

**HERPETOFAUNA of the
APPLETON-WHITTELL RESEARCH RANCH**



NATIONAL AUDUBON SOCIETY

2012



Special thanks to these individuals for the use of their excellent photographs to represent the herpetofauna of the Research Ranch. Photo credits are listed beneath each of their contributing photographs. Erik F. Enderson, Tara Sprankle, Robert L. Bezy and Kathryn Bolles, Young D. Cage, Dr. Christian d’Orgeix, Kortney Jaworski, Matthew Lattanzio, Dan Robinett, Jim Rorabaugh, and Cecil Schwalbe.

Text, photographs of landscapes and herps taken on site at the Research Ranch by Roger C. Cogan.

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Herpetofauna of the Appleton-Whittell Research Ranch

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This is a summary of personal observations and impressions of the continued presence or absence of the herpetofauna which have been previously reported at the Appleton-Whittell Research Ranch. A total of fifty-two amphibian and reptile species have been reported within the Research Ranch boundaries. The continued existence of several species may be in doubt. Currently, sightings of the majority of herp species are documented with time, date and location. Sightings of rare or uncommon species whenever possible are documented with photographs with specific points georeferenced. Wintering sites, primarily for crotalids are also sought out and documented.

The herpetofauna species accounts referenced are as follows:

June – August 1982 compiled by Doderer, Mark and Spengler, John

May 19 1987 updated species list author unknown

October 23, 2002 updated list by Smith, Hobart M. and Chiszar, David

October 2011 updated list by Cogan, Roger C.

Tabular key to the Whiptail Lizards of Southeastern Arizona, Rosen, Phil

Nomenclature applied is from Society for the Study of Amphibians and Reptiles, Herpetological Circular No. 39, Seventh edition, 2012. Frogs originally described in the genus *Rana* have been reassigned and are now known as *Lithobates*. Most toads in the genus *Bufo* have been reassigned to the genus *Anaxyrus*. Sonoran Desert Toad originally described as *Bufo alvarius* was changed to *Ollotis alvarius*. It has recently been changed in 2012 to *Incilius alvarius*. Tiger salamander was originally described as *Ambystoma tigrinum*, the western race of this salamander is now under the designation *Ambystoma mavortium*. Whiptail lizards previously known as genus *Cnemidophorus* have been reassigned and are now known as *Aspidoscelis*. The Little Striped Whiptail (*Cnemidophorus inornatus*) has been reclassified to (*Aspidoscelis arizonae*). The Mountain Short-horned Lizard (*Phrynosoma douglassii*) has been reclassified to (*Phrynosoma hernandesi*). The Southern Prairie Fence Lizard (*Sclerophorus undulatus consobrinus*) has been reclassified to Southwestern Fence Lizard (*Sceloporus cowlesi*). Whipsnakes in the genus *Masticophis* have reverted to their original description *Coluber*.

Measurements included are for adult specimens located at lower right of photographs.

All amphibian and lizards are snout to vent measurements. Snake measurements are for total length. Turtle measurements are by carapace length.

References: Amphibian and Reptiles in Arizona by Brennan, Thomas C. and Holycross, Andrew T.

Arizona Game and Fish Department, 2006.

All references to recent sightings are from 2009 to 2012.

Amphibians



Amphibians: ten species, of seven genera

Red-spotted Toad	<i>(Anaxyrus punctatus)</i>
Woodhouse Toad	<i>(Anaxyrus woodhousii)</i>
Sonoran Desert Toad	<i>(Incilius alvarius)</i>
Couch's Spadefoot Toad	<i>(Scaphiopus couchii)</i>
Chihuahua Spadefoot Toad	<i>(Spea multiplicata stagnalis)</i>
Canyon Treefrog	<i>(Hyla arenicolor)</i>
Tiger Salamander	<i>(Ambystoma mavortium)</i>
Chiricahua Leopard Frog	<i>(Lithobates chiricahuensis)</i> extirpated
Lowland leopard Frog	<i>(Lithobates yavapaiensis)</i> extirpated
American Bullfrog	<i>(Lithobates catesbeiana)</i> Non-native

Red-spotted Toad (*Anaxyrus punctatus*)



(to 76 mm or 3")

Red-spotted Toad (*Anaxyrus punctatus*)

Red-spotted toads have previously been reported along O'Donnell creek and in wet places with sandy soil. However they could occur in or near all of our major drainages. Due to exceptionally dry conditions in 2011 the only sightings had been near the Grassland Center and the staff and researchers' quarters. No reproduction was observed in 2011. After summer monsoon storms in 2012 tadpoles and metamorphs were observed in north Post and Lyle creek. Surface activity is usually during summer monsoon rains. They are primarily nocturnal but they may also be observed during summer day-light hours when moist conditions are present.

Woodhouse Toad (*Anaxyrus woodhousei*)



(to 127 mm or 5")

Woodhouse Toad (*Anaxyrus woodhousei*)

Woodhouse toad had not previously been mentioned in any species list at the Ranch. During 2012, heavy monsoon rains filled water impound ponds east of the researcher quarters area. Two other species of toads, the Chihuahuan spadefoot and Couch's spadefoot gathered in the ponds for breeding. Woodhouse toads were identified in the same ponds by Matt Lattanzio with a male photographed and identification confirmed by Roger Cogan. They are primarily nocturnal.

