



Post Oak & Prairie Journal

A Regional Journal of Crosstimbers Connection

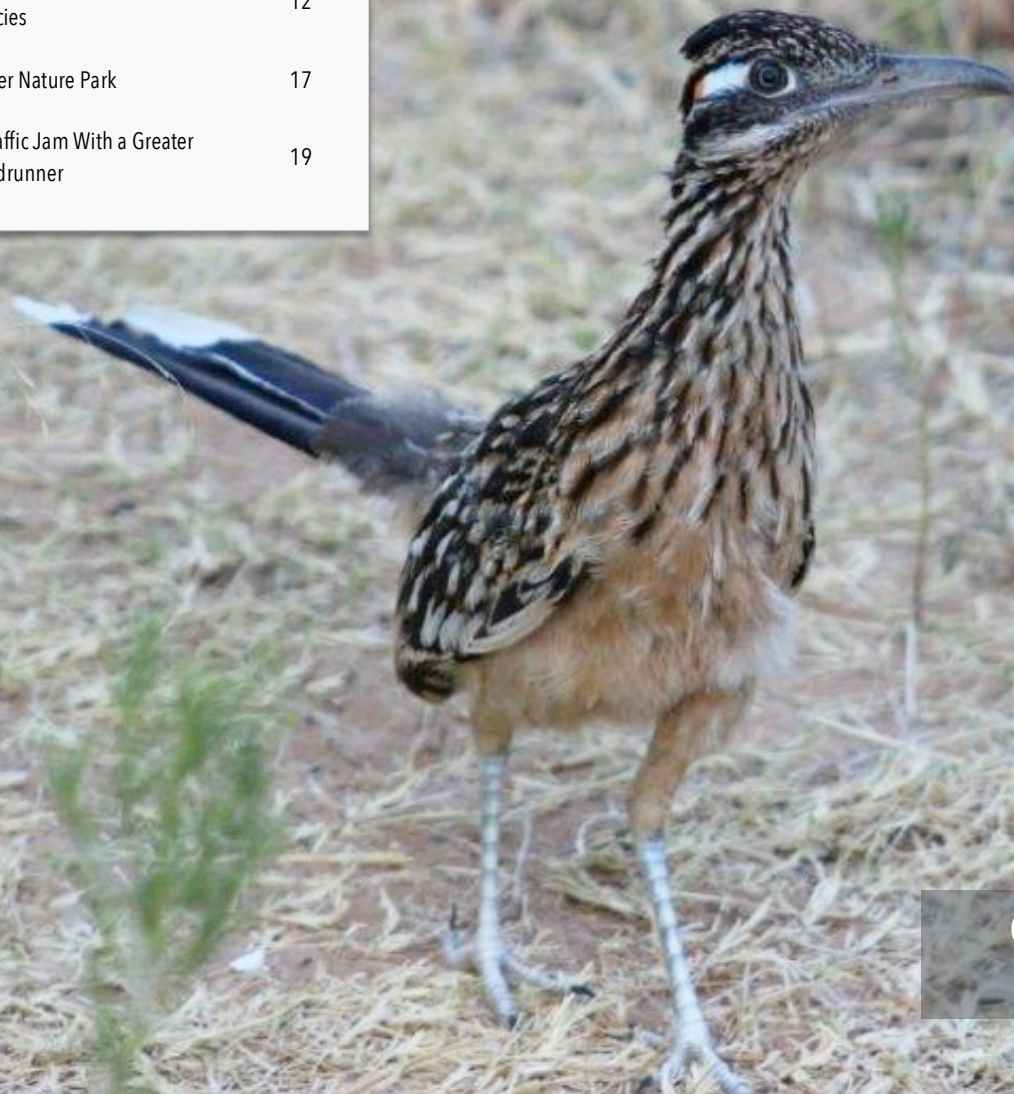


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Greater Roadrunner

(photo: Michael Smith)

POST OAK & PRAIRIE JOURNAL

A Quarterly Journal of the Cross Timbers and Blackland Prairies Ecosystems

Rob Denkhaus - Editor / Michael Smith - Co-Editor

The *Post Oak & Prairie Journal* is published by Crosstimbers Connection, a 501(c)(3) nonprofit organization whose goal is to connect people with nature in north Texas.

Submissions:

We welcome articles that report observations, research and descriptions of the cross timbers and prairies, as well as articles pertaining to wildlife, plant communities, conservation, and land management within these ecoregions. Articles are peer-edited prior to acceptance.

Manuscripts may be sent in Microsoft Word, Apple Pages, or as documents that can be opened in Word or Pages. The article may also be sent in the body of an email. We regret that we cannot accept handwritten manuscripts.

Photos may be sent by email as JPEG, TIFF, or PNG images. Please send at the highest resolution available and we will compress them as needed. Please do not send photographs to be scanned.

Please contact us regarding submissions by emailing journal@crosstimbersconnection.org



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The journal is *free*, and you can download each issue from the Crosstimbers Connection website shown below. You can also read and download for free at Issuu - <http://issuu.com/crosstimbersconnection>. At this time, POPJ is not available as a print publication (although we hope that it will print nicely on your printer after it is downloaded!).

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EDITORIAL

“Connecting People With Nature”

Michael Smith, President, Crosstimbers Connection

I grew up at a time when kids could freely roam creeks and fields, at least in Fort Worth. Fifty-something years ago, during summer break I would pack something to eat and go explore the creek from morning until evening, wading through pools and flipping chunks of white limestone to find watersnakes or earless lizards. My recollection is that I did this several times a week, and Mary's Creek was my home away from home. In many ways, that time has been lost to the current generation of kids. It has been lost because of our fear of predatory adults who, it seems, might lurk anywhere. For some kids, it has been lost because of video games and social media, or schedules filled with lessons, sports and other structured activities. The consequences of having no unstructured time to play in nature are more serious than it seems at first glance.

In the midst of habitat loss, climate change, and biodiversity crisis, people are more and more estranged from nature. These are the people whose support will be crucial for any effective action to conserve wild lands and species. In an article in *Trends in Ecology & Evolution*, James Miller (2005) discussed the importance of experience in the natural world in order for people to support conservation. He noted that an increasing proportion of people live in urban areas, where undisturbed nature is in short supply. Children spend increasing amounts of time indoors, watching TV and computer screens for long hours. The amount of time they spend exploring outside is correspondingly shrinking (Children & Nature Network, 2015). Why would we think that a population whose world revolves around technology, buildings, and cars would advocate for the preservation of nature? Miller cited reports from Australia of schoolchildren



unaware that milk is produced by cows and that the cotton in their clothing comes from plants. Why would such children care if the last woods are cut or the last prairie plowed?

