Shape the Future

Canyon Chatter

Friends of Madera Canyon

October 2025

Phidippus carneus

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On the cover. A male of the jumping spider, *Phidippus carneus*. The species is distributed in southern Arizona, southern New Mexico, and Central Mexico. This species occurs on various desert shrubs, cacti, and oaks, at elevations ranging from 420 to 7090 feet. Females deposit egg sacs under rocks. Males are typically found from mid-summer through autumn, whereas females are found in every month. The photos are from the same specimen. This individual was living in my patio furniture. See Rose, S. 2022. Spiders of North America. Princeton Field Guide. Photography JCM

How to Join Friends of Madera Canyon

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From the President

October 2025

When John Murphy asked me to write a Foreward to his new book, A Field Guide to the Amphibians and Reptiles of Madera Canyon and adjacent areas on behalf of the Friends of Madera Canyon, it did not take me even a nanosecond to say yes. John has generously pledged proceeds from the sale of his book to the Friends, so my writing a few words to introduce the book was appropriate.

For me, there was more. John captured my thinking with a quote from Sir David Attenborough (BBC TV program Extinction: The Facts, September 13, 2020): "It's never more important for us to understand the effects of biodiversity loss…only if we do that, will we have any hope of averting disaster."

Far too few of our species care much about losing biodiversity. So, humans pave over, scar land, foul water, and destroy habitat without any notion that each assault on the natural order adds to an accumulating total. And it is within the realm of possibility that the next assault will be the tipping point to do irreparable harm to our planet.

Educating the wider public to the wonders of nature and helping them to understand the danger of destroying biodiversity is a core purpose of the Friends of Madera Canyon. So, I welcomed the opportunity to put my name and our group of Friends alongside John's in his book.

I wrote:

"Education has been fundamental to the mission of the Friends of Madera Canyon since its founding in 1987. John C. Murphy's A Field Guide to the Amphibians and Reptiles of Madera Canyon is a major contribution to the resources now available to anyone seeking a road map for identifying, understanding, and appreciating a significant and numerous life form in the Canyon.

The *Guide* includes a brief introduction to the natural history of the Canyon, and a summary of how climate change has impacted, and will continue to impact, it. This book provides a snapshot in time of what amphibians and reptiles are here now as a historical record of potential use to future professional scholars and amateur herpetologists alike. The history of science is a sequence of such snapshots upon which researchers depend to understand how the past affects what exists now and what conditions might be in the future.

Aside from its value in the ongoing work to understand the world in which we live, *A Field Guide* can also be useful to the hiker in the Canyon who is suddenly startled by a beautiful lizard or colorful snake and wonders what it is. Murphy's periodic "field notes"— "I have only seen this toad [Woodhouse] at Historic Canoa Ranch"— add personal observations in the way most good teachers do, connecting the more formal descriptions and discussions with "by the way" comments that engage the user of the guide more directly.

The photographs are noteworthy as well, collected by Murphy from a variety of sources, including his own pictures. Some of the toads seem to look directly into the lens with a face only a mother could love. Other plates, like the Eastern Collared Lizard, reveal patterns and colors on the skin that rival the most beautifully beaded jewelry. By themselves, the photographs are yet another addition to the historical record.

For me, field guides are a way to confirm, or not, what I think I saw, learn something new, and stimulate further inquiry about a species. The photos are useful and add depth and breadth of information, making the *Guide* an essential reference book. I cannot say that I always remember what I have learned from a guide. But I know where to look if I have forgotten.

John Murphy's work for A Field Guide was animated by his passion for the amphibian and reptile world. The number of books, articles and research reports he has published are testimony for his love of subject. He also loves Madera Canyon and currently serves on its Board of Directors. The Friends of Madera Canyon organization is pleased to benefit from his work and to offer a new and valuable resource to the wider community interested in the natural world."

I have never had a pet snake or horned lizard. I probably won't get one. That does not stop me from admiring the beautiful illustrations in John's book or appreciating the variety of species living where I do. Perhaps ours is the only species that can take the time to admire other species. It is worth taking that time.

