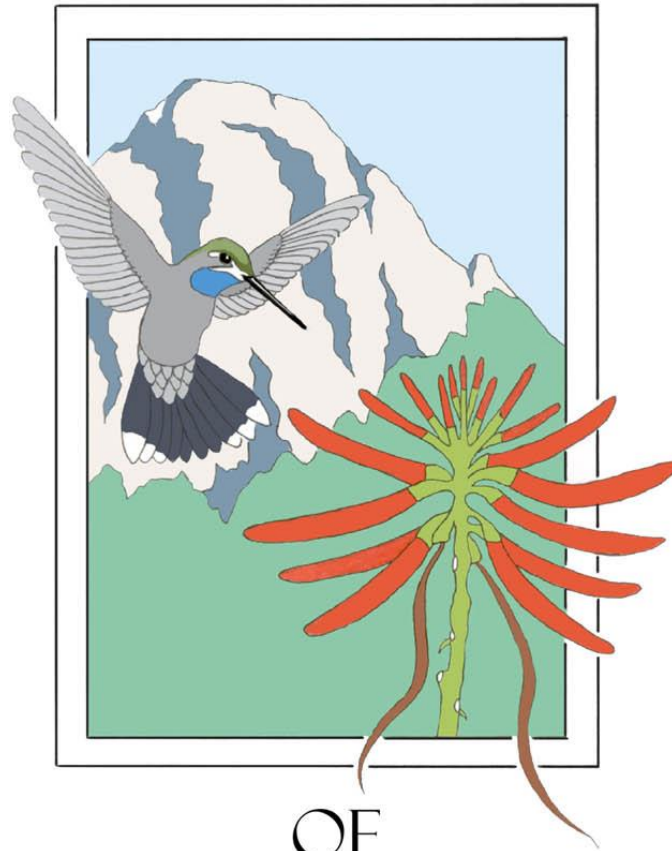


FRIENDS



OF

MADERA CANYON

# Madera Canyon: Proctor Trail Amphibians & Reptiles



Madrean Alligator Lizard



**Madera Canyon is in the Santa Rita Mountains,  
just east of Green Valley and Sahuarita,  
Arizona.**



The Santa Ritas are a "Sky Island" mountain range. They are SO tall that the temperature gets cooler the higher up in elevation you go!





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The cooler temperatures allow different kinds of plants and animals to live up in the mountains than in the hot, dry desert below.



In the very middle of the Santa Ritas, below the highest peaks, Madera Canyon is a perfect place to find these plants and animals-



Like amphibians and reptiles!



Green Ratsnake

Come along!

Let's take a photo trip into the canyon to see some of amphibians and reptiles we might find there.





Southeast Arizona has one of the highest diversities of amphibians & reptiles in the USA. 47 different species live in Madera Canyon and the bajada slope below.



This is the trail-head at Proctor parking area. The Proctor Trail is a great place to look for amphibians and reptiles.



The loop trail is an easy walk through 5 different plant communities- there is lots of excellent habitat!



Seeing these animals on the trail can be a challenge.  
Season, temperature, and time of day are important.



Lizards and frogs are often out and active on warm days.  
Some snakes, toads, and lizards like geckos & skinks are  
nocturnal or wary and secretive- they are harder to see!



**Amphibians** are small **vertebrates** (animals with a backbone) with four legs- frogs, toads, and salamanders.



Adult  
Red-spotted  
Toad

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Adult  
Red-spotted  
Toad

They usually need a puddle, pond, or stream to reproduce and a moist environment to survive. Amphibians are **ectothermic**. They cannot make their own body heat! Their body temperature depends on the temperature of the environment.





Most amphibians mate and lay eggs in the water. Eggs hatch into **aquatic larvae** with gills called **tadpoles**.

Mating Red-spotted Toads

Tadpoles grow and change in a process called **metamorphosis**. They absorb their tail and grow four legs. They also grow lungs! They turn into air-breathing adults that can leave the water.

Toad tadpoles in a puddle





As you might have guessed, Red-spotted Toads are one of the amphibians to see on the Proctor Trail.



Baby  
Red-spotted  
Toad out on  
the trail

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Baby  
Red-spotted  
Toad out on  
the trail

Adults live underground and **emerge** on warm nights—mostly during summer monsoon rains. They lay eggs in big rain puddles and Madera Creek. In late summer, tiny toads can be hopping around almost everywhere!