Sonoran Desert Toad (*Incilius alvarius*)



(to 191 mm or 7")

Sonoran Desert Toad (*Incilius alvarius*)

The Sonoran desert toad is the largest toad native to North American. The first confirmed record of this species on the Research Ranch occurred in July, 2006. In recent years, specimens have been reported near the staff quarters and the researcher quarters. It is likely they may be located elsewhere on the Ranch along the major drainages; in particular in association with sacaton flats. Desert toads are capable of remaining dormant for several years until favorable conditions return for surface activity which is usually only for a few brief weeks. Surface activity is usually during summer monsoon rains and is associated with reproduction. They are primarily nocturnal.

Couch's Spadefoot Toad (*Scaphiopus couchii*)



Photo by Matthew Lattanzio

(to 89 mm or 3.5")

Couch's Spadefoot Toad (*Scaphiopus couchii*)

Recorded sightings for the Couch's spadefoot are from sandy bottom areas, especially in O'Donnell creek just east of the researcher quarters. There were no reported sightings in 2011. During 2012 heavy summer monsoon rains filled water impound ponds east of the researcher quarters. Previous records suggest that Couch's bred in mass numbers in these ponds. However in 2012 there were less than a dozen toads breeding during this high water event. Spadefoot toads are capable of remaining dormant for several years until favorable conditions return. They could potentially be found at other locations on the Ranch where there are water impoundment ponds or temporary summer ponds. They also are likely to occur in or near all of the major drainages on the Ranch. Surface activity is usually during summer monsoon rains and is associated with reproduction. They are primarily nocturnal.

Chihuahua Desert Spadefoot Toad (*Spea multiplicata stagnalis*)



(to 64 mm or 2.5")

Chihuahua Spadefoot Toad (*Spea multiplicata stagnalis*)

Recorded sightings for the Chihuahua spadefoot are from O'Donnell creek. Recent sightings are from the Grassland center area and the researcher quarters area. In 2011 only one verified pond had breeding activity with eggs and tadpoles. This pond was a short distance from the road north of McDaniel well in the Turkey creek drainage. There was little accumulated runoff forming only a small pool. This pond dried approximately two weeks after breeding occurred with no offspring surviving. During 2012 heavy summer monsoon rains filled water impound ponds east of the researcher quarters area. Chihuahuan spadefoot were the dominate species breeding at that location. Spadefoot toads are capable of remaining dormant for several years until favorable conditions return. They could potentially be found at other locations on the Ranch where there are water impoundments or temporary summer ponds along our major drainages. Surface activity is usually during summer monsoon rains and is associated with reproduction. They are primarily nocturnal.

Canyon Treefrog (*Hyla arenicolor*)



(to 50 mm or 2")

Canyon Treefrog (*Hyla arenicolor*)

Previous records of canyon treefrogs at the Research Ranch list them as isolated populations at Lyle creek, O'Donnell creek and upper Turkey creek. They have recently been reported (2010-2012) at south Post canyon at both dam site locations and near adjacent rock pools. Recent sightings at O'Donnell creek are upstream from the upper dam. Another location for recent sightings is the Grassland Center and staff quarters area. Canyon treefrogs are cryptic in camouflage; often found fully exposed on the tops of rocks in or near water sources. The preferred habitat elsewhere in their range is rocky or boulder areas near a perennial water source. They may possibly be found throughout our major drainages or at wildlife tanks where water and moisture are fairly constant. Activity can be anytime during warmer weather; they are both diurnal and nocturnal. Canyon treefrogs are most often encountered during summer monsoon rains.

Tiger Salamander (*Ambystoma mavortium*)



Photo by Erik F. Enderson (*Ambystoma mavortium stebbinsi*)

(to 191 mm or 7.5")

Tiger Salamander (*Ambystoma mavortium*)

One specimen that was not positively identified to sub-species has been reported at the Ranch. It was found crossing the road between the Grassland Center and researchers quarters. Tiger salamanders could potentially be found at any of our permanent water or damp locations. However, they would most likely be an introduced form, not the endangered Sonoran tiger salamander (*Ambystoma mavortium stebbinsi*) which is the native species that still naturally occurs near the Ranch. Surface activity would normally be during summer rains and primarily nocturnal. It is unlikely that any persist with continuing drier weather conditions in our area.

Chiricahua Leopard Frog
(*Lithobates chiricahuensis*)

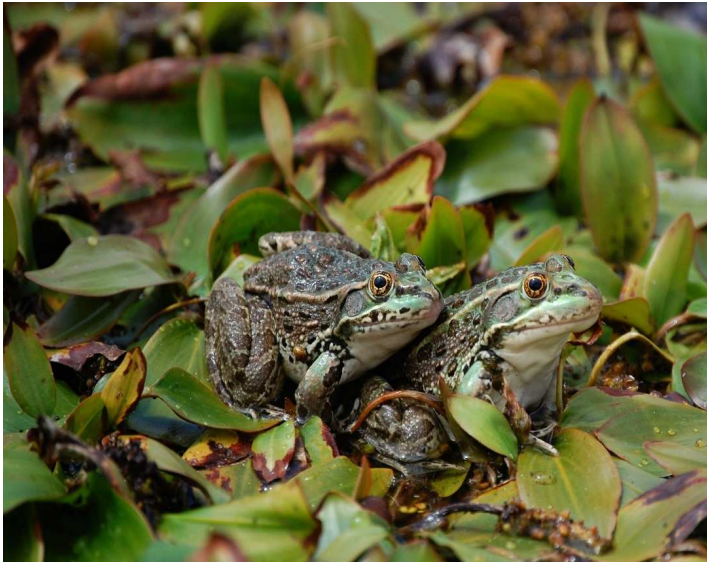


Photo by Tara Sprankle (to 135 mm or 5.4”)