Thank you, John, for caring so much that you take the time to educate us all about the world of amphibians and reptiles in our region and reminding us of their beauty.

Daniel E. White

The Friends are looking for a few helping hands!

Want to spend more time in the Canyon?

Did you know that the Friends provide brochures about the Canyon, hiking and birding to Madera Canyon visitors? That's right. They call themselves the Box Crew. Led by Joe and Cheryl Wolowsky for the last five years, and helped by Joe and Joan MacIsaac, Franz and Doris Schatz, Sharon Toborg, and John and MJ Van Veldhuizen, these volunteers share the job of re-stocking each of the 15 brochure distribution locations throughout the Canyon.

The Box Crew recently welcomed new volunteer, John Haak, but they're looking for a few more Friends to pitch in. If you love being in the Canyon, would you consider an hour and a quarter to help out once a month or so? We offer great benefits: time in the Canyon you love!

If you'd like to help, please contact Joe at jwolowsky@gmail.com.

Call to Artists!

Exciting things are happening in the Friends of Madera Canyon: We're developing a Volunteer Portal that will serve as an information hub for all the great work our volunteers are doing. We're making plans to celebrate the 40th Anniversary of the Friends of Madera Canyon in 2027. We're making Friends with our local businesses to help fund our mission.

If you are a Graphic Artist, we could use your help do design three pieces of artwork to support the activities listed above: A logo for the landing page of the Volunteer Portal, a logo for the 40th anniversary publicity, and a logo for our business supporters. This would be a one-time project, and not an ongoing volunteer position.

If you're not a Graphic Artist but you know one who might be willing to volunteer, that's great too. Please share. Contact Michele Gazica at michele.gazica@friendsofmaderacanyon.org
Thank you for being a Friend.

The Bird Page

HIGH & LOW

Bob Pitcher

Carrie Nation

On September 6, I joined a nature walk led by Doug Moore, Madera Canyon naturalist and Education Director for the Friends. We were to take the Carrie Nation Trail in the upper part of the Canyon, and see what plants and animals might be stirred into activity by the monsoon rains.

I was hopeful on the way. The Interstate was wet as I approached Green Valley at about 8:00 in the morning; it had rained recently. There were puddles in places along Madera Canyon Road as well. There were also a great many orange Arizona Summer Poppies in the grassland, and the grass itself was high and refreshingly green.

The White Breasted Nuthatch. National Parks Gallery

We were a party of five. We saw a few birds at the lower end of the trail, which has been nicely cleared by the Friends' trail-maintenance crew. We first heard a pair of Common Ravens croaking to one another, and then a White-breasted Nuthatch – there were probably a pair there – and then saw a couple of Bridled Titmouse in the scrub oaks with the nuthatches. These two birds are often participants in a mixed flock of small woodland birds of many other species, including warblers, vireos, kinglets, and Brown Creepers, but the nuthatches and titmice seemed to be all there was.

A little farther along the trail, we heard the two signature birds of the upper Canyon, Acorn Woodpeckers and Mexican Jays. The woodpeckers are often noisy birds, tapping loudly on a snag, or more softly at a live tree trunk to get at a grub – and then fussing at one another. Or so it seems. And it seems the woodpeckers take no notice of people. The jays are quite different. They're always in a group, though one rarely if ever sees all the group. They softly call to one another, as a hiker comes into the group's territory, pretty clearly spreading the word that people are on the way. Then they keep watch as we pass through, moving around restlessly, positioning themselves, it may be, in case one of us drops something edible.

About this time, at the spot where large sycamores in the creek bed attract Elegant Trogons and Sulphur-bellied Flycatchers looking for nesting holes in the spring, we heard the song of a Painted Redstart, but never saw him in the foliage.

So far, so good, though perhaps a little quieter than one would like. Soon after, the trail goes steeply up and is rocky and difficult, and there's poison ivy. But that stretch doesn't last long, and above it the woods are opener, the going easier, and here at close to 6,000 feet, the birding is commonly more interesting.