The other amphibian species found on the Proctor Trail  
always lives by Madera Creek- Canyon Treefrog.



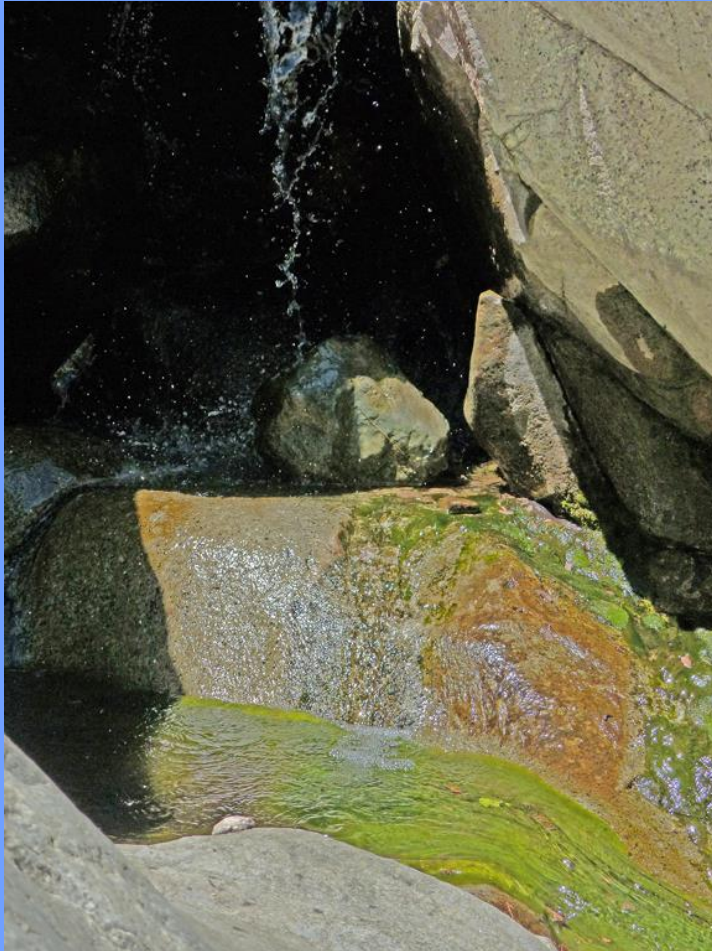
Three  
Canyon  
Treefrogs

On warm sunny days, Canyon Treefrogs often **bask**  
on creek boulders when the water is running.

If they get too hot, or sense danger,  
they can just jump in for a swim!



Canyon Treefrogs can change color a little bit to match the boulders they like to rest on.



Can you spot the Treefrog?



Canyon Treefrog on granite

This is good camouflage on granite boulders.



But doesn't always work as well on other kinds of rocks!

Canyon Treefrog on dark boulder



Canyon Treefrog on purple boulder



Some other amphibians live near the Proctor Trail:



Barking Frog in crack

Barking Frogs live deep in moist cracks within granite rock **outcrops** above the trail. Only on rainy summer monsoon nights do they emerge to call and mate.

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Barking Frog in crack

Couch's Spadefoot, Mexican Spadefoot, Great Plains Toad, and Sonoran Desert Toad live in the **Semi-Desert Grassland** below Proctor. Inactive underground most of the year, they also emerge on rainy summer nights to hunt and mate.



Female Couch's Spadefoot



Reptiles are small to large ectothermic vertebrates covered in scales that have four legs-



Great Plains Skink- a secretive lizard

the lizards, turtles, and crocodiles,



or are descended from ancestors that used to have four legs, but no longer have any limbs now-



Western Lyresnake- a nocturnal snake

the snakes.



The Semi-desert Grassland around the Proctor parking lot is excellent lizard habitat!



Male Elegant Earless Lizard

In warm weather Elegant Earless Lizards hunt insects and bask out on rocks, parking bumpers, and pavement.





Male and female  
Elegant Earless Lizards  
look different- their  
bold markings help tell  
them apart!

The two colorful  
females in the photo  
are **gravid**- their fat  
tummies show that they  
are going to be laying  
eggs soon!

Two female Elegant Earless Lizards



Desert Grassland Whiptails actively hunt insects in the grass and along the sidewalks and trail around Proctor.



Desert Grassland Whiptail



Desert Grassland Whiptails actively hunt insects in the grass and along the sidewalks and trail around Proctor.



Desert Grassland Whiptail

These slim, striped lizards are all females!  
They lay clutches of 1 to 4 fertile eggs.  
Each egg hatches into an exact genetic  
clone of its mother! Cool!!



Can you spot the **camouflaged** Regal Horned Lizard sleeping in the photo below?



Regal Horned Lizard



Regal Horned Lizards are very fond of eating ants! These "flat" lizards used to be common around the big Harvester Ant nests near Proctor parking lot.



Regal Horned Lizard



Regal Horned Lizards are very fond of eating ants! These "flat" lizards used to be common around the big Harvester Ant nests near Proctor parking lot.

They are rare now. **Climate change** with **drought** and people catching them for pets may be the reasons.



Regal Horned Lizard



Down the trail towards Madera Creek,  
the mesquite trees grow thicker together.  
This is the **Mesquite Bosque**, a woodland habitat.



Young Ornate Tree Lizard

Lizard species, like Ornate Tree Lizard, hunt  
and bask on the tree trunks and rocks there.





Ornate Tree Lizards can be gray, tan, or brown. Usually they also have dark markings, but sometimes not!

Ornate Tree Lizard



Ornate Tree Lizard

Ornate Tree Lizards can be gray, tan or brown. Usually they also have dark markings, but sometimes not!

These common small lizards hide very well on the bark of trees. They are easier to see sunning on rocks and boulders.

Kind of wrinkly, they look like they are wearing baggy clothes!



Clark's Spiny Lizards are also often seen in trees. They also like boulders, rock outcrops, and even the sides of buildings, like in the photo below.



Male  
Clark's  
Spiny  
Lizard

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Male  
Clark's  
Spiny  
Lizard

They grow much bigger than Ornate Tree Lizards! Besides mesquite, both species also like to climb other trees in the **Oak Woodland** on the upper Proctor loop.



Male Clark Spiny Lizards are called "blue bellies" for the bright color on their throat and tummy. They often do "pushups" to claim their **territory** from other males.



Male Clark's Spiny Lizard

Male Clark Spiny Lizards are called "blue bellies" for the bright color on their throat and tummy. They often do "pushups" to claim their **territory** from other males.



Male Clark's Spiny Lizard

Female Clark's Spiny Lizard



Females and young are gray with bold black markings. Both males and females have dark stripes on their front legs.



The other Whiptail Lizard species on the Proctor Trail is the Sonoran Spotted Whiptail.



Sonoran Spotted Whiptail

They look and act very similar to Desert Grassland Whiptails, but have light spots between their stripes. These long, thin lizards are also all females!

Can you tell which species of Whiptail lizard this is ?



Older Sonoran Spotted Whiptail

Sometimes the spots on older Sonoran Spotted Whiptails fade away. Up on the trail where their ranges overlap, you must look very closely to tell which whiptail species is which!



Three very secretive lizard species live in the mesquite and oak woodlands along the trail.

The Mountain Skink, Great Plains Skink (photo page 18), and Madrean Alligator Lizard (photo page 2) all like to stay under or near cover of rocks, logs, and plants.

They are active in daytime, but rarely seen out in the open. Prey is mainly insects, spiders, and other arthropods.



Mountain Skink

Western Banded Geckos are nocturnal. With a flashlight, you can see these small, colorful lizards out hunting around the Proctor parking area and trailhead after dark.



Western Banded Gecko



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Western Banded Gecko

Young Gila Monster



Very rare at Proctor, Gila Monsters are more common in the desert and grassland below. Mostly nocturnal, they live much of the year underground in burrows, packrat dens or rock crevices.



The different plant communities on the Proctor Trail provide habitats for a variety of snake species.



Smith's Black-headed Snake



The different plant communities on the Proctor Trail provide habitats for a variety of snake species.



Smith's Black-headed Snake

A few species are more common and usually easier to see. Others are rare or nocturnal and much harder to find. Threadsnakes and Black-headed Snakes are tiny, very secretive, and spend most of the time under rocks or underground.

Active during the day, Sonoran Whipsnakes are the second most commonly seen snake on the Proctor Trail.



Sonoran Whipsnake climbing

Swift moving and excellent climbers, whipsnakes live in the rocky shrub and grass habitat along Madera Creek and on the hillsides above.





Sonoran Whipsnakes are impressive predators reaching 5 feet in length! Adults eat rodents, bats, birds, and lizards. Juveniles eat mainly lizards.

Sonoran Whipsnake



Sonoran Whipsnake

Sonoran Whipsnakes are impressive predators reaching 5 feet in length! Adults eat rodents, bats, birds and lizards. Juveniles eat mainly lizards.

Alert, with keen eyesight, these snakes will disappear among rocks or climb swiftly into shrubs and trees to avoid predators or humans.





One of our largest snakes, Sonoran Gophersnakes are found in many habitats from desert to high mountains.



Sonoran  
Gophersnake



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Sonoran  
Gophersnake

They are most often seen on the trail above the lower creek bridge. They hunt mice, gophers and squirrels in the grass, shrubs, and boulders of the **Chaparral** habitat above the trail.



Excellent swimmers, Black-necked Gartersnakes are most often seen chasing tadpoles to eat in Madera Creek.



Black-necked Gartersnake

These striped snakes also hunt on land for small lizards, frogs, toads, and **invertebrates**, like insects and spiders. Sometimes they are found a long ways from water.

Ring-necked Snakes are secretive, colorful small to medium-sized snakes.

Usually active in the morning or evening, they are most often seen after rain or overcast humid days during summer monsoon.



Ring-necked Snake



Ring-necked Snakes are secretive, colorful small to medium-sized snakes.

Usually active in the morning or evening, they are most often seen after rain or overcast humid days during summer monsoon.

They feed mainly on small snakes and lizards. When threatened, they show the bright color on the underside of their coiled tail!



Ring-necked Snake



Knobloch's Mountain Kingsnakes are found from high in Madera Canyon down on to upper Proctor Trail.

One of the most beautiful snakes in the world, the scarlet red, black, and ivory pattern is very distinctive!

Knobloch's Mountain Kingsnake





Knobloch's  
Mountain  
Kingsnake  
in a  
Sycamore  
tree

These kingsnakes love the rocky habitat under the shady trees of the **Riparian Woodland**. They climb well and hunt lizards, rodents, and birds. **Riparian** trees and plants grow along the banks of Madera Creek.



Black-tailed Rattlesnakes are the most commonly seen snake on the Proctor Trail and in Madera Canyon. They are active on warm days in spring and fall, and at night during the hot summer.



Black-tailed Rattlesnake





Black-tailed Rattlesnake

Black-tailed Rattlesnakes are **venomous**! Their **cryptic** coloration and pattern blend in very well with their environment.

Rattlesnakes are important **predators** and part of the natural web of life.



Black-tailed Rattlesnake

Black-tailed Rattlesnakes are **venomous!** Their **cryptic** coloration and pattern blends in very well with their environment.

Rattlesnakes are important **predators** and part of the natural web of life.

Hikers need to watch where they are walking. **Do not approach these snakes!** Observe only from a far, safe distance! **Leave them alone!**





Young Nightsnake

Nightsnakes and Sonoran Lyresnakes (photo page 19) are also on the trail, but are nocturnal and rarely seen. They hide away during the day. Both species are mildly venomous, but not dangerous to humans.



Young Nightsnake

Nightsnakes and Sonoran Lyresnakes (photo page 19) are also on the trail, but are nocturnal and rarely seen.

They hide away during the day. Both species are mildly venomous, but not dangerous to humans.

Green Ratsnakes (photo page 7) are rather rare and rarely seen. Active mostly early or late in the day, adults hunt rodents, bats, birds, and lizards. They are most often found during the humid weather of the summer monsoon.





Ornate  
Box Turtle

Ornate Box Turtles are now very rare in the Semi-desert Grassland below Proctor. Habitat loss, climate change, and collecting by people for pets may be reasons why.

There are no aquatic turtles that live in Madera Creek.

There are no alligators or crocodiles either!! ;-)



The End



For more information on amphibians and reptiles of the southeast AZ Sky Islands visit:

**Tucson Herpetological Society**  
[www.tucsonherpsociety.org](http://www.tucsonherpsociety.org)

For more information and videos about the Proctor Trail and Madera Canyon visit:

**Friends of Madera Canyon**  
[www.friendsofmaderacanyon.org](http://www.friendsofmaderacanyon.org)

## Credits:

Story & Photography- **Doug Moore**

Green Ratsnake, Barking Frog, & Mountain Skink

Photos- **Eric Enderson**

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