Lowland Leopard Frog
(*Lithobates yavapaiensis*)



Photo by Jim Rorabaugh (to 87 mm or 3.4”)

Chiricahua Leopard Frog (*Lithobates chiricahuensis*):

Lowland leopard Frog (*Lithobates yavapaiensis*)

both are considered extirpated within the Ranch

Species of special concern in Arizona, they are both totally protected by Arizona state law. The Chiricahua leopard frog (*Lithobates chiricahuensis*) is now federally listed as an endangered species as of 2011. Leopard frogs were not reported to be common species at the Ranch but were restricted to small, local populations. The locations cited were from Post canyon, upper O’Donnell creek and Finley tank, and possibly occurring in Lyle creek and Turkey creek but not confirmed. The last known location for either species was the Chiricahua leopard frog at Finley tank. Neither species have been sighted for several years and are now considered extirpated from the Ranch. Leopard frogs were historically more common in southern Arizona when wetter conditions prevailed in cienegas, creeks, tanks, ponds and rivers. Drier conditions in the southwest, increased human use of water resources, introduced plants, bullfrogs and exotic diseases have decimated leopard frog populations throughout their range. Activity could possibly be anytime during warmer weather. They are both diurnal and nocturnal. Efforts are underway to possibly reintroduce one or both species back into the Ranch ecosystem.

American Bullfrog (*Lithobates catesbeiana*) Non-native



(up to 203 mm or 8")

American Bullfrog (*Lithobates catesbeianus*) Invasive Exotic

It is the only herp species at the Ranch where efforts are directed to removing them whenever they are found. Previous efforts have contained their numbers. However their removal is a continuing effort. Activity can possibly be anytime during warmer weather, they are both diurnal and nocturnal. Bullfrog dispersal into the Research Ranch from surrounding refugia likely occurs during high water events and moist conditions during summer monsoon rains. Recent occurrences of bullfrogs have been in south Post creek and O'Donnell creek. A native to the eastern U.S., it is considered an invasive exotic in the western U.S. where it has either been intentionally or accidentally introduced. Bullfrogs have created havoc on small native aquatic and semi-aquatic wildlife wherever they occur in the west. With few predators to control their numbers and growing to a large size they are able to eat anything that they can overpower.

Lizards



Lizards: nineteen species, of eight genera

Arizona Striped Whiptail	(<i>Aspidozelis arizonae</i>)
Canyon Spotted Whiptail	(<i>Aspidozelis stictogrammus</i>)
Chihuahuan Spotted Whiptail	(<i>Aspidozelis exsanguis</i>)
Gila Spotted Whiptail	(<i>Aspidozelis flagellicaudus</i>)
Sonoran Spotted Whiptail	(<i>Aspidozelis sonorae</i>)
Sonoran Tiger Whiptail	(<i>Aspidozelis tigris punctilineatus</i>)
Desert Grassland Whiptail	(<i>Aspidozelis uniparens</i>)
Eastern Collared Lizard	(<i>Crotaphytus collaris</i>)
Madrean Alligator lizard	(<i>Elgaria kingii</i>)
Mountain Skink	(<i>Plestiodon callicephalus</i>)
Great Plains Skink	(<i>Plestiodon obsoletus</i>)
Chihuahuan Earless Lizard	(<i>Holbrookia maculata flavilenta</i>)
Greater Short-horned Lizard	(<i>Phrynosoma hernandesi</i>)
Round-tailed Horned Lizard	(<i>Phrynosoma modestum</i>)
Regal Horned Lizard	(<i>Phrynosoma solare</i>)
Clark's Spiny Lizard	(<i>Sceloporus clarkii</i>)
Slevin's Bunchgrass Lizard	(<i>Sceloporus slevini</i>)
Southwestern Fence Lizard	(<i>Sceloporus cowlesi</i>)
Ornate Tree Lizard	(<i>Urosaurus ornatus</i>)

Whiptail lizards, in the genus *Aspidoscelis* are notoriously difficult to identify to species. These lizards are difficult or impossible to catch in the field, but are easily observed. The whiptails are characterized by widely fluctuating population levels. Thus not all species listed may be seen on any given year. The Research Ranch has a tabular key compiled by Dr. Phil Rosen (University of Arizona) which is a great help in identifying this complicated group of lizards.

Arizona Striped Whiptail (*Aspidoscelis arizonae*)

Arizona striped whiptails are reported to be found in upland grassland areas. There are no exact location records listed for the Research Ranch. No recent sightings have been reported. If they still persist on the Ranch, this would be a distinct separate population from the rest of the species range.

Canyon Spotted Whiptail (*Aspidoscelis stictogrammus*)

Also known as giant spotted, the canyon spotted is reported to be found in dense brush near water in riparian corridors. There are no exact location records listed for the Research Ranch. No recent sightings have been reported.

Chihuahuan Spotted Whiptail (*Aspidoscelis exsanguis*)

Chihuahuan spotted are reported to be found from desert grassland to oak woodland with the typical habitat as canyon bottoms in oak woodland. There are no exact location records listed for the Research Ranch. No recent sightings have been reported.