But today the birds were sparse indeed. A Northern Flicker, perhaps a pair, and a single Arizona Woodpecker. A Western Wood Pewee was heard in the distance, sounding even more mournful than usual, and two unidentified hummingbirds whizzing by. That was it.

Why so quiet? Doug had been remarking as we went up that while there were a large variety of the plants commonly found along Carrie Nation in monsoon time, they had not yet flowered. And there were hardly any bugs about. We were actually on our way down before Doug spotted a small moth – there had been no other moths or butterflies. And I remember seeing only a very few flying insects myself. Usually through spring, summer, and

fall, there's a low buzz from all the insect life in the woods -- a ground bass. It wasn't there.

Where there are no flies, there are no flycatchers – and no other insect-eating birds such as tanagers and vireos. No wonder that lone pewee sounded sad! It may have been raining below, and perhaps also toward the top of the ridges, where many more birds have been reported, but in this middle stretch of the Canyon, there was very little to see or hear in the way of birdlife.

About the time we reached the second stream crossing on Carrie Nation, our stopping point for the walk, there were a few raindrops, and then real rain. We all got quite wet – pleasantly so! – on the way down. And there has been rain in the Santa Ritas in the days since. The Canyon may seem a more promising place now to migrants looking for a place to rest for a few weeks.

Western Wood Pewee. National Parks Gallery.

Green Valley WRF

Well, if there weren't many birds higher up, perhaps there would be more lower down in the valley. On the way home, I stopped by the Green Valley WRF (that's Water Reclamation Facility), where there have been a lot of shorebirds this fall, and which has changed its rules for access.

Water treatment facilities of the West, whatever they're called, and if they're open or at least viewable, tend to be great places to see birds. In what's often dry country otherwise, here's a place with consistent water. It's no wonder that Sweetwater in Tucson or the Gilbert Water Ranch are great places for birds and birders. The facilities at Benson and Mammoth also have their charms – at least for birdwatchers.

The Green Valley facility is off Nogales Highway, on the lefthand side just north of Quail Creek; a short side road takes one to the fenced area. One used to have to call from the gate to have the staff open it. That was awkward for both birders and staff, evidently, and after a series of rare birds on site, the staff now keeps a walk-in gate open from 6:30 until 2:30. Once inside, one is free to walk the gravel roads between the several basins – five in all, I believe.

The basins have varying amounts of water in them, and a good deal of vegetation has grown up around the edges of the deeper ones. The best of them these days, however, is the large basin at the front, with just enough water for the various shorebirds passing through Arizona on their way south from the Arctic.

Short-billed Dowitcher. National Parks Gallery.

Shorebirds are hard to find in Arizona. They need open, fairly shallow water, or, some of them, muddy or grassy flats near water -- rare habitat here. But where there are such places, especially if they're near a migration corridor, such as the Santa Cruz River, the birds will come – and in the fall, when they're in not in a hurry to get to breeding grounds, they may stay a few days.

Such has been the case this fall at the GV WRF. Attention was first drawn to the place this month on account of a Sabine's Gull and a Short-billed Dowitcher. Though these rarities were both gone by the time I visited, there were still more than a dozen species of shorebird, including Wilson's and Red-necked Phalaropes, Greater and Lesser Yellowlegs, Stilt and Baird's Sandpipers, and even a Semipalmated Sandpiper. There were also various early-migrant ducks, and several species of swallow catching bugs above the ponds. It made a good finish to the morning.

The Editor's Desk

The Importance of Predators

Large predators, such as wolves, lions, and sharks, play a crucial role in controlling populations of herbivores and smaller prey. By keeping these populations in check, they prevent overgrazing and allow plant communities to thrive, which in turn supports greater biodiversity. Their predation creates ripple effects throughout the food web, promoting ecosystem resilience and stability.

Meso-predators, including birds of prey and snakes, provide similar ecological services. They often target pest species and organisms that carry diseases, benefiting both crops and human health. Meso-predators occupy ecological niches that may be unavailable to larger predators, ensuring a rich diversity of species and a stable ecosystem.

