squirrel



Trail width: 4"
Stride length: 5"-9"

Trail Pattern

Douglas' Squirrel Tracks

Douglas squirrel scolding from a tree.



Hover mouse pointer over picture above to start sound.

Netscape users: [click here to see and hear a Douglas' squirrel scolding](#)



Natural History of Douglas' Squirrels

Douglas' squirrels are active during the day. They have rust red coats and white rings around the eyes. The underside is orange. Long, curved toenails act as hooks to help the animals climb. Douglas' squirrels build their nests high in trees. In summer, they build a nest out of lichens, mosses, twigs, and bark. In winter, their nests are located in holes in trees. They also live in ground burrows and sometimes move into and cap abandoned bird nests with sticks and leaves.



These squirrels are fairly noisy and will scold and chatter at people from their perches. Their tracks show four toes on the front foot and five toes on the hind foot. The young, usually a litter of four to six, are born in May or June. A family group may stay together for almost a year. Douglas' squirrels are also called pine squirrels or chickarees.

They eat green vegetation, new shoots of conifers, acorns, nuts, mushrooms, insects, fruits, and berries. They are fond of cones and will drop them to the ground and gather them up later for winter storage. They establish favorite feeding stations in the trees. They eat the seeds, which they get to by stripping the cones. Cone scales mound up on the ground below feeding stations in piles called middens. The squirrels also stash mushrooms in the forks of tree branches for later use. Douglas' squirrels open acorns by gnawing on the shells. You may find piles of these opened nuts beneath a tree where the squirrel has been working.

Common predators include bobcats, foxes, house cats, and owls. Humans raid the cone caches for seeds to be used in planting nursery trees.

Personal Notes on Douglas' Squirrels



Douglas' squirrels seem to be very vocal animals. Whenever I startle one on a trail, it will run up a tree and sit there scolding me! I can always tell where other hikers are in the forest by listening for the squirrel's scolding calls!

Got a squirrel story? E-mail me and tell me about it.



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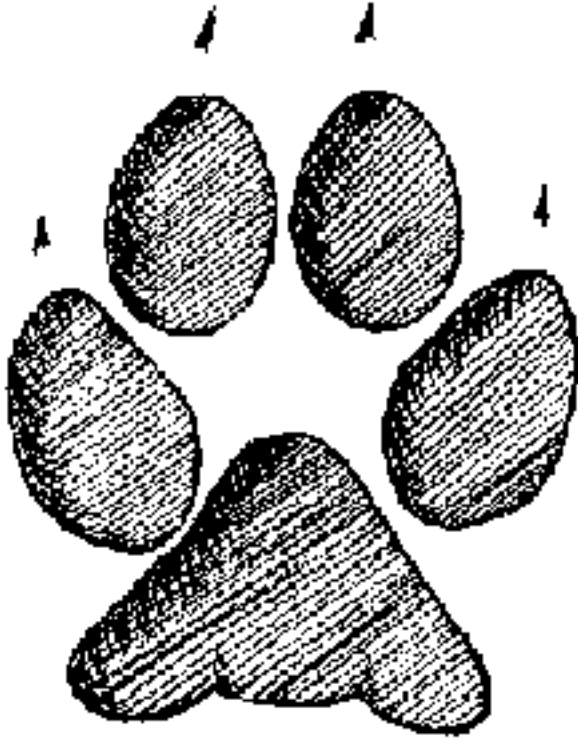
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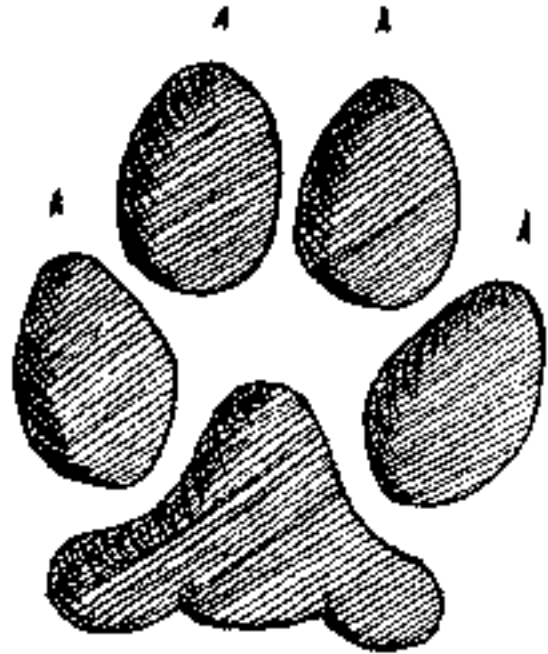


Gray Wolf

Canis lupus



Front Foot



Hind Foot

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 form 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 $4\frac{1}{4}$ to $4\frac{3}{4}$ 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 to 35 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.

[Canine vs. Feline tracks \(Is it a cat or a dog?\)](#)



Got a wolf story? E-mail me and tell me about it.



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Birds



What is a Bird?

Birds are feathered animals. Birds have a four-chambered heart and are warm-blooded. They develop in eggs outside the mother's body. Egg shells are hard, unlike those of reptiles. Most birds can fly.



Click on the name of the bird below to see a picture of its tracks and some natural history information about it.



• <u>Brown Pelican</u>	• <u>California Valley Quail</u>
• <u>Ducks</u>	• <u>Great Blue Heron</u>
• <u>Gulls</u>	• <u>Turkey Vulture</u>
• <u>Killdeer</u>	• <u>Merganser</u>
• <u>Raven</u>	• <u>Robin</u>
• <u>Steller's Jay</u>	• <u>Wild Turkey</u>
• <u>Acorn Woodpecker</u>	• <u>Red-breasted Sapsucker</u>
• <u>Pileated Woodpecker</u>	• <u>Northern Flicker</u>

Got a bird story? E-mail me and tell me about it.



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Brown Pelican

Pelecanus occidentalis



Left track



Right track

Brown Pelican Tracks



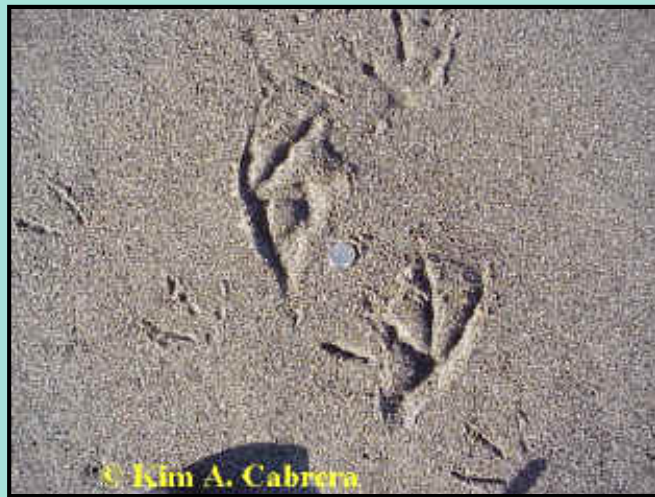
Natural History of Brown Pelicans



Brown pelicans are coastal birds that inhabit the Pacific, Atlantic, and gulf coasts. They are rarely found inland.



They can be up to 4 to 4 1/2 feet long. The head is light colored and the bill is very long; it is longer than the bird's head. The rest of the body is a darker color. The legs and feet are black and the eyes are yellow. The skin pouch that hangs below the bill can hold about three



times as much as the stomach. It can hold three gallons of fish and water. Pelicans hold the water in their bill and let it drain off before swallowing the fish. They usually carry fish in the gullet, rather than the pouch. This pouch also helps the bird disperse body heat in warm weather. They can eat four pounds of fish a day. Pelican tracks show four toes, with one pointing behind. All toes are joined by a web of skin. This is called a totipalmate foot.

The pelican diet consists mostly of fish, but they do eat crustaceans.