Gila Spotted Whiptail (*Aspidoscelis flagellicaudus*)

Gila spotted are reported to be found in upland grassland and oak woodland. There are no exact location records listed for the Research Ranch. No recent sightings have been reported.

Sonoran Tiger Whiptail (*Aspidoscelis tigris punctilineatus*)

Reported in drier portions of the Ranch; preferring open areas avoiding dense grassland and thick growth of shrubs. There are no exact location records listed for the Research Ranch. No recent sightings have been reported. If they still persist on the Ranch, this would be a distinct separate population from the species range.

Sonoran Spotted Whiptail (*Aspidoscelis sonorae*)



(to 89 mm or 3.5")

Sonoran Spotted Whiptail (*Aspidoscelis sonorae*)

Sonoran spotted is reported to be found in oak woodlands and riparian areas. There are no exact location records previously listed for the Research Ranch. During July and August 2011 they were commonly found in Clark wash north of the Grassland center. In 2012 they have been sighted near the Grassland center, staff quarters and researcher quarters as well as the lower O'Donnell drainage area.

Desert Grassland Whiptail (*Aspidoscelis uniparens*)



(to 86 mm or 3.3")

Desert Grassland Whiptail (*Aspidoscelis uniparens*)

The desert grassland whiptail is the most often encountered and widespread whiptail lizard on the Ranch. They are fond of open grassland and riparian areas. Commonly found in areas with scant cover of grasses and shrubs, they are often seen along roadways. During late spring and summer sightings are common.

Eastern Collared Lizard (*Crotaphytus collaris*)



Photo by Erik F. Enderson

(to 108 mm or 4.25")

Eastern Collared Lizard (*Crotaphytus collaris*)

Collared lizards were reported to be common and widespread in rocky areas. There are no exact location records listed for the Research Ranch. No recent sightings have been reported. In other locations within their range they are often visually apparent due to their basking behavior on mid-size to large boulders. Considering this behavior it would make them easier to locate. *It is possible that some may have been misidentified and confused with Clark's spiny lizard. This lizard also has a prominent collar pattern on the neck..* Their presence at the Ranch is in doubt.

Madrean Alligator Lizard (*Elgaria kingii*)



(to 140 mm or 5.5”)

Madrean Alligator lizard (*Elgaria kingii*)

Madrean alligator lizards are reported at the Ranch in wet places, under rocks, dense plant growth and frequently found in old woodrat nests. Alligator lizards at the Ranch are widespread; they turn up almost anywhere from open grassland into woodland and riparian areas. Alligator lizards can often be found on roadways and around Ranch buildings. Considered to be primarily nocturnal they can be found abroad during the daylight hours especially towards sunset during the summer months. During the monsoon season this may be a commonly encountered species, especially near Ranch buildings.

Mountain Skink (*Plestiodon callicephalus*)



Photo by Erik F. Enderson

(to 76 mm or 3")

Mountain Skink (*Plestiodon callicephalus*)

Mountain skinks are reported to be found in Lyle canyon. Mountain skinks possibly could be found in other riparian situations at the Ranch. However, there have been no recent sightings.

Great Plains Skink (*Plestiodon obsoletus*)



Photo by Robert L. Bezy and Kathryn Bolles

(to 133 mm or 5.6")

Great Plains Skink (*Plestiodon obsoletus*)

Great Plains skink was reported in fine grained soils below rock outcrops. No exact locations were reported. Great Plains skink possibly could be found in riparian situations at the Ranch. However, there have been no recent sightings.

Chihuahuan Earless Lizard (*Holbrookia maculata flavilenta*)



(to 70 mm or 2.75")

Chihuahuan Earless Lizard (*Holbrookia maculata flavilenta*)

Taxonomy of the genus *Holbrookia* and its six sub-species are still currently under much debate. This lizard was originally reported on the Ranch as Lesser Earless Lizard (*Holbrookia maculata*). It was later reported (date unknown) as Chihuahuan Earless Lizard (*Holbrookia maculata flavilenta*). This is still considered to be a valid sub-species. Earless lizards are widespread and found throughout the Ranch in open grassland habitat. During warm weather they are considered abundant. They are most often sighted in sandy washes and on roadways. It is also possible that we may have another species, the Elegant Earless Lizard (*Holbrookia elegans*) occurring at the Ranch as well as intergraded specimens. Further research is needed to sort out what species actually occur on the Ranch.

Greater Short-horned Lizard (*Phrynosoma hernandesi*)



(to 125 mm or 4.9”)

Greater Short-horned Lizard (*Phrynosoma hernandesi*)

Short-horned lizards are widespread throughout the Ranch in open grassland, less frequently in riparian corridors. They are most often sighted in open areas especially on roadways. They may appear as nothing more than a flattish rock. Unfortunately this often leads to their demise as they are extremely difficult to see from a moving vehicle. During the summer months they are a commonly encountered species at the Ranch.

Round-tailed Horned Lizard (*Phrynosoma modestum*)



Photo by Erik F. Enderson

(to 70 mm 2.75")

Round-tailed Horned Lizard (*Phrynosoma modestum*)

Round-tailed horned lizards at the Ranch are reportedly found in upland grasslands. There are no exact locations listed. There have been no recent sightings. If they still persist on the Ranch, this would be a distinct separate population from the rest of the species accepted range.