Direct experience of nature, playing and exploring in a real place, seems to be how kids truly fall in love with nature and become advocates for it. Stephen Kellert (2002) discussed children's direct, indirect, and vicarious experiences of nature, coming down in favor of direct experience. No matter how breathtaking and wonderful the BBC's "Planet Earth" video series is, playing in the woods may be what gives rise to that lifelong sense of kinship with nature. And this is what we had in mind when we formed Crosstimbers Connection. We wanted kids as well as adults to have the kinds of experiences that had shaped us, walking in the woods or wading a stream. Our tagline, "connecting people with nature in north Texas," reflects that. We knew the importance of the sensory, emotional, and intellectual aspects of direct nature experience. While our organization is composed of only a few part-time volunteers, we believed that taking small, intimate groups of people out to experience nature firsthand would be a worthwhile effort.

EDITORIAL: In This Issue (*continued*)

And so, in our most recent field trip, a group of us went to the LBJ Grasslands on September 20th, as related in “The End of Summer at LBJ Grasslands.” It is the most wonderful and enjoyable of tasks, to take people out and show them what we love (and have them share things from their own expertise). And while the LBJ Grasslands is in Wise County, there are lots of places close to the metroplex where the same thing can happen. One example is Oliver Nature Park where Sam Kieschnick has the privilege of sharing nature with visitors. He has generously provided a profile of these 80 acres of forest, prairie, and riparian areas on pages 17-18. In our view, one of the services that this journal can provide is to publish descriptions of various parks and preserves in the cross timbers and prairies region. There are small (and relatively large) natural treasures scattered around north Texas, and these profiles will help make sure that anyone looking to spend time in the woods and fields knows just where those treasures are.

Once you have discovered these places, and after you have fallen for the amazing diversity of wildlife that lives there, the experience of nature easily becomes a lifelong habit. Organizations and individuals can work together so that the need for outdoor experience can be met while adding to our understanding of ecosystems and wildlife. In this issue, Rob Denkhaus writes about the long-term working relationship between a group of Fort Worth Audubon Society volunteers and the Fort Worth Nature Center & Refuge. The data resulting from Project Feeder Watch adds to our knowledge of local bird diversity, and the story behind it reflects the good that can come from a lifetime of devotion to nature.

We hope you will enjoy this issue of the *Post Oak & Prairie Journal*, and we hope you will do what you can to “connect people with nature in north Texas” – for the sake of all of us and for the sake of the wild places we all love.

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Male red-winged blackbird

Reptilian Refugees:

Relocating Copperheads After the Flood

Michelle Villafranca, Natural Resource Specialist, Fort Worth Nature Center & Refuge

It all started after the May/June 2015 'Noah's Ark' floods. I was weed-eating my dog's yard when I noticed something slither through the grass along the foundation of the house. I noticed that it was a copperhead. Over the period of twenty years living in this location, we have occasionally seen copperheads; perhaps a few a year. But, likely as a result of the 2015 flooding, many copperheads had to move out of the wooded creek area and move uphill ('uphill' being our house).

I stopped my task and went to round up the 'snake relocation kit' that my husband and I have designated for exactly this circumstance. The kit is comprised of blacksmith tongs, a five gallon bucket, and a lid. I carefully used the tongs to grasp the copperhead just behind its head. Then, keeping a very long arm's distance from the dangling serpent, I placed it in the bucket and hurriedly put the lid on.



Figure 1. A bucket-full of copperheads, which are surprisingly docile.

I have often heard that it is not a good idea to relocate wildlife, even snakes, because it is somewhat akin to dropping a person off in an unknown location a thousand miles away and expecting them to immediately survive attacks by rival gangs and be able to source food, water and shelter. I have an exception: venomous snakes. I will not kill them because I know that they have an ecological right to occupy this niche as much as I do. However, I must protect my pup. And my toes.



Figure 2. We placed a small copperhead in a glass jar so we could take a picture of it. Notice the pit between the nostril and eye.

I took a brisk quarter-mile walk with the bucket until I found a suitable location to deposit my now-angry copperhead friend. Really, it wasn't such a bad disagreement that we had. I pulled the lid off the bucket and tipped it slightly so that the snake knew that it was being asked to depart. Once on the ground, we exchanged a few intense glares and then the snake was on its way.

Copperheads are venomous snakes known as pit vipers; which refers to the heat-sensing pit between the eyes and the nostril. Their preferred habitat is woods, thickets, bottomlands and other areas that have a cover of leaves, downed wood, and an adequate supply of prey. Copperheads' coloration is perfect for blending into fallen leaves and logs. They prey on small rodents, frogs, lizards, and even cicadas. They are diurnal, but in the heat of the summer, they rest during the day and hunt in the evening.

As the daytime temperatures heated up, the copperheads began appearing in the evening. So, although I thought my copperhead sighting was over; except it wasn't. Over the course of a month,

Reptilian Refugees (*continued*)

my husband Vince and I found 21 additional copperheads. Mostly, they were lounging about in his place of business. Vince is a self-employed bronze artisan. He has a casting foundry with many tools and miscellaneous items against the walls. The copperheads seem to prefer the coolness of the sandy floor of the casting room. Every time we entered the foundry, we had to scan the walls and look around the kiln to see if a copperhead was coiled up resting. Eventually, when we realized this was going to be a regular ‘thing’, we conducted a massive clean-up and reorganization in an effort to dissuade any further recruitment.

Our relocation service kicked into high gear with snake captures reaching up to five at one time. Some days we’d only capture one; then we’d have a few days reprieve, and then the next day, five. Vince has become somewhat of an expert at capturing copperheads with blacksmith tongs. We relocated all copperheads to distant locations with suitable habitat. After the first few, we began taking them further afield because we wondered at what distance you could be ensured that they would not return. Towards the end of our relocation program, someone suggested to me that we should be inserting radio telemetry trackers in the snakes for a scientific study. While I do not dispute that that is a good idea; we were not equipped to do such a thing on short notice. So thus, valuable potential data has been lost to the world of science. Anecdotally, we believe that the copperheads were not returning.

