



Shape the Future

# Canyon Chatter

Friends of Madera Canyon Newsletter

December 2023



*Happy Holidays!*

## From the President

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When leading groups of fourth graders on a walk on the Proctor Trail, docents often stop not far down the trail to point out a section of fencing that shows the signs of being burnt in a wildfire. The kids’ curiosity is piqued. A fire? Why is there a fence? Was the fire very bad? When did it happen?

It is becoming harder each year to remember fourth grade, but I retain some snippets of memory. First, of course, is how eager we students were to go on field trips. The trips broke up the routine. They often got us outside instead of in a desk. We got to see and touch rather than read about or see a film.

It is hard to say, then, that the specific purpose of the field trip from the teacher’s standpoint was achieved. But seeing and touching are helpful in most learning experiences, so something probably stuck.

A specific memory of fourth grade in California was the “topographical” map each of us made of the state. I don’t remember the materials we used to create the mountain ranges but even today, I can conjure in my mind’s eye the coastline west of the mountains and the big valley between ranges that characterize the state’s geography. I got a sense of how big California was and how different it was, region by region.

A seed, therefore, was sown in the act of making a map. Likewise, the process of learning by seeing and touching was another seed planted early in my life.

At the burnt fence, the docents ask the students about the height of the mesquite trees. They are all the same. The docents explain that while the parts of the trees above the ground burned in the fire, the roots remained alive. When the right amount of water and sun occurred, new growth sprouted. The result was the rebirth of a mesquite grove.

Doug Moore and the docents who work with him hosting fourth graders in the Canyon cannot be certain that all of the kids or even most of the kids will carry away significant amounts of knowledge about what they have seen and heard from the 2 ½ hours they spend on the walk. They have had, though, the chance to see and touch on a trip outside their classrooms.

#### VISIT OUR WEBSITE

<https://friendsofmaderacanyon.org/>

#### ON THE COVER

Happy Holidays from the Fo-MC’s Board of Directors. We would like to make 2024 a good, maybe even an excellent year for nature and the Santa Ritas. Photography JCM

What the adults hope for is that some seed will have been planted in some child that, with the right “water and sun” will sprout into a new naturalist who values the Canyon and its splendors. Even if the seed only produces an advocate—not a career choice—the experience will have been worth the time and effort.

You support this. As a member, your dues help to spread the word to the young in our community about the splendors of Madera Canyon. As a donor, you make it possible extending the program to embrace more kids. In this way, you are helping to shape the future.

The Friends’ Mission Statement commits us to “the preservation, conservation and restoration” of the Canyon. It is for those fourth graders and the many generations of fourth graders that we do what we do.

### Good News!

Secondly here is an update on the charcoal grills in the canyon. A grant for \$9,000 from Freeport McMoRan has completed the funding we needed to replace all of the fire grills in Madera Canyon. Already, the Forest Service has installed the first grill, at Whitehouse picnic ground. The FS has a plan for installing all of the 44 grills over the coming months, ensuring that the goal of reducing one threat of wildfire by providing safe places to cook for picnics will be achieved.

**Dan White, President**



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# Education Programs

## Fall 2023 Education Program

Continental School's 4th grade classes were guided by FoMC docent naturalists for "Nature Walk" field trips around the Proctor Nature Loop Trail this fall. Each of the three classes participated in their own field trip- Mrs. Flowers's class on October 26, Mrs. House's on November 9, and Mrs. Montoya's on November 16. About 75 local students got outside & enjoyed the fall nature in Madera Canyon again this year!

Despite an unseasonably dry Madera Creek, there was still plenty for the students



Fall color sycamore and ash in the Upper Proctor Loop. Photography Doug Moore.

*Docents helped students explore the five plant communities the Proctor trail winds through, while brilliant fall color and canyon wildlife made each walk a captivating adventure!*

to discover and learn about "their" canyon, public land in the Coronado National Forest. Docents helped students explore the five plant communities the Proctor trail winds through, while brilliant fall color and canyon wildlife made each walk a captivating adventure! Though not every groups sees exactly the same things, everyone got a chance to watch grazing Coues White-tailed Deer, resident Mexican Jays, and fall migrant birds. Other individual group highlights included lots of lizards, a cat-



A Western Screech-Owl, a returning resident roosting in a Sycamore. Photography Doug Moore

erpillar “line-up,” a wandering tarantula, and a variety of beetles, a few butterflies, and other insects. The last field trip even saw a perched Western Screech-owl, a returning winter resident that has taken up home in a Creekside sycamore for the past 5 or 6 years! What a treat for students, parents, teachers, and docents!