Regal Horned Lizard (*Phrynosoma solare*)



Photo by Erik F. Enderson

(to 117 mm or 4.6")

Regal Horned Lizard (*Phrynosoma solare*)

Regal horned lizards at the Ranch are reportedly found on rocky ridge tops; especially near harvester ant nests. There have been no recent sightings.

Clark's Spiny lizard (*Sceloporus clarkii*)



(to 144 mm or 5.6")

Clark's Spiny Lizard (*Sceloporus clarkii*)

Clark's spiny lizards are found throughout the Ranch, in all terrestrial habitats. They are widespread and still considered abundant within the Ranch. Spiny lizards are often sighted on large trees, dead tree trunks and snags, rocky areas in dry ravines and in riparian corridors. Spyns are also commonly encountered on and around Ranch buildings.

Slevin's Bunchgrass Lizard (*Sceloporus slevini*)



Photo by Dr. Christian d'Orgeix

(to 68 mm or 2.7")

Slevin's Bunchgrass Lizard (*Sceloporus slevini*)

Historic reports from the Ranch are from dry creeks near the Grassland center to dry ridges above Turkey creek, on north Mesa and on sandy flats along O'Donnell and Post canyons. They were once considered abundant at the Ranch. Slevin's are generally thought to be a higher elevation species. Recent surveys at the Ranch as well other lower elevation populations have shown a drastic decline in their overall population numbers. A survey for Slevin's conducted on the Ranch in 2011 had reported only four specimens. Their continued occurrence at the Ranch may be at risk. Further research is needed to determine if their decline can be reversed.

Southwestern Fence Lizard (*Sceloporus cowlesi*)



(to 75 mm or 3'')

Southwestern Fence Lizard (*Sceloporus cowlesi*)

Southwestern fence lizard distribution throughout the Ranch appears to be patchy; favoring rocky areas and washes with large trees that have substantial deadfall as habitat locations. Fence lizards are also encountered in and around dead trees, brush piles, wood fence posts and around Ranch buildings especially near the researcher quarters area.

Ornate Tree Lizard (*Urosaurus ornatus*)



(to 59 mm or 2.3")

Ornate Tree Lizard (*Urosaurus ornatus*)

Tree lizards are widespread and found throughout the Ranch in all terrestrial habitats. Tree lizards continue to be considered abundant. They are encountered on large trees, tree stumps and snags and are often seen around Ranch buildings. They also favor washes, gullies and ravines and rocky areas in riparian corridors. There is debate over sub-speciation. At the Ranch we have both the ornate tree lizard *U. ornatus* and the lined form *U. ornatus linearis*. They are distinct in appearance, but are often found living sympatrically; *U. ornatus linearis* may prove to be a pattern variation.

Snakes



Snakes: Twenty one species, of twelve genera

Western Diamondback Rattlesnake	(<i>Crotalus atrox</i>)
Mohave Rattlesnake	(<i>Crotalus scutulatus</i>)
Banded Rock Rattlesnake	(<i>Crotalus lepidus klauberi</i>)
Black-tailed Rattlesnake	(<i>Crotalus molossus</i>)
Regal Kingneck snake	(<i>Diadophis punctatus regalis</i>)
Chihuahuan Hook-nosed Snake	(<i>Gyalopion canum</i>)
Mexican Hognose Snake	(<i>Heterodon kennerlyi</i>)
Spotted Nightsnake	(<i>Hypsiglena chlorophaea</i>)
Western Black Kingsnake	(<i>Lampropeltis nigrata</i>)
Desert Kingsnake	(<i>Lampropeltis splendida</i>)
Arizona Mountain Kingsnake	(<i>Lampropeltis pyromelana</i>)
Sonoran Whipsnake	(<i>Coluber bilineatus</i>)
Sonoran Coachwhip	(<i>Coluber flagellum</i>)
Sonoran Coral Snake	(<i>Micruroides euryxanthus</i>)
Sonoran Gopher snake	(<i>Pituophis catenifer affinis</i>)
Western Patchnose Snake	(<i>Salvadora deserticola</i>)
Eastern Patchnose Snake	(<i>Salvadora grahamiae</i>)
Western Groundsnake	(<i>Sonora semiannulata</i>)
Western Black-necked Gartersnake	(<i>Thamnophis cyrtopsis</i>)
Mexican Gartersnake	(<i>Thamnophis eques</i>)
Checkered Gartersnake	(<i>Thamnophis marcianus</i>)

Western Diamondback Rattlesnake (*Crotalus atrox*)



(up to 1, 676 mm or 66")

Western Diamondback Rattlesnake (*Crotalus atrox*)

Diamondbacks are widespread and can be encountered in all terrestrial habitats throughout the Ranch. They are most often encountered in or near washes, ravines, gullies and rocky areas. Diamondbacks are occasionally sighted near Ranch buildings and crossing roadways. Diamondbacks are most often encountered during warm weather and are considered to be abundant. Several wintering sites have been identified being utilized by diamondbacks. Two near O'Donnell creek located 60-80 meters uphill from the streambed. Three have been identified in Post canyon only 3-10 meters above the streambed. These same sites are also utilized by black-tail rattlesnakes, gopher snakes and Sonoran whipsnakes. Diamondbacks will also take advantage of other sites which may be suitable. One was found using a hole in the ground at the base of a Sotol plant while another was found using a hole (since repaired) in the flooring of one of the older Ranch buildings.

