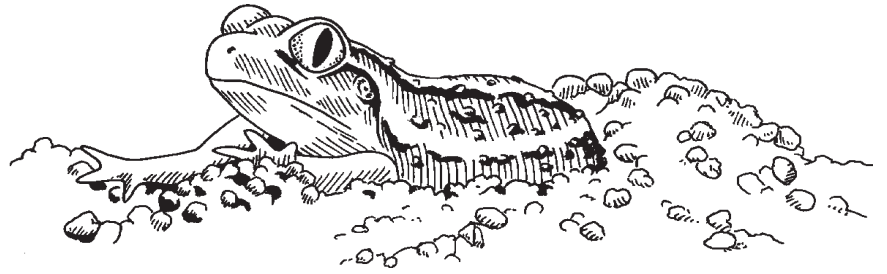


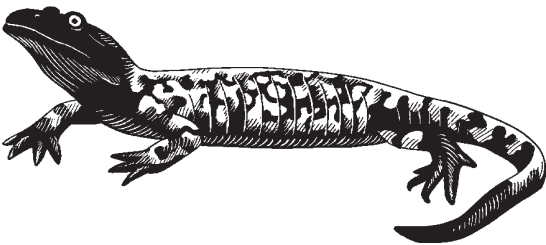


## Modern Amphibians



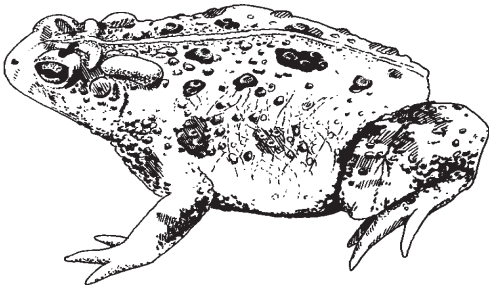
Can you imagine living underground for nine months of the year and not eating, drinking, or defecating? An amazing group of animals do just that – amphibians. It's hard to imagine that in this dry region animals that require consistent moisture could thrive. Three hundred and fifty million years ago the first fish-like amphibian hauled itself out of the sea. Within the sedimentary rock of the park, giant amphibians such as metoposaurs have been discovered as fossils. By the time dinosaurs appeared, amphibians were flourishing. Today, they are still among the most successful groups of animals. Why have they survived and adapted to such varied environments worldwide? Permeable skin! Permeable skin allows amphibians to live in Petrified Forest. Amphibians do not drink; instead, they absorb water through their skins. Spadefoot toads, residents of the park, absorb water from the soil in which they hibernate. Although permeable skin allows for water absorption, it provides little barrier to evaporation. This causes amphibians' water balance to be in constant flux. Evaporative water loss also results in loss of body temperature. This is why you often see amphibians on warm pavement in the evening. It is not an easy life for amphibians in this dry grassland. Behavioral and physiological mechanisms that shape their daily life make it possible for them to survive.

### Tiger Salamander



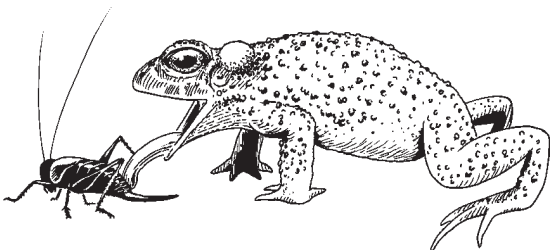
Tiger salamanders are the only salamander species known in Arizona. From 3-7 inches long, they have a gray, olive, or black background color with yellow or white bars mottling the back. They are found in park grassland near major drainages. Most of their year is spent underground. Emerging in the spring and early summer, they breed in rivers and temporary pools.

### Woodhouse's Toad



Seldom seen, Woodhouse's toads are identified by a thin white dorsal stripe down the middle of their backs and ending at a prominent cranial crest (bony ridge behind the eye). Their coloration is gray, yellow-brown, or olive broken by dark spots with red or orange centers. Anywhere from two to six inches long, Woodhouse's toads are the largest toads in the park. They frequent grasslands, stream or wash corridors, and developed areas.

### Red-spotted Toad



Red-spotted toads sport vivid red or orange warts on a light gray, olive, or brown background. This small toad is only 1.5 inches to 3.5 inches in length. Rocky areas near streams, canyons, and floodplains are preferred habitats. They are most active during the rainy season from July through September.

### Great Plains Toad



The Great Plains Toad, measuring two to five inches in length, is the most common toad in the park. It is greenish overall with symmetrically paired, pale-edged dark blotches down its back. A dark vocal sac distinguishes males. Grasslands are preferred.

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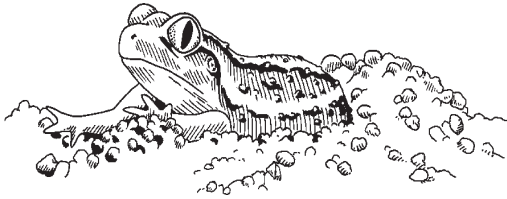
### New Mexico Spadefoot



Short, round, and squat, the New Mexico spadefoot is the most common spadefoot in the park. All spadefoots are distinguished by a thick spade-like structure on their hind feet used to dig their burrows. Like most amphibians, they spend most of the year underground. The New Mexico spadefoot is gray or tan in color with red spots.

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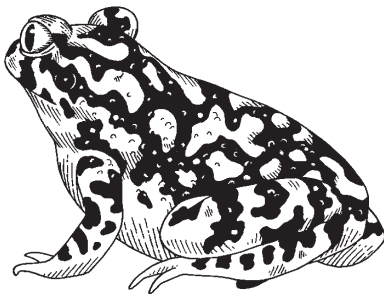
### Plains Spadefoot



New Mexico and Plains spadefoots are very difficult to tell apart. Both species are found throughout the park and are often sighted together. While similar in size and color, the Plains spadefoot has a larger head and eyes with a small body boss (bump) between its eyes.

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### Couch's Spadefoot Toad



Couch's is the least common and largest of the spadefoots. Bright greenish yellow to brown in color with dark gray-brown mottling, they blend with their preferred habitat – grass and shrublands. Because they are active primarily during the short monsoon season, accelerated development enables tadpoles to complete their growth before water sources dry up.

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Although amphibians have been successful for millions of years, today they are in trouble. Biologists have noted dramatic declines in populations of species worldwide. What is causing these declines? No one knows for sure, but it is thought that it may be a sign of global environmental degradation. For many populations, the causes include habitat loss, such as the destruction of wetlands, pesticide contamination,

heavy metal poisoning, predation, and competition from introduced species. Natural population fluctuations may explain the decline of some populations. However, scientists have ruled out natural causes as the only explanation for the overall problem as declines are happening in many species simultaneously around the world. Human actions are the primary cause of these declines. What can you do to help ensure the continued survival of these amazing creatures?

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The following is a list of amphibians known to currently occur in the park. Further research will undoubtedly locate more species as different habitats in the park are more thoroughly studied.

Tiger salamander	<i>Ambystoma tigrinum</i>
Woodhouse's toad	<i>Bufo woodhousii</i>
Red-spotted toad	<i>Bufo punctatus</i>
Great Plains toad	<i>Bufo cognatus</i>
New Mexico spadefoot	<i>Scaphiopus multiplicata</i>
Plains spadefoot	<i>Spea bombifrons</i>
Couch's spadefoot	<i>Scaphiopus couchii</i>