Continental School was the original participant school when Patsy Proctor and Betty Lane started the “Nature Walk Program” in 1988. Continental has been a consistent, reliable “field trip” partner ever since. I want to thank all the participating Continental 4th grade teachers (and school principals) who have continued making the nature walks such a fun, educational success for so many children! Once again, our docents and program received

rave reviews and “two-thumbs up” from the teachers, kids, and participating parent chaperones.

The spring & fall field trips would be impossible without the unfaltering dedication of a fantastic corps of docent volunteers. The group is not as large as it once was (and new volunteers seem harder to find and retain these days), I can truthfully say that quality is more important than quantity! The docent leaders and sweeps of the past several years are the most fun and best naturalists that the Education Program has fielded, and that is saying something, as the program has had MANY excellent docents in the past! My heartfelt **Thank You** to docents Nancy Bowen, Jim Burkstrand, Kathy Curran, Dave DeGroot, Craig McFall, Kirk McFall, Julie Porter, Thom Sharples, Doug Shumway, Penny France, Darren Diehr, Rozanne Roman; new docents Jean Martin, Judy White, Dan White; and recent retirees Judy Wilson, Ann Cottay, Pam Irvin, Lenny Friedman, Joan Titre.

**Doug Moore, Education Director**

**For feedback we received on these field trips see the Letters on pages 11 and 12.**

*Continental School was the original participant school when Patsy Proctor and Betty Lane started the “Nature Walk Program” in 1988.*



## Birding Report

### November Birds in Madera

November 10, 7:45. I start up the Super Trail from the east end of the Mt. Wrightson Picnic Area in the Canyon. It's early, and it's chilly, at 41°, but it's a holiday and there were some two dozen cars already parked by the time I get there. It's light, although the sun hasn't made it up over the eastern ridge yet.

I'm out this morning to see what birds I can find this time of year in the upper part of the Canyon. My expectations, from prior late fall and winter bird walks, are low. On the other hand, I'm looking forward to a beautiful walk in the mountains.

Super Trail's in pretty good shape – no strong monsoon rains this summer to tear it up. It's rocky in places, especially the first few hundred yards, and occasionally steep, but not so unrelentingly so as the Carrie Nation Trail. The cat-claw bushes haven't encroached on the trail much; maybe the scant moisture has discouraged even them.

The late season is very evident in many of the plants along the trail. Though the forest is primarily evergreen, with junipers, pines, oaks, and green shrubs, the sycamores' foliage ranges from the brightest yellow – flaming when the sun eventually hits it a little later – to an aging yellow-brown. The few walnut trees I see are also yellow by now, as are the more common Arizona grape vines. The only red touches are Virginia Creeper, which I knew growing up in the Midwest as woodbine.

Nothing's in bloom – I see nary a flower all morning -- but there are lots of spent flowerheads, mostly small yellow composites I think may be Cudweed, and several bushes have a few bright red berries left. Juniper berries, some now dark purplish, cover the trail under Alligator Junipers.

In general, the Canyon woods here is as gorgeous as usual, however late in the year. Living in desert scrub, I don't get my quota of green; a walk like this is restorative. Lower down, near the trailhead, the trees are almost entirely juniper and oaks of several sorts, all evergreens. Pines gradually mix in, first in the creekbed, then in shadier spots, Ponderosa and Arizona Pines, I believe. Oaks are always tricky to identify beyond *Quercus* sp., but many I see are surely Arizona White Oaks, Emory Oaks, and at least an occasional Silverleaf. There's also the occasional handsome Arizona Madrone, and the

*Living in desert scrub, I don't get my quota of green; a walk like this is restorative.*

shrubbery includes red-barked Manzanitas and tiny-leaved Cercocarpus.

Unlike some other trails in the higher Canyon, Super Trail takes one across dry, exposed slopes, where the vegetation is quite different. Grasses predominate there, many with beautiful plumes, but none identifiable by me. With them are beargrass, agaves, and yuccas interspersed with scattered oaks.

I notice the Quiet. There's only an occasional breeze; there are no insect noises, until late sunshine brings out a few buzzing flies; and there are no birdsongs. On a fine morning in May, none of this would be true. The sun would be striking these hills from the northeast much earlier in the morning, the bugs would be out, and so would the birds. But no flies no flycatchers – and no warblers, no vireos, no tanagers and orioles. They've all gone south.