Mohave Rattlesnake (*Crotalus scutulatus*)



(up to 1,270 mm or 50")

Mohave Rattlesnake (*Crotalus scutulatus*)

Mohaves are widespread and found throughout the Ranch. Mohaves can be found in open grassland, dry washes, ravines and crossing roadways. Mohaves are most often encountered during warm weather in open grassland areas of the Ranch and are considered to be abundant. Searches for possible wintering sites for Mohaves have been conducted 2010-2012 with no success. It is assumed that rodent burrows or thick cover at the bases of trees and shrubs are likely locations.

Banded Rock Rattlesnake (*Crotalus lepidus klauberi*)



Photo by Dan Robinett

(up to 840 mm or 33")

Banded Rock Rattlesnake (*Crotalus lepidus klauberi*)

A species of special concern in Arizona, they are totally protected by Arizona state law.

Rock rattlesnakes are considered a higher elevation species, but will range into lower elevations favoring riparian corridors and rocky hillsides in oak woodlands. Rock rattlesnakes possibly could be found in other rocky locations in association with our major creek drainages. Previous records indicate that one specimen was found in Post Canyon in the late 1980s and they were suspected to be found in upper Lyle canyon and Turkey creek. Recent sightings are of two specimens. One was found in the recycle shed at headquarters in 2009, most likely from the Post canyon population. The second specimen was found in 2011 at O'Donnell creek upstream from the dam locations.

Black-tailed Rattlesnake (*Crotalus molossus*)



(up to 1,219 mm or 48")

Black-tailed Rattlesnake (*Crotalus molossus*)

Black-tails are reported as possible in rocky riparian corridors throughout the Ranch. Recent sightings have been primarily in O'Donnell creek and in Post canyon near the dam locations. During spring and early summer at both of these locations they are commonly encountered. Several wintering sites for black-tails have been identified. All of the sites described for western diamondbacks were shared by black-tails. In addition to the five sites described, two other sites utilized by black-tails were located in O'Donnell creek 2-3 meters above the creek bed.

Regal Ringneck Snake (*Diadophis punctatus regalis*)



(to 857 mm or 34")

Regal Ringneck snake (*Diadophis punctatus regalis*)

Ringnecks are grassland specialists and could possibly be found in all terrestrial habitats throughout the Ranch. They are most often encountered crossing roadways during summer monsoons while the ground is moist in early morning or late afternoon. Eight specimens had been sighted in 2011, enough to consider ringnecks abundant.

During September 2012, five hatchlings were reported basking on roadways.

Chihuahuan Hook-nosed Snake (*Gyalopion canum*)



Photo by Cecil Schwalbe

(to 380 mm or 15")

Chihuahuan Hook-nosed Snake (*Gyalopion canum*)

Hook-nosed snakes with their secretive habits make them extremely difficult to locate. Hooknose snakes possibly may occur throughout the Ranch in oak woodland habitats. Only one specimen has been reported in 2009 by Christine Haas near the researcher quarters area.

Mexican Hognose Snake (*Heterodon kennerlyi*)



Photo by Tara Sprankle

(to 760 mm or 30")

Mexican Hognose Snake (*Heterodon kennerlyi*)

Hognose are reported to occur in loose sandy soils of floodplains and riparian areas. Hognose were suspected to occur in the O'Donnell floodplain in association with sacaton at the northeast section of the Ranch. However, none have been documented. One specimen was reported in 2009 on the road just north of the Research Ranch entrance.

Spotted Nightsnake (*Hypsiglena chlorophaea*)



(up to 598 mm or 23")

Spotted Nightsnake (*Hypsiglena chlorophaea*)

Reported to possibly occur anywhere on the Ranch; documented specimens were located near the Grassland center, central O'Donnell canyon and the old Appleton residence. Nightsnakes are likely to occur in rocky washes, ravines and riparian corridors where lizards are abundant. Spotted nightsnakes are primarily nocturnal. There have been no recent sightings.

Desert Kingsnake (*Lampropeltis splendida*)



Photo by Kortney Jaworski

(to 1,422 mm or 56")

Desert Kingsnake (*Lampropeltis splendida*)

This species has only recently been added to the Ranch species list. The first specimen was reported in September 2003, near the sacaton grasslands at the northeast section of the Ranch. In 2009 one was reported near the researcher quarters. In 2011 a specimen was reported crossing east corral road, north of the research quarters and a second specimen was reported on the front porch of the bunk house. Desert kingsnakes are grassland specialists and may possibly be found in other locations at the Ranch.

Western Black Kingsnake (*Lampropeltis nigrita*)



Photo by Young D. Cage

(to 1,422 mm or 56")

Western Black Kingsnake (*Lampropeltis nigrita*)

A black kingsnake was reported to be found on the Ranch by Mark Doderer (researcher) in 1984. There are no recent confirmed sightings. However, it is possible that they still occur.

Arizona Mountain Kingsnake (*Lampropeltis pyromelana*)



(to 1,088 mm or 43")

Arizona Mountain Kingsnake (*Lampropeltis pyromelana*)

Originally described as a subspecies, *L. pyromelana woodini*, this is no longer considered valid. Considered to be a higher elevation species, mountain kingsnakes will range into lower elevations favoring riparian corridors and rocky hillsides in oak woodlands. Earlier records report them to be found at Turkey creek and Lyle canyon. Recent sightings were of two specimens in the O'Donnell Creek drainage in 2011. Mountain kingsnakes are potentially at risk from illegal poaching.

Sonoran Whipsnake (*Coluber bilineatus*)



(up to 1,778 mm or 70”)

Sonoran Whipsnake (*Coluber bilineatus*)

Sonoran whipsnakes were reported to be abundant in upper Turkey creek and O’Donnell creek. Recent sightings have been from open grasslands and riparian corridors throughout the Ranch. They are typically encountered crossing roadways and are considered common in our riparian corridors. Sonoran whipsnakes have been found wintering alongside rattlesnakes.

Sonoran Coachwhip (*Coluber flagellum*)



(up to 1,728 mm or 68")

Sonoran Coachwhip (*Coluber flagellum*)

Sonoran coachwhip, *Coluber f. piceus* (photo, above), and red racer, *Coluber f. cingulum* are both reported to occur anywhere on the Ranch. The last confirmed sighting was in May, 2010, east of Headquarters in O'Donnell Canyon, when a Sonoran Coachwhip was seen crossing the road. It is likely that Red Racers still occur but none have been confirmed recently.

Sonoran Coral Snake (*Micruroides e. euryxanthus*)



Photo by Erik F. Enderson

((to 615 mm or 24"))

Sonoran Coral Snake (*Micruroides euryxanthus*)

Records include one specimen from O'Donnell creek and a second from an unknown locale. They possibly could occur anywhere on the Ranch. They are suspected to be found on rocky hilltops and rocky ridges. There are no recent sightings. If coral snakes still persist on the Ranch, it is likely that their preferred food item, the Western Threadsnake (*Rena humilis*), will also occur.

Sonoran Gopher Snake (*Pituophis catenifer affinis*)



(to 2,337 mm or 92")

Sonoran Gopher Snake (*Pituophis catenifer affinis*)

Gopher snakes are often locally called bull snakes. The bull snake, *Pituophis catenifer* is the species found in the mid-western U.S. Gopher snakes are widespread and found throughout the Ranch, in all terrestrial habitats. During warm weather they are commonly seen. Gopher snakes can be found crossing roadways and are often found around Ranch buildings. Gopher snakes have been found sharing wintering sites with rattlesnakes.

Eastern Patchnose Snake (*Salvadora grahamiae*)



(to 900 mm or 35.5")

Eastern Patchnose Snake (*Salvadora grahamiae*)

Eastern patchnose are widespread and found throughout the Ranch. Patchnose prefer open grassland areas and are often sighted stretched out (photo above) while basking on roadways. They often remain motionless when approached and are at risk from passing vehicles. They are considered to be a common species during warm weather. Patchnose are one of the first snakes to emerge during spring and one of the last snakes to be seen active before winter.

Western Patchnose Snake (*Salvadora deserticola*)



Photo by Erik F. Enderson

(1,014 mm or 40")

Western Patchnose Snake (*Salvadora deserticola*)

Western patchnose snake were suspected but not documented at the Ranch. Three road kill individuals were found in 2011 on the road just north of the Research Ranch. It is possible that they do occur and may yet be documented on the Ranch.

Western Ground Snake (*Sonora semiannulata*)



(483 mm or 19")

Western Groundsnake (*Sonora semiannulata*)

Western groundsnake has only recently been added to the Ranch species list with three specimens sighted. In 2009, one was found at the staff quarters, the second on East Corral Road in 2011. The third was a hatchling west of the Ranch House in 2012. They are likely to be common. However, due to their secretive life style, they are not often encountered.

Black-necked Gartersnake (*Thamnophis cyrtopsis*)



(up to 1,070 mm or 42")

Black-necked Gartersnake (*Thamnophis cyrtopsis*)

Records report black-neck garters as a limited population, with no definite population sites identified. Black-necks are considered to prefer streamside and seep habitat situations. Recently, they have proved to be a widespread species and found throughout the Ranch, usually associated with but not restricted to moist situations.

Mexican Gartersnake (*Thamnophis eques*)



Photo by Dr. Christian d'Orgeix

(up to 1,120 mm or 44 “)

Mexican Gartersnake (*Thamnophis eques*)

A species of special concern in Arizona, they are totally protected by state law. They are currently, 2012, a candidate for federal listing as endangered. Mexican garters have always been considered a rare snake at the Ranch. Records report them from O'Donnell creek, Turkey creek and Finley tank. Several relatively recent sightings at the Ranch were from Finley tank, where a small population persisted. They were last reported August 9, 2009 at this location. The species decline has been linked throughout their range to the decline of their preferred food, leopard frogs which are now believed to be completely absent from the Ranch. However, during July 2012, a high water event occurred filling water impound ponds east of the researcher quarters. Spadefoot toads emerged for breeding in mass numbers. Researchers reported five Mexican gartersnakes having recently fed on spadefoot toads.

Checkered Gartersnake (*Thamnophis marcianus*)



(up to 1,088 mm or 43")

Checkered Gartersnake (*Thamnophis marcianus*)

Checkered gartersnake had not been listed with older records; however, they have been reported throughout the years with no cited locations. Recent sightings have been at the desert pup fish pond, south of the Grassland center, near the researcher quarters and near Clark wash. Checkered garters are usually found near moist situations, but often range some distance from water sources.

Turtles



Turtles: two species, of two genera

Sonoran Mud Turtle (*Kinosternon sonoriense*)

Desert Box Turtle (*Terrapene ornata luteola*)

Sonoran Mud Turtle (*Kinosternon sonoriense*)



(to 175 mm or 7")

Sonoran Mud Turtle (*Kinosternon sonoriense*)

Originally identified at the Ranch as Sonoyta Mud Turtle (*Kinosternon sonoriense longifemorale*), this may have been in error since the only known populations of Sonoyta mud turtle are from Quitobaquito pond in Organ Pipe National Monument USA and in the Rio Sonoyta drainage in Mexico. Historic reports of abundance and occurrence at the Ranch are from deep pools in Turkey creek, Post canyon and O'Donnell creek. These populations still persist with an extraordinary population in the rocky pools in south Post canyon. During summer monsoon rains, they can often be found well away from permanent water sources. They are capable of colonizing other permanent or semi-permanent water sources. In 2011 specimens have been sighted at Finley tank and in the Pupfish pond immediately south of the Grassland center. It is possible with the high water events in 2012 through the post and O'Donnell drainages mud turtles may migrate and be found in other water retaining areas of the Ranch. Mud turtles are a species of special concern in Arizona.

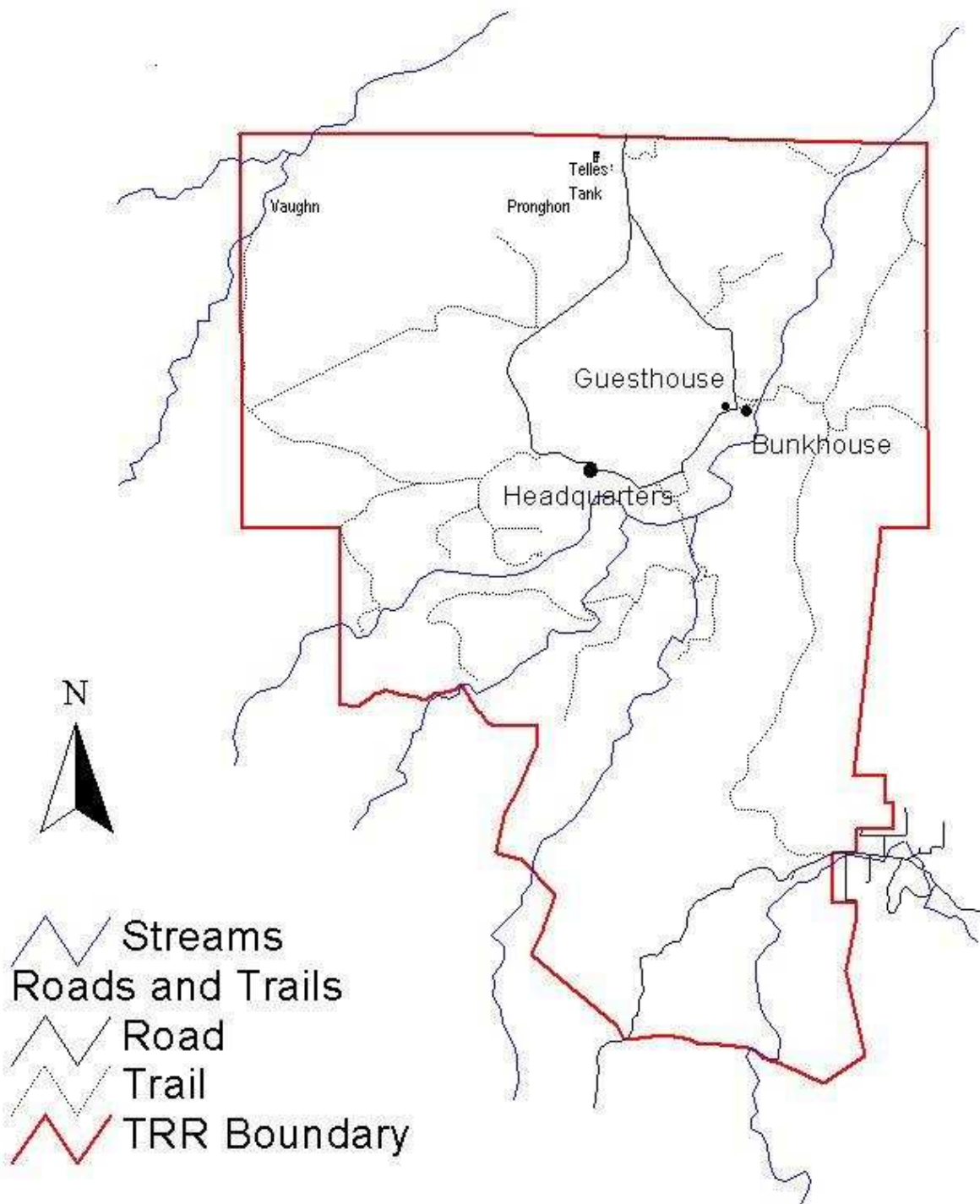
Desert Box Turtle (*Terrapene ornata luteola*)



(to 146 mm or 5.75”)

Desert Box Turtle (*Terrapene ornata luteola*)

A species of special concern in Arizona, they are totally protected by state law. Historic reports of occurrence cited box turtles as widespread in sandy soils along stream courses. Recent sightings are near lower O’Donnell creek in association with sacaton. A juvenile was located in 2011, a good indicator that recouplement still occurs. Box turtles are occasionally found on the road north of the Research Ranch. Individuals found are also reported to AZGFD for the Box Turtle survey.



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 Roads and Trails