The first ten included a few adults and the rest seemed to be juveniles. They were all resting in close proximity and when combined into a bucket and left alone for hours, they got along just fine. I believe that there was something of a ‘perfect storm’ phenomenon occurring. Perhaps the flooding in and adjacent to the nearby creek sent the copperheads searching for high ground. Once they reached said high ground (our foundry), they found a den location, perhaps under the foundation of the building. The rains may have improved conditions for successful breeding of Woodhouse’s toads and the emergence of dog-day cicadas. Not to mention Bewick’s wren nestlings that lived in Vince’s sandblasting machine for 20+ days. These three food sources convened at the same time as the copperhead appearances. While I do feel guilty about hauling the copperheads away from such abundant and delicious food sources, I cannot say that I regret doing so. I selected the best possible alternative habitat for them. I only wish that I had implanted them with telemetry trackers so that I could learn how they are responding to their new home.

Michelle Villafranca works at the Fort Worth Nature Center & Refuge as the Natural Resource Specialist. She actively contributes to collaborative projects at other City parks and Stormwater sites, as well as working with other organizations on regional projects and conferences. She can be reached at: michelle.villafranca@fortworthtexas.gov

Capturing and Relocating Snakes

Michael Smith

- Growing up in a particular spot, snakes tend to remember the cues associated with “home” – they establish a home range and tend to stay within it.
- If moved far outside their home range, the snake may attempt to return home and wander without settling down, and many die even when the surrounding habitat is suitable.
- Therefore, snakes should not be relocated unless it is very necessary to do so (if its current location places the animal or people in danger, relocation is warranted) and the relocation distance should be minimized (less than a half-mile).
- Inexperienced people should avoid contact rather than to try to relocate a venomous snake. Especially in rural or outlying areas, a snake that is left alone may leave a yard or porch and never be seen again.
- Many snakes can be safely contained by placing a large, empty trashcan on its side and using a broom to sweep and nudge the animal into it. The trashcan should be taller than the snake’s length, stretched out. Once the reptile is within the container, set it upright *without reaching into it or grasping the top edge*. Place a secure cover over it and seek help. Transport and release the snake only if you have the experience to do so – otherwise call Animal Control or other qualified person.
- Selecting a place to release the reptile requires knowledge of the potential release area and the animal’s required habitat and typical home range. Release it too close, and you may see it again; release it in the wrong place and it may die because its needs cannot be met. If you are near a TPWD urban biologist or an experienced naturalist or herpetologist, they may be able to help you select a spot.

The End of Summer at LBJ Grasslands

Michael Smith, President, Crosstimbers Connection

On September 20th of this year, a small group of us hiked through portions of the LBJ National Grasslands, an area of mixed grasslands and woodland comprising over 20,250 acres (US Forest Service website, 2015). The area includes intermittent streams and small ponds as well as four larger impoundments of 30 acres or less. This patchwork of Forest Service land and private ranch land contains western cross timbers habitat, with oak and juniper as well as little bluestem and other prairie grasses and forbs. It is a favorite Wise County destination for many of us, and we planned this hike in hopes that temperatures would be moderate a few days before the start of fall. We were not disappointed with high temperatures in the mid to upper 80s.

The five of us were engaging in a sort of countercultural action by spending a Sunday afternoon in the woods and fields. Our culture and our lifestyles are increasingly urban and alienated from nature. Richard Louv (2008) famously recounted an interview in which a child said “I like to play indoors better ‘cause that’s where all the electrical outlets are.” He recalled a commercial in which an SUV drives alongside a picturesque mountain stream, while in the back seat two children watch a movie on a flip-down video screen, completely unaware of the scene outside. That does indeed seem to capture what Louv calls “nature-deficit disorder” – sealed away in our cars, watching our screens, while something really significant is right there within arm’s reach, but missed nevertheless.

But on this day, for the five of us, what was outside was not going to be neglected. We began our afternoon in a place where pine trees towered overhead and a layer of pine needles covered the ground. These groves are out of place in a cross timbers ecosystem but they are lovely places, planted in deep sand with numerous little ponds scattered among the trees. And as we approached the ponds, frogs were everywhere. Small leopard

frogs and a few juvenile bullfrogs jumped into the water ahead of us. Cricket frogs scattered like grasshoppers, jumping and then seeming to disappear. Their small bodies in mottled shades of gray with the occasional streak of green or rust color blended perfectly with the mud and vegetation.



A leopard frog at the pond margin.

We followed a trail away from the pine grove and into more typical cross timbers habitat. Post oak grows in mottes and small woodlands, with scattered savannas with little bluestem and other grasses and forbs. John was our resident expert on cacti and succulents, and he pointed out the occasional yucca scattered in the grasslands, saying that he believed them to be the Arkansas yucca. A little further in, John pointed out a couple of patches of Indian grass with their big seed heads and relatively broad leaves. We talked about what the original tallgrass prairie must have been like, with grasses growing as high as a horse. In fact, some of these grasses were taller than we were, and navigating through a large area of it would be slow going if there was no trail.

Since all of us were field herpers, we kept an eye out for snakes and lizards, scanning the ground and the lower branches of the

The End of Summer at LBJ Grasslands (*continued*)

Above: Indiangrass, with junipers in the background; Below: green lynx spider eating a honeybee

junipers and oaks as we walked by. While not seeing reptiles, we were fortunate in seeing lots of invertebrates, including a variety of spiders. While I have never completely warmed up to spiders after an intense childhood fear of them, I like taking photos of some of these fascinating arachnids, allowing me to see them close up without walking into their webs and having them crawl over me. We saw a couple of green lynx spiders, which have become a sort of favorite of mine since Clint introduced me to them a while back. They are a beautiful leaf-green with some whitish markings, and they are often found on flower heads and tall grasses in open areas. Every minute or so Clint would show up with a crab spider or some other invertebrate, and we learned a lot from him.