Yes, I do see a few birds on the trail, but all are either permanent residents of the Canyon or migrants that come here for the winter. Among the former are Mexican Jays, of which I see some fifteen along the trail, a single Yellow-eyed Junco, several Northern Flickers, and at least five Acorn Woodpeckers. Among the winter residents are four Hermit Thrushes and a Red-naped Sapsucker. (Hermit Thrushes nest here too, but those are a different subspecies.) Several species are calling, but apart from the Acorn Woodpeckers, none are noisy or persistent.

In all, I see or hear a dozen species of bird on the trail, some 35 individuals, and most of them are lower down along the creekbed, which in a few places actually have water in it. A little more than a mile and a half up the trail, I turn around and come back down again. My expectations for few birds are confirmed, but I've had a mighty nice walk.

On the way out, I stop a half hour at the feeders at the Santa Rita Lodge. They're hopping with birds, but here too the variety is down. Most noticeably different is the absence of Broad-billed Hummingbirds, the most numerous summer species. I expect there are still a few Broad-bills around now, but most common today are Anna's Hummingbirds, most of them probably migrants from farther north. There was a Costa's Hummingbird among them, and the usual pair of Rivoli's. (Did you know that the Rivoli's was named for the second Duke of Rivoli, an Italian amateur ornithologist, and that the Anna's was named for his wife?) Most of the other birds were the usual Mexican Jays, Acorn Woodpeckers, Turkeys, and Lesser Goldfinches. There was a pair of Arizona Woodpeckers and two or three Bridled Titmice, but these too may be at the Lodge any time of year.

On the way home, I make one more stop, at the Green Valley Water Reclamation Facility to see the latest southern Arizona Bird-of-the-Week, a Pomarine Jaeger, which has no business being anywhere near Arizona, but was here nonetheless.

**Bob Pitcher**



A Rivoli's Hummingbird in Madera Canyon. This bird is also known as the Magnificent Hummingbird or *Eugenes fulgens*.

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# Canyon Nature



The Great Plains Skink, *Plestiodon obsoletus*, is expected in the Great Plains, and ranges from southeastern Wyoming and Nebraska (also Fremont County, Iowa) southward through Arizona and into Mexico as far south as Durango and Tamaulipas. These medium-sized skinks are highly secretive and wary. They inhabit dry areas in the terrestrial vegetation along riparian habitats; concealing themselves in rock crevices and mammal burrows. They are rarely active in bright sunshine and are most likely to be seen early in the morning and before sunset. This one was photographed in the Canyon by Rusty Lombardo.

## How to join Friends of Madera Canyon

Below are links to join as a new member, renew a membership and make a donate. The links will take you to a secure server hosted by DonorSnap where you can use a credit card or ACH transmission with payments processed through GoMerchant.

**Any questions? let us know at [info@friendsofmaderacanyon.org](mailto:info@friendsofmaderacanyon.org)**

If you prefer to help by writing a check, please make your check payable to: Friends of Madera Canyon and mail to:

**Friends of Madera Canyon  
PO Box 1203,  
Green Valley, AZ 85622-1203**

[A New Membership](#)

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## View From The Trees

### In Case You Haven't Heard - Arizona May Have New Jaguar

The Center for Biological Diversity has reported a likely new Jaguar sighting in Arizona. The Jaguar was caught on camera in Southern Arizona's Huachuca Mountains.

A wild Jaguar has been photographed by federally run trail cameras in southern Arizona's Huachuca Mountains at least twice this year. A U.S. Fish and Wildlife Service database that tracks jaguar detections lists two photos in March and May 2023.

"These photos show that despite so many obstacles, jaguars continue to reestablish territory in the United States," said Russ McSpadden, a conservation advocate at the Center for Biological Diversity. "This is a wonderful reminder

*These photos show that despite so many obstacles, jaguars continue to reestablish territory in the United States," said Russ McSpadden, a conservation advocate at the Center for Biological Diversity.*



The Jaguar known as El Jefe was captured on a trail camera in Sonora Mexico. The cat was last seen seven years ago in the mountains outside of Tucson. Photo Credit CATalyst and the Center for Biological Diversity

that these big cats move great distances across the landscape. It drives home the importance of protecting connected habitat for these elusive, beautiful felines.”

