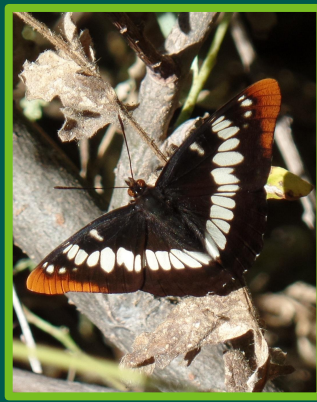
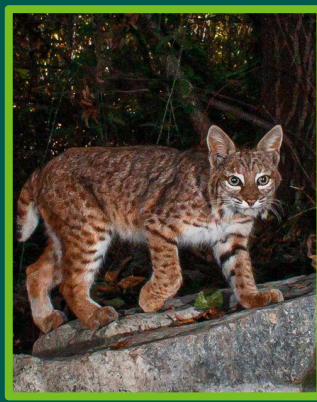




California Quail



Lorquin's admiral



Bobcat

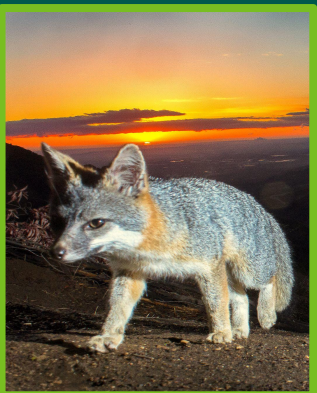


Western pond turtle

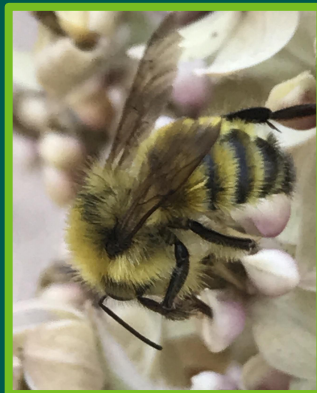


# Biodiversity Indicator Species:

## A Guide to the City of Los Angeles' Charismatic Umbrella Species



Gray fox



Bumblebee



Baja California tree frog



Western bluebird

## **Background**

This booklet has been created to raise awareness about the presence and distribution of the City of Los Angeles's biodiversity indicator species. This booklet presents information on each of the City's 37 charismatic indicator species. A photo, information on habitat, diet, common predators, and behaviors is included for each species. This booklet also provides useful observation tips, range maps, and suggestions for places to visit in the City to observe each species. If you are able to observe and photograph these species in the wild, please upload your photos to the [iNaturalist app](#).

Please remember to be respectful when observing species in this booklet. Please follow posted park rules, stay on dedicated trails, and use binoculars or cameras to safely observe organisms from a distance.

## **Acknowledgements**

This booklet was created by five students at UCLA: Shaan Chima, Ankeen Dajadiae, Ryan Kinzel, Pedro A. Perez, and Adam Pingatore. The students were given guidance by UCLA Lecturer, Alison Lipman; UCLA Ph.D. candidate, Joseph Curti; and LA Sanitation & Environment's Biodiversity Lead, Michelle Barton. Pedro A. Perez led the effort, researching and designing the booklet, Shaan Chima assisted with research and helped edit and refine this booklet, and Adam Pingatore created all maps.

### **Cover page photo credits:**

- Daniel S. Cooper: Baja California tree frog, bumblebee, and Lorquin's admiral
- Nurit Katz: California quail, western bluebird, and western pond turtle
- Robert Martinez: bobcat and gray fox

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# Baja California Tree Frog

*Pseudacris hypochondriaca*



Photo: Daniel S. Cooper



**Amphibian**

## **Fun Fact:**

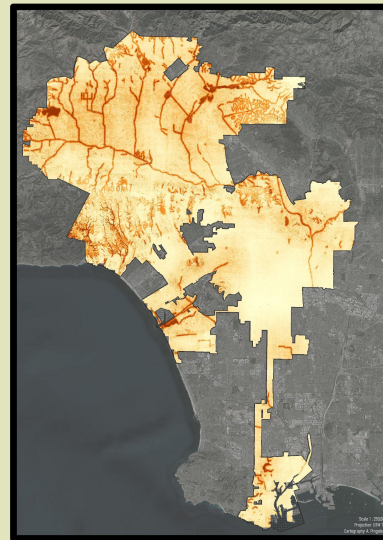
Baja California tree frogs are the only western frogs to make the classic "ribbet" sound that has been popularized by Hollywood

### **Habitat:**

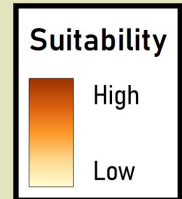
Baja California tree frogs live in forests, woodlands, grasslands, pastures, oases, desert streams, and urban areas.

### **Observation Tips:**

- Found in Lake Balboa, Northridge, and Hollywood
- Can change colors in different temperatures and humidities



*Areas in LA with habitat suitable for this species*



### **Diet:**

Baja California tree frogs primarily eat at night, but they can be seen eating during the day during the breeding season.

As tadpoles, they eat:

- Algae
- Bacteria
- Debris
- Protozoa

As adults, they eat:

- Invertebrates

### **Predators:**

If they feel threatened, Baja California tree frogs will jump long distances or hop into water and swim to hiding spots to evade predators. They may also use their ability to change their body color to avoid being spotted.

Predators include:

- Bullfrogs
- Raccoons
- Snakes

### **Baja California Tree Frog Behavior:**

- Nocturnal during dry season, but may still be observed during the day
- Rarely seen in the water unless evading a predator
- Territorial over breeding grounds
- Males use vocalizations as mating calls and to intimidate other males
- Can coordinate their vocalizations to make a "frog chorus"
- Primarily sing in the spring, but can be heard year round
- Usually live alone as adults

# Black-bellied Slender Salamander

*Batrachoseps nigriventris*



Photo: Daniel S. Cooper



Amphibian

## Fun Fact:

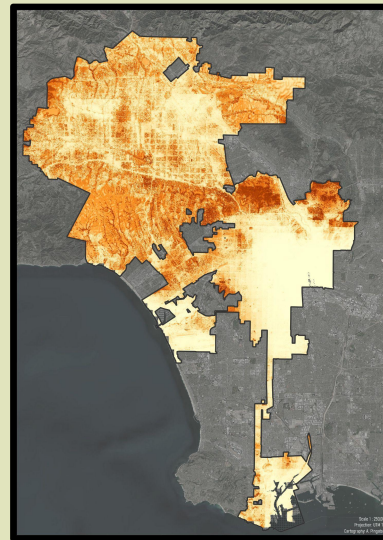
Black-bellied slender salamanders can detach their tails to distract predators.

**Habitat:**

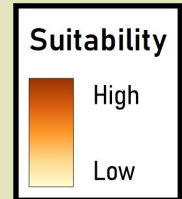
Black-bellied slender salamanders live in oak woodlands, chaparral, oak/pine forests, and along streams.

**Observation Tips:**

- Live in the San Fernando Valley and in the Santa Monica Mountains
- Active in rainy/moist weather
- Often found under rocks, logs, and debris



*Areas in LA with habitat suitable for this species*



**Diet:**

Black-bellied slender salamanders shift their diets from primarily aquatic prey to aerial prey as they age. They mainly feed above water but, as temperatures increase, they will begin hunting underwater.

They eat:

- Aquatic worms
- Crayfish
- Flies
- Butterflies

**Predators:**

When attempting to escape a predator, black-bellied slender salamanders can detach their tails to distract their aggressor. If caught, they may attempt to bite the predator in order to free themselves.

Predators include:

- Short-tailed shrews
- Crayfish
- Garter snakes
- Spring salamanders

**Black-bellied Slender Salamander Behavior:**

- Nocturnal when young, but not as adults
- Use burrows made by other animals, or hide under debris, to breed
- Only visit the surface in rainy seasons
- Hide underground when temperatures rise
- Aggressively guard territories

# Western Toad

*Anaxyrus boreas*



Photo: Jesse Rorabaugh  
(inaturalist.org)



**Amphibian**

## **Fun Fact:**

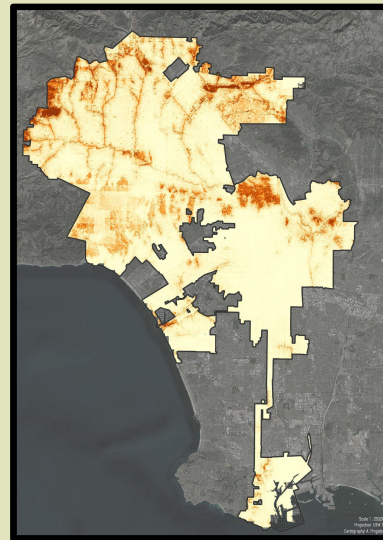
During the breeding season, western toad males will make peeping sounds that sound like geese.

### **Habitat:**

Western toads can live in a variety of habitats like marshes, springs, meadows, woodlands, forests, lakes, deserts, etc.

### **Observation Tips:**

- Observable in the Santa Monica Mountains and Lake Balboa
- Vocalize during the day and at night



*Areas in LA with habitat suitable for this species*

### **Diet:**

Western toads rely primarily on their eyesight to hunt. After locating prey, toads will use their sticky tongues to capture prey.

As tadpoles, they eat:

- Algae

As adults, they eat:

- Bees
- Ants
- Crayfish
- Grasshoppers

### **Predators:**

To defend themselves, western toads produce poison that is secreted through their skin. Being nocturnal also reduces their risk of predation.

Predators include:

- Birds
- Fish
- Mammals

### **Western Toad Behavior:**

- Active during the daytime in winter, but nocturnal in summer
- Bask in the sun to control body temperature
- More active during the day in humid conditions
- Very slow – typically hop and crawl to move
- Territorial over breeding sites

# Acorn Woodpecker

*Melanerpes formicivorus*



Photo: Nurit Katz



Bird

## Fun Fact:

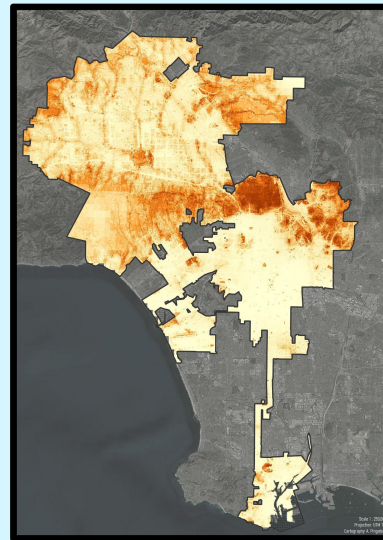
Acorn woodpeckers can store up to 50,000 acorns in a single tree.