On the way back, near the pine grove, Dominic spotted a snake that moved out of sight into an oak motte. We spread out and worked our way into this clump of trees, through understory



The End of Summer at LBJ Grasslands (*continued*)

Left: male blotched watersnake; Right: (L to R) Michael Smith, John Chmielewski, Dominic Vlach

shrubs and past the strands of thorny greenbrier. As usual, Clint was the first to reach the snake, reaching into the leaf litter by some branches and pulling up a large blotched watersnake. While they have no venom, this species does not passively accept being picked up. The heavy-bodied brown snake flattened and struck, but Clint was able to bring it back to the trail without being bitten. Watersnakes have a second defense that is about as bad as the bite, and that is the musk they eject from the cloaca when threatened. It has an offensive smell and the snake's thrashing often smears this fluid (sometimes along with feces for good measure) on the arms of a human captor. After some initial attempts to escape, it sat still on the trail, flattened to look as large and menacing as possible, with its head partly hidden under a coil. After we took some photos, I decided to see if I could get it in hand and, if possible, let Dominic handle it. He had not handled a snake this large in the wild, and if we supported the snake just right and offered no target, chances are he would avoid the superficial scratches that result from a watersnake bite. I got my hands under a coil of the snake, away from the head, and lifted it up. I then let Dominic support part of the snake in a way that offered no target, and he was able to hold the snake.

Watersnakes are sexually dimorphic, meaning that males and females are different in some attribute such as size or pattern. Female blotched watersnakes grow to a considerably larger size than males, and this snake was a huge male (approximately three feet long). He had probably been cruising the area around the ponds, feasting on the frogs we had seen earlier. We counted ourselves lucky to have been able to take photos and handle this snake without being bitten or musked, and we released him with our thanks.

Shortly afterward, in the pine grove where we had started our walk, Clint shouted, "cottonmouth!" Sure enough, on the banks of a tiny pond, Clint had managed to get a cottonmouth into his sweep net as a quick strategy to prevent its escaping into the water. When it emerged from the net, we used snake hooks to position it (and repeatedly re-position it until it stopped trying to get away) for photos. The western cottonmouth is not uncommon in the LBJ Grasslands around the ponds and small lakes, even though we tend to think of this species as inhabiting bottomlands and larger wetlands. Despite the species name (*piscivorus*) which means fish-eating, its diet is varied and it sometimes wanders away from the water. Compared to the blotched watersnake we had just worked with, the cottonmouth has a "chunkier" arrow-shaped head, and eyes with elliptical pupils set lower down on the face under a flattened head. Watersnakes may flatten their heads to look somewhat triangular, but when they do this their heads look fairly thin, with round eyes set rather high up on the head. Watersnakes have lighter-colored scales above the lips, with dark-edged bars on them. This snake reminded us of another difference: often the cottonmouth seems rather mild-mannered compared to its nonvenomous cousins. While watersnakes will flatten, release musk, and snap at a person that harasses them, cottonmouths often merely try to get away or sit still. This cottonmouth did not snap at us or even gape to show us the lining of its mouth (a common warning behavior that gives it the name "cottonmouth") while we interfered with its escape with our snake hooks. When it found that it could not get away, it merely sat there while we took pictures. An inexperienced person might need to be reminded that this is a dangerous snake that could very well respond to handling by biting anyone foolish enough to pick it up.

The End of Summer at LBJ Grasslands (*continued*)

Western cottonmouth seen at a pond margin in the pine grove.

We now drove to a different location within the grasslands, a hill near Cottonwood Lake. While the area we had just visited was primarily sandy, this location is one of limestone and caliche. On the hillside were rocks ranging from pebbles to large slabs of limestone, offering good shelter for lizards, snakes and invertebrates. The ridge top has areas of exposed limestone as well as thin, gravelly soil. Working our way up the hillside, I found a little brown skink. This is the lizard formerly known as the ground skink, and it has a two-toned coppery body with thin little legs. It is more often seen on the woodland floor, where it undulates its little three or four inch body through the leaf litter almost like a snake. On the other side of the ridge, Clint had found a young Texas spiny lizard. Covered in backwards-facing pointed scales, this little reptile is truly “spiny,” and its gray and rusty brown pattern provides good camouflage as it sits perched on a tree trunk. They are excellent climbers, and with the approach of a human they often dart behind the tree trunk or scamper into the upper branches.

On some of the rocky ridges such as this one, we sometimes find small, low-growing cacti tucked away



Nipple cactus

among the rocks. And sure enough, we found one of these interesting little cacti which John identified as *Coryphantha sulcata*. It has a variety of common names, including finger cactus or nipple cactus. The cylindrical body of the plant has finger-like projections all over it, with a cluster of spines at the end of each “finger.” Perhaps some of the appeal of a cactus such as this is the geometry of its body and the symmetry of its design. It was like an amazing work of art half-hidden at our feet.

We stopped for a snack and talked about seeing what snakes or frogs might come out on the road as sunset arrived. However, a light rain was beginning and temperatures were falling, and at least for snakes, these were not ideal conditions. We decided to call it a day. It had been a wonderful afternoon, a great way to say goodbye to summer.

We wish that our walk in the woods and fields was more mainstream, an appreciation of nature shared by more people. How else will enough people care about these places to advocate for them and protect them? The population of Texas continues to grow, and more people bring more pressure to develop or alter natural places. Seven counties in north central Texas experienced population growth of 25% or more between 2000 and 2010 (TPWD, 2012a). As more of the prairie falls under the bulldozer’s blade, and more woods become houses

and shops, where will people take walks like this in the future? We can save some places within the cross timbers, but we save what we have seen and touched and truly care about. If new generations grow up staying indoors (“that’s where the electrical outlets are”) and watching video screens, will a pond full of frogs or a ridge top with lizards and cacti really matter to them? It is

The End of Summer at LBJ Grasslands (*continued*)

true that currently, the LBJ National Grasslands is federal land managed by the Forest Service, and not for sale to developers. However, would efforts to manage and protect the integrity of the habitat continue without public support?

There is plenty of work needing to be done. Forty-three issues ranging from invasive species to land management practices have been identified that impact species of greatest conservation need (SGCN) in the cross timbers (TPWD, 2012b). Many of these issues, listed in Table 5 of the Texas Conservation Action Plan Handbook for the cross timbers, are related to concerns about loss of open spaces and the fragmentation or degradation of habitat. What can we do that will make a difference? I believe that one of the most important actions we can take is to share these places with others who may come to love them as we do.

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Michael Smith is an amateur naturalist with a lifelong interest in field herpetology. He is Co-Editor for POPJ, and currently serves as President of Crosstimbers Connection. He can be reached at: michael@crosstimbersconnection.org



SIGHTINGS:

Things seen and heard, especially the first and last sightings of the season, or sightings in unusual places or significant situations

Week in 2015	Sighting
Week 32: August 3	8/3/15 - 9:30-11:00pm. Multiple Brazos watersnakes (<i>Nerodia harteri</i>), seen in Hunter Park amongst rocks and drift material along the shoreline of Lake Granbury, Hood Co. The Brazos watersnake is an uncommonly seen endemic species, protected by Texas Parks & Wildlife Department. Observation: Clint King.