Mini-predators include a predatory mite, parasitoid wasps, spiders, a bat the size of a bumblebee, tiny threadsnakes and blindsnakes, and many other species we don't generally think about. However, these species are important in their ecosystems and communities, despite their small body size.

Traditionally, predators are thought to impact ecosystems mainly by reducing prey numbers through predation or by changing prey behavior through fear. Less studied are predators that eat prey with fruits containing seeds. The prey is digested, but the seeds stay in the predator's gut and are moved when the predator evacuates its intestine (Reiserer et al. 2018).

Predator size also matters. Large predators may target bigger prey and tend to be messy eaters. They cannot always consume the entire prey, so they leave behind parts that other animals scavenge. Mountain lions often cache some of their prey to eat later. However, large pythons and boas, like all snakes, are very neat when they eat. They consume the whole prey animal and leave no scraps. Ecologists have long recognized that predators have a unique impact on ecosystems. Still, most research primarily focuses on how predators impact ecosystems by altering prey populations. There are many other, less-known ways individual predators can leave distinct marks on ecosystems.

Predator pressure can influence the life history of prey. Natural Guppy (*Poecilia reticulata*) populations coexist with two different predator groups (Rodd and Reznick 1997). Some Guppy populations coexist with a small killifish, a gape-limited predator; in other populations, guppies live with larger fish species that also prey on them. Guppy populations that coexist with the killifish have fewer small, immature guppies and more mid- and large-sized, mature guppies than populations exposed to larger predators. The sex ratio of adult guppies does not differ between predator sites but is significantly more variable among sites with the small predator. Ninety percent of all samples show a female-biased sex ratio. Season (wet vs. dry) does not significantly affect sex ratio or stage and size distributions. The variation in guppy demography may stem from differences in prey size preferences among predators. However, guppies from the two site types display notable differences in life history traits, such as

age at maturity and fecundity. This trait variation might contribute to the demographic differences. Results from an individual-based computer model suggest that fecundity, offspring size, and growth rates have the most significant influence on differences in size distributions and the proportion of immature individuals across sites. Mortality rates and growth rates appear to have the most impact on variation in adult sex ratio. Therefore, the observed demographic patterns likely result from complex interactions between mortality schedules and the life history traits of the populations.

Predators also create ecological hotspots by repeatedly transporting prey remains, such as meat and bones, to a concentrated area like a den or nest — often called 'home sites.' Adult predators typically bring prey remains back to these sites to feed their offspring. Over time, nutrients from the decaying remains and the predators' excrement accumulate. This consistent buildup of nutrients can cause significant ecological changes in these localized areas.

Predators can stop prey from drastically changing habitats and prevent the formation of ecological hotspots. For example, wolves can prevent beavers from damming streams and creating ponds that transform forests into wetlands (Johnson-Bice et al. 2023).

The jumping spider on the cover of this issue and the Mexican Grey Wolf above are both predators. Both species impact the biodiversity and ecological services in their respective ecosystems and communities.

Large carnivores often have higher hunting success at specific times and locations. In other words, humans cannot easily imitate the role predators play in producing prey carcasses. Animal carcasses are frequently overlooked as valuable sources of food and nutrients for both animals and plants. Although animals die and their carcasses fall to the ground constantly throughout the year from various causes, such as disease and hunting by humans, predators like cougars, bears, and wolves uniquely influence when, where, and how many carcasses are created. It is increasingly important to recognize and understand the full range of roles that predators have in ecosystems, as this helps improve management and conservation efforts. Humans tend to believe they can replicate the ecological functions of predators; therefore, some areas might be considered acceptable

without large predators. However, the wide variety of ways individual predators affect ecosystems makes it impossible to reproduce their effects across entire ecosystems.

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The Last Page

The Plains Lubber Grasshopper is found throughout the western plains of the United States and Mexico, where it lives in a variety of prairie environments, including shortgrass, mixedgrass, tall-grass, sand, and desert prairies. In each of these habitats, the grasshopper relies on specific forbs for food. It is herbivorous. Photographed in the rain JCM.

Send comments, articles, & announcements to:
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