

Vertebrates of Cold Canyon

The sign at the entrance to Cold Canyon warns that you are about to enter mountain lion country, but despite claims of mountain lion encounters in the logbook, most of the animal action at the reserve is low to the ground where reptiles, mammals, and birds scurry into the shrubs at the sound of approaching footsteps. Frequently, the signs of animal activity, such as songs, tracks, and scats, are quite detectable while the animals themselves remain elusive. Observing wildlife in Cold Canyon requires patience and persistence.

The reserve's canyons and hillsides are, in fact, home to scores of vertebrates. At least 10 species of snakes, including the western rattlesnake, live in the canyons alongside salamanders, frogs, and lizards. In total, there are at least 25 species of reptiles and amphibians that make this their home, but with the possible exception of a few western fence lizards, most go unnoticed by the day hiker. So, too, do the 40-odd species of mammals that are active mostly only during the hours of darkness. While many of the canyon's resident birds are active by day, most stay hidden in the brush. Other birds are nocturnal and many others are not even permanent residents, using Cold Canyon as a rest stop during migration.

Signs of Wildlife

While many vertebrates will elude the notice of even patient observers, most of these animals will leave telltale signs of their presence. The most common signs of mammals are their tracks. In the rainy months, the ground is soft enough to preserve the impressions of animals' feet. Because many mammals are elusive and nocturnal, their tracks are often the best way to determine whether they inhabit the area. Another common sign of mammal activity is the presence of scats, often found along the trail. Like tracks, scats can also be used to identify the presence of particular species. For example, fox scats are small and black and are often carefully placed by the fox in the middle of a rock as a territorial marker. Coyote scat can often be found in the center of the trail, and a close look may reveal the seasonally shifting diet of the animal – hair indicates rodent prey, and seeds and a purplish cast indicate a diet of berries.

Other signs of animals include the houses they build. Most birds build nests, often hidden in the tangled branches of a chamise or manzanita bush, but sometimes on more exposed and observable branches. Dusky-footed woodrats build a complex house out of sticks and other debris. These impressive conical structures are up to 6 feet (1.8 m) tall and 8 feet (2.4 m) in diameter, with thick roofs and several passageways leading to multiple chambers.



Black-tailed deer tracks.



Fox scat on rock.

Observing Wildlife

Here are some suggestions if you would like to observe the vertebrates of Cold Canyon. First, remember that many animals have much keener vision, hearing, and sense of smell than do humans. If you try to approach something moving in the brush, chances are that the animal will notice you and retreat, or freeze in fear and remain hidden in the bush. Often the best way to observe these animals is to sit quietly and wait. If you escape detection by the animal for several minutes, it may come out from hiding. Better yet, start your observations without the animals realizing you are there. Pick a quiet comfortable place in which you are relatively hidden. Because many animals can detect you simply by your smell, your observation place should be downwind of the area you want to observe. Use binoculars to observe animals from a greater distance than they can detect you.

The animals you observe will greatly depend upon the time of day you visit Cold Canyon. To the midday visitor, first impressions can be misleading. Nothing seems to be out and about. Except for the chatter of a few birds, a fleeting glimpse of a squirrel, or the skitter of a lizard, there simply does not seem to be any life in the area.

Come back at first light of morning, and you'll experience a completely different sensation. Tread your way up the canyon, away from the highway, and you'll hear what birders call the dawn chorus. You'll be surrounded by dozens of songs, coming from just as many bird species. During this time, it is much easier to spot particular birds because they often sing boldly from conspicuous perches and may even be attracted to you if you whistle softly.

Or arrive in the late afternoon and wait for dusk to creep up the canyon slopes. At sundown, the coyotes begin yipping up canyon as owls call from their tree limb perches. Harvest mice and meadow mice roam the grassy hills, searching for seeds and insects, and dusky-footed woodrats begin to stir from their houses, in search of food and more plant material to add to their houses. In addition, many amphibians and mammals (and at least one reptile, the night snake) are nocturnal and, as a result, go about their activities unseen by humans.

The season you visit Cold Canyon is as important as the time of day for observing particular species of vertebrates. Many more bird species are active during the spring and summer than in other seasons, and your chances of seeing rare birds are greatest during the early spring and fall migrations. Reptiles depend on the warmth of sunshine, so most are active in late spring, summer, and early fall. However, most amphibians require moisture to prevent desiccation and, as a result, their activity peaks during the rainy season of late fall, winter, and early spring. Mammals are present year-round, but many are inactive during the winter.

Fish, Amphibians, and Reptiles

Cold Canyon is home to a fair diversity of the "lower vertebrates" – especially amphibians and reptiles – but the secretive nature of these creatures makes it difficult for naturalists and hikers to appreciate them. There are two other reasons it might be difficult to observe the reserve's resident amphibians and reptiles. First, as previously described, certain species may be active only during particular times of the day or during certain seasons. Second, some amphibians and reptiles live in restricted habitats of Cold Canyon and are therefore difficult to locate. For example, whiptail lizards prefer the dense growth of chaparral and thus do not come into contact with most humans. Other reptiles are primarily fos-

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social (underground dwellers) and so rarely see the light of day. As a result of these factors, some species are suspected to occur in Cold Canyon but have not been confirmed with a positive identification.

Below are descriptions of the most common fish, amphibians, and reptiles found in Cold Canyon. A complete list of known and suspected species is located in the appendices (p. 115).

Fish

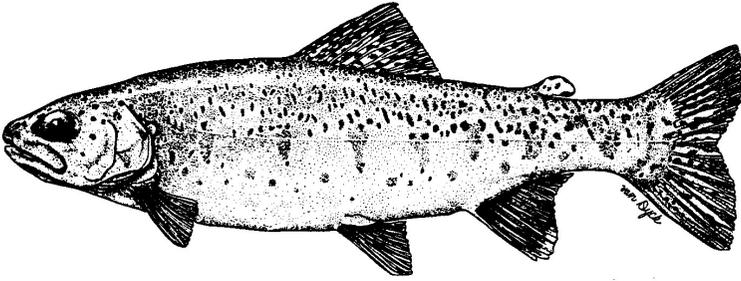
Rainbow trout (*Oncorhynchus mykiss*). This native species is the only fish that might on occasion be found in the creek. During rainy years, Cold Creek swells in its banks and some rainbow trout are capable of moving up from Putah Creek. When the creek dries in the summer, permanent pools in Wild Horse Canyon can provide a home for these trout. In such situations, these fish may survive to reproduce – starting a new generation in Cold Creek. However, this is a rare occurrence. In most years, the pools dry up and trout are excluded from the area, so rainbow trout cannot truly be considered permanent residents of Cold Canyon.

Amphibians

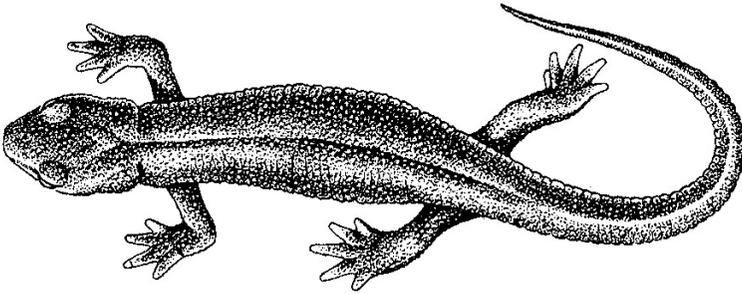
California newt (*Taricha torosa*). The California newt is a medium-sized salamander (5-7 in., or 13-18 cm, from head to tail), with textured skin that is tan colored on its back and orange on its belly. Newts have a complex and intriguing life cycle. In the pools of the creek, they hatch from eggs as tadpole-like juveniles. As the pools dry up, they metamorphose into their adult form and head for moist logs and holes in the ground. After the fall rains replenish the water in the stream, the adult newts return to the pools, metamorphose into an aquatic form, and reproduce. The best places to spot California newts are near the stream and on moist portions of the trail. In winter you can find the newts heading for the water, and in the spring you can find them heading back into the hills. At all times, newts move slowly and seem oblivious to other animals. Their nonchalance is likely due to their toxic skin – each gland contains noxious poison. They advertise this weapon with their bright orange belly, a warning recognized by most predators.

California slender salamander (*Batrachoseps attenuatus*). While these tiny (1-3 in., or 2-8 cm, long), brown, wormlike salamanders are most active during the winter and early spring, they can be found in moist places under rocks and logs as late as June. Unlike newts, slender salamanders do not spend any of their life cycle in the water. In the winter, they lay their eggs underground. These hatch in the early spring, and the young are born looking like smaller versions of their parents.

Western toad (*Bufo boreas*). Western toads are 2 to 5 inches (5-13 cm) long, brown, and covered with warty bumps. These bumps hold toxins that can easily kill a dog or other predator unlucky enough to bite a western toad. Toads spend their adult lives hiding in leaf litter and burrows and are usually active only at night. During the winter wet season starting in January, they come out of hiding to breed in Cold Canyon's pools. Males station themselves around the pools and attract females with weak, chirpy calls. Females lay fertilized eggs in the creek, and tadpoles hatch within several weeks. The tadpoles develop rapidly, metamorphose into tiny toadlets, and are out of the creek pools and hiding in the wooded slopes of the canyon by May.



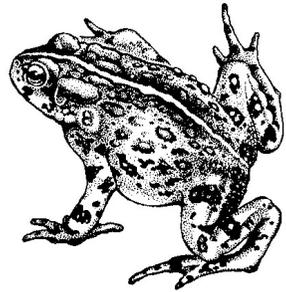
Rainbow trout



California newt



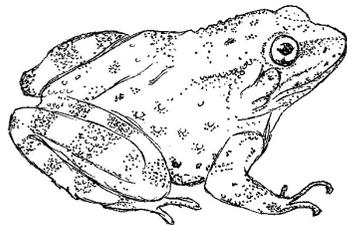
California slender salamander



Western toad



Pacific treefrog



Foothill yellow-legged frog

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Pacific treefrog (*Hyla regilla*). These small (1-2 in. or 2-5 cm) frogs are the most common frogs in California. They come in many colors, from green to tan to brown, and individuals can actually change color fairly rapidly. Fortunately, a dark eyestripe that does not change color distinguishes these frogs from all others in Cold Canyon. Contrary to their name, Pacific treefrogs generally stay near the ground, although their padded toes enable them to climb if they need to. Like western toads, Pacific treefrogs breed in the pools of Cold Creek from January to May, and, during this time, males attract females by calling. Their repeated *kek-ek* calls, which seem much too loud for such a small creature, are the most common type of frog call that Californians hear. Eggs are laid in streams and hatch into tiny black tadpoles, which rapidly metamorphose into the adult form.

Foothill yellow-legged frog (*Rana boylei*). These medium-sized (1-3 in. or 2-8 cm) frogs can be identified by their mottled back and yellow underside and their tendency to dive into pools and hide in the muck at the bottom when disturbed. Yellow-legged frogs breed from March to May and will stay in the vicinity of the creek the entire year. As a result, they are the first to return after the fall rains begin, and male yellow-legged frogs initiate the breeding season with their grating, guttural calls. Of all the amphibians in Cold Canyon, the foothill yellow-legged frog is perhaps the most endangered. Although they are locally abundant, yellow-legged frogs have suffered huge declines across the state, largely due to habitat destruction and introductions of non-native predatory fish.

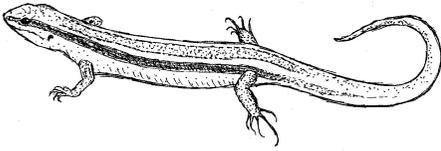
Reptiles

Western fence lizard (*Sceloporus occidentalis*). These “blue-bellies” are the most common reptiles in Cold Canyon and probably all of California. They are 4 to 6 inches (10-15 cm) long from head to tail, with brown and black blotches or lines on their spiny-scaled back. They can be seen along much of the trail, and they colonize the creek bed when it dries up. Most lizards, especially the males, sport blue patches on their throats and the sides of their bellies. They use these to communicate via “push-up” displays, during which they lift the front of their bodies repeatedly with their front legs.

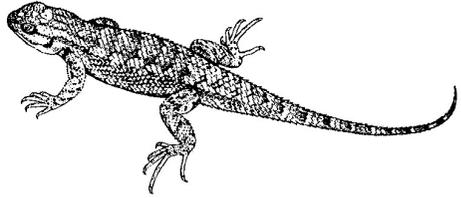
Western fence lizards provide a surprising service for humans and potentially other mammals in the canyon. Deer ticks, which carry Lyme disease, bite lizards as well as humans. But unlike humans or any other vertebrate, western fence lizards produce a substance that kills Lyme disease. When a tick attaches to a lizard, the substance in the lizard’s blood enters the tick and kills the Lyme disease bacteria inside the tick. As a result, areas that have lots of western fence lizards have a low prevalence of ticks infected with Lyme disease. Therefore, a large population of lizards reduces the possibility of Lyme disease infection in humans.

Western skink (*Eumeces skiltonianus*). Western skinks are small (3-7 in. or 8-18 cm), smooth-scaled lizards that undergo a change of color as they grow into adults. Young skinks are brightly striped and have showy, almost neon blue tails, while adults are generally brownish with an orange head and tail. Herpetologists speculate that the blue tails of young skinks help them escape predators. If the predator is quick enough to catch a young skink, it is attracted to the coloration of the tail. When grabbed, the tail readily breaks off and thrashes about with a life of its own, distracting the predator, while the skink quickly runs for cover.

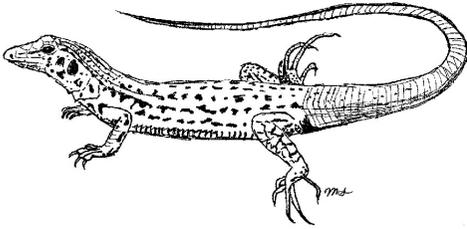
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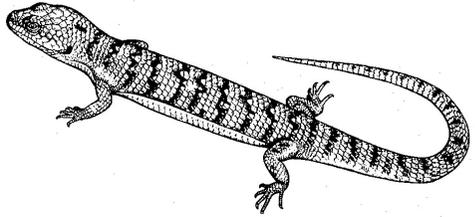
Western skink



Western fence lizard



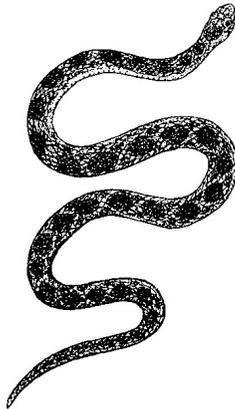
California whiptail



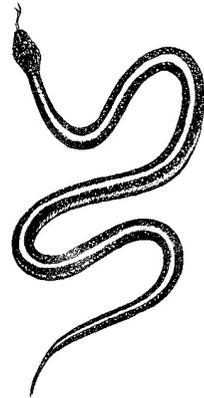
Southern alligator lizard



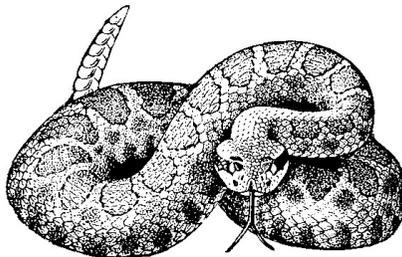
Western yellow-bellied
racer



Gopher snake



Western aquatic garter snake



Western rattlesnake

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California whiptail (*Cnemidophorus tigris*). Whiptails are the sprinters of the reptile world. These medium-sized lizards (4-8 in. or 10-20 cm), characterized by stripes and bars coloring their small scales, can run up to 30 miles an hour if pressed. Usually they are seen moving nervously underneath shrubs. Approach them, and they will rapidly skitter into the chaparral. Like skinks, whiptails are born with blue tails, which they lose as adults.

Southern alligator lizard (*Elagaria multicarinatus*). These are the largest lizards in Cold Canyon, ranging from 6 to 12 inches (15-30 cm) in length from head to tail-tip. Alligator lizards have smooth tan scales with darker bars. They are often found in grasslands chasing insects, small lizards, and young mice, but will also climb trees and eat bird eggs. They are aggressive lizards that will take a bite at your finger if cornered.

Western yellow-bellied racer (*Coluber constrictor*). These olive or brown smooth-scaled snakes can get up to 7 feet (2.1 m) long. They are well named, for they move at surprising speeds when chased. Racers are often found in grasslands and savanna. They prey on many small vertebrates, especially lizards.

Gopher snake (*Pituophis melanoleucus*). These snakes are 3 to 8 feet long (0.9-2.4 m) and have cream-colored, keeled scales with brownish blotches or stripes. They often look like rattlesnakes, and in fact they are known to imitate them. A defensive gopher snake will often rear up, hiss, and shake its tail in the leaf litter to simulate a rattle. While they have a nasty temper, gopher snakes are not venomous and kill their primarily mammalian prey by constriction.

Common garter snake (*Thamnophis sirtalis*). These thin, striped snakes range from 18" (46 cm) to almost 6 feet (1.4 m) in length. Most Common garter snakes at Stebbins have black scales, yellow stripes, and bright red skin between their scales. They are often found in Cold Creek's pools or basking on nearby rocks. They are excellent swimmers and will retreat to the water when alarmed. Garter snakes do not lay eggs, but instead allow the eggs to develop in their body and bear the young live.

Western rattlesnake (*Crotalus viridis*). This is the only venomous snake living in Cold Canyon and Northern California. It grows up to 6 feet (1.8 m) in length and is covered in gray or brown keeled scales. This snake uses its conspicuous rattle at the end of its tail to create a buzz-like warning noise when it is startled. It is active from April to October, but is most frequently encountered from May to July. Rattlesnakes are common in the reserve, but are most often seen on the dry hillsides rather than in the canyon bottoms. Although potentially dangerous, this rattlesnake is not aggressive and usually retreats unless cornered or provoked. Young rattlers tend to be more dangerous than adults, because young do not retract their fangs when they strike, and therefore are much more likely to inject large quantities of venom into the bite. Rattlesnakes eat all types of small mammals and lizards, but they are best adapted to capture small mammals and birds. Small pits located on their faces enable the snakes to detect temperature differences. Therefore, they are readily attracted to warm-blooded animals. Not surprisingly, they often hunt at dusk, when they can most easily detect these temperature differentials.

Birds

The birds of the Cold Creek and Wild Horse drainages can be categorized into at least 34 families, 82 genera, and 114 species, one half (56) of which are known or suspected to nest in these two basins. By comparison, the terrestrial bird count for the entire state of California is about 235 regularly occurring species. Thus, the Cold Canyon basin contains nearly 50% of the total for the state, a most impressive number for such a small area. About one half of the recorded species either pass through the reserve during migration (transients) or migrate to the reserve to spend the winter (winter visitors). The descriptions below highlight the most common and more permanent residents. Use the species list in the appendices on pages 117 to 121 as a complete checklist. Birds are the only taxonomic group assigned official common names, so their names are capitalized, unlike the common names of other animals and plants.

Turkey Vulture (*Cathartes aura*). The Turkey Vulture teeters from side to side as it soars on long wings held up in shallow V. It uses both vision and smell, not in search of living prey, but in search of carrion, or carcasses of previously killed animals. Its plumage is black overall, though the undersides of its flight feathers have a silvery cast, and the red skin of its head (gray in juveniles) is unfeathered. Turkey Vultures lay their eggs in sheltered ledges on cliffs such as those found to the west above Cold Canyon.

Red-tailed Hawk (*Buteo jamaicensis*). Scanning the grasslands and savanna for a meal, large birds of prey such as the Red-tailed Hawk soar above the reserve on the updrafts that rise off steep canyon walls. Though they vary widely in coloration, most Red-tailed Hawks are a shade of brown above, with a lighter shade underneath. Darker markings fleck their broad wings and form a band across their belly, and adults exhibit their namesake rust-colored tail. The Red-tailed Hawk's piercing call, a familiar sound effect from movies and television, descends in pitch and is often heard in the spring as mated pairs perform acrobatic aerial courtship displays.

California Quail (*Callipepla californica*). A prominent, curly black head feather marks the shy California Quail. Quail can be found running about among shrubs that neighbor grasslands. They often travel in large coveys – groups usually composed of several adults and numerous young – in search of acorns, seeds, and fresh grass. Catching them by surprise often causes a loud burst of short flight, followed by a confused chorus of peeps as the birds run about to regroup. These monogamous birds produce large clutches of eggs, and the young that hatch are immediately able to feed themselves and run on the ground.

Great Horned Owl (*Bubo virginianus*). A voracious and silent hunter of the night, the Great Horned Owl will prey upon almost anything it can catch, including mice, woodrats, and even animals as large as skunks and pheasants. Most of the day, Great Horned Owls remain inactive, moving about only when they are discovered by humans or by an unruly mob of birds. However, during the early spring, males often hunt in the late afternoon to accommodate their hungry babies. As you hike near the oak woodlands, listen for the shrill alarm calls of jays and flickers; they might be advertising the location of a Great Horned Owl.

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Anna's Hummingbird (*Calypte anna*). In metabolic overdrive, tiny hummingbirds hover by rapid wingbeats as they drink sugary nectar from flowers with their needle-thin bills. Exceptional in its ability to overwinter, Anna's Hummingbird is an abundant year-round resident at the reserve, while other hummingbirds are only present during their breeding or migration seasons. Both sexes of Anna's Hummingbird have metallic green upperparts and pale gray undersides with a green wash. When light is reflected from a certain angle, the male's head and throat feathers shine pink, and the female's throat is sparsely flecked with these iridescent feathers. The Anna's male sings a squeaky series of high chirps from a perch.

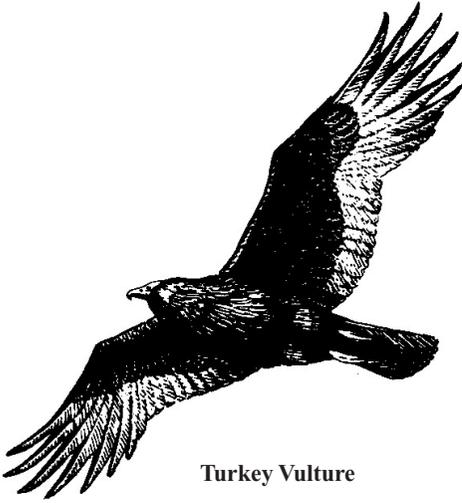
Northern Flicker (*Colaptes auratus*). The Northern Flicker is a loud resident of the canyon, chiding hikers with a *flick-a flick-a flick-a* call as it flies over the trail. Look for its white rump, its black-spotted belly, and the reddish undersides of its wings and tail. Flickers tend to fly with several rapid wingbeats followed by a glide. These birds nest in cavities they hollow out of dead trees with their stout beaks. These cavities are also often important for other bird species, including swallows, bluebirds, and screech owls.

Nuttall's Woodpecker (*Picoides nuttallii*). The series of rattling calls given by a Nuttall's Woodpecker often announces its presence high on the side of a tree. Its back is barred horizontally with black and white, and its head is black with white marks. The male also sports a red crown. Nuttall's Woodpecker uses its specialized bill to flake away bark as it forages for insects, to make a territorial drumming on tree trunks, and to excavate a nest cavity in a trunk or branch.

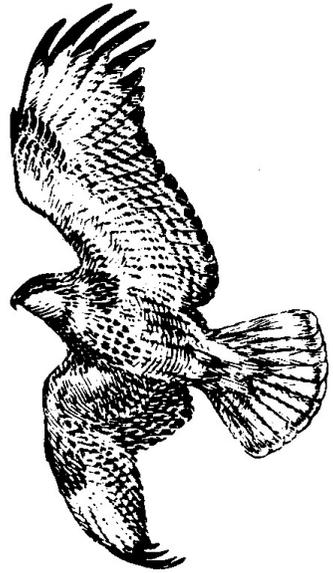
Black Phoebe (*Sayornis nigricans*). Closely associated with riparian habitat, the diminutive Black Phoebe can be seen perched on branches hanging over Cold Creek. From its perch, the Black Phoebe nervously flicks its tail and makes occasional flittery flycatching forays into the air. A solid black head, upperparts, and breast with a contrasting white belly give this bird a trim coloration. Two rising notes followed by two descending notes constitute its song.

Western Scrub-Jay (*Aphelocoma coerulescens*). Well known in California due to its abundance and brash behavior, the Western Scrub-Jay can scarcely be missed in the reserve. Its loud, grating call is given as a singular statement or in a series. The sky blue of its head, wings, and long tail surrounds its gray back and extends as a broken necklace into its white underparts. In autumn the Western Scrub-Jay switches from a diet of mostly insects and begins to collect acorns and cache them in the ground. By burying more acorns than it consumes over the winter, the Scrub-Jay effectively plants the next generation of oaks. It is believed that this relationship allows the oaks to disperse uphill, counteracting the tendency of acorns to roll downhill.

Cliff Swallow (*Hirundo pyrrhonota*). Flying and gliding about the steep canyon cliffs, Cliff Swallows seem to be forever in flight, rarely pausing to rest from their persistent insect foraging. These birds build nests out of daubs of mud on cliff faces. Because these birds are colonial, there are usually hundreds of nests placed right next to each other. Three



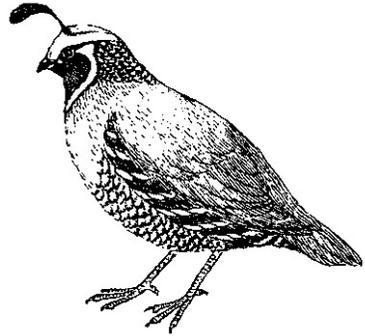
Turkey Vulture



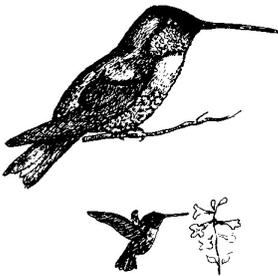
Red-tailed Hawk



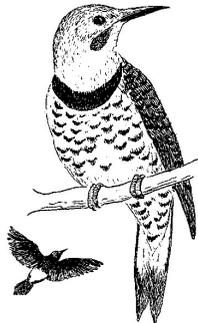
Great Horned Owl



California Quail



Anna's Hummingbird



Northern Flicker



Nuttall's Woodpecker

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other swallow species are regularly seen in Cold Canyon, but only the Cliff Swallow sports a small buff-colored patch on its forehead.

Oak Titmouse (*Baeolophus inornatus*). The Oak Titmouse is a small, uniformly gray bird, with a pointed crest on its head. These birds flit among trees and shrubs, energetically gleaning insects and berries. Although shy, they can often be heard repeatedly whistling *tee-wit tee-wit*, the most common of their broad repertoire of songs and calls.

Bushtit (*Psaltriparus minimus*). Tiny but kinetic, the Bushtit is pale gray with a light brown crown and relatively long tail. Frantically moving through the chaparral and woodlands as they forage in winter, flocks of Bushtits keep in constant communication by a twittering of whistled chirps. In spring these contact calls continue between mated pairs as they build elaborate gourd-shaped hanging nests of plants and lichen woven together with silk from the webs of spiders and cocoons of insects.

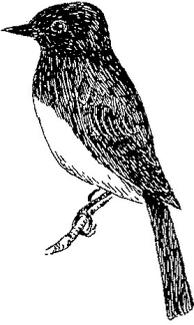
Bewick's Wren (*Thyromanes bewickii*). Although several types of wrens live in Cold Canyon, the Bewick's Wren is the most conspicuous. These wrens are can be spotted flitting into the foliage where they hunt for insects and hide from predators, but they can often be coaxed out of the brush by whistling and *pssshing*. Bewick's Wrens have long tails with white edges, which they stick up in the air, and a white eyestripe extending across their face from their curved bill. When out of sight they will often sing a three-note *sweet sweet cheeeee* song. The first two notes are high pitched, while the third is a lower, longer trill.

Wrentit (*Chamaea fasciata*). The Wrentit is one of the many small birds with drab coloration that blends in with the brushy environments of the reserve. On the rare occasion when it emerges from the shelter of dense undergrowth, one can see the Wrentit's dark gray-brown plumage, white irises, and long tail, which is often held up at an angle. The Wrentit is more often heard than seen, giving its characteristic "bouncing ball" song, a descending series of notes that becomes more rapid until running together as a trill.

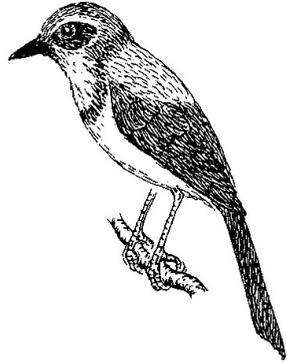
Yellow-rumped Warbler (*Dendroica coronata*). While most North American wood warblers migrate to the tropics, the hearty Yellow-rumped Warbler can be found here in abundance as a winter visitor. Gathering in flocks, wintering Yellow-rumped Warblers give a sharp chirp as a contact call. Though variable by race, sex, and season, plumage follows a basic pattern of gray upperparts with patches of yellow above the tail, on the sides under the wings, and on the crown. The "Audubon's Warbler" form, more common in the West, has white crescents above and below the eye and, in males, a yellow throat. The "Myrtle Warbler" form can also occasionally be spotted in the canyon and can be distinguished by a white eyebrow stripe and white throat extending to the sides of the neck.

Spotted Towhee (*Pipilo maculatus*). The Spotted Towhee prefers chaparral or the understorey of woodlands and is often heard scratching with both feet simultaneously as it combs the leaf litter for seeds and insects. Black on the male – brown on the female – covers the upperparts and forms a hood over its head and upper breast, accented by red eyes, white wing bars, and white spotting above the wings. This appearance long kept the Spotted Towhee classified with its eastern relative, the Rufous Towhee, but recently it has been

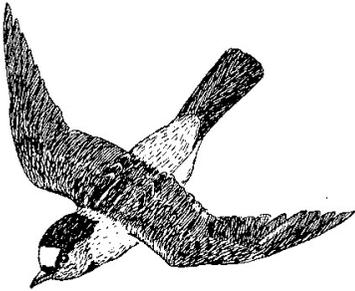
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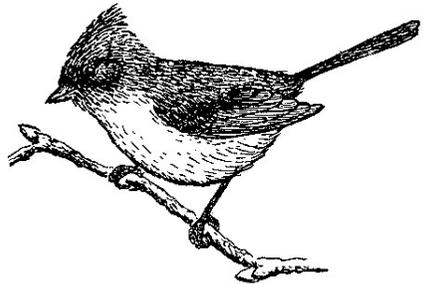
Black Phoebe



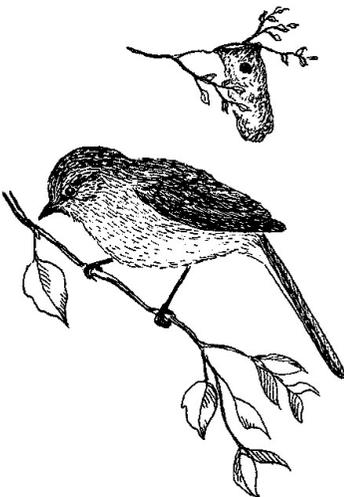
Western Scrub-Jay



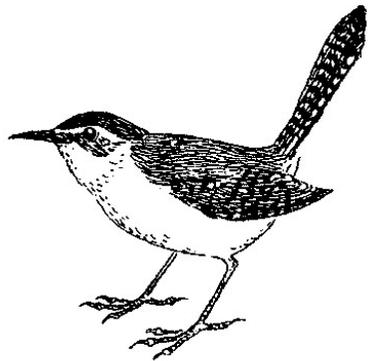
Cliff Swallow



Oak Titmouse



Bushtit



Bewick's Wren

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recognized as a separate species because evidence suggests that the two populations do not interbreed. A buzzy trill is the song given by the male, usually from a prominent perch. The call of the species is a scratchy, rising slur.

White-crowned Sparrow (*Zonotrichia leucophrys*). When winter brings harsh weather and a scarcity of available seeds to their breeding territories high in the mountains, populations of White-crowned Sparrows move into suitable habitat in the Central Valley and interior Coast Range, including the woodlands of the Stebbins Cold Canyon Reserve. Identify this small ground-feeding sparrow by its black-and-white striped crown (brown striped on immatures) and pink to orange bill. The White-crowned Sparrow's song consists of one to three clear whistles followed by a trill, and they vocalize all winter. A close listen distinguishes the dialect sung by wintering White-crowned Sparrows at Cold Canyon from that of the resident populations on the California coast.

Lesser Goldfinch (*Carduelis psaltria*). A flash of yellow in the trees above the trail may mark the flight of a Lesser Goldfinch. Male Lesser Goldfinches sport bright yellow breasts and black capes that cover their heads and run down their backs. Females are olive-colored, with dark wings and tails. These birds search for insects among the live oak and riparian woodlands, singing a paired *tee-ye* call to communicate with each other.

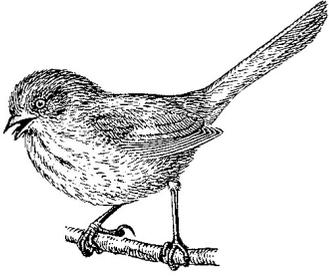
House Finch (*Carpodacus mexicanus*). The House Finch is a common resident of Cold Canyon. These birds can often be seen searching for seeds and fruits, which make up most of their diet. A reddish breast, forehead, and rump readily distinguish the males. Females are gray-brown above and streaked below. House Finches brighten the afternoon canyon quiet with an extended, lilting musical song. In the late 1800's, these birds were prized by pet sellers in the eastern United States. After legislation outlawing collection of these birds was passed, hundreds of finches were released by pet store owners, and some of these birds became established in New York. This population spread across the east, outcompeting the native Purple Finch (*Carpodacus purpureus*). Now House Finches can be found almost everywhere east of the Mississippi, in addition to their native, semi-arid habitat in the West.

Mammals

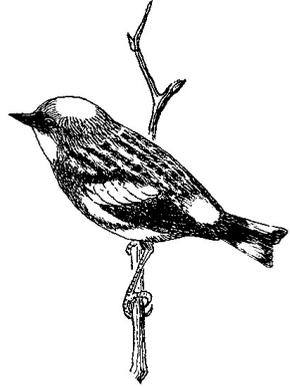
Most visitors to the Stebbins Cold Canyon Reserve may give little thought to the rich mammalian fauna that lives in the region. After all, most mammals are nocturnal and those that are active during the daylight hours are usually quite secretive, rarely showing themselves to human visitors. However, it would be a serious mistake to dismiss the mammals just because they are less conspicuous than their avian neighbors. Ranging in size from the quarter-ounce shrew to the large, lumbering black bear, over 40 species of mammal call this area home for much or all of their lives. Many factors contribute to this diversity, but particularly relevant is the location of the reserve at the intersection of the valley habitat to the east and the coastal mountain habitat to the west.

It is, therefore, the diversity of habitats – whether open, hot and dry, or shady, cool and dense – that dictates to a large extent the composition of mammal species at any specific site. On the grassy hills to the west, harvest mice (*Reithrodontomys megalotis*) and Botta's pocket gophers (*Thomomys bottae*) are the most common mammalian residents. Drop

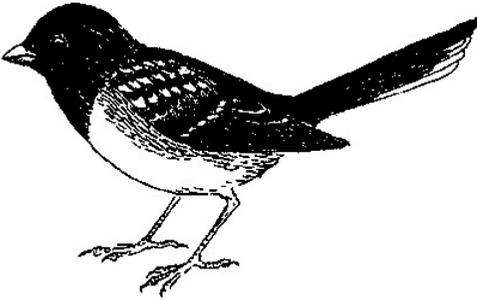
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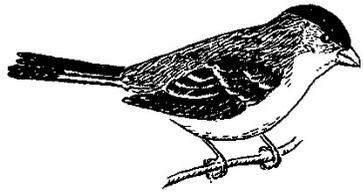
Wren tit



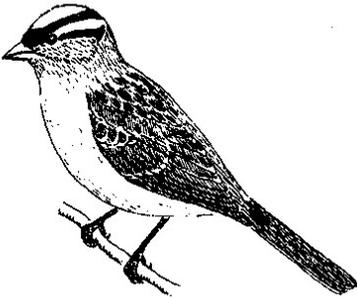
Yellow-rumped Warbler



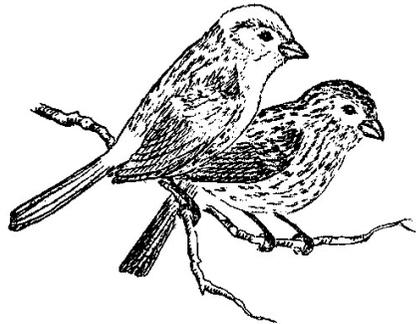
Spotted Towhee



Lesser Goldfinch



White-crowned Sparrow



House Finch

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down into a riparian canyon in the middle of this grassland where the vegetation changes to a more shade-dominated mix of plant species and where the soil layer gives way to rocks and gravel, and you will find an abundance of two species of field mice (*Peromyscus maniculatus* and *P. boylii*) and very few harvest mice and pocket gophers. Walk over to the west side of the canyon, where shade dominates the landscape, and you will not only find these same two species of *Peromyscus* in high numbers, but also the dusky-footed woodrat (*Neotoma fuscipes*), whose presence is revealed by the large, stick houses that it builds. A number of bat species find the canyon attractive as well. Some roost in the thick shrubs and tree branches, while others find safe daytime lodging in the cracks and caves of the two rocky ridgelines that traverse the reserve.

A vigorous assemblage of small mammal species means that a number of predators can also be found in the canyon. Coyotes (*Canis latrans*) and gray fox (*Urocyon cinereoargenteus*) are two of the most abundant predators, and they make their presence best known by the piles of scat that they deposit on the many animal trails that crisscross the reserve. It is from these scats that field biologists can quickly determine the array of prey in the area, because bones and teeth, diagnostic in species identification, remain in the scat.

The reserve's three largest mammals are black bear (*Ursus americanus*), mountain lion (*Puma concolor*), and black-tailed deer (*Odocoileus hemionus*). Both bears and mountain lions are most often recorded by the tracks that they leave in the mud along either Cold Creek or Wild Horse Creek. While they are certainly not numerous, usually at least one or two sightings are reported each year. Deer can be found throughout the canyon, as the rich and diverse array of tasty and nutritious plants offer year-round browse.

The most common mammals in the reserve are described below. A complete list of all mammals that have been observed in Cold Canyon can be found in the appendices (p. 122).

Virginia opossum (*Didelphis virginiana*). The opossum is the only marsupial in North America. Like all marsupials, it raises its young in an abdominal pouch. This pouch may be the key to its abundance – an opossum can simultaneously have a batch of young developing in the pouch and an additional set on its back, and thereby produce a huge number of young in its lifetime. Another key to its abundance is its omnivorous habits. The opossum eats fruits, insects, carcasses, and garbage, and these scavenging habits have made it a common city resident. Observing an opossum is difficult, as they are active only at night. If you are lucky enough to stumble on one, you may witness its classic ability to play dead. In fact, the opossum is not playing – its immobility is caused by a fright reaction.

Raccoon (*Procyon lotor*). A characteristic dark mask and banded tail distinguish the ubiquitous raccoon. Raccoons are one of the most common carnivores, although this classification is a bit of a misnomer as they readily consume anything edible. Well known for their ability to pry open garbage cans, raccoons will also feast on fruits or frogs, carrion or crayfish. Raccoons seem particularly attracted to water, which they play in and use to constantly clean their paws. Observing these curious and clever mammals is difficult to do by day, for they are primarily nocturnal.

Striped skunk (*Mephitis mephitis*). These primarily nocturnal scavengers wander Cold Canyon in search of berries, insects, eggs, and dead animals. Their characteristic black-

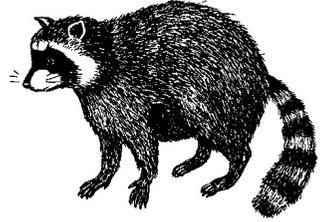
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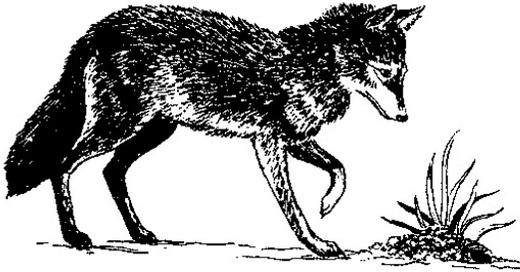
Virginia opossum



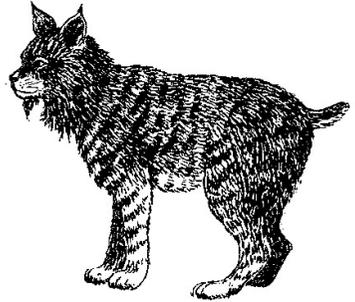
Striped skunk



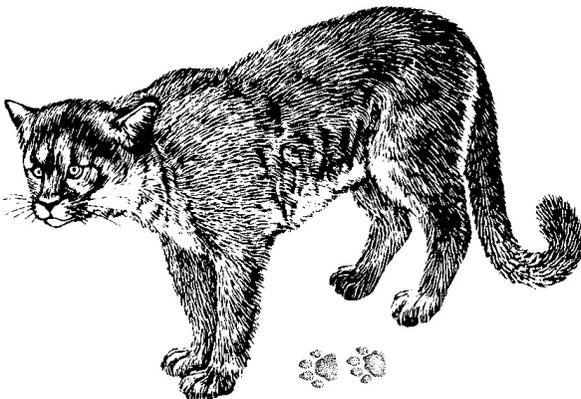
Raccoon



Coyote



Bobcat



Mountain lion

VERTEBRATES

and-white coloration warns most potential predators of their nauseating spray. As a result, skunks seem to bumble along their way without much concern for predators.

Coyote (*Canis latrans*). The coyote is a resident of Cold Canyon, but individuals are so secretive that few people get even a glimpse of them. These mammals, about the size of a collie, remain hidden by day but roam the homestead trail by night, sometimes barking and yipping in a cacophonous chorus. They leave behind a few obvious signs of their presence: their footprints (which are usually impossible to differentiate from the prints of other dogs) and their scats. The remains in their scats attest to their varied diet of berries, seeds, and small mammals.

Bobcat (*Lynx rufus*). These cats are a rare sight in Cold Canyon, but can be readily identified by their spotted coat, pointy ears, and stubby tail. Bobcats are true carnivores, chasing down mice, rabbits, birds, and snakes for their meals. Like many mammals, bobcats are primarily nocturnal, but they are also active in the mornings and late afternoons.

Mountain lion (*Puma concolor*). Perhaps the most famous of California's mammals, the mountain lion is also one of the rarest in the canyon. These large cats are active primarily at night, on the hunt for deer, rabbits, and other mammals, but on occasion they have been seen in the early morning and even the afternoon. By day, mountain lions generally retreat to the more remote parts of Wild Horse and Cold canyons. They are sometimes confused with bobcats, but their large thick tail and uniformly tawny fur easily distinguish them from Cold Canyon's other wild cat. The sight of a mountain lion is lucky indeed, but if you do see one, act threatening, make a lot of noise, and stand your ground to prevent the lion from treating you as potential prey.

California ground squirrel (*Spermophilus beecheyi*). Douglas California ground squirrels, the subspecies found in the reserve, are mottled squirrels with a dark blotch on their back and are one of the few mammals that are active by day. Although they occasionally climb into trees to find food or to sun themselves, they are most comfortable down near the ground, especially near their burrows. The high-pitched alarm whistle of a California ground squirrel is often mistaken for a bird call, especially because the squirrel is rarely in sight after it whistles. Ground squirrels have good reason to stay alert, for they are hunted by many other vertebrates in Cold Canyon, including birds of prey, foxes, and rattlesnakes. Of particular interest to some researchers at the University of California, Davis, are their interactions with rattlesnakes. Adult ground squirrels are immune to the venom of rattlesnakes, but their young are not. In the presence of a rattlesnake, adult ground squirrels are particularly aggressive and often attempt to drive the snake away from their vulnerable young.

Deer mouse (*Peromyscus maniculatus*). These are the most common mammals on the reserve, although their strictly nocturnal habits generally eliminate the possibility of seeing them. Deer mice have light brown fur on their backs, white fur on their bellies and legs, long tails, and large eyes and ears. By night they forage for seeds and berries, and will occasionally munch on insects. Deer mice are carriers of the Hanta virus, which has caused human deaths in the West. The possibility of an outbreak in Cold Canyon is remote, for

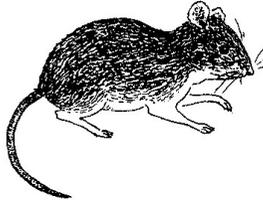
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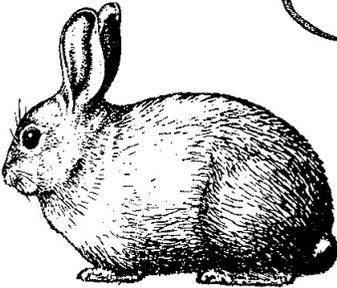
California vole



Dusky-footed woodrat



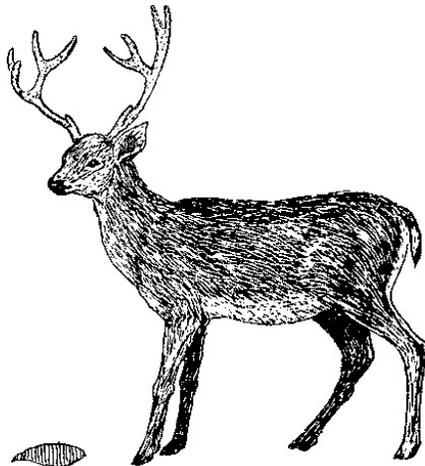
Deer mouse



Brush rabbit



California ground squirrel



Black-tailed deer

VERTEBRATES

even if there were diseased mice in Cold Canyon, most outbreaks of the disease have involved prolonged human contact with dried mouse feces.

Dusky-footed woodrat (*Neotoma fuscipes*). Dusky-footed woodrats are the architects of the mammalian world. They live in a complex structure built of sticks and other debris that can be up to 8 feet (2.4 m) in height and contain numerous tunnels and rooms. It is these houses that form the nucleus for the social life of woodrats. Older, dominant individuals usually maintain control over several houses. Except in the case of a mother woodrat with her young, individuals live alone in these houses. They shift from house to house, and occasionally move into new territory, taking over a group of houses from an individual that has died or moved on. The presence of surplus houses in an area is critical for the establishment of subadult woodrats dispersing from their mother's home.

Woodrats are generally nocturnal, usually requiring some disturbance to or near their house to cause them to emerge from the house during the daylight. Skilled climbers, woodrats are often found moving through the branches of trees once night approaches, when they forage for acorns, berries, seeds, and other vegetable matter. Woodrats may actually aid in the uphill dispersal of seeds as large as buckeyes: they carry these and other seeds to their middens, where they occasionally germinate.

California vole (*Microtus californicus*). This small, dark-gray mouse is most active by night, but may be heard at other times of the day as it travels along the runways it cuts through the grass. Voles can be distinguished from other mice by their short tails and hairy ears. They can be found wherever grass and other ground cover grows more than several inches high. Voles eat grass, as well as seeds from many plants.

Brush rabbit (*Sylvilagus bachmani*). These small brown rabbits with white tails are sometimes flushed from thick grass and shrubs. It is likely they have a permanent shelter site nearby, such as a burrow or a particularly tangled thicket, because they do not venture far from safety. Although they are active in the day, they are rarely conspicuous because the brush rabbit is prey to a great many animals.

Black-tailed deer (*Odocoileus hemionus*). Deer are plentiful in the canyon, as attested by their often-sighted footprints and scats, but their fear of human hunters makes them a relatively uncommon sight. Deer often travel in small groups, and communicate with each other by stamping their feet. The best place to see deer is along the creek, near the less accessible pools. Look for the trails that they use to travel from the hill slopes to the pools.