To submit a sighting, please send the relevant information to: journal@crosstimbersconnection.org. Please include the date, location, identification, and the significance of the sighting (unusual location or habitat, early or late season sighting, etc.). If possible, include a photo in jpg or similar format to confirm identification. We publish selected sightings but regretfully cannot always publish all of them. Thank you for contributing!

We love getting significant sightings here, but remember to also report sightings to www.inaturalist.org! Sightings of herpetofauna in Texas should be contributed to the Herps of Texas project, <http://www.inaturalist.org/projects/herps-of-texas>. Additionally, Crosstimbers Connection has a project at iNaturalist: <http://www.inaturalist.org/projects/crosstimbers-connection>.

“Friday Gulls” and 61 Other Bird Species: Project Feeder Watch at Fort Worth Nature Center & Refuge

Rob Denkhaus, Natural Resource Manager, Fort Worth Nature Center & Refuge

Project FeederWatch (PFW) is a citizen science program coordinated by the Cornell Laboratory of Ornithology designed to monitor trends in bird populations around the country. Participants simply identify the birds that visit feeding stations around their homes and businesses and document the highest number of each species seen during each count period. Fort Worth Nature Center & Refuge (FWNC&R) volunteers, many of them Fort Worth Audubon Society members, have been collecting data on the birds that visit the bird feeding courtyard located on the south side of the Hardwicke Interpretive Center (HIC) as a part of PFW for the past 25 years.

Every winter since 1990-1991, from the middle of November to the end of March (or occasionally the first week of April) dedicated birders have logged countless hours in the “field” of the Hardwicke courtyard tallying bird species and numbers. Looking at the data from year to year tells us relatively little about the birds around the HIC but having 25 years of data creates an impressive data set, the holy grail for all researchers. Variability in weather conditions, in observer ability, or any other factor from year to year limits the value of the data from just a handful of years but 25 consecutive years smooths out the variability from year to year.

The HIC courtyard was created in the 1980s when an “L”-shaped addition was added to the existing interpretive center. The initial landscaping included an array of native plantings, a shallow water feature, and a brush pile in addition to a variety of bird feeders. In 2005, the water feature was renovated and expanded to simulate all of the aquatic habitats found on the FWNC&R; a deep water area provides a small lake-like environment, a shallow planted area simulates a marsh, and a flowing stream represents the river. A waterfall adds another facet of aquatic habitat as well as visual and aural esthetics for birds and humans alike. All of the accoutrements added to the courtyard serve to provide the necessary components of wildlife habitat that are the key to attracting a plethora of bird species: food, water, and shelter. Of course, the HIC’s location nestled



A male cardinal at the feeder in the HIC courtyard

amongst the diverse prairie, forest and wetland habitats of the FWNC&R makes attracting birds easier than in more urbanized locations.

TOTAL BIRDS OBSERVED

Sixty-one species of birds representing 20 avian families were observed visiting the HIC courtyard over 244 observation periods. Most observation periods consisted of two consecutive mornings totaling 6-8 hours of observations with approximately two weeks separating periods. During each observation period, only the maximum observed number of a species at one time is tallied. Volunteers tallied 17,267 total birds during the 25 years of the project to date. Annual totals ranged from 198 birds tallied in the winter of 1990-91 to 1004 birds during 2014-15 (Fig. 1). As indicated by the trend line ($R^2=0.3187$) included in Fig. 1, birds have become more plentiful during the project period despite the reported general decline in bird populations throughout the country.

In many areas overall bird declines have been masked by an increase in exotic species such as European starlings (*Sturnis vulgaris*), rock doves (*Columba livia*), and house sparrows (*Passer*

“Friday Gulls” & 61 Other Bird Species (continued)

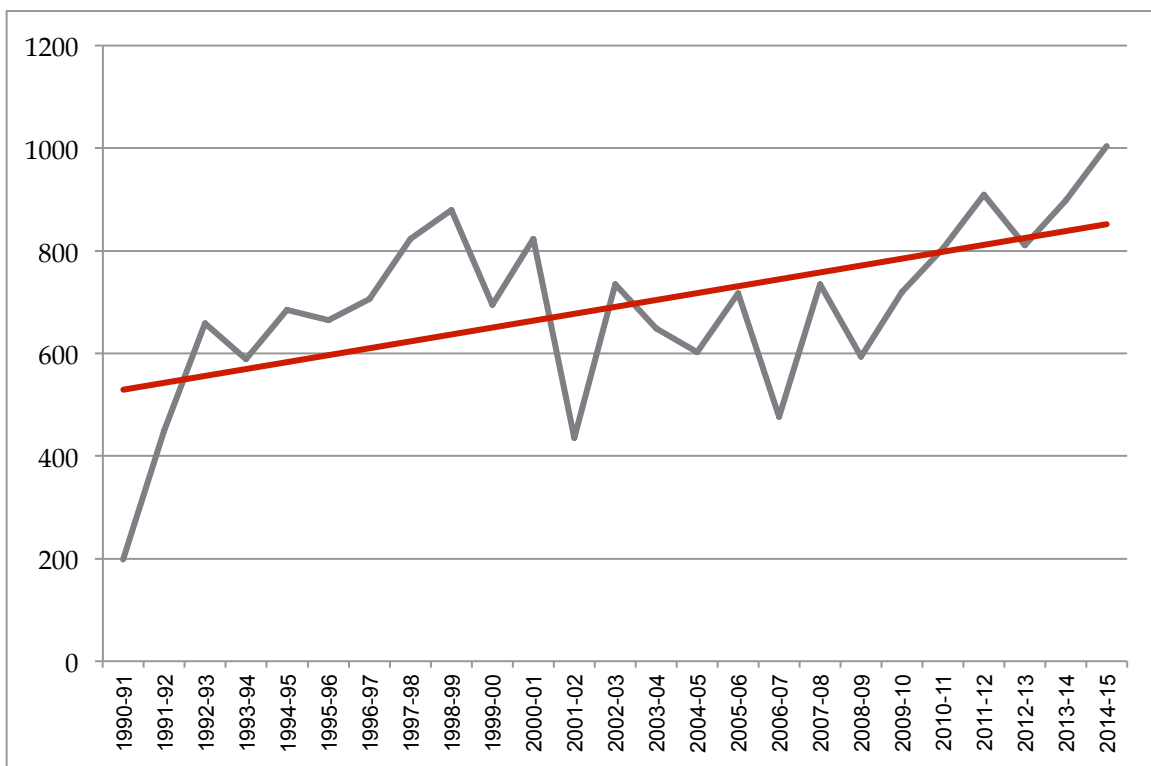


Figure 1. Total birds (all species combined) tallied per year (gray line). Red line indicates increasing trend in number of birds observed at HIC courtyard during count period over 25 years of data collection.