Pelicans nest in colonies during March and April. Nests can be in trees, shrubs, or on the ground. Nests in trees are built of sticks, grasses and other materials. On the ground, the nests are built of feather and mounds of dirt. Pelicans lay 2 or 3 eggs, which are

Gull and pelican tracks. Quarter in middle of picture for size comparison.

chalky white. Incubation lasts between 28 and 30 days. The young who are born in ground nests are able to walk out of the nest at about 35 days. Those whose nests are in trees do not leave the nests for about 63 to 88 days.

Pelicans live in flocks throughout the year. When in flight, they tuck their long neck back and rest their head on their shoulders with the bill resting on the folded neck.

In the 1960s and 1970s, populations of brown pelicans were reduced after DDT in fish caused their egg shells to become too thin for the young to survive. Populations of pelicans recovered a bit after DDT was banned.



A sunny day on the beach at Redwood National Park near Orick. The pelicans and gulls congregated at the shore and allowed me to approach fairly close before they took off.

The arrows indicate where two pelicans landed on the sand. Note the deeper impressions where they landed and the other tracks where the momentum carried them forward.





A pelican trail in fresh beach sand. The arrow indicates a quarter used for size comparison. The shoe track in the lower right corner is mine.

Another landing site, this one with some wing marks in the sand. Note the gliding motion indicated in the right footprint. The tracks to the right are gull tracks.





Personal Notes on Brown Pelicans



Along the coast here in northern California, brown pelicans can be seen frequently. They sometimes gather along the shore with other birds. They are usually the biggest birds in the group. The photos on this page were all taken in Redwood National Park, along the beach near the south visitor center in Orick. I was able to approach quite closely before the birds took flight. Their tracks are huge compared to those of the gulls they shared the beach with. They couldn't be mistaken for anything else.



Got a brown pelican story? E-mail me and tell me about it.



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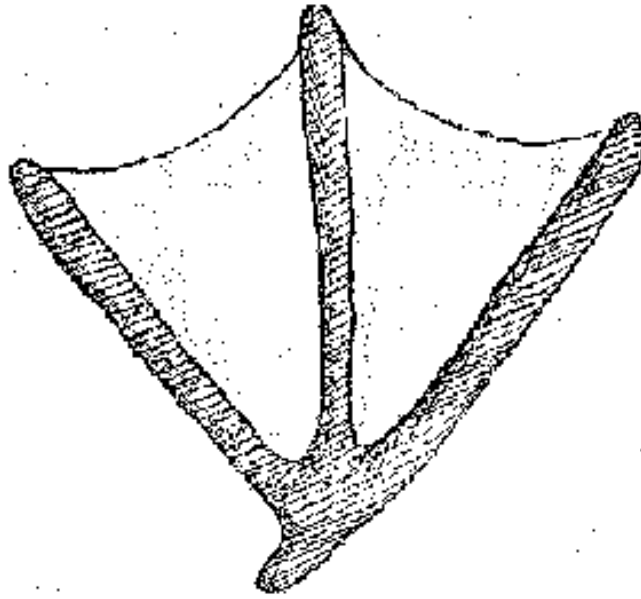
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Ducks

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.



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Wood duck in the Eel River.



© Kim A. Cabrera

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.

Got a duck story? E-mail me and tell me about it.



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Big duck pic is from Webseek.

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Page updated: Sunday, November 24, 2002.

Killdeer

Charadrius vociferus



Killdeer Tracks



Killdeer chicks one day old. Photo by Pete Mills, BC, Canada. Thanks, Pete! According to Pete, these chicks were up and running around after the parents the next day.

A familiar shorebird found most everywhere in the U.S. This robin-sized bird has two black bands on its throat. Its body is light brown with white below. It prefers to inhabit open areas and is somewhat abundant. Killdeer nest on the ground in a nest lined with grass. Adults protect their nests by feigning injury when a predator approaches. The parent tries to lure away the predator by dragging its wing along the ground and hobbling away from the nest site. When the

danger passes,
the bird flies
off.

The call sounds
like: "kill-
DEEE."

Tracks show three toes facing forward and one back. They are small, but abundant along water's edge in many places.

Sometimes the tiny toe that faces backward does not leave an imprint in the trail. The penny used for scale here is 3/4 inch in diameter.

The line running through the middle of the photo is a worm track.



Killdeer scat found with its tracks. The silty mud along rivers is a good place to find the tracks of these birds.



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Can you see the killdeer camouflaged on this rock?



Got a killdeer story? E-mail me and tell me about it.



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Killdeer chicks photo by Pete Mills.

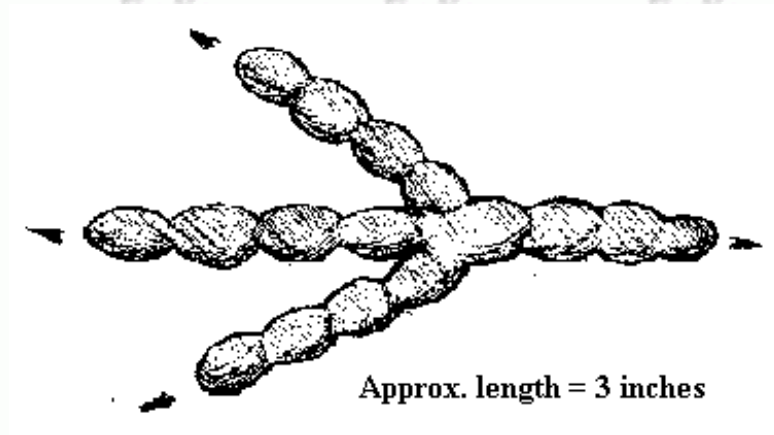


Page updated: January 22, 2001.



Ravens

Corvus corax



Raven Track



Natural History of Ravens

Ravens are corvids, relatives of crows. They are black and have large, heavy bills.

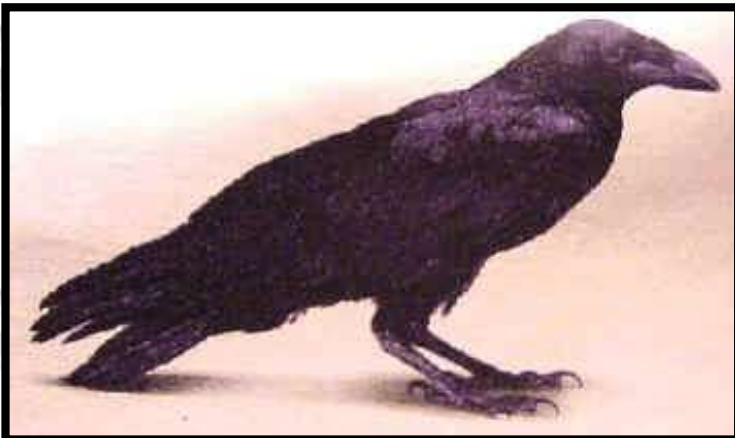
These large birds are commonly heard calling in the redwood forest. Some of their calls sound like screams. Other calls sound like deep croaks or hollow knocking sounds.

Ravens will chase red-tailed hawks. I once saw two ravens chase a bald eagle away from a salmon carcass they were feeding on.



This is the largest perching bird. They can be identified in flight by the wedge-shaped tail.

These intelligent birds will raid food left on camp tables, and usually eat whatever they can find. They will eat carrion, insects, small animals, and fish. They have been known to feed at garbage dumps.



These tracks show the structure of the foot. The bottom of the foot has a granular or pebbly texture, similar to that of turkeys and other birds. This probably gives them some traction for gripping branches. Their toes have joints and are very flexible to allow them to grip things. The middle toe doesn't point exactly forward. It points inward slightly.



Their tracks resemble very large Steller's jay tracks, often up to four inches long. They show three toes facing forward and one toe facing backward. In loose sand, there is often a long drag mark left by the middle toe. Like other ground-dwelling birds, their prints are one after the other in a straight line. (Birds that are primarily tree-dwellers leave paired prints.)