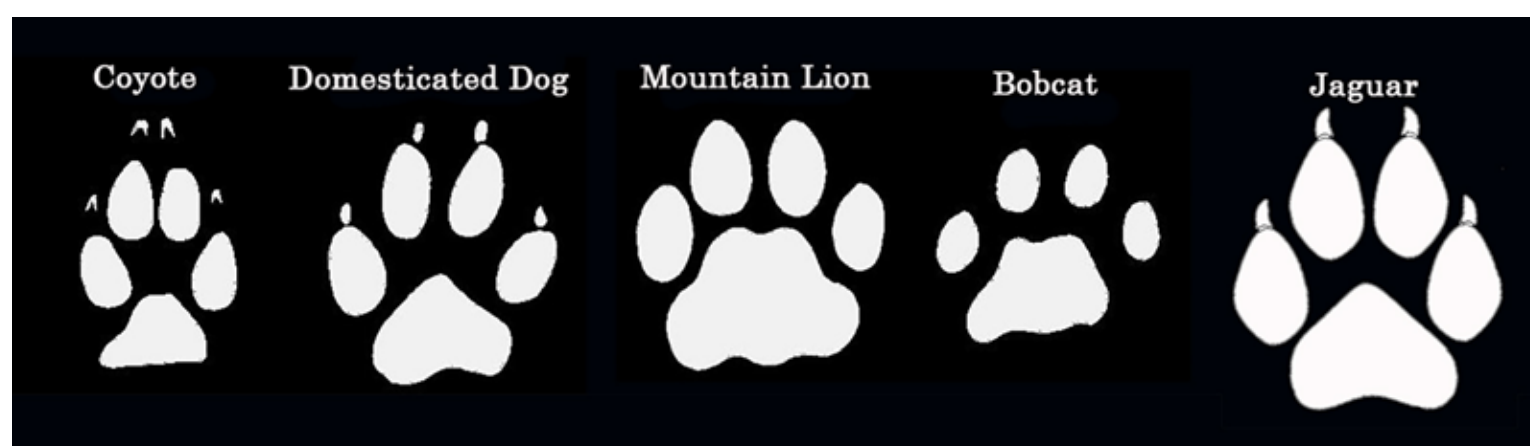
The photos were taken soon after former Arizona Gov. Doug Ducey’s illegal shipping container border wall was removed from a critical jaguar migration corridor in the Huachuca Mountains.

This is the second jaguar to be detected in the Huachuca Mountains since 2016. The first was a young male named Yo’oko, the Yaqui word for jaguar given to the big cat by students of Hiaki High School in Tucson. Yo’oko roamed the mountains in 2016 and 2017 but was photographed dead in Sonora, Mexico, in 2018.

In the latest database entries, which describe but do not include the photos, the U.S. Fish and Wildlife Service writes that the trail camera photos are “too blurry for spot analysis.” The pattern of rosettes on every jaguar is unique, enabling identification of specific individuals.

The agency speculates that the photos could show a new jaguar, previously undetected north of the border, or they could show “jaguar 3,” popularly known as Sombra. Sombra has been detected in the Chiricahua Mountains in southern Arizona dozens of times since 2016. The Chiricahuas are roughly 50 miles northeast of the Huachucas.

Another jaguar, El Jefe, roamed the Whetstone and Santa Rita mountains between 2011 and 2015. Following his disappearance in the United States, El Jefe was observed in 2022 on a trail camera approximately 120 miles south in Sonora, Mexico. The seven-year gap between detections illustrates how elusive jaguars can be and how far they roam.



*The photos were taken soon after former Arizona Gov. Doug Ducey’s illegal shipping container border wall was removed from a critical jaguar migration corridor in the Huachuca Mountains.*

My Dear Mr. Hornaday:-

The bear came from West Virginia.

Very truly,

Theodore Roosevelt

Letters

Good Afternoon,

We just got back from our field trip with the wonderful docents - this was the best field trip I have ever been on! The knowledge and excitement displayed by the docents was infectious! Personally, I had the best time today and my kids have been talking about everything they saw and learned ever since we left! Thank you for this amazing experience.

Sincerely,  
Mrs. Flowers 4th Grade Class  
Continental Elementary School  
(please be on the lookout for thank you notes)

Sharon Flowers  
Fourth Grade Teacher  
Continental Elementary School

Following up on the field trip for Mrs Flowers class at Continental School discussed above are letters from two students that were on the trip.

I had a lot of fun and thank you for showing group 3 around. In liked when you showed us what people did in the old days with gall ink! I hope that we go back! Thanks you for bringing cool stuff to show us how acorn woodpeckers put acorns in trees and take them out later and the star mushroom was so cool how they were hard after 2 hours they were squishy, I think it was sad that the Morales family dies but kind for how they honored them in that way. It was funny how we had Greyson in our group and