domesticus). This is not the case in the HIC courtyard as nonnative species are exceedingly uncommon in the area with only two species recorded during the 25 years of the project. A single European starling was tallied in late December 1992 and house sparrows were observed in only 11 count periods (4.5%) tallying 16 total birds. The maximum number of house sparrows tallied during a single period was four with a single bird accounting for nine of the count period records. Nonnative birds accounted for 0.098% of the total birds tallied illustrating that these undesirable species are not responsible for the increasing trend in overall bird numbers.

BIRD DIVERSITY

As overall bird numbers increased so too did bird species diversity. In the first year of the project, 1990-91, 17 species were observed. Only the winter of 2001-02 had less diversity with 16 species recorded. The maximum species recorded in a year, 33, were observed in 2011-12 and again in 2014-2015. Fig. 2 provides annual species totals and a trend line ($R^2=0.3538$) showing the upward trend towards increasing

species diversity over time. The average number of species recorded during the project to date is 26.4 species per annum with the average increasing to 31.8 species during the past five years (2010-11 – 2014-15).

FWNC&R visitors are often interested in seeing the greatest diversity of species in the courtyard. PFW data over 25 years provides the opportunity to examine when the best time for a winter visit to the HIC courtyard to see the greatest number of species. For data analysis purposes, observation periods were grouped based upon the date of the first day of each observation. Groupings were identified by being either early (1st-15th of each month) or late (16th-end of each month). Early November and early April are represented by four and five observation periods, respectively (Fig. 3). This low representation is due to how PFW coordinators determine the starting dates each year but still resulted in an average of 10.0 species observed/period (Range = 5-12 species). All other observation period groupings are represented by 22-31 individual observation periods. Late January was shown to be the time period with the greatest species diversity with 29

“Friday Gulls” & 61 Other Bird Species (continued)

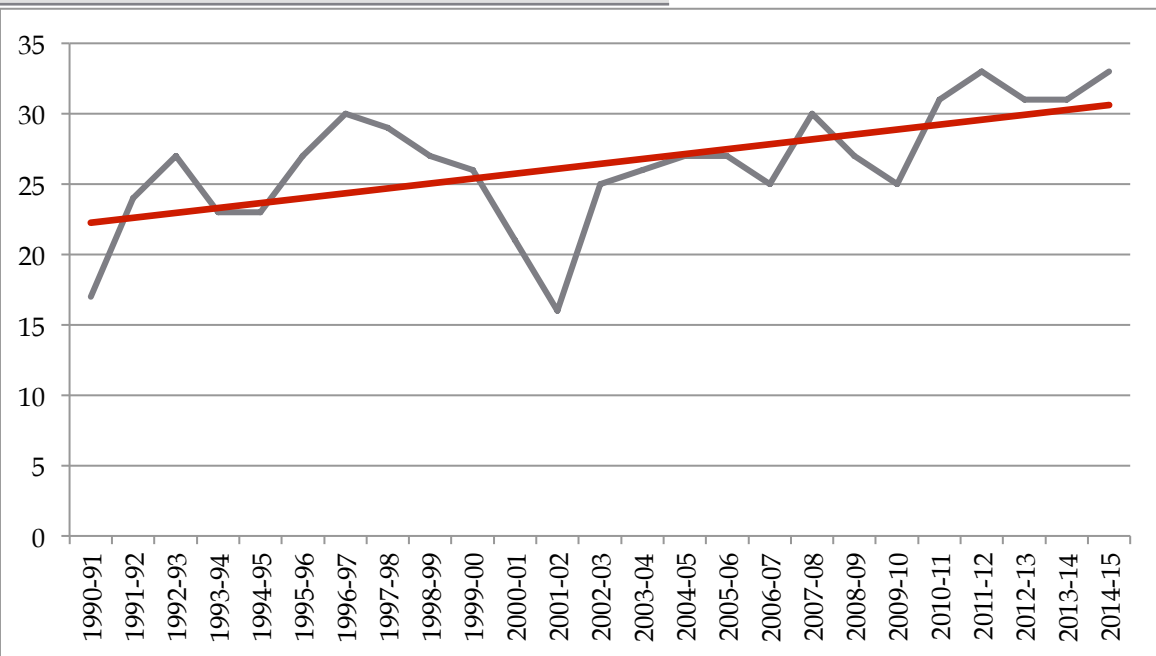


Figure 2. Total bird species observed per year (gray line). Red line indicates increasing trend in number of species observed at HIC courtyard during count period over 25 years of data collection.