🐾 Personal Notes on Ravens 🐾



The ravens at the park I work at are known for raiding campground picnic tables. They love shiny objects and will pick up pieces of foil and fly off with them. I have seen ravens attacking their own reflections in shiny stovepipes. The stovepipes have to be painted black to stop the ravens from sitting on the roof all day pecking at the stovepipe! They will also peck at their reflections in car mirrors.



Got a raven story? E-mail me and tell me about it.



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Steller's Jay

Cyanocitta stelleri

Steller's Jay Tracks



Natural History of Steller's Jays

A Steller's jay is a blue bird with a black crest and tufts of feathers on top of the head. This is the only California jay with a crest.



They are common in campgrounds and have been called "camp robbers" because of their habit of stealing food from picnic tables. Although noisy and conspicuous in campgrounds, they are quiet when near their nest sites. They are very secretive about hiding their nests.

Their tracks, which are smaller than those of the raven, show three toes facing forward and one toe facing backward.

They eat many things, including the young of other birds, fruit, berries, seeds, insects, and human food. Steller's jays are bold and will grab food right off a picnic table if you turn your back.

Steller's jays can imitate the calls of the red-tailed hawk and the golden eagle.

Jays will sit on fence posts or treetops to survey their surroundings. Because they spend much of their time in trees, the tracks you find on the ground will be paired.



© Kim A. Cabrera
Stellers Jay feathers



Personal Notes on Steller's Jays



These birds are common around the campgrounds I work in. They will raid a picnic table quite boldly. I have had them land on the table and hop to within inches of me to grab a morsel of food that was dropped. I once saw two thrushes chasing a jay that had made off with one of their young. They apparently thought they could get it back. Sadly, that was not the case. So, the jay enjoys an occasional nestling in its diet.

The jay in the picture is one that flew into the kitchen and then couldn't figure out how to get out. He finally managed to make his way out the door, but not before making quite a mess!



Got a jay story? E-mail me and tell me about it.



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Updated: Monday, November 25, 2002.



🐾 Acorn Woodpecker 🐾

Melanerpes formicivorus



The photo above shows the most commonly found sign of this bird's presence - the acorns they store in granary trees.



🐾 Natural History of Acorn Woodpeckers 🐾

Being written... Check back later.



This is a granary tree.



An acorn woodpecker was feeding on this previously stored acorn.



Personal Notes on Acorn Woodpeckers

One of the sounds I hear frequently in the woods is the raucous call of the acorn woodpeckers. There is a group of them that lives near me. They can be seen storing the acorns and rapping on trees and buildings to make the holes in the fall. In winter, they remove the acorns and eat them.

Got a woodpecker story? E-mail me and tell me about it.



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Pileated Woodpecker

Dryocopus pileatus

tracks coming soon...



Natural History of Pileated Woodpeckers



Pileated woodpeckers are the largest North American woodpeckers. They are about the size of a crow, about 16 inches long. The wingspan can be 29 inches. They weigh about 10 ounces. They are black and white, with a large red crest on the head.

Pileated woodpeckers live in mature forests. They can be heard tapping on trees for a long distance. The call is loud and distinctive.

Their preferred food is carpenter ants. These large ants live in old rotten logs and standing dead trees, eating the wood and helping to decompose it and return the nutrients to the forest. The pileated woodpecker will excavate large holes in search of these big ants. The holes they make while feeding can vary, but are sometimes rectangular.

Pileated woodpeckers also excavate nest holes. These are round, in contrast to their feeding holes. The large holes abandoned by the woodpeckers are used by other animals as nest holes, or as shelter.

This woodpecker was hard to photograph. As soon as I got close enough for this photo, he moved. Unfortunately, he moved to a lower branch and I would have had a much better photo....if I hadn't run out of film at that moment. Better luck next time!

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Pileated woodpecker feeding sign on an old log. Note the somewhat rectangular shape of the excavations. If you look closely, you can see the ant tunnels in the wood. If the woodpecker is feeding on beetles, you can sometimes find the beetle frass in the excavations. Beetle frass is sawdust that has gone through the beetle's digestive tract.



Personal Notes on Pileated Woodpeckers

Pileated woodpeckers live in the woods around my place. I find their calls to be somewhat similar to those of the northern flicker, except longer and louder. I spent a lot of time trying to photograph them, but they are too quick. Their feeding signs are everywhere and it is surprising that such a large bird is not seen more often. They are frequently seen flying overhead, but not often up close. When one is drumming on a tree nearby, you know it. It is very loud.



Got a pileated woodpecker story? E-mail me and tell me about it.



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🐾 California Valley Quail 🐾

Callipepla californica



California Valley Quail Tracks



🐾 Natural History of the California Valley Quail 🐾

This is the state bird of California.

Quail spend most of their time foraging on the ground, therefore their tracks are found in a line, one after the other. Both male and female have a teardrop-shaped tuft of dark feathers on top of the head, although the female is not as boldly colored as the male.

After the breeding season, quail live together in groups called coveys. These groups of up to 200 birds are composed of parents and young.

Parents closely watch their young. While the group is feeding, one bird will act as a sentinel to warn the group of any approaching danger. If you're hiking along and startle a covey of quail, they will all burst into flight at once with a roaring of wings.

These small, plump birds roost in trees for safety. They can be found inhabiting parks and woodland edges.

Quail tracks are frequently found on sandy river bars.

Their calls can be heard in the summer. The call, which sounds like *Chi-ca-go*, is often given from a low perch.



Personal Notes on California Valley Quail

i frequently hear these birds when I'm out hiking. Many times, I have startled a covey of quail and they have taken wing with a roar. It's pretty loud when about 50 birds take flight all at once! The call of the quail reminds me of summer and many pleasant walks in my favorite campground, Albee Creek Campground. When the young quail are hatched, they follow their parents around in a little group. I've watched several broods grow up. The little quail will run and hide at the first sign of danger. One of the parents is always on the lookout for any predators. I've always enjoyed seeing quail.



Got a quail story? E-mail me and tell me about it.



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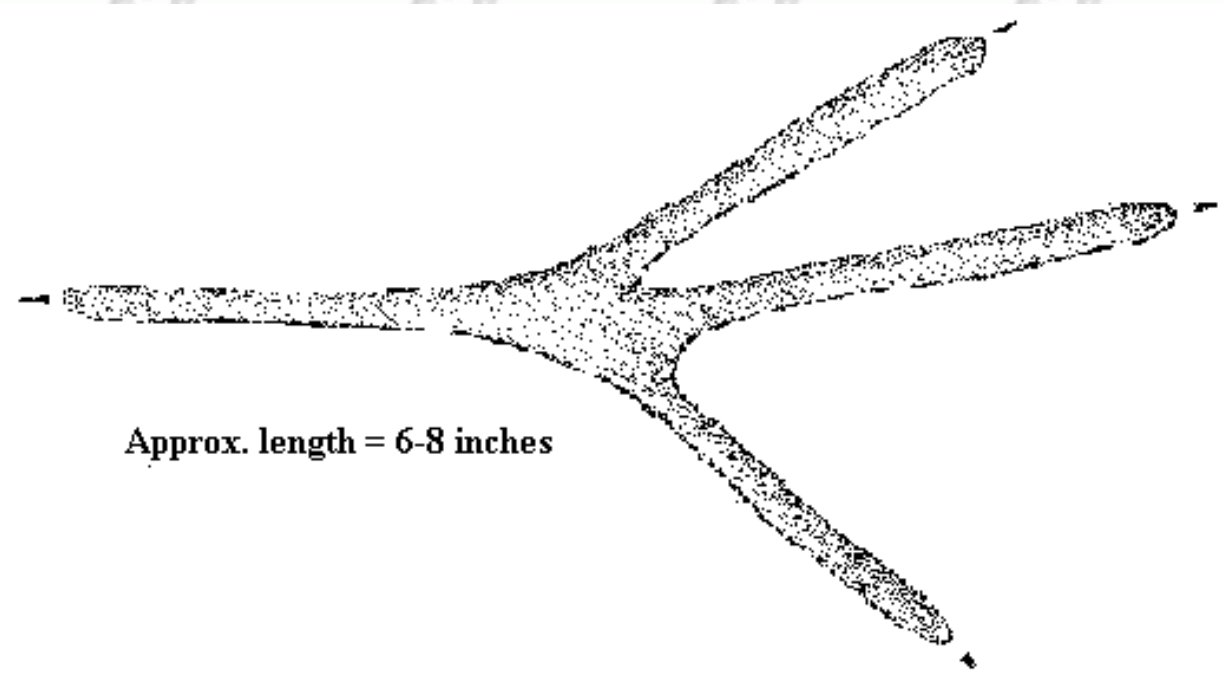
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Great Blue Heron

Ardea herodias



Great Blue Heron Track
(Right foot.)

Click here to hear a [heron sound](#). (38K WAV)



Natural History of Great Blue Herons

This large bird stands four feet tall and has a seven foot wingspan. It is the largest heron in North America. Its body is blue-gray and its head is white with black plumes projecting to the rear. It has a yellow bill.

The tracks are six to eight inches long. They



Heron stalking in the shallows.



show three toes facing forward and one back.

Herons live in fresh or salt water, wherever fish are plentiful. They are found in wetland areas, so you will see them along the banks of rivers or in marshes.

They eat fish, snakes, insects, mice, and frogs. They hunt by walking slowly through shallow water and striking at prey. They use the long, dagger-like bill to spear fish. You may see them standing motionless in the water with the head and neck folded back, waiting for prey. Herons will squawk when alarmed or startled.

I waited as the heron in the photos slowly stalked along until it was near enough for me to get photos of it. I quietly took the photos, until it heard me move and took off suddenly. It flew down the river canyon, turned and came back, saw me and squawked loudly as it flew away.

Herons have special feathers that break up into powder. These are used as a sort of powder puff to clean their feathers. The powder is rubbed into the feathers and combed out using the comb-like claw located on the middle toe of each foot.

Tracks show three toes facing forward and one facing back. The large hind toe enables them to stand on one leg for long periods of time.

They nest in colonies in wetlands where vegetation provides safety for the nesting site. Nests are three feet across and built in trees. They are maintained year after year. Herons will make 30-mile round trips to feeding areas.



Heron track with 6-inch ruler for size comparison. Notice how the three forward toes are not in alignment. This is the left foot. The two outer toes (on the left in the picture) stick out at a slightly offset angle. The two inner toes are in line, as they would be expected to look. This arrangement of the toes may give the heron greater stability when it is walking in the deep mud and water it often hunts in.

Heron trail pattern. The stride in this photo was about 8 inches.





Personal Notes on Great Blue Herons

There is a heron rookery along the bay near where I live. Many herons roost there. It's a pretty fantastic sight to see them. In flight, the heron is monstrous in size. I have seen many herons slowly stalking prey along the shores of the Eel River, which runs by the property I caretake. They never hurry; just take their time and slowly wade through the shallows. When they strike, it's fast and accurate. Amazing hunters.



Got a heron story? E-mail me and tell me about it.



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Turkey Vulture

Cathartes aura

Track photo coming soon...



Turkey vultures are large soaring birds that can be 26 inches long with a wingspan of 67 inches. They weigh about 4 pounds. Being scavengers, they feed on carrion, garbage, and anything else they can find.

Turkey vultures have brownish bodies and red heads that lack feathers. The large hooked beak helps them tear flesh or other food.

Turkey vulture tracks can be found in many places, frequently near their feeding areas. They show three toes facing forward and one back. Claw marks sometimes show in the prints.



Turkey vulture in a tree.

Got a turkey vulture story? E-mail me and tell me about it.



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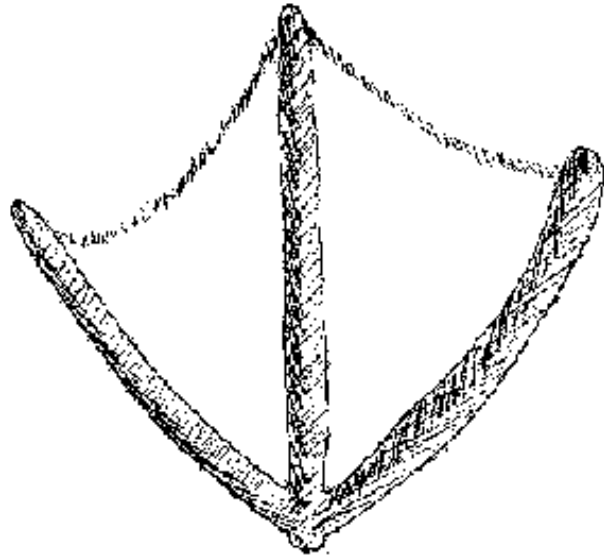
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Page updated: November 25, 2002.



Common Mergansers

Mergus merganser



Common Merganser Tracks



Natural History of Common Mergansers

These birds prefer fresh water and are seldom found near salt water.

The male has a dark green head that appears almost black. The female has a crest on her head and a white throat. Both have a thin, red, hooked bill with sharp teeth along the edges. These teeth help them catch their swimming prey. The teeth also help them keep a grip on slippery fish.



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Mergansers dive underwater to catch fish, their preferred prey. They can swim well and quickly pursue prey underwater. Mergansers also eat aquatic insects.

The call is a low, short quack.

They build their nests on the ground or in crevices of trees. Mergansers are commonly seen flying along some river canyons. They sometimes skim low over the water, usually in pairs. White wing patches are visible when they are in flight. Mergansers prefer open water.



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The webbing on their feet sometimes shows in the tracks.

Click for video clip of [flying mergansers](#) along the Eel River in Humboldt County, California.



Personal Notes on Common Mergansers



Got a merganser story? E-mail me and tell me about it.



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Updated: Sunday, November 24, 2002.

American Robin

Turdus migratorius



Robin Tracks

Click here to hear a [robin sing](#). (18K WAV)



The robin is a bird that is commonly associated with the arrival of spring. Large flocks of them winter in the northern states. These large groups can contain thousands of birds.

Robins inhabit open woodlands, agricultural lands, gardens and parks. They are found from Guatemala to Alaska.

Robins build nests out of mud and grass. They form a cup with the mud and line it with grass. Nests are built in trees, on ledges, or on windowsills. They can have two broods each season. Robins have a high mortality rate, with 80% of them dying each year.

Got a robin story? E-mail me and tell me about it.



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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

Click here to hear a [turkey gobble](#). (36K WAV)



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.

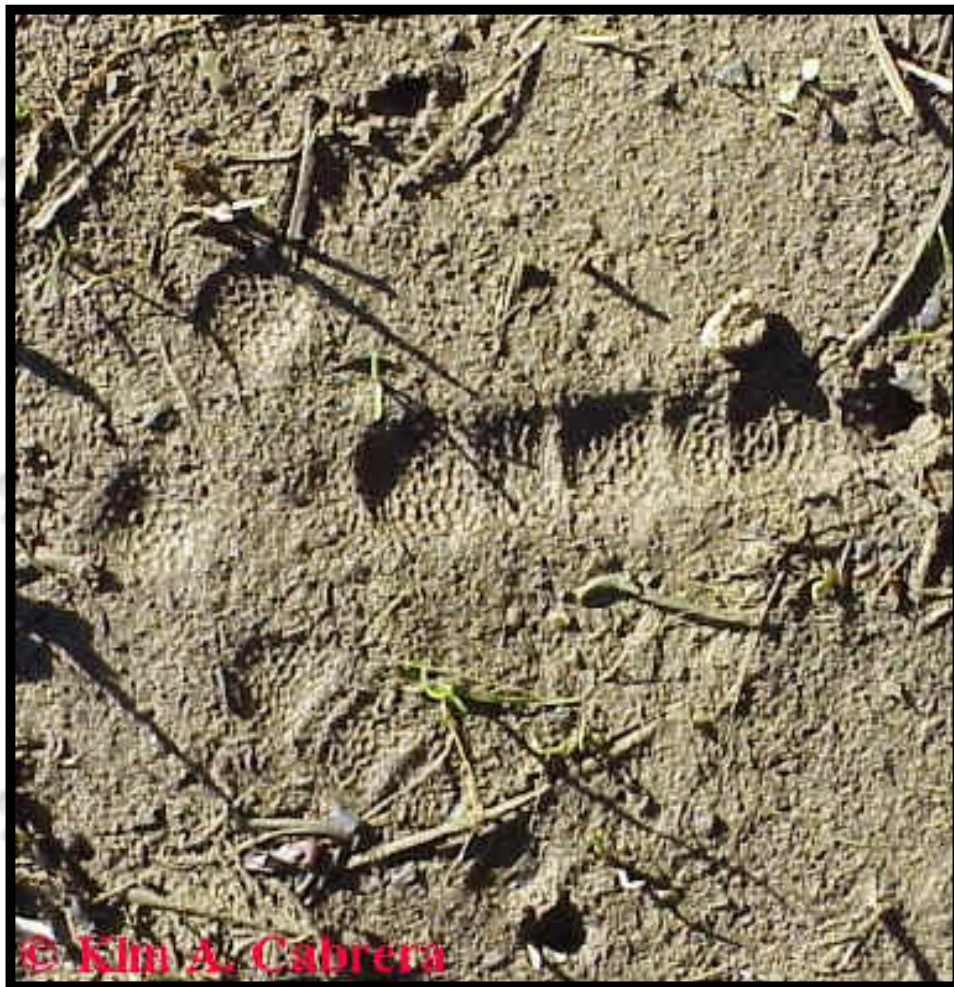
They are swift runners and are wary of people. However, I have found them to be bold when they know there is food around. Turkeys have approached quite close to me when

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.



Personal Notes on Wild Turkeys



I have seen wild turkeys frequently. When I attended a recent tracking class at Henry W. Coe State Park in California, I camped in the park. The wild turkeys would call every morning and we would see them walking right by the campground. The males fan their feathers and call to the females. On the property I caretake, turkeys are sometimes seen in the trees and all over the grassy areas. I often hear them call from the tops of trees. For such a large bird, they can be difficult to see through the foliage. My cats watch the turkeys in fascination. Obviously the biggest bird they've ever seen!

Here are some pictures of the turkeys that live in my "back yard."



Got a wild turkey story? E-mail me and tell me about it.



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Page last updated: February 1, 2003.

Red-breasted Sapsucker

Sphyrapicus ruber



The photo above shows the most commonly found sign of this bird's presence - sapsucker "wells" on a tree.



Natural History of Red-breasted Sapsuckers

Being written... Check back later.



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[Video of red-breasted sapsucker feeding](#)



Personal Notes on Red-breasted Sapsuckers

The bird in the photos recently returned after being away most of the winter. The holes in this oak tree had sealed themselves over and were beginning to heal when the bird returned. He immediately opened up the holes again and let the sap flow. He spends quite a large portion of his day clinging to this tree and eating from the wells he has pecked out.



Got a sapsucker story? E-mail me and tell me about it.



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Northern Flicker

AKA Red-Shafter Flicker

Colaptes auratus



Flicker tracks on lower right
Upper left is hole the flicker was probing for ants



The northern flicker is a type of woodpecker. It can grow to 12.5 inches long and have a wingspan of 20 inches.

Flickers prefer to eat ants. They will open anthills to get at them. In the photo above, the flicker was probing a hole on a dirt road as I approached. This particular area is a popular place for the flickers. I see them frequently. There must be lots of ants or other insects in



that particular stretch of road for them to eat.

The flicker has a very distinctive plumage. The back has dark bars and the front is spotted. In flight, the rump is white. The bird in the photo at left is a male. The female lacks the red patch on the cheek. The female has a gray face.

Tracks are not often found. They can measure 1 3/4 to almost 2 1/2 inches long and about half an inch wide.

Flickers will do damage to buildings, often pecking holes into wood siding. Where I live, this is a constant problem. One way to discourage them is to hang up bright reflective tape, which flutters in the wind and scares off the birds.

© Kim A. Cabrera

Northern flicker in a tree.



© Kim A. Cabrera

Primary feather of a northern flicker. Note the red shaft, which gave this bird its old common name of red-shafted flicker.



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Page updated: November 24, 2002.



Amphibians



What is an Amphibian?


Salamanders, frogs and toads are amphibians. Amphibians have long tails and slender bodies. They live near water. Unlike reptiles, they do not have scaly skin. The skin is smooth and moist. Mucous glands help to keep the skin moist. Blood vessels just beneath the surface allow the amphibian to use its skin to help it breathe. Some secrete poisons from their skins. Special color cells allow the amphibian to change its skin color by expanding or contracting. If a limb is lost to a predator, some amphibians can re-grow a new limb. Amphibians are cold-blooded and those living in cold regions hibernate during winter. Eggs are laid in jelly-like masses in the water. Some amphibian larvae have gills and live underwater until they metamorphose into land-dwelling forms. Adult amphibians are carnivorous, but larvae are herbivorous (vegetarian).



Click on the name of the amphibian below to see a picture of its tracks and some natural history information about it.



Pacific Treefrog	Western Toad
Foothill Yellow-legged Frog	Salamanders



Got an amphibian story? E-mail me and tell me about it.



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Pacific Treefrog

Pseudacris regilla



Pacific Treefrog Tracks

Click to hear the treefrogs croak. These were recorded along the south fork of the Eel River in Humboldt County, California on March 5, 2000.



16 sec.
.wav
130KB



Natural History of Pacific Treefrogs

The Pacific treefrog is a small frog common in California, Oregon and Washington. In the spring, their calls are commonly heard near riparian areas. They are the only western frog whose call is a *ribbit*. Their toes have little rounded toe pads on them. These help the frog to climb and stick to things. Pacific treefrogs can be either green or tan in color, but all have a dark eye stripe. Eggs are laid underwater, attached to vegetation, in round-ish clumps about an inch in diameter. The tiny eggs are visible as dark dots in the jelly-like egg mass. As they develop, you can see the tiny tadpoles grow tails. When they are about ready to hatch, the tadpoles will start to squirm inside the egg mass.



The tadpoles are small and dark. You will find them in ponds, puddles, rivers and streams. As the tadpoles metamorphose into frogs, they are able to leave the water and live on land.

Treefrog tracks sometimes show the outline of the animal's entire body. They move about by hopping. You will find all four feet and sometimes even the impression of the frog's belly in the tracks. Look for their tracks near water. I have even found them in sand dunes near the ocean, although the frogs did not go into the salt water. Hind feet are larger than the front ones and show five toes. Front feet are turned inward and have four toes.



Tree frog in grass. Notice how well the frog blends into its surroundings.



Tree frog on vegetation. Again, its color helps it blend into its surroundings.

Treefrog life cycle

One of the sounds of spring is the croaking of the frogs. You can hear them at night and during the day. Sometimes the air will seem alive with their calls. Then, suddenly they will all stop calling at once, leaving silence. If you listen carefully, you may hear one frog croak, then another join in, then another and another until they are all croaking again. Why do frogs call in the spring? They are looking for mates. This is the time of year when frogs reproduce. Look carefully at the edges of ponds and in puddles and streams. You may find tiny jelly-like objects with eggs inside. This is the egg mass of the frog. Some frogs lay eggs in long strings. Others lay them in clusters. The egg masses are usually attached to vegetation so they don't wash away.



Frogs start out life in ponds and puddles. When the eggs hatch, they release tiny tadpoles. These grow into frogs eventually.

As tadpoles get older, they grow larger. Soon, these tadpoles will begin to develop legs so they can make the transition to life on land. At this stage, they still need water to live.



The tadpoles on the left are in three different stages of life. The top one has arms and legs and the tail is disappearing. The middle one is still fairly large and has stubs of legs. The bottom one has legs, but a long tail. In a couple weeks, they should all be ready to leave the water.

The tail does not fall off. It is re-absorbed into the body. The animal uses the nutrients stored in the tail.





At this stage, the tadpole can spend a longer time outside the water.



These tadpoles look more like the frogs they will soon be. Their legs and arms are well-developed and they use them more and more to get around. They are also beginning to acquire the green color they will have as adult frogs.



This frog will be ready to come out of the water within days. The tail is almost completely re-absorbed. The eyestripe characteristic of the species is visible.

The legs and feet on these tadpoles are well developed.



This tadpole will soon be able to survive on land and breathe oxygen.



This tiny frog is experiencing his first day on land. Note the stub of a tail. This will be absorbed into the frog's body and disappear. This frog is beginning to acquire the green skin characteristic of this species. Also note the eyestripe. See photo below of an adult with green coloration.



Same frog as above with penny for size comparison. The frog was 1/2 inch long. It will eventually grow to about 2 or 3 inches long.

Watch ponds and puddles for these tiny life forms. You can easily observe the life cycle of the frog every spring. Frogs are found almost everywhere, even in the city. They are one of the most interesting animals to watch.



Personal Notes on Pacific Treefrogs

Everywhere I have lived in California, I have heard these frogs. They are common and very pleasant to listen to on warm evenings. In spring, I find their egg masses in roadside ditches on old logging roads and in small puddles everywhere. The tiny eggs are no bigger than a grain of rice. The whole mass would fit in a teaspoon. It's neat to watch the little tadpoles grow inside their jelly cases. When they start looking like tadpoles, you can gently nudge the egg mass and they will squirm around inside. Don't be too rough with the egg mass though. You don't want to damage them. The little globules of jelly are only about an inch around and contain maybe 50 eggs. The tiny tadpoles are fascinating.




I've moved the egg masses from puddles that were in danger of drying up. I put them in larger bodies of water so they'll have a chance of surviving. If you do this, be very careful to attach the mass to something so it doesn't wash away. When you find the mass, it's probably attached to a stick or something. Try to move the anchor with the mass if possible. I wouldn't move one unless it was in danger of being destroyed or dried out. The frogs and tadpoles in the life cycle pictures above were all moved from two dried up puddles. I found them laying there gasping for air and moved them all to a puddle with a constant water supply. They have all managed to survive and many are already through with the tadpole stage of life and are frogs. I hope to hear their calls next spring. If you find tadpoles in a puddle that will soon dry up, move them to a deeper puddle if you can.





I think all treefrogs are fascinating creatures. The Pacific treefrog can be either green or a tan color, but they always have that eyestripe.





Got a frog story? E-mail me and tell me about it.


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Foothill Yellow-legged Frog 🐾

Rana boylei



Foothill Yellow-legged Frog Tracks



🐾 Natural History of Foothill Yellow-legged Frogs 🐾

Foothill yellow-legged frogs are found near streams and rivers. They will come out on the banks to sun themselves, but dive to the bottom if a predator or a threat approaches. They stay still along the river bottom and their color helps camouflage them there. The underside of the hind legs and the abdomen are usually yellow.



The younger frogs don't have the distinctive yellow coloring right away, but acquire it as they grow older. The frog in this photo had very faint yellow coloring on its legs. The skin is usually granular in appearance. These frogs breed between mid-March and early June. They range from the Cascade Mountains of Oregon all the way south to the San Gabriel River near Los Angeles.

This is the left hind track of a yellow-legged frog. The tips of the toes are not globular or bulbous like those of the Pacific treefrog. (Pacific treefrogs have toe pads on the tips.) Yellow-legged frogs have toes that are more pointed than those of the Pacific treefrog. This track was found in fine river silt along the Eel River near Redway, California. Penny for scale is 3/4 inch across.



Personal Notes on Foothill Yellow-legged Frogs

These frogs are fairly common where I live in California. When walking along creeks with gravel or cobble banks, it is sometimes startling when one of these frogs leaps into the water and dives to the bottom. They are hard to see amongst the rocks and their sudden appearance and disappearance is marked only by the distinct 'plop' as they hit the water. Unless you are looking right at the frog, all you hear is the sound. I occasionally find the egg masses left by these frogs. The tiny eggs are visible in their individual globs of jelly. It doesn't take long before the eggs begin to take on the shape of a tadpole. They sometimes wriggle when they are still inside the jelly envelope. Note the shape of the toes in this photo. Compare them to those of the Pacific treefrog on the [treefrog](#) page.



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Western Toad

Bufo boreas



Western Toad Tracks



Natural History of Western Toads

Toads are nocturnal amphibians who roam overland looking for insects. They are most active at night because the daytime heat would dry them out. During the day, they hide under logs, boards, rocks, burrows of their own construction, or in rodent burrows. They get around mostly by walking, rather than hopping like frogs do. They will hop to escape danger.

Tracks are often indistinct, unless they are found in soft mud as in the photo below. Usually the tips of the toes leave round dots and drag marks in the sand. The drag marks point in the direction of travel.

Western toads have dry, warty skin and a light stripe down the back. They often travel far from sources of water, although they do require water for breeding.

In the soft sand of river bars, the drag marks from the hind toes are very prominent.

They breed between January and September. Long strings of eggs in a jelly-like substance are attached to vegetation in still, shallow water. The tadpoles emerge from the eggs and live in the shallows feeding on vegetation until they lose their tails and metamorphose into toads.



If you handle toads or other amphibians, remember that insect repellents, sunscreens, and other substances on your hands can damage their delicate, sensitive skin. You will not get warts from toads.



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Track photos courtesy of [Mark Seaver](#).



🐸 **Personal Notes on Western Toads** 🐸

Toads are frequently seen at night. I have found them near water and far from water. They apparently don't need to be near a large body of water. Their tracks were puzzling to me at first. I found the fine traces in soft sand and it took a lot of thought to figure out exactly who made them. Then, I watched a toad move across a river bank. After taking a look at its tracks, I knew was able to solve the mystery.

I have never heard the voice of the western toad. I don't even know if they make sound. Where I live, the most commonly heard amphibian is the Pacific treefrog.

I was somewhat surprised to find that toads prefer walking rather than hopping. It still amazes me when I walk down to the river bar in the morning and see all the toad tracks. There certainly are a lot of them out there. Morning is the best time to see the tracks, before the wind has erased the little delicate imprints.



Kim A. Cabrera



Got a toad story? E-mail me and tell me about it.



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Updated: Sunday, November 24, 2002.

Salamanders of the North Coast

Here are some of the common salamanders found in the redwood forest of northern California. Collected in Humboldt Redwoods State Park by Houston Murrish. (and released unharmed after posing for these photos)



Clouded Salamander
Aneides ferreus

Clouded salamanders are found in cool humid coastal forests. They are climbing salamanders and are often found 20 feet and higher in trees. They lay their eggs inside rotting logs or underneath slabs of bark. The female will guard her eggs, which are each attached to the surface by a mucus stalk. They spend the dry summers deep inside rotten logs where they are protected from high temperatures and from drying out.





These are one of the world's smallest salamanders. They have four toes on each tiny foot. They hunt by using their long sticky tongues to catch prey. Favorite habitat is woodland with plenty of dead leaves, logs, and bark on the ground. They are frequently found walking around after a rain. If attacked, the tail can be detached. A new one will eventually regrow to replace it. These salamanders are also very agile. They are usually nocturnal.

California slender salamander

Batrachoseps attenuatus



California Slender Salamander



Ensatina
Ensatina eschscholtzi



Backlit ensatina



Ensatinas have a constriction at the base of the tail. They also have five toes on the hind foot. The tail of the male is often longer than his body. These salamanders do not have an aquatic stage. They lay their eggs underground and these hatch into fully formed salamanders. They prefer a habitat of cool coastal forest. They can be found along streams or in damp dead leaves. If attacked, the tail may be broken off to distract the predator while the ensatina escapes. They also have toxins in the tail that are distasteful to predators. The tail is used as a food storage organ. The fatter the tail, the more nutrients the salamander has stored up.

[Ensatina video](#)



Ensatina

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Reptiles



What is a Reptile?

Reptiles include snakes, lizards, crocodilians, and turtles. Reptiles are cold-blooded. (They depend upon their environment to provide warmth.) Most reptiles are egg-layers, although some produce live young. In cold regions, reptiles hibernate. In extremely hot or dry climates, some reptiles will estivate, or go into a torpor. Because they lack internal heating mechanisms, reptiles depend on external heat sources. Thus, you will often find them lying in the sun on rocks and logs. Most reptiles have a three-chambered heart.



Click on the name of the reptile below to see a picture of its tracks and some natural history information about it.



• Lizards	• Snakes
• Turtles	

Got a reptile story? E-mail me and tell me about it.



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Lizards

Sauria



Lizard Tracks



Natural History of Lizards



Lizards are cold-blooded reptiles. Since they cannot make their own body heat, they spend a lot of time out in the sun, staying warm. You will find them on fence posts, rocks, logs, pavement, fences, walls, and many more places. There are more than 3000 species of lizards, making them the largest group of reptiles. They have dry, scaly skin and clawed feet. Lizard tails are fragile and easily break off. This can be beneficial in that it allows the lizard to escape from predators. Some lizards use their tails to store fat reserves.

Most lizards eat insects. (They are insectivores.)
Some are vegetarians and a few will eat small mammals and eggs.



Fence lizard tracks in dust.

They are found in tropical and sub-tropical habitats.

Many lizards can defend themselves by biting and there are two species that are venomous. The scaly skin helps protect against predators. The chameleon can change its color to match that of its environment. This allows it to camouflage itself and hide from predators.

The largest lizard is the Komodo dragon.

Since they are, for the most part, lightweight animals, their tracks can be difficult to see unless you have the right conditions of soil and light. Sometimes the tail will leave a drag mark in the trail. You will find little scratches that indicate where the feet were placed. The long toes may, on occasion, be visible in the trail.



Fence lizard tracks in dust. Penny, for scale, is 3/4 inch across.



As a kid, I thought it was fun to catch the "blue-belly" lizards that frequented wood piles near my house. We found that, if you turned the lizard over and rubbed its belly, it would go to sleep. I don't know why that is, but it's pretty challenging to get a lizard to go to sleep in your hands.



Got a lizard story? E-mail me and tell me about it.



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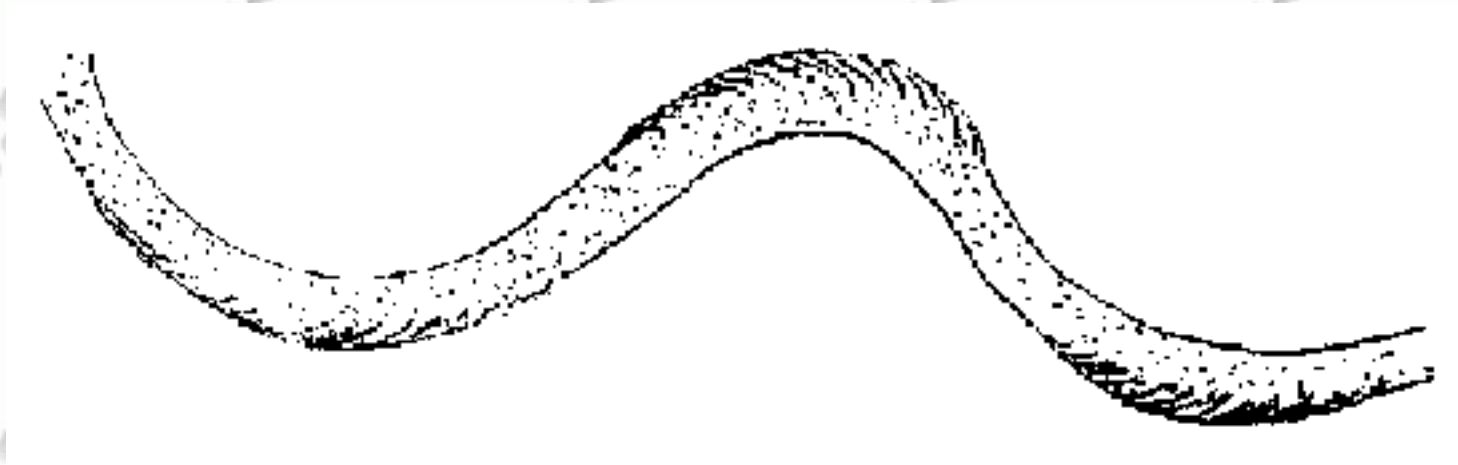
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Updated: November 24, 2002.

Snakes



Snake Track



Natural History of Snakes



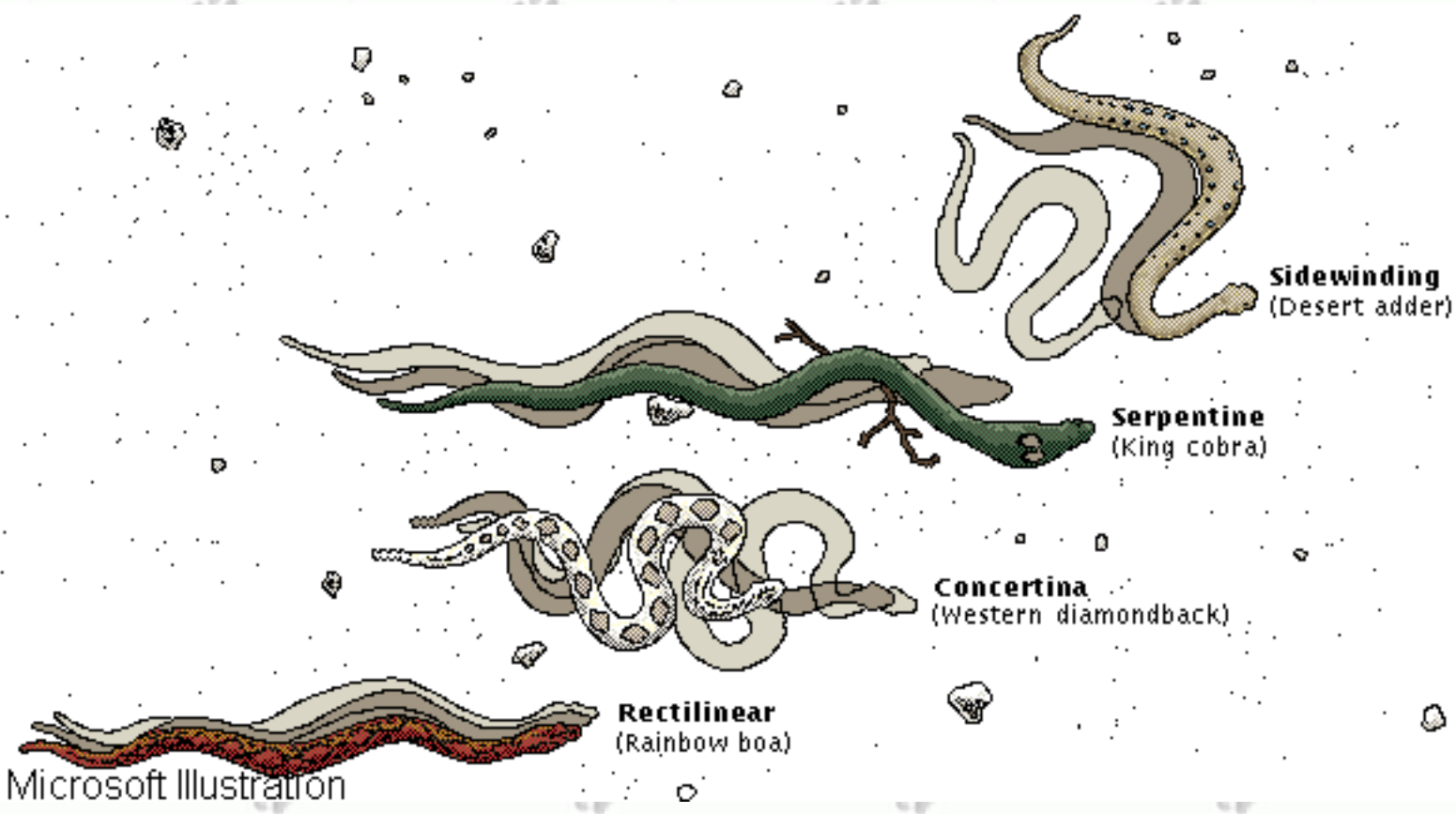
Snake tracks can be wavy or straight lines. They are usually furrows in the ground that can be 1/2 or more wide. Some of the snakes found in my area can swim and often hunt underwater. These aquatic

Snake trail in fine river silt. Photo taken at Burlington river bar, Humboldt Redwoods State

garter snakes can stay submerged for over ten minutes. I have personally watched one stay underwater for that long. Snakes are cold-blooded reptiles. They often are found on exposed rocks and pavement, sunning themselves. Some snakes have a hinged jaw that opens wide to allow them to swallow their prey. Prey is swallowed whole and digested over a week or two depending on the size of the prey. Some snakes are venomous. Snakes can a well developed

sense that allows them to sense heat. This helps them locate prey.

There are four ways that snakes move about. Each movement produces a different track. The illustration below shows the different types of snake movement.



(Picture taken from MS Encarta 97 Encyclopedia)



Personal Notes on Snakes



Got a snake story? E-mail me and tell me about it.



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Updated: Sunday, November 24, 2002



Turtles



Turtle Tracks

Photo courtesy of [Mark Seaver](#).



Natural History of Turtles

Turtles are fascinating animals that carry their homes around on their backs. They have a hard shell, called a carapace, that encloses all their internal organs. Tortoises are turtles that retract their heads into their shells by pulling their neck into an S-shaped curve. Some turtles hide their heads by bending their necks sideways.

Turtles vary in size. Small North American box turtles can be six inches long, while the huge leatherback sea turtles can reach eight feet in length.

Turtles do not have teeth. While some turtles are vegetarians, most are omnivorous.

Turtles lay their eggs in sand or dirt. A few turtles live a long time, some reaching 100 years. The eggs are leathery, rather than hard like bird eggs.

Some pond turtles have webbed feet. One of the largest pond turtles in the world is the alligator snapping turtle. It can get up to 200 pounds.

Look for turtle tracks near water. The best time to look for them is the summer or fall. Females come out of the water to lay their eggs in late spring or early summer. They dig a hole in soft sand to deposit the eggs in. Some land-dwelling turtles will dig burrows.

Sometimes the tail or shell will leave drag marks in the trail. The tracks are almost oval in shape with the toes showing on one side of the oval. There are five toes.



Personal Notes on Turtles



The river near my home has numerous pond turtles. Unless you spend time really looking at the river, you won't see them. A casual glance often misses the turtles quietly sunning themselves on riverside logs. Sit by the river and look carefully. You will see them.

Late spring and early summer are good times to see the baby turtles. This tiny pond turtle was found in the South Fork of the Eel River in Humboldt County, California.



Turtles climb onto rocks and logs at the water's edge to sun themselves.



Claws are visible on the hind foot of this baby turtle. Even turtles this size are great swimmers.





Do you know how hard it is to get a baby turtle to sit still on a ruler so you can get a picture of its size? It's not easy. They don't like to sit still at all. This turtle was about two inches long and full of energy.



This large pond turtle was found in Bull Creek, Humboldt Redwoods State Park, California.
Summer 1999.

Got a turtle story? E-mail me and tell me about it.

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Insects



What is an Insect?

Insects outnumber all other animals, with about 800,000 species described so far. They are arthropods and are found almost everywhere. They are the most highly developed of the invertebrates (animals without a backbone). Some have a highly developed social structure. Most grow by metamorphosis, passing through at least two distinct stages. Insect bodies consist of three parts: the thorax, abdomen, and head. They have two antennae and mandibles, or jaws, on the head. Insects have three pairs of legs and an external skeleton (exoskeleton).

What is a Spider?

Although spiders are arachnids rather than insects, I have put them on this page. Spiders have eight legs and most of them spin webs from silk.



Click on the name of the insect below to see a picture of its tracks and some natural history information about it.



• Beetles	• Grasshoppers
• Spiders	



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Tracking Humans

Human tracks can be found just about anywhere. People leave tracks wherever they go - sandy trails, deep forests, grassy meadows, even on linoleum floors indoors. With more and more people seeking recreation in the wilderness, it is not surprising that they sometimes wander off trails and become lost or turned around. This can lead to some interesting tracking. What does a tracker look for when tracking humans? The following pictures will give you a taste of a few of the clues a tracker will find.



How does a tracker make sense out of all this? First, you have to know the tracks of the person you're trying to find. You may have to go back to their campsite to see if you can find some of their tracks around, or visit a place you know the person was. By eliminating other tracks, you should be able to narrow down the search to the correct one.

Don't expect to find perfect tracks all the time. Prints like this are rare. If you find enough detail in the print to positively identify it, it is called a signature print. Heel marks are one of the signs to look for. As you take a step, notice that the heel comes down first and bears all the weight. This leaves a nice impression. Sometimes, the toe will not leave much of a print.



Human tracks really are everywhere, as you'll notice once you become familiar with what to look for. These are the tracks of the workers who laid this asphalt.



When they are relaxing, people put their feet up on things, like this fire ring at a campground. The fire ring was hot and melted the shoe, leaving a nice clear track of the person who got a hot foot!



People will climb over or go under obstructions on trails. This person climbed over a log and left marks where the shoe rubbed on the wood. You can see the pattern on the bottom of the shoe in this wood.



When walking uphill, people tend to dig their toes in a little more. In this photo, you can see where gravel was scraped away and some loose material was kicked back as the toe of this boot dug in. The person was travelling from left to right in the photo. You can also see some of the gravel pressed into the ground from the weight of being stepped on. If you were to look closer still, you would find some broken twigs. The crumbled leaves are from an older track.





As you walk, your shoes pick up material from the ground. When you step from one surface to another (example: from sand to rock), some of this material is carried onto the new surface by your shoes. In this case, someone was walking on sand, then stepped on the piece of driftwood. The sand that was transferred left a pattern from their shoe. This sign is called "transfer."

Are tracks only found in dirt? No. Tracks can be anywhere. If you step on a piece of paper, you leave a track on it. If you step on an aluminum can, you leave a mark on it. If you control the source of light, you can see these hidden tracks. In a dark room, hold a flashlight at a very low angle to the object you are examining. You should be able to see the dust transfer on the object. In the photo, it is on top of the gold lettering, right above the F in "draft." See the 4 or 5 dust marks? They form part of the pattern from the bottom of a shoe.

This is also the way to see tracks on linoleum floors. Turn off the lights and use a flashlight to shine light on the floor at a very low angle. This will make the tracks stand out. Experiment and see what you can find.



This shoe print was found on a dusty linoleum floor. With the proper light angle, it is not difficult to find tracks on such



surfaces. You may have to darken the room and use a flashlight to get the proper light angle, but smooth surfaces like this can yield tracks.

This very brief overview should give you an idea of the many places there are to look for human tracks. This hasn't even begun to scratch the surface of the many signs there are to look for. If this has made you want to learn more, check back here as I add more to this page. Also, see the [SAR](#) page for an explanation of how tracking is used in search and rescue.

Coming soon in 2004: "Animals Don't Cover Their Tracks - An Introduction to Animal Tracking" on CD! (Version 2.0) New drawings, more species, more photos, more extensive sections on tracking humans, more detailed directions for plaster casting, mystery tracks section, tracking stories section, and more. Easy to use format. This web site is limited by bandwidth, but the CD is not. When the CD is available, an announcement will be made at www.bear-tracker.com.

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