### **Habitat:**

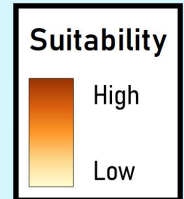
Acorn woodpeckers can be observed in oak and pine-oak woodlands, forests, urban parks, suburban areas, etc.

### **Observation Tips:**

- Concentrated in Lake Balboa and the Santa Monica Mountains
- Look for acorn woodpeckers in trees, on utility poles, and near fences stuffed with acorns



*Areas in LA with habitat suitable for this species*



### **Diet:**

Acorn woodpeckers are known to store nuts in fences, utility poles, and “storage trees” during the winter. They may also store insects in crevices year-round.

They eat:

- Nuts (e.g., acorns, walnuts)
- Fruits
- Tree sap
- Insects
- Lizards

### **Predators:**

When they spot a predator, acorn woodpeckers use alarm calls to warn other woodpeckers to hide or remain still.

Predators include:

- Bobcats
- Snakes
- Hawks
- Coyotes

### **Acorn Woodpecker Behavior:**

- Active in the daytime
- Commonly seen hopping around on the ground
- Territorial against other woodpeckers
- Live in groups of over a dozen woodpeckers
- Both sexes make drumming sounds in territorial conflicts
- Females may destroy the eggs of other female woodpeckers

# California Quail

*Callipepla californica*



Photo: Nurit Katz



Bird

## Fun Fact:

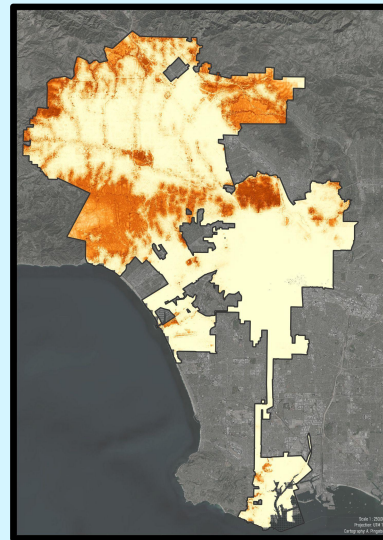
California quail derive most of the water they need from the insects and berries they consume.

### **Habitat:**

California quail tend to be found in foothills, sagebrush, chaparral. They also found in the California high desert.

### **Observation Tips:**

- Common in the Santa Monica Mountains
- Look on ground and near bushes
- Listen for *Chi-ca-go* call



Areas in LA with habitat suitable for this species

### **Diet:**

California quail can be seen walking, running, or scratching at the ground and leaves looking for seeds and other food, mainly in the morning and evening.

They eat:

- Seeds
- Flowers
- Leaves
- Berries
- Invertebrates

### **Predators:**

During daytime, California quail spend most of their time in shrubs to hide from predators. If they feel threatened, they'll run or take flight for small distances.

As adults, their predators include:

- Hawks
- Bobcats

Nest predators include:

- Snakes
- Domestic cats
- Squirrels

### **California Quail Behavior**

- Usually nest on the ground under shrubs or next to logs that provide cover
- Young quails can walk and feed themselves almost immediately after hatching
- Like to forage in groups
- Male and female alternate calls

# Canyon Wren

*Catherpes mexicanus*



Photo: Nurit Katz



Bird

## Fun Fact:

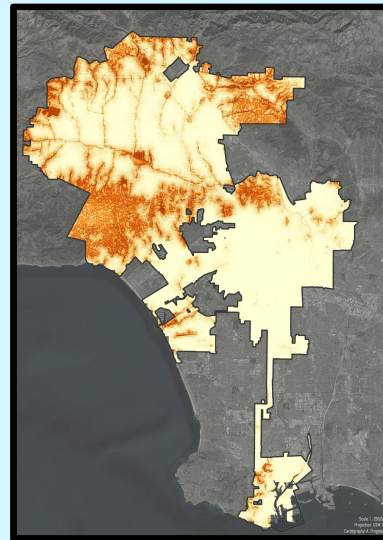
Canyon wrens are one of just a few songbirds in Los Angeles with a call that uses descending tones

### **Habitat:**

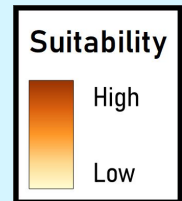
Canyon wrens reside in areas with cliffs, steep canyons, talus slopes, rocky outcrops, and boulder piles.

### **Observation Tips:**

- Observable in Topanga State Park and Santa Susana Pass State Historic Park
- Listen for their song



*Areas in LA with habitat suitable for this species*



### **Diet:**

Canyon wrens hop around to forage during the day, using their long bills to reach into crevices in rocks. They tend to forage in sheltered spots such as under rocks.

They eat:

- Spiders
- Other insects

### **Predators:**

If threatened by other wrens, canyon wrens will act aggressively and attempt to chase them away. Canyon wrens are also quick and can evade predators by hiding under rocks or blending into the habitat.

Predators include:

- Snakes
- Wild cats
- Falcons and hawks
- Rock squirrels

### **Canyon Wren Behavior:**

- Mating pairs remain together throughout year
- Typically move using short hops, shifting from side to side
- Males attract females and defend their territories by singing
- Nest in holes or crevices in rocks or ledges in caves

# Cinnamon Teal

*Spatula cyanoptera*

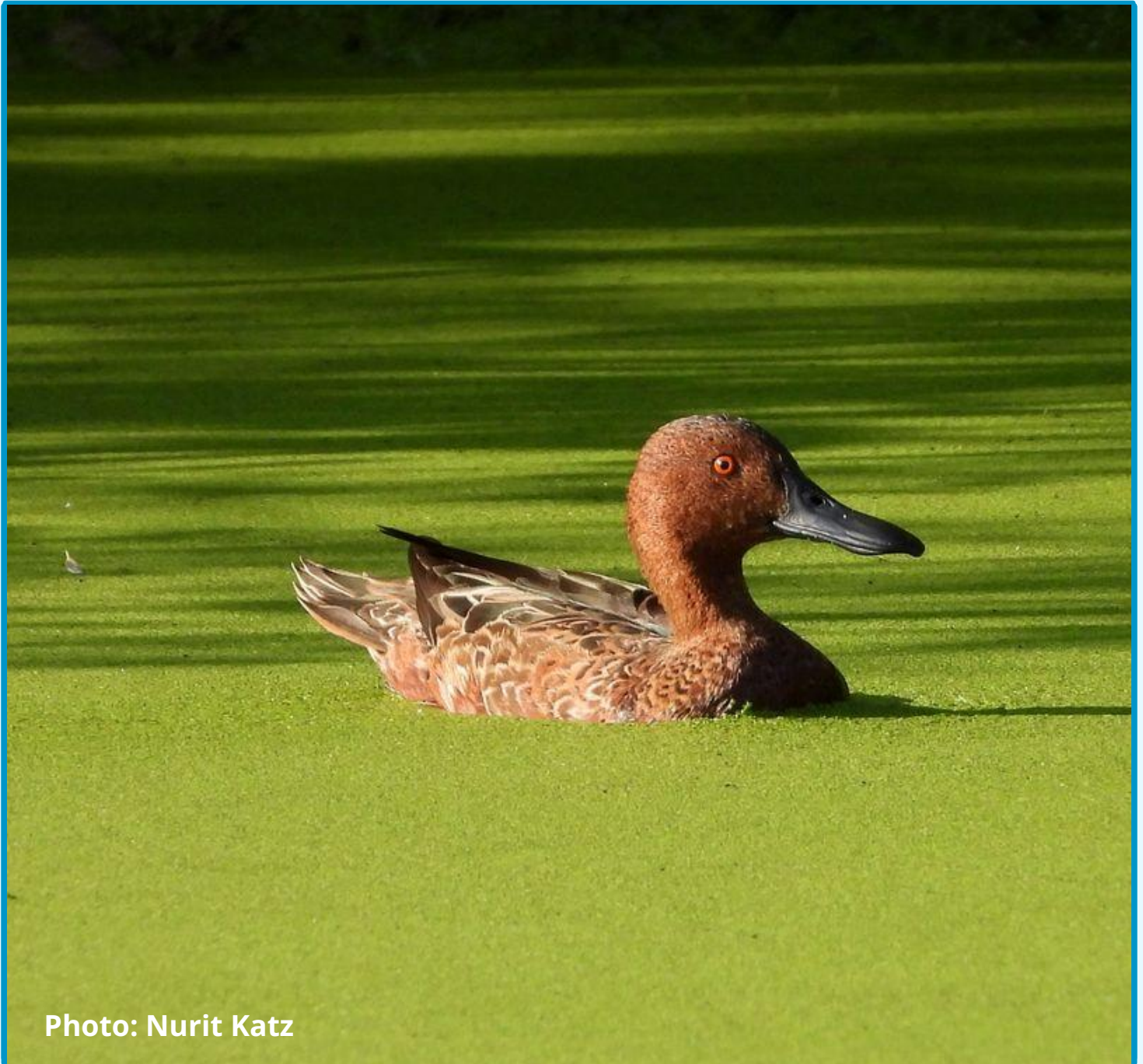
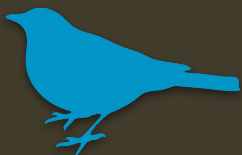


Photo: Nurit Katz



**Bird**

## **Fun Fact:**

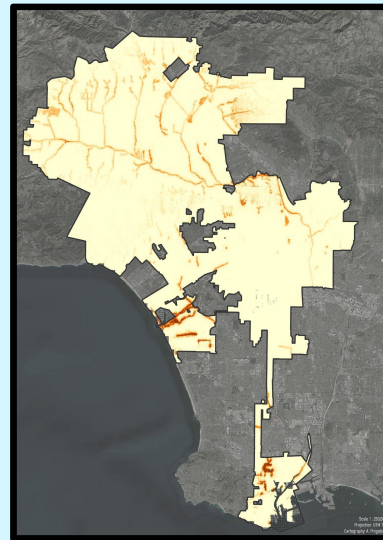
Cinnamon teal nests are usually concealed below matted, dead vegetation stems and only accessible through tunnels

### **Habitat:**

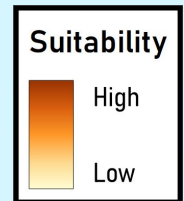
Cinnamon teal are found in areas with abundant vegetation, marshes, streams, water reservoirs, and stock ponds.

### **Observation Tips:**

- Observable at the Ballona Freshwater Marsh and along the LA River
- Look for them at wetland edges



*Areas in LA with habitat suitable for this species*



### **Diet:**

Cinnamon teals feed during the daytime at the water's surface by rapidly opening and closing their bills.

They eat:

- Seeds
- Zooplankton
- Insects
- Aquatic vegetation

### **Predators:**

If there's a predator nearby, cinnamon teal females will create a disturbance to draw the predator away from the nest. Males usually circle the nesting site while females protect it directly.

Nest predators include:

- Ravens and crows

Adult predators include:

- Foxes
- Raccoons
- Wild dogs and cats

### **Cinnamon Teal Behavior:**

- Exhibit courtship displays
- Form mating pairs that usually consist of one male and one female, but some males may mate with multiple females during a season
- Males typically guard a small territory around the nest including the female's favorite resting area
- Males start guarding females as soon as nest construction begins and continue guarding until the incubation period ends

# Great Blue Heron

*Ardea herodias*



Photo: Nurit Katz



Bird

## Fun Fact:

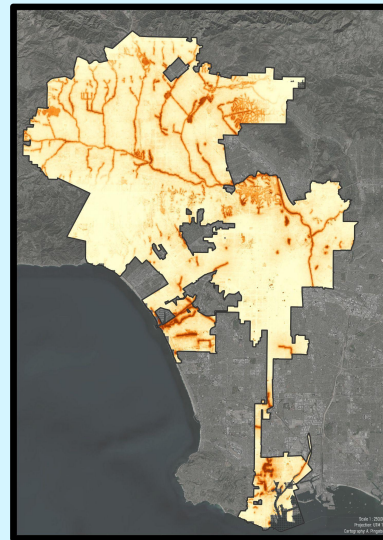
Thanks to their specialized neck vertebrae, great blue herons can curve their necks into s-shapes when hunting

### **Habitat:**

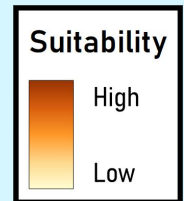
Great blue herons can be observed near saltwater and freshwater marshes, sloughs, open coasts, riverbanks, lakes, grasslands, backyard ponds, etc.

### **Observation Tips:**

- Commonly seen near Lake Balboa, Hansen Dam, and along the LA River
- Look for stick nests in tall trees during the nesting season



*Areas in LA with habitat suitable for this species*



### **Diet:**

Because of their night vision, great blue herons can hunt at day and night. Herons use their beaks to impale fish, grab small animals, and break the spines of their prey.

They eat:

- Fish
- Amphibians
- Mammals
- Insects

### **Predators:**

Great blue herons can jab aggressors using their large, thick bills.

As adults, their predators include:

- Hawks
- Bears
- Raccoons
- Eagles
- Turkey vultures

Nest predators include:

- Crows
- Ravens

### **Great Blue Heron Behavior:**

- Stand completely still when hunting
- Begin constructing nests in February
- Droop wings, open mouths, and flutter throats to cool body temperature
- Have elaborate mating displays like stick transfers and greeting rituals
- The species is territorial and will aggressively defend feeding sites
- Throw their heads back, stretch their wings, and look up to intimidate other herons

# Greater Roadrunner

*Geococcyx californianus*



Bird

## Fun Fact:

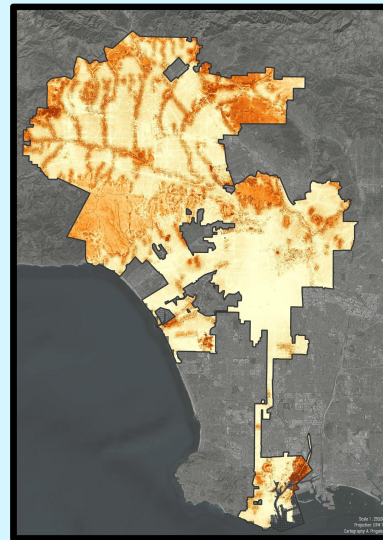
The greater roadrunner is the only bird species in LA that can run at speeds up to 15 miles per hour.

### **Habitat:**

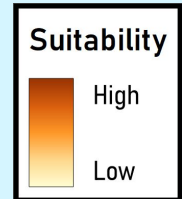
Greater roadrunners are found in grasslands, woodlands, canyons, and chaparral.

### **Observation Tips:**

- Observable in Santa Susana Pass State Historic Park and at Angeles National Golf Club.
- Look near bushes on the ground



*Areas in LA with habitat suitable for this species*



### **Diet:**

Greater roadrunners use their beaks to peck snakes to death. They also slam larger prey against rocks or the ground to break their bones, making prey easier to swallow.

They eat:

- Small mammals
- Frogs
- Insects
- Reptiles
- Birds

### **Predators:**

Greater roadrunners fly in short bursts if threatened by predators. They may erect their crest and flash an orange patch of skin to display dominance.

Predators include:

- Hawks
- Coyotes
- Raccoons

### **Greater Roadrunner Behavior:**

- Males distract potential nest predators by running away from the nest while flashing blue and red colored patches on sides of head
- Use tails to keep their balance while running
- Mating pairs can stay together for life. Each year, pairs perform courting rituals to renew their partnership
- Can kill western rattlesnakes, another indicator species, with their beaks
- Typically avoid heavily forested/densely populated areas

# Great Horned Owl

*Bubo virginianus*



Photo: Nurit Katz



**Bird**

## **Fun Fact:**

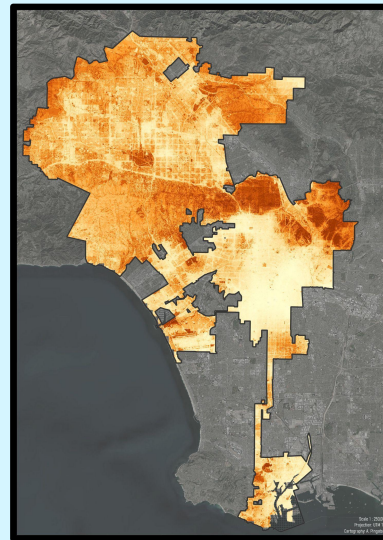
Crows harass great horned owls by mobbing around them for hours at a time

### **Habitat:**

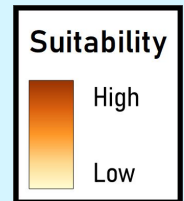
Great horned owls typically live in secondary-growth woodlands, swamps, agricultural areas, forests, cities, suburban areas, wooded parks, etc.

### **Observation Tips:**

- Found in the San Fernando Valley and Central LA
- Mostly active at dusk



*Areas in LA with habitat suitable for this species*



### **Diet:**

Great horned owls primarily hunt at night, but they can occasionally be seen hunting in the day. They typically search for prey from perches, but may hunt smaller animals on the ground.

They eat:

- Mice
- Rabbits
- Squirrels
- Birds
- Snakes

### **Predators:**

If threatened, great horned owls will hiss, scream, spread their wings, or strike the threat with their feet.

Predators include:

- Foxes
- Coyotes
- Raptors

### **Great Horned Owl Behavior:**

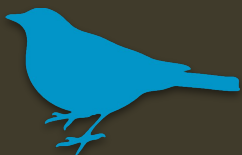
- Mostly active at night, especially near dusk and dawn
- Make nests in thick brush, trees, and on man-made structures
- Territorial against other owls
- Have monogamous pairings

# Hooded Merganser

*Lophodytes cucullatus*



Photo: Nurit Katz



Bird

## Fun Fact:

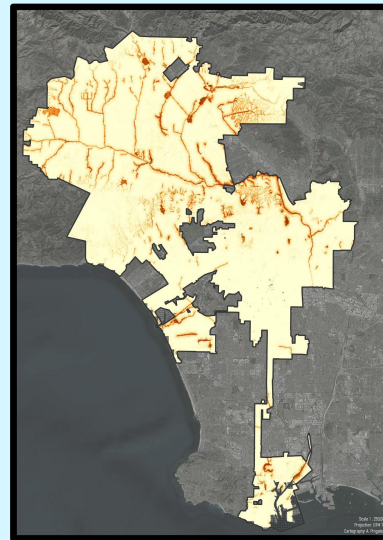
Hooded mergansers are one of the fastest flying ducks in LA! They can reach speeds of up to 50 mph

**Habitat:**

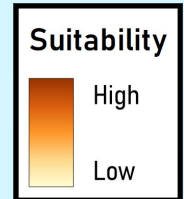
Hooded mergansers are typically found in spruce-fir, pine-hardwood, cottonwood, and oak-cypress forests.

**Observation Tips:**

- Common near the Hollywood Reservoir and along the Los Angeles River
- Look for nests in logs, tree stumps, and tree cavities



*Areas in LA with habitat suitable for this species*



**Diet:**

Hooded mergansers usually hunt by diving into the water. They may also submerge their heads underwater while paddling to search for prey.

They eat:

- Aquatic insects
- Small fish
- Crustaceans
- Amphibians
- Mollusks
- Vegetation

**Predators:**

If hooded mergansers are startled or threatened by predators, they will fly away to a safer location. Females may perform a “broken wing display” to lure predators away from their nest.

As adults, their predators include:

- Rat snakes
- Black bears
- Raccoons

Nest predators include:

- Woodpeckers
- European starlings

**Hooded Merganser Behavior:**

- Young can leave nests within 24 hours of hatching and are able to find their own food, but females still typically care for young for a few weeks
- Typically solitary except during mating and migrating
- Calls made by males during mating season can be heard up to half a mile away

# Northern Harrier

*Circus hudsonius*



Photo: Dario  
(inaturalist.org)



Bird

## Fun Fact:

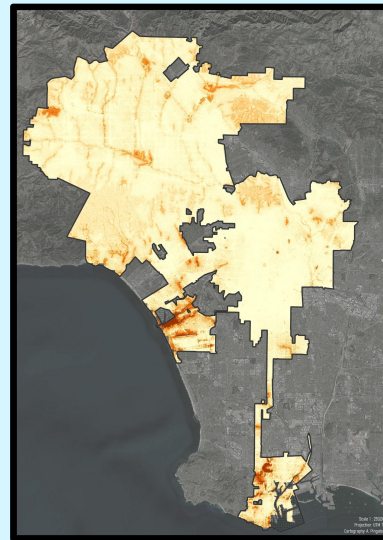
Female northern harriers will dive at humans that approach their nests

**Habitat:**

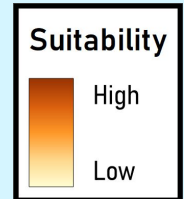
Northern harriers are found in areas with wetlands, grasslands, fields, meadows, woodlands, etc.

**Observation Tips:**

- Seen in Ballona Wetlands Ecological Reserve and White Point Nature Education Center
- Look for nests hidden in shrubs and clumps of vegetation



*Areas in LA with habitat suitable for this species*



**Diet:**

Northern harriers have a facial structure that allows them to locate prey by sound. They fly low to the ground and hunt during daytime.

They eat:

- Small mammals
- Amphibians
- Birds
- Reptiles

**Predators:**

If threatened by predators, northern harriers will act aggressively and attack with closed talons and sound distress calls.

Predators include:

- Feral dogs
- Raccoons
- Coyotes
- Red foxes
- Great horned owls

**Northern Harrier Behavior:**

- Males have one or two mates, or more, depending on food availability
- Males perform sky-dancing displays to attract females and advertise territory
- Both males and females defend nests

# Red-tailed Hawk

*Buteo jamaicensis*



Photo: Nurit Katz



Bird

## Fun Fact:

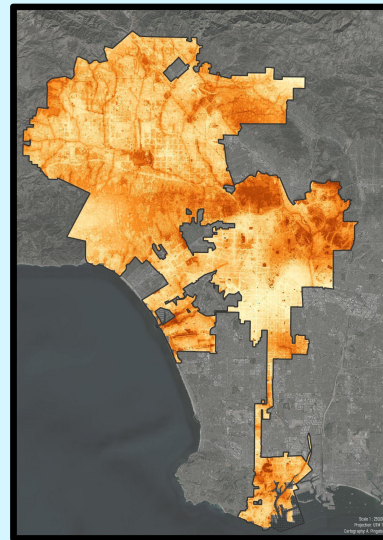
Red-tailed hawks are the second largest and most widespread raptor in Los Angeles

### **Habitat:**

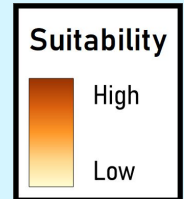
Red-tailed hawks are usually found in grasslands, scrublands, deserts, field, pastures, parks, etc.

### **Observation Tips:**

- Seen at Ballona Wetlands, Elysian Park, and in the Santa Monica Mountains
- Listen for two to three second long screeches



*Areas in LA with habitat suitable for this species*



### **Diet:**

Red-tailed hawks soar over open areas searching for small prey. Their excellent eyesight allows them to detect the smallest movements in the grass.

They eat:

- Small rodents
- Rabbits
- Squirrels
- Pheasants
- Snakes

### **Predators:**

As adults, red-tailed hawks defend themselves against predators by using their large, sharp talons. Most predation of the species occurs on nestlings or eggs

Predators include:

- Great horned owls
- Crows

### **Red-Tailed Hawk Behavior:**

- Soar in circles at great heights
- Pairs may hunt together
- Can chase off other hawks, eagles, and great horned owls
- Form monogamous pairs that remain together until one of them dies
- Typical territories are around two square miles
- Males patrol and defend their territories
- Females stay at nests and defend the young

# Red-winged Blackbird

*Agelaius phoeniceus*



Photo: Nurit Katz



Bird

## Fun Fact:

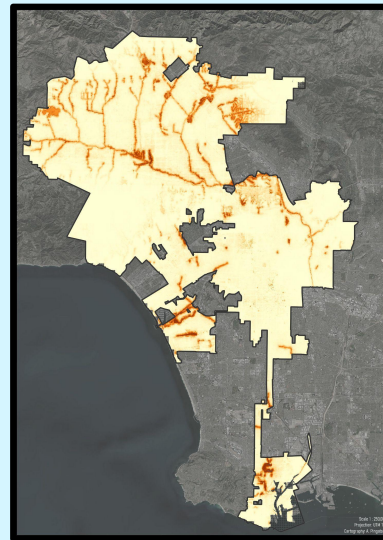
Red-winged blackbirds can hide or fluff their colored shoulder feathers

### **Habitat:**

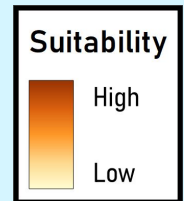
Red-winged blackbirds can inhabit wetlands, fresh and saltwater marshes, wet roadsides, pasture, grasslands, streams, drier fields, etc.

### **Observation Tips:**

- Can be observed in Lake Balboa and South LA
- Listen for their *conk-la-lee* call



Areas in LA with habitat suitable for this species



### **Diet:**

Red-winged blackbirds primarily eat seeds in the winter, but their diets shift to mainly insects over the summer.

They eat:

- Frogs
- Snails
- Spiders
- Flies
- Cocklebur
- Ragweed

### **Predators:**

Both male and female red-winged blackbirds will defend their nests from predators.

Predators include:

- Owls
- Raptors
- Raccoons

### **Red-winged Blackbird Behavior:**

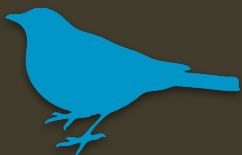
- Sing on perches high above their territories during breeding seasons
- Aggressively territorial
- Five to 15 females can live in one male's territory
- Females often mate with territory holders, but not always

# Spotted Towhee

*Pipilo maculatus*



Photo: Nurit Katz



Bird

## Fun Fact:

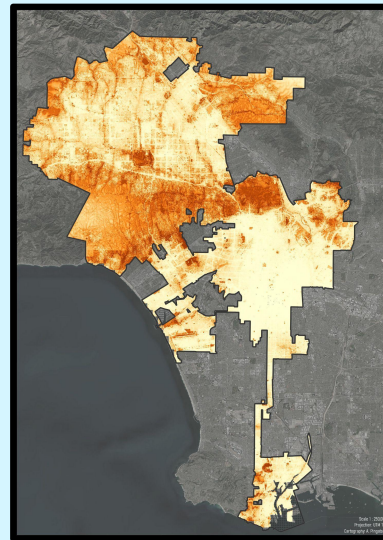
Spotted towhee males may spend up to 70-90% of each morning singing to attract females during early breeding season

### **Habitat:**

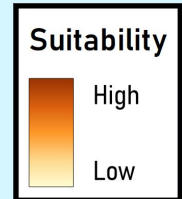
Spotted towhees are usually found in brushy tangles, dry thickets, shrubby backyards, chaparral, canyons, and along forest edges.

### **Observation Tips:**

- Can be found in the Santa Monica Mountains
- Listen for rustling leaves



*Areas in LA with habitat suitable for this species*



### **Diet:**

Spotted towhees search for food during daytime by scratching at leaves. When hunting, they hop backwards on both feet and then pounce on their prey.

They eat:

- Berries
- Seeds
- Caterpillars
- Grasshoppers
- Wasps and bees
- Other insects

### **Predators:**

Adult spotted towhees will fly away to a nearby tree or bush when threatened by a predator. As spotted towhees nest on the ground, their nestlings and eggs are subject to predation.

Some predators for nests include:

- Hawks
- Cowbirds
- Western-scrub jays
- Raccoons
- Snakes

### **Spotted Towhee Behavior:**

- Settle conflicts by carrying a piece of bark, twig, or leaf in their beaks, which is considered a sign of submission
- Flick their wings and flash white corners of tail when alarmed
- Males sing to defend territory
- Males may chase females during courtship
- Nest on the ground under shrubs or in low bushes

# Western Bluebird

*Sialia mexicana*



**Bird**

## **Fun Fact:**

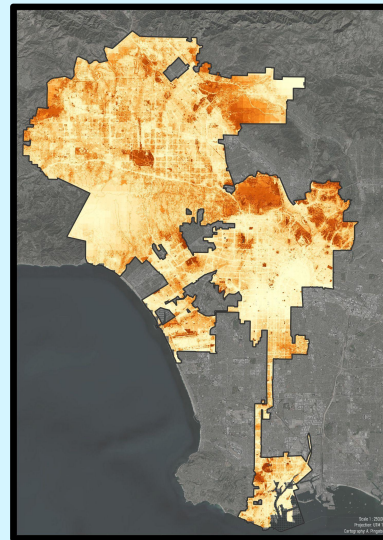
Western bluebirds rely on woodpeckers and natural processes to make nest cavities in trees since they aren't able to create cavities themselves

### **Habitat:**

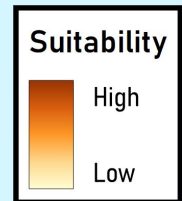
Western bluebirds can be found in open woodlands, evergreens, deciduous woods, burned forests, logged areas, neighborhood parks, etc.

### **Observation Tips:**

- Observable in Central LA and the San Fernando Valley
- Perch on fences and utility lines



*Areas in LA with habitat suitable for this species*



### **Diet:**

The western bluebird diet changes seasonally. Western bluebirds mostly eat insects during the summer and switch to fruits and seeds in the winter.

They eat:

- Caterpillars
- Grasshoppers
- Sumac
- Elderberries

### **Predators:**

A lot of western bluebirds don't make it past their first year due to predation and also harsh environmental conditions during the nesting period.

Nest predators:

- Chipmunks
- Squirrels
- Deer mice
- Raccoons

Adult Predators:

- Large birds
- Wild cats

### **Western Bluebird Behavior:**

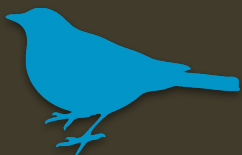
- When hunting, scan ground from perches and then dive abruptly to catch their prey
- Social species that can have a flocks of up to 100 individuals
- One male pairs with one female for the breeding season each year
- Pairs, males, or young individuals will go to nests of other bluebirds in community to help raise young

# Western Meadowlark

*Sturnella neglecta*



Photo: Nurit Katz



Bird

## Fun Fact:

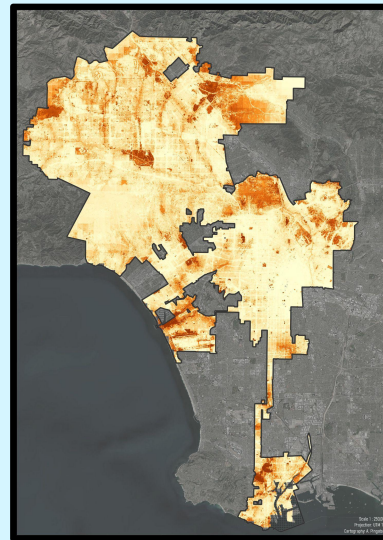
Western meadowlarks may abandon their nests if humans approach it during the incubation period

### **Habitat:**

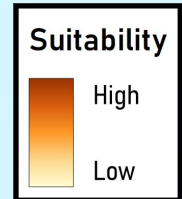
Western meadowlarks can be found in grasslands, meadows, prairies, and agricultural fields.

### **Observation Tips:**

- Seen at Ballona Wetlands and Balboa Lake
- Look for a flash of yellow on the ground



*Areas in LA with habitat suitable for this species*



### **Diet:**

Western meadowlarks mostly forage during daytime on the ground. They have a seasonal dietary period, preferring grain and seeds during warmer months and insects during colder months.

They eat:

- Seeds
- Wild grain
- Insects
- Roadkill carcasses (during hard winters)

### **Predators:**

Western meadowlarks draw predators away from their nest by using a display where they spread their wings and tail feathers.

Predators include:

- Skunks
- Foxes
- Hawks
- Coyotes
- Raccoons
- Domestic cats and dogs

### **Western Meadowlark Behavior:**

- Set up nesting territories in the spring
- Males will chase intruders away in pursuit flights of up to three minutes
- Males can spend up to a month defending breeding territory until female shows up
- Males usually mate with two females in the breeding season and will provide food and care for both
- Males sing to claim and defend territory

# Behr's Metalmark

*Apodemia virgulti*



Photo: Daniel S. Cooper



Invertebrates

## Fun Fact:

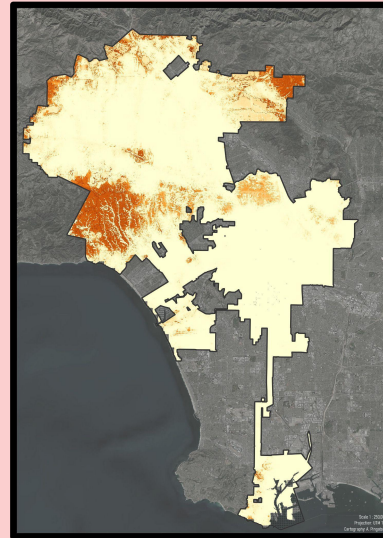
Behr's metalmark caterpillars hibernate within plant parts, such as dried flower heads of host buckwheat plants.

**Habitat:**

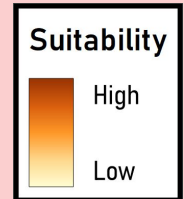
Behr's metalmark butterflies are found across various arid lands in California.

**Observation Tips:**

- Seen in the Santa Monica Mountains
- Look near host buckwheat plants



Areas in LA with habitat suitable for this species



**Diet:**

Behr's metalmarks tend to perch on host buckwheat plants throughout the day while feeding on them.

Diet as caterpillars:

- Leaves and stems of host plants

Diet as adults:

- Nectar of host plants

**Predators:**

Behr's metalmark have dark brown and orange coloration that helps them blend in with the environment. Their white spots stand out and can warn approaching predators to stay back.

Predators include:

- Birds
- Lizards

**Sara Orangetip Behavior:**

- Buckwheats (*Eriogonum* sp.) are the butterfly's preferred host plants around Los Angeles
- Males perch on host plants or in hollows on big rocks to attract females
- Females lay their eggs in groups of 2-4 on the lower leaves of host plants
- Caterpillars rest during the daytime in shelters made by leaves tied together using silk
- Low and rapid flyers

# Bumblebee

*Bombus* sp.

Certain *Bombus* sp. endangered



Photo: Graham Montgomery



Invertebrates

## Fun Fact:

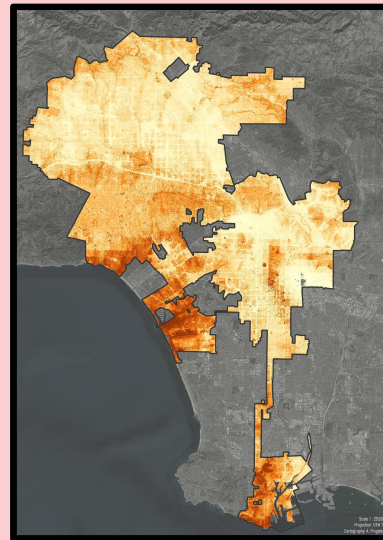
Bumblebees don't make honey

**Habitat:**

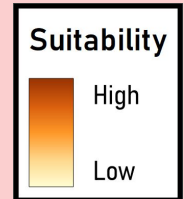
Bumblebees live in mountain habitats, coastal plains, etc.

**Observation Tips:**

- Can be found at the Ballona Wetlands and in the Sepulveda Basin Recreation Area
- Look near flowers and agricultural plants, like tomatoes and blueberries



*Areas in LA with habitat suitable for this species*



**Diet:**

Because of their diverse tongue sizes, bumblebees can reach into various plants to feed on pollen.

They eat:

- Flower nectar
- Pollen

**Predators:**

Bumblebees use their stingers to attack aggressors. Because their stingers aren't barbed, they are able to attack perceived threats multiple times. (Humans are typically unlikely to get stung unless they provoke a bee.)

Predators include:

- Wood mice
- Shrews
- Badgers
- Foxes
- Birds

**Bumblebee Behavior:**

- Dance to signal to other bees that they have successfully found food
- Use wing vibrations to pollinate plants and agricultural crops
- Queens hibernate until spring and lay their eggs in the spring/summer
- Some bumblebee species are parasitic and will invade and conquer existing bee nests
- Vibrate wing muscles in their nests to generate heat to help eggs develop

# Bramble Green Hairstreak

*Callophrys dumetorum*



Photo: Daniel S. Cooper



Invertebrates

## Fun Fact:

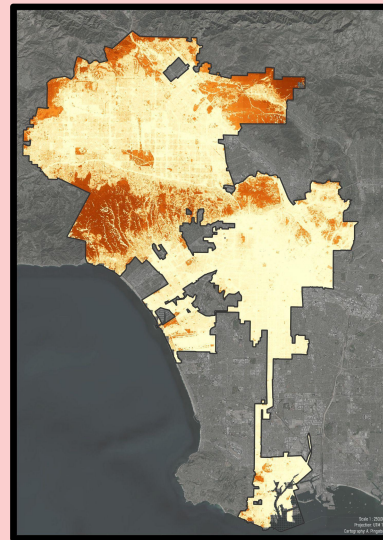
Bramble green hairstreaks only fly for three months out of the year

**Habitat:**

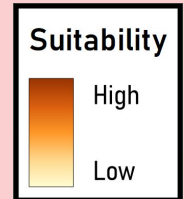
Bramble green hairstreaks can be seen in chaparral, coastal scrub, rocky foothill canyons, lower-montane chaparral, etc.

**Observation Tips:**

- Found in the Greater Wilshire neighborhood and Topanga State Park
- Begin flying in the spring



*Areas in LA with habitat suitable for this species*



**Diet:**

Bramble green hairstreaks rely mainly on their host plants for food.

As caterpillars, they eat:

- Leaves
- Flowers
- Fruit

As adults, they eat:

- Nectar from host plants
- Buckwheat
- Desert parsley

**Predators:**

Butterflies generally rely on their ability to blend into their environment to avoid predators. They may also use bright colors on their body to prevent predators from eating them since those colors usually signal to potential predators that an animal is toxic.

Some butterfly predators include:

- Birds
- Lizards

**Bramble Green Hairstreak Behavior:**

- Males are territorial and will guard their perches
- Males typically perch near host plants for entire days, waiting for females to arrive

# El Segundo Blue Butterfly

*Euphilotes battoides ssp. allyni*

Endangered Species<sup>5</sup>



Photo: Daniel S. Cooper



Invertebrates

## Fun Fact:

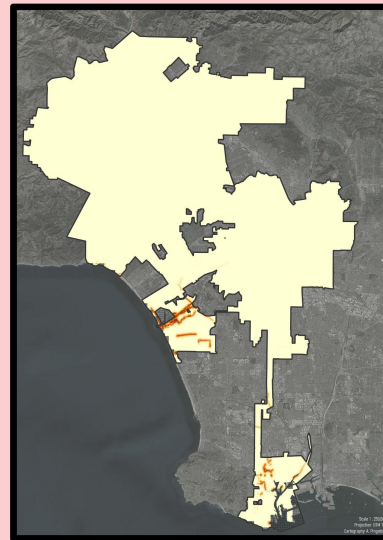
Adult El Segundo blue butterflies only live for 4-14 days

**Habitat:**

El Segundo blue butterflies are only observable at the El Segundo Dunes.

**Observation Tips:**

- Hibernate through the winter as pupa, but generally begin flight in mid-June



*Areas in LA with habitat suitable for this species*

**Diet:**

The feeding habits of the El Segundo blue butterfly revolve exclusively around its host plant, seacliff buckwheat.

As larvae, they eat:

- Seacliff buckwheat flower heads

As adults, they eat:

- Seacliff buckwheat pollen
- Seacliff buckwheat nectar

**Predators:**

Typically, butterflies utilize the ability to camouflage into their environment to avoid threats. Butterflies can also use bright body colors to keep predators away since these colors are a sign of toxicity.

Some butterfly predators include:

- Birds
- Lizards

**El Segundo Blue Butterfly Behavior:**

- The life cycle of the species closely follows the life cycle of its main host plant, the seacliff buckwheat
- Generally emerge from hibernation between mid-June and September
- Only remain active for about a month before returning to a state of hibernation

# Harvester Ants

*Pogonomyrmex* spp.



Photo: Graham Montgomery



Invertebrates

## Fun Fact:

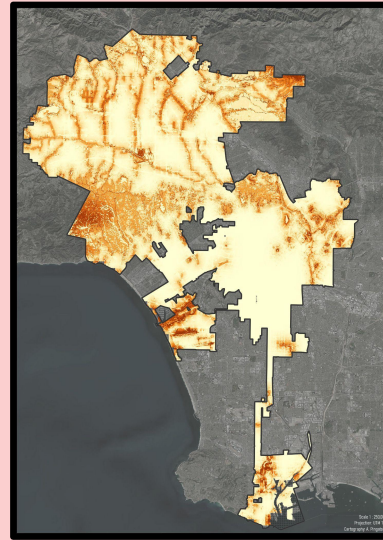
Harvester ants seal the entrance to their nest every evening to keep intruders out

### **Habitat:**

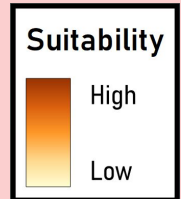
Harvester ants inhabit open grasslands, areas with clay loam soils, wooded areas, etc.

### **Observation Tips:**

- Widespread in LA
- Observable at Lake Balboa and Hansen Dam
- Typically there are large unvegetated patches surrounding their nests



*Areas in LA with habitat suitable for this species*



### **Diet:**

Because they seal their nests at night, harvester ants only look for food during the day. They prefer seeds, and are known to hoard them in large quantities.

They eat:

- Seeds
- Barley
- Various grasses
- Dead insects

### **Predators:**

Harvester ants use powerful stings to defend themselves against predators. Their venom can spread in the lymph channels of their attacker.

Predators include:

- Lizards
- Frogs
- Toads
- Birds
- Wasps
- Antlions

### **Harvester Ant Behavior:**

- Never active at night
- Worker ants care for young, expand nests, and search for food
- Females may mate with multiple males before leaving to start new colonies
- Deposit waste and dead ants in dedicated sections of nest middens

# Lorquin's Admiral

*Limenitis lorquini*



Photo: Daniel S. Cooper



Invertebrates

## Fun Fact:

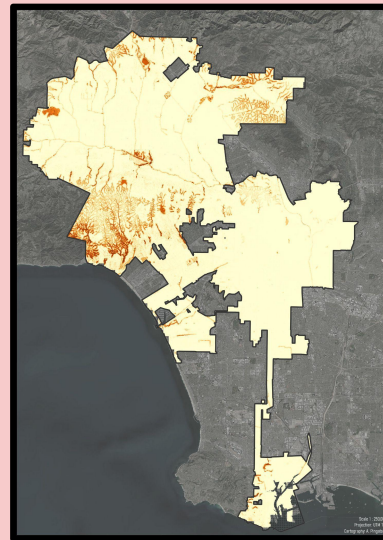
The Lorquin's admiral is named after Pierre Joseph Michel Lorquin, a French naturalist who came to California during the Gold Rush

**Habitat:**

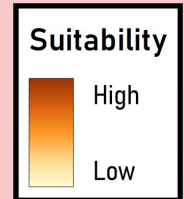
Lorquin’s admirals can be found in mountain canyons, urban parks, gardens, deciduous woodlands, cottonwood groves, and along southern California forest edges

**Observation Tips:**

- Observable at Exposition Park, Lake Balboa, and Hansen Dam
- Typically begin flight in April



*Areas in LA with habitat suitable for this species*



**Diet:**

Lorquin’s admirals have diverse diets that change depending on the phase of their life cycle.

As larvae, they feed on:

- Willow
- Cottonwood
- Orchard trees

As adults, they eat:

- Nectar
- Sap
- Privet
- California buckeye

**Predators:**

Butterflies can utilize their camouflage to avoid predation or bright body coloration as a defensive tactic. Bright colors on an animal usually signal that an animal is toxic, which makes some predators avoid them.

Predators include:

- Birds
- Lizards

**Lorquin’s Admiral Behavior:**

- Aggressively territorial and attack anything perceived as a threat
- Males typically perch on shrubs to await the arrival of a female
- Males may patrol the area in search of a female
- Lay eggs on the tips of the leaves of their host plants

# North American Jerusalem Crickets

*Ammopelmatus* sp.



Invertebrates

## Fun Fact:

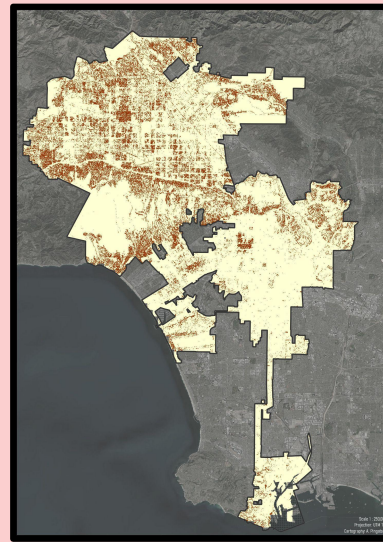
North American Jerusalem crickets are one of the heaviest insect species found in Los Angeles

**Habitat:**

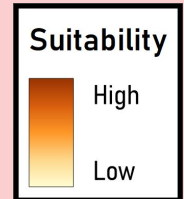
North American (NA) Jerusalem crickets are found in oak savannahs, grasslands, chaparral, and coastal and sand dunes.

**Observation Tips:**

- Can be seen all throughout LA, especially areas with bare soil
- Hard to observe since they're usually underground



*Areas in LA with habitat suitable for this species*



**Diet:**

NA Jerusalem crickets have thickened front legs that allow them to dig for food. Their jaws are also large and powerful to aid them in eating plant roots and tubers.

They eat:

- Arthropods
- Beetle larvae
- Roots and tubers
- Dead plant & animal matter

**Predators:**

Since NA Jerusalem crickets are usually underground, they don't often interact with predators. If threatened by a predator, they'll hiss and use their strong jaws to try and bite.

Some known predators are:

- Opposums
- Owls
- Foxes
- Rodents

**North American Jerusalem Cricket Behavior:**

- Can move quickly and are good at climbing
- Tend to be nocturnal
- Jaws are strong enough to pierce human skin and draw blood
- Take almost two years after hatching to hit maturity
- Lay their eggs underground

# Sara Orangetip

*Anthocharis sara*



Photo: Phytographer  
(inaturalist.org)



Invertebrates

## Fun Fact:

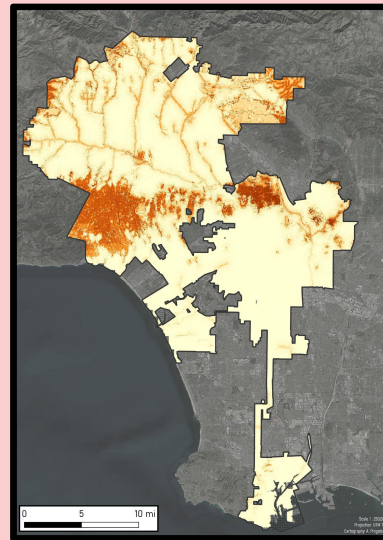
The sara orangetip butterfly species is endemic to California

### **Habitat:**

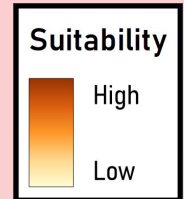
Sara orangetip butterflies are found in orchards, fields, meadows, canyons, hilly oak woodlands, and along streamcourses.

### **Observation Tips:**

- Can be seen in the Santa Monica Mountains
- Look near host mustard & milkmaid plants



Areas in LA with habitat suitable for this species



### **Diet:**

Sara orangetips can be often seen flying through fields in the hills. They tend to feed in the daytime.

Their diet as caterpillars:

- Flower buds of host plants

Diet as adults:

- Nectar of host plants

### **Predators:**

Sara orangetip butterflies have bright orange spots that help ward off potential predators. These spots warn predators to not eat them and signal toxicity.

Some known predators are:

- Birds
- Lizards

### **Sara Orangetip Behavior:**

- Males usually patrol valleys in search of females
- Preferred host plants around Los Angeles are milkmaids (*Cardamine californica*) and western tansymustard (*Descurainia pinnata*)
- Females tend to lay eggs towards the top of host plants

# Velvet Ants

*Mutillidae (Family)*



Photo: Daniel S. Cooper



Invertebrates

## Fun Fact:

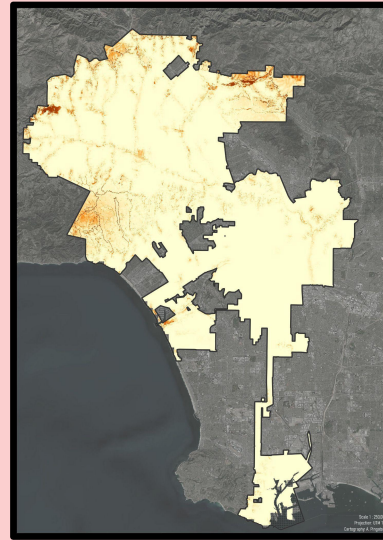
Velvet ants are actually wasps, but are called ants because females have ant-like appearances

**Habitat:**

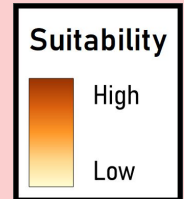
Velvet ants can be seen in scrublands, semi-arid areas, deserts, and in urban areas (e.g., cemeteries, lawns)

**Observation Tips:**

- Found near Hansen Dam and Kagel Canyon
- Listen for chirping and squeaking sounds
- \*Exercise caution near them as they sting



*Areas in LA with habitat suitable for this species*



**Diet:**

Female velvet ants are parasites to other wasps and bees.

As young, they eat:

- Larvae, pupae, and cocoons of other wasp species

As adults, they eat:

- Flower nectar

**Predators:**

When threatened, velvet ants can deliver a sting so excruciating that it earned the insect the name “cow killer”. Because of this, and other reasons, this species has very few predators. Despite this reputation, their venom is less toxic than that of honeybees or harvester ants.

Known predators are:

- Toads

**Velvet Ant Behavior:**

- Make chirping and squeaking noises before delivering stings
- Not aggressive, but will sting if held or stepped on
- Females overtake the nests of other species by force
- Attack other insects and lay their eggs in the cells of those insects
- Feed on the bodies of other insects as they develop

# Bobcat

*Lynx rufus*



Photo: Robert Martinez



Mammals

## Fun Fact:

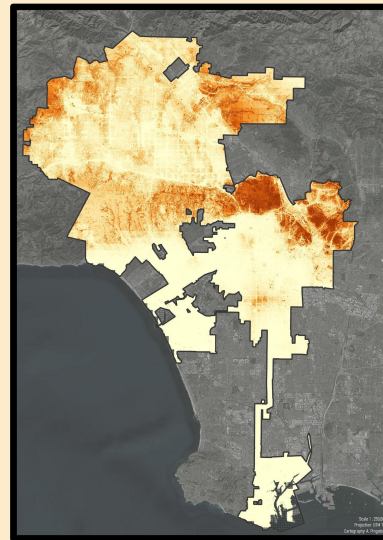
Bobcat pregnancies are typically around 62 days

### **Habitat:**

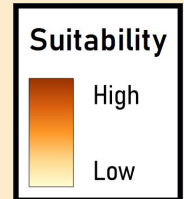
Bobcats can be found in various habitats, including forests, wetlands, deserts, mountains, grasslands, woodlands, etc.

### **Observation Tips:**

- Observable in Griffith Park and northeastern Los Angeles
- \*Exercise caution near this species



*Areas in LA with habitat suitable for this species*



### **Diet:**

Although bobcats are opportunistic and eat nearly anything they can catch, they most commonly eat small animals that weigh one and a half to two pounds.

They eat:

- Birds
- Fish
- Rodents
- Amphibians
- Reptiles

### **Predators:**

While young bobcats are vulnerable to predators, adult bobcats don't have many predators.

Predators of juveniles include:

- Owls
- Foxes
- Mountain lions
- Coyotes

As adults, predators include:

- American alligators
- Gray wolves
- American black bears

### **Bobcat Behavior:**

- Tend to be active during dusk and dawn in winter, but are nocturnal during the spring
- Very solitary. Even males and females only associate briefly during mating
- Young will leave parents when they are eight months old
- Can survive long for long periods of time without food
- During lean times, may hunt larger prey

# Dusky Footed Woodrat

*Neotoma macrotis*



Photo: Jeff Adams Stauffer  
([inaturalist.org](http://inaturalist.org))



**Mammals**

## **Fun Fact:**

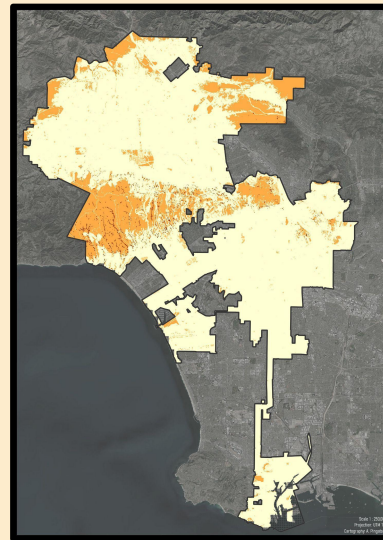
Dusky footed woodrats, and other members of the *Neotoma* family, tend to hoard shiny objects left out by humans

**Habitat:**

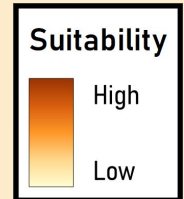
Dusky footed woodrats can be observed in chaparral, coastal sage scrub, oak, riparian woodlands, etc.

**Observation Tips:**

- Can be seen in Bel Air and at the Kenneth Hahn State Recreation Area
- Nocturnal, but occasionally active during the day



*Areas in LA with habitat suitable for this species*



**Diet:**

Dusky footed woodrats can eat 72 different types of plants. They usually get their nutrients and water intake from the vegetation they eat.

They eat:

- Blackberries
- Maul oak
- Soap plants
- Ferns
- Bracken

**Predators:**

When threatened by predators or other woodrat males, dusky footed woodrats will beat their tails on the floor, open their mouths, and pull their ears back. Their attacks may consist of rushing and biting.

Predators include:

- Skunks
- Hawks
- Wildcats
- Owls

**Dusky Footed Woodrat Behavior:**

- Typically avoid any source of light, even moonlight
- Live solitary lives except during the breeding season
- Normally friendly to other woodrats, but males may fight each other
- Known as a “packrat” because of its tendency to hoard items

# Gray Fox

*Urocyon cinereoargenteus*



Photo: Robert Martinez



**Mammals**

### **Fun Fact:**

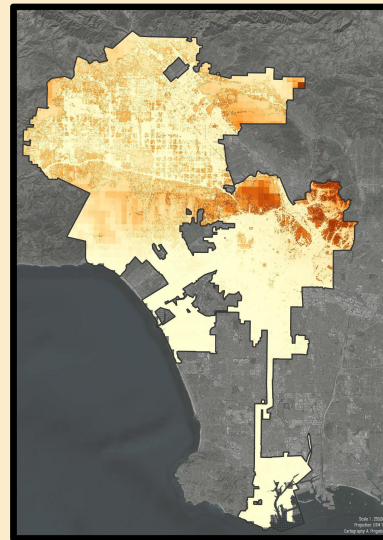
Gray foxes are the only canids known to regularly climb trees

### **Habitat:**

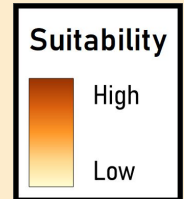
Gray foxes reside in a variety of habitats like northern mixed chaparral, coastal sage scrub, coast live oak, chamise chaparral, valley oak, grasslands, etc.

### **Observation Tips:**

- Observable in the Santa Monica Mountains
- \*Exercise caution near this species



*Areas in LA with habitat suitable for this species*



### **Diet:**

Being well adapted to forest environments, gray foxes use their tree-climbing skills and camouflage to ambush small animals.

They eat:

- Birds
- Squirrels
- Rodents
- Rabbits
- Fruit

### **Predators:**

Gray foxes will climb trees to avoid terrestrial threats. They generally avoid predators by keeping away from areas where predator activity is high.

Predators include:

- Hawks
- Eagles
- Domestic dogs
- Mountain lions
- Coyotes
- Bobcats

### **Gray Fox Behavior:**

- Primarily nocturnal
- Described as "feline-like" because they are shy, secretive, and climb trees
- Young foxes tend to play fight
- Use retractable claws to climb trees
- Are typically taught hunting techniques like pouncing and stalking by their fathers

# Mountain Lion

*Puma concolor*

State Candidate for Listing



Photo: Robert Martinez



Mammals

## Fun Fact:

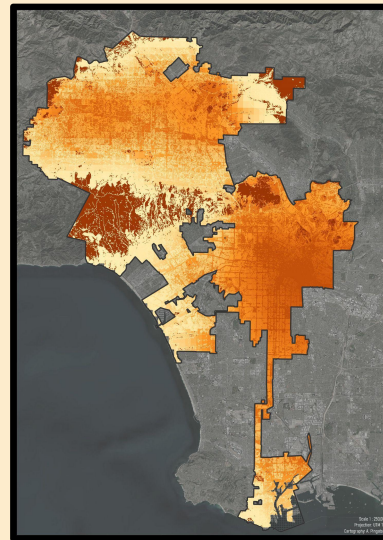
Los Angeles is the only megacity where mountain lions live side-by-side with humans

### **Habitat:**

Mountain lions can be observed in a variety of habitats including mountains, forests, deserts, and wetlands.

### **Observation Tips:**

- Observable in the Santa Monica Mountains and the Angeles National Forest
- \*Keep your distance and exercise caution near this species



*Areas in LA with habitat suitable for this species*

### **Diet:**

Mountain lions are ambush predators and primarily hunt at night. They are usually strictly carnivores, but may occasionally eat plant matter or insects.

They eat:

- Deer
- Elk
- Smaller animals

### **Predators:**

Mountain lions usually avoid conflict, unless they feel cornered.

Predators include:

- Bears
- Wolves

### **Mountain Lion Behavior:**

- Primarily active at dusk and dawn
- Territorial, but allow other lions to pass through their territories
- Mark their territories by scratching trees and creating urine-soaked mounds
- Can growl, shriek, and purr, but cannot roar
- Can be driven away by defensive prey

# Mule Deer

*Odocoileus hemionus*



Photo: Nurit Katz



**Mammals**

## **Fun Fact:**

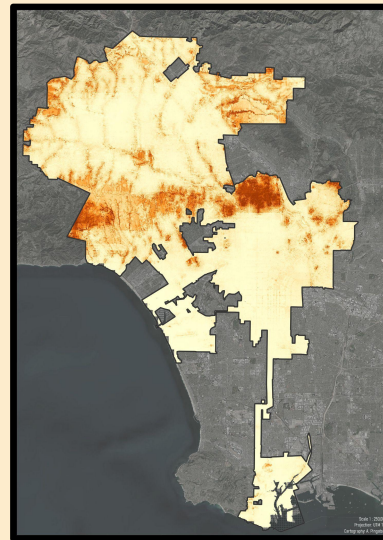
Mule deer received their names because their very large ears resemble those of a mule

### **Habitat:**

Mule deer are found in agricultural land, grasslands, shrublands, semi-deserts, montane forests, etc.

### **Observation Tips:**

- Seen near Sepulveda Dam, in Central LA, and Exposition Park
- Usually most active at dusk and dawn



*Areas in LA with habitat suitable for this species*

### **Diet:**

Mule deer mostly eat soft foods that are high in protein and easy to digest because they have limited digestive system. As winter approaches, they will gain weight and build up their body fat.

They eat:

- Leaves
- Fruits
- Shrubs
- Nuts
- Grasses

### **Predators:**

This species will usually use their hearing or smell to detect nearby threats. If they see a predator, mule deer will typically just run away.

Predators include:

- Coyotes
- Bobcats
- Mountain lions
- Bears
- Wolves

### **Mule Deer Behavior:**

- Can be observed during in the day, but are most active near dusk and dawn
- Males typically mate with numerous females
- Males become aggressive and fight each other during breeding season
- Form large groups in the fall that provide winter protection
- Males with larger antlers are more successful and typically able to mate with more females

# California Kingsnake

*Lampropeltis californiae*



Photo: Simon Tonge  
(inaturalist.org)



Reptiles

## Fun Fact:

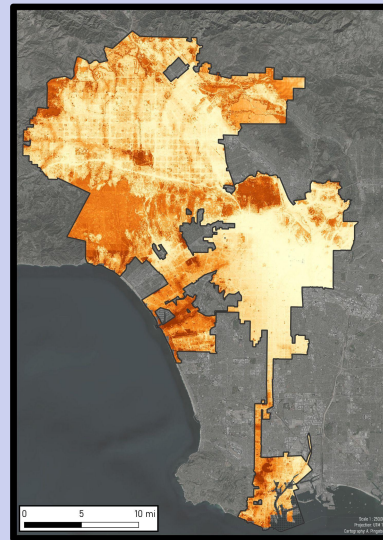
California kingsnakes have very diverse appearances and their individual coloration and markings vary greatly

### **Habitat:**

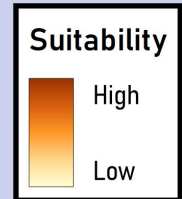
California kingsnakes live in varied habitats including grasslands, woodlands, and arid regions, such as deserts

### **Observation Tips:**

- Observable in Griffith Park and the Sepulveda Basin Recreation Area



*Areas in LA with habitat suitable for this species*



### **Diet:**

California kingsnakes can incapacitate prey by constricting them with their bodies. They are known as “kingsnakes” because they eat other snake species, such as rattlesnakes.

They eat:

- Small mammals
- Birds
- Lizards
- Amphibians
- Other snakes

### **Predators:**

When threatened, California kingsnakes may hiss, vibrate their tails, or coil into a ball shape.

Predators include:

- Birds
- Mammals
- Other kingsnakes

### **California Kingsnake Behavior:**

- Nocturnal during warm summer months, but active during the daytime during spring and fall
- Typically not aggressive, but can be dangerous
- Emit strong odors when they feel threatened
- Do not eat or defecate during winter

# Coachwhip Snake

*Masticophis flagellum*



Photo: Patrick Alexander  
(inaturalist.org)



Reptiles

## Fun Fact:

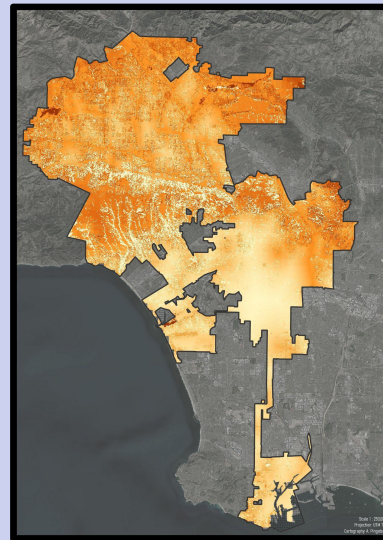
Coachwhip snakes are the fastest snakes in North America and can reach speeds of nearly four miles per hour

### **Habitat:**

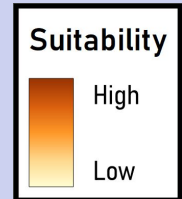
Coachwhip snakes reside in, prairies, deserts, woodlands, swamps, and agricultural lands.

### **Observation Tips:**

- Observable in Griffith Park and at Hansen Dam
- Mostly active during the daytime
- \*Exercise caution near this species



*Areas in LA with habitat suitable for this species*



### **Diet:**

Coachwhip snakes are non-venomous, but have very powerful bites. They rely mainly on their eyesight and strong sense of smell to locate prey. Coachwhips are fast, agile hunters.

They eat:

- Insects
- Lizards
- Amphibians
- Other snakes
- Mammals

### **Predators:**

This snake does not have many natural predators because it is able to outpace potential threats. When evading predators, coachwhip snakes may enter rodent burrows or climb trees.

Predators include:

- Coyotes
- Great horned owls

### **Coachwhip Snake Behavior:**

- Unlike most snakes, remain active even during the hottest parts of the day
- Hibernate during winter
- Can swim, but don't do it often
- Vibrate their tails when they feel threatened or are otherwise distressed
- Female activity decreases significantly during breeding seasons

# Gopher Snake

*Pituophis catenifer*



Photo: Daniel S. Cooper



Reptiles

## Fun Fact:

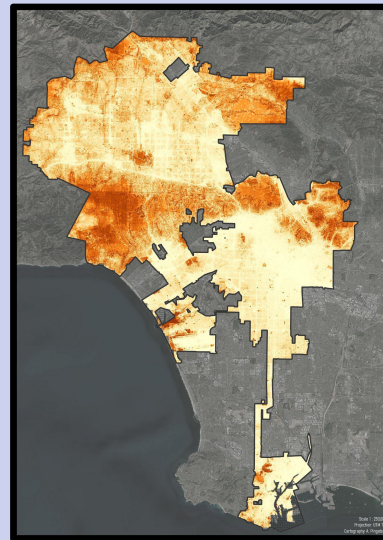
Gopher snakes avoid predators by mimicking rattlesnakes

### **Habitat:**

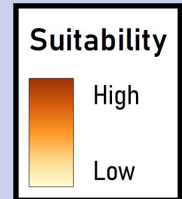
Gopher snakes inhabit deserts, prairies, woodlands, agricultural lands, chaparral, forests, etc.

### **Observation Tips:**

- Widespread in LA, but can be found at Lake Balboa, Hansen Dam, and Griffith Park
- Mainly active in the daytime
- \*Keep your distance and exercise caution near this species



*Areas in LA with habitat suitable for this species*



### **Diet:**

Gopher snakes are constrictors and may kill their prey by squeezing them very tightly or by pressing them against the walls of their burrows. They typically rely on their sense of smell to locate prey.

They eat:

- Birds
- Rodents
- Rabbits
- Lizards
- Other snakes

### **Predators:**

Gopher snakes avoid predators by mimicking rattlesnakes. Among other things, they will shake their tails, flatten their heads into triangular shapes, and hiss loudly to confuse potential predators into thinking they are venomous.

Predators include:

- Raptors
- Foxes
- Coyotes
- California kingsnakes

### **Gopher Snake Behavior:**

- Mainly active in the day, but increase nighttime activity in hot weather
- Solitary outside of breeding season
- Become dormant when they are unable to find prey
- Mostly visible in the spring, when they leave hibernation
- Share hibernation dens with other snakes, including rattlesnakes

# Sideblotched Lizard

*Uta stansburiana*



Photo: Lila Higgins



Reptiles

## Fun Fact:

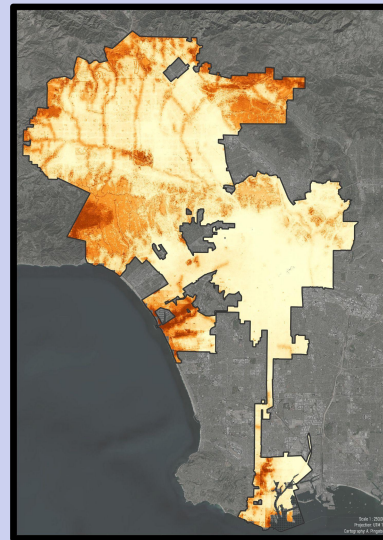
Male sideblotched lizards can have different throat colors. Potential throat colors include yellow, orange, and blue.

### **Habitat:**

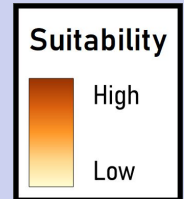
Sideblotched lizards can live in sandy washes, arid areas with scattered vegetation, chaparral, etc.

### **Observation Tips:**

- Widespread in LA, but observable at Hansen Dam and the Sepulveda Basin Wildlife Reserve
- Active during the day



*Areas in LA with habitat suitable for this species*



### **Diet:**

Sideblotched lizards spend very little time looking for food as they will typically eat nearly any moving insect they see. While they primarily eat insects, they may sometimes consume plants for their water content.

They eat:

- Scorpions
- Spiders
- Ticks
- Mites
- Vegetation

### **Predators:**

If they feel threatened, sideblotched lizards will quickly run under nearby cover. They can detach and wiggle their tails to distract predators as they escape.

Predators include:

- Desert scorpions
- Birds
- Rattlesnakes
- Other lizards

### **Sideblotched Lizard Behavior:**

- Bask in morning sun
- Do “push-ups” to defend their territories
- Active during the winter, unlike many other lizard species
- Orange-throated males are dominant, aggressive, and territorial
- Yellow-throated makes mimic females to sneak into other territories
- Blue-throated males guard females against yellow-throated males but avoid orange-throated males

# Western Pond Turtle

*Actinemys marmorata*



Photo: Nurit Katz



Reptiles

## Fun Fact:

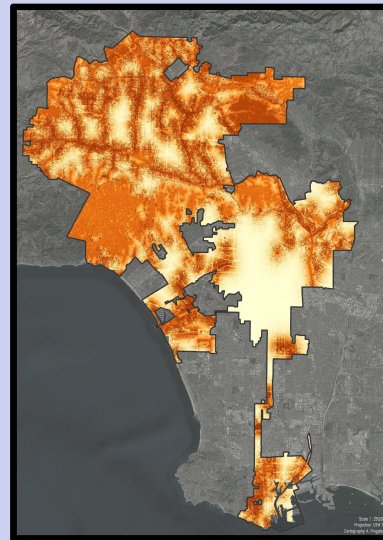
Western pond turtles can hold their breath for more than 15 minutes

### **Habitat:**

Western pond turtles are typically found in ponds, creeks, marshes, streams, vegetation, woodlands, grasslands, forests, etc.

### **Observation Tips:**

- Seen in the Santa Monica Mountains and Exposition Park
- Often seen basking in the sun



*Areas in LA with habitat suitable for this species*

### **Diet:**

Feeding, and other behaviors, only occur when western pond turtles are in aquatic environments.

They eat:

- Aquatic plants
- Invertebrates
- Salamander eggs/larvae
- Fish
- Frogs
- Carrion

### **Predators:**

Western pond turtles are typically wary of predators and exhibit an early flight response. Non-native predators, like bullfrogs, are harming populations.

As young, some predators include:

- Bullfrogs
- Fish

As adults, some predators include:

- Raccoons
- Coyotes

### **Western Pond Turtle Behavior:**

- Bask in the sun to control their body temperature
- Prefer to use basking sites that other turtles are already using
- Will quickly plunge into nearby water when they feel threatened
- Bury themselves in mud or soil to hibernate during winter

# Western Rattlesnake

*Crotalus oreganus*



Photo: Daniel S. Cooper



Reptiles

## Fun Fact:

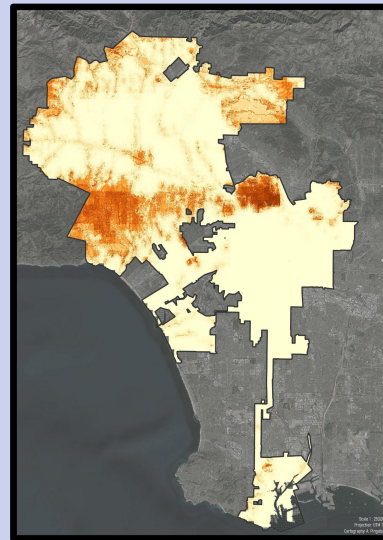
The rattles of young western rattlesnakes are called "buttons"

### **Habitat:**

Western rattlesnakes live in coastal regions, deserts, urban areas, rural areas, etc.

### **Observation Tips:**

- Found near Griffith Park and in the Santa Monica Mountains
- Rattle presence is unreliable for identifying this species
- \*Keep your distance and exercise caution near this species



*Areas in LA with habitat suitable for this species*

### **Diet:**

Western rattlesnakes detect prey with their tongues and temperature-sensitive pits on their heads. They incapacitate their prey with by injecting them with venom.

As young, they eat:

- Lizards
- Small rodents

As adults, they eat:

- Rodents

### **Predators:**

Unless they are startled, western rattlesnakes are unlikely to attack a perceived threat. Instead, they will leave the area. They use their rattles as a warning of their impending attack.

Predators include:

- Badgers
- Black bears
- Skunks
- Greater roadrunners

### **Western Rattlesnake Behavior:**

- Typically not aggressive, but still dangerous as they are venomous
- Hibernate during the winter
- Species range changes depending on the season
- Usually mate between July and early August

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## **Additional Resources**

Thank you for reading this booklet and taking the time to learn about LA's 37 biodiversity indicator species! We hope that you will return to this booklet often and use it as a resource. For more information about the City's ongoing efforts to protect biodiversity in Los Angeles please visit [LASAN's Biodiversity webpage](https://lacitysan.org/biodiversity). To find more information about the species you read about in these pages, or contribute to community science efforts, please [download the iNaturalist app](#) or visit the [iNaturalist website](https://www.inaturalist.org).

- LASAN's Biodiversity Webpage: [lacitysan.org/biodiversity](https://lacitysan.org/biodiversity)
- iNaturalist: [iNaturalist.org](https://www.inaturalist.org)