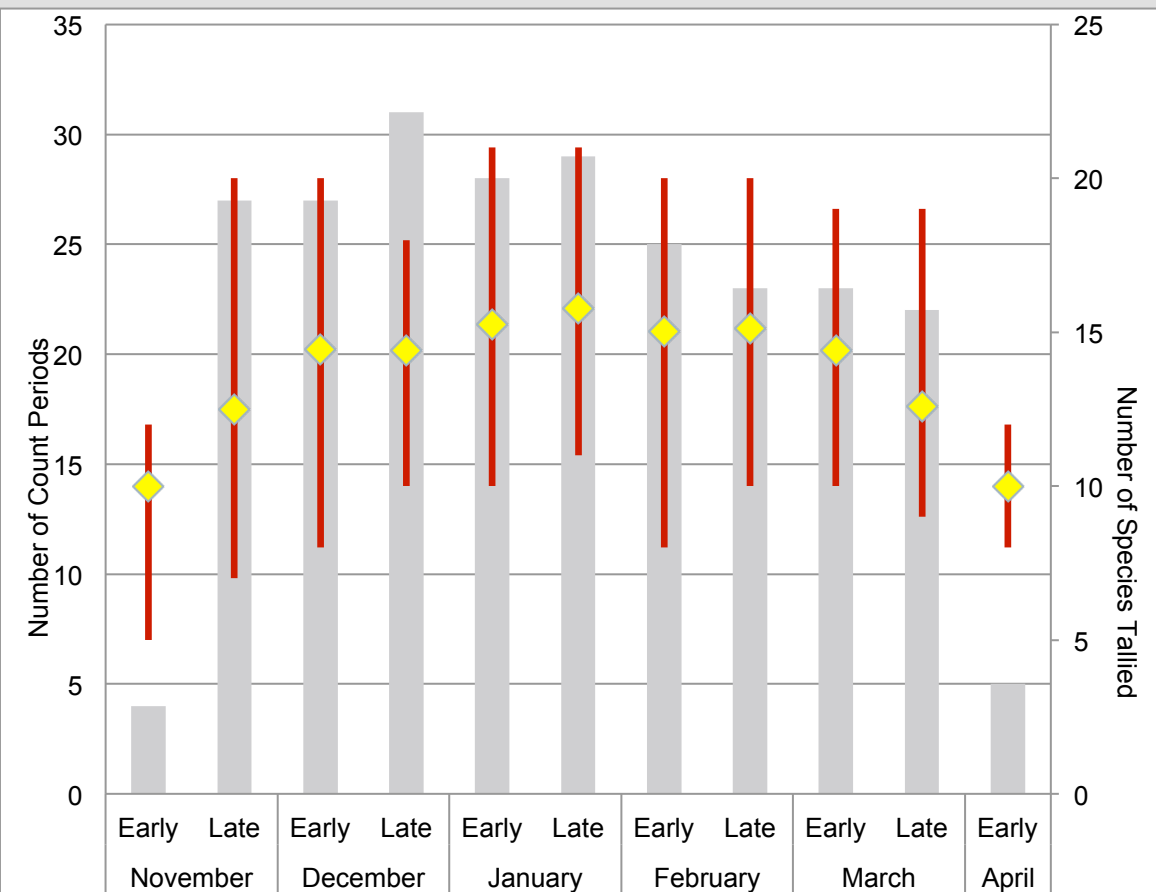


Figure 3. Species recorded during combined time periods. Number of observation periods for each time period (gray bars); maximum (top) and minimum (bottom) number of species tallied during each time period (red lines); average number of species tallied during time period (yellow diamonds).

“Friday Gulls” & 61 Other Bird Species (continued)

observation periods averaging 15.8 species per period (Range = 11-21 species). Combining all observation periods over all years provides an average of 14.3 species/period.

INDIVIDUAL SPECIES OCCURRENCE

Eight species (Table 1) were recorded during all 25 years of the project to date. An additional five species were recorded in 22-24 years or $\geq 90\%$ of the project years to date. These 13 species represent 8 different avian families. Ten species, representing eight avian families, were recorded in $\leq 10\%$ (1-2 years) of the project years to date with the majority of the records being of a single bird. In contrast, the most observed species was the red-winged blackbird (*Agelaius phoeniceus*) with 5,170 individuals (29.9% of all recorded birds) tallied in 24 of 25 years.

The remaining 38 bird species recorded were observed in 3-21 years. Fifteen (39.5%) of these species' populations could be described as increasing based upon the growing likelihood of observing these species in any given year. These include species such as white-winged doves (*Zenaidura macroura*) that have been expanding their range into north central Texas. The first white-winged dove to be recorded at the HIC during PFW was during the winter of 2010-11 and the species has been tallied each year



Carolina chickadee

AOU Name	Family	Species	Number Years Recorded
AMCR	Corvidae	American Crow	25
UDEJ	Emberizidae	Dark-Eyed Junco	25
FISP	Emberizidae	Field Sparrow	25
NOCA	Emberizidae	Northern Cardinal	25
AMGO	Fringillidae	American Goldfinch	25
CACH	Paridae	Carolina Chickadee	25
ETTI	Paridae	Tufted Titmouse	25
RBWO	Picidae	Red Bellied Woodpecker	25
BHCO	Emberizidae	Brown Headed Cowbird	24
RWBL	Emberizidae	Red Winged Blackbird	24
MODO	Columbidae	Mourning Dove	23
RCKI	Muscicapidae	Ruby Crowned Kinglet	22
CARW	Troglodytidae	Carolina Wren	22

Table 1. Bird species recorded $\geq 90\%$ of project years.

since. Other species, such as the black-chinned hummingbird (*Archilochus alexandri*) and eastern phoebe (*Sayornis phoebe*), have shown an increase in observations possibly due to climate change making their favored foods available earlier in the year.

Eight additional species can be described as declining in population based upon a reduction in their presence on annual species observation lists. Most of these species are sparrows, members of the family Emberizidae, and prefer open or edge habitat and the vegetative succession, both natural and anthropogenic, that has occurred within the HIC courtyard over the past 25 years has altered the habitat possibly making it less attractive to these species.

Additional analysis on individual bird species is currently being prepared for future publication.

THE HIDDEN VALUE OF THIS DATA

It is easy to see the value of long term data on bird population trends. Such data can guide habitat management decisions and provide feedback on the success or failure of management actions. Data can even alert biologists to species in need of conservation action. All of this is obvious and provide justification for the time and effort expended to collect the data but there is a hidden value to this data and its collection.

“Friday Gulls” & 61 Other Bird Species *(continued)*



A pair of cardinals at the feeder

The 244 observation periods, each an average of 7 hours of observation time, total 1,708 hours of data collection over the 25 year project to date. The vast majority of observation periods were conducted by at least two volunteers doubling the man-hours to 3,416, an impossible amount of time for the FWNC&R staff to devote to the project. The value of citizen science is making the impossible possible.

The majority of the volunteers who performed data collection over the past 25 years have been highly skilled birders with decades of experience identifying birds in the field. Many of these dedicated volunteers have been in the later stages of their lives and were no longer able to venture into the field as they had in the past. PFW gave them the opportunity to continue birding with a purpose, for many a lifelong pursuit. In addition, these skilled birders introduced countless HIC visitors to the joys of birding by teaching and mentoring anyone who was interested.

Richard Louv introduced us to the concept of nature deficit disorder in children in his book *Last Child in the Woods* (Louv, 2008). But children are not the only ones who can suffer from a lack of exposure to the natural world. Citizen science projects such as PFW provide a viable means of keeping the more mature members of the conservation community active and involved in

valuable activities while using their vast skills and allowing them to embrace their lifelong passion for nature.

For this reason, I would like to dedicate this article to the volunteers who collected the data with a special dedication to the “Friday Gulls,” an informal group of Fort Worth Audubon Society members, many of whom spent untold hours tallying birds for PFW. Many of these volunteers have since passed away but will always live in our memories and the data that they collected and the actions that it guides will always serve to illustrate their legacy as conservationists and supporters of the FWNC&R.

Reference

Louv, R. (2008) *Last child in the woods: Saving our children from nature-deficit disorder*. Chapel Hill: Algonquin Books.

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Exploring the Post Oaks & Prairies



Oliver Nature Park:

A Mansfield City Park Devoted to Nature Education and Appreciation

Sam Kieschnick, Nature Education Specialist, Parks and Recreation Department, City of Mansfield

Elmer W. Oliver Nature Park in the city of Mansfield is located at the intersection of two ecoregions: the eastern Cross Timbers and the northern Blackland Prairies. The 80 acres of the park contain several different ecosystems such as forests, prairies, and riparian areas. Each section is unique in plant and animal life. For instance, you'll see squirrels playing in the trees of the forest, but they rarely explore the grassy areas of the prairie. Wildflowers shine in the brightness of the sun in the prairie, but they cannot tolerate the shade of the trees. Each animal and plant is adapted to a certain area of the park. Look for other examples of these kinds of adaptations along approximately 1 mile of ADA (Americans with Disabilities Act)

compliant trails. The park, located at 1650 Matlock Road, is open seven days a week, opening at 5 am and closing at 6 pm (November – February) or 9 pm (March – October).

Oliver Nature Park is an ideal location for adults, families, and students to connect with and learn about our environment, through exploration and hands-on activities. In this outdoor classroom setting, students may explore scientific concepts in hands-on, inquiry-based experiences at various sites around the park like the treehouse, rocky ford, wildflower area, ponds, and the natural amphitheater.



Photo: Sam Kieschnick

Oliver Nature Park *(continued)*

<http://www.inaturalist.org/projects/elmer-w-oliver-nature-park>.

The tagline of this nature park is “Educate. Appreciate. Preserve.” By learning a little more about nature, we start to appreciate it, and hopefully that act of appreciation will lead us to protecting and preserving it. Oliver Nature Park is a great introduction to nature for anyone interested. For more information, visit the website www.olivernaturepark.com.

Besides nature education programs, Oliver Nature Park offers a unique opportunity for the naturalist to enjoy nature. The crushed granite trails are bike-free as the park encourages a leisurely stroll to enjoy all of the natural flora and fauna. Dogs are allowed only on leash and owners are required to pick up after their pets.

There is an active survey of the biodiversity of the park using the citizen science network, iNaturalist. Several participants have documented almost 800 species of plants, animals, and fungi in around 3700 observations so far! Fall and spring bioblitzes enticed naturalists and nature enthusiasts to document every kind of organism on a single morning with spectacular results. On the last fall bioblitz on October 10, 2015, around 400 observations were made documenting nearly 100 species! These biodiversity surveys extend throughout the year, as the seasonal changes are quite noticeable in the flora and fauna of the park. You can take a look at what everyone has been seeing by visiting

Sam Kieschnick plans and implements the nature education programs and field trips with the city of Mansfield, primarily at Oliver Nature Park. He has previously worked as a botanist for the Botanical Research Institute of Texas and served in other roles as a teacher and naturalist. Sam also is an active participant in citizen science and curates for the citizen science network iNaturalist. He can be reached at sambiology@gmail.com



A Traffic Jam With a Greater Roadrunner

Michael Smith, President, Crosstimbers Connection

On August 14th of this year, at the Southwest Nature Preserve in Arlington, a friend and I had an interesting interaction with a greater roadrunner (*Geococcyx californianus*). The bird approached us on a trail several times, as if wanting to get past us. After taking several photographs, we stepped aside and the roadrunner ran past us and on down the trail, seeming to confirm our hypothesis.

My past interactions with roadrunners have generally been along the lines of, “Hey look! Oh no, gone too fast for a photo.” From the dirt road they disappear into the vegetation at a fast trot, or maybe with a short, low flight over a barbed wire fence. The greater roadrunner is a variety of cuckoo, a gangly, medium-sized bird with a streamlined shape and a short crest of feathers atop its head. They do spend a great deal of time on the ground, but I have seen them fly short distances, mostly to get through or over a thicket.



According to the Cornell Lab of Ornithology (2015), these birds are opportunistic feeders, chasing down prey such as insects, rodents, lizards and snakes. In fact part of this bird's claim to fame is taking on and killing small rattlesnakes. The beautifully photographed book by Wyman Meinzer (2003) documents the hunting prowess of roadrunners. Less dramatically, their diet can include fruit and seeds in winter. Typical habitat in north Texas would include mesquite grasslands or scrubby, open woodlands. A roadrunner's territory might measure up to a half-mile in diameter, and within this large home range the bird and its mate may hunt and drive off others of its kind.

The encounter on August 14th happened at the end of an afternoon as Casey Garcia and I walked along a narrow trail worn in the low plants growing in the little clearing. Just ahead on the left was a gentle sloping hillside strewn with boulders. A small sumac thicket was close by, and behind it was eastern cross

timbers woodland, dominated by blackjack oak and post oak. On our right, the land sloped away toward a large pond.

We first spotted the roadrunner a short distance up the trail, and it walked closer and closer to us. The bird would stop, look at us and look from side to side, and then approach closer, stopping about five or six feet away. After a moment of what looked like uncertainty or frustration, it went down a side path toward the pond for a few feet, then turned around, came back, and went back up the trail about 20 to 25 feet. It then approached us again, going through the same process, including the little detour to our right, and back in front of us. The third time that this occurred, I

commented that the bird appeared to want to get past us down the trail where we had been. We stepped a few feet off of the trail, and sure enough, the roadrunner approached again, this time continuing on down the trail past us.

We were surprised that the bird approached us so closely, and did so repeatedly. Among the questions we asked ourselves was whether this bird had been exposed to people repeatedly within this small refuge, to the point that it had become somewhat habituated to them. If true, it would raise concerns since not everyone would simply step aside for a bold roadrunner persistently wanting human traffic to yield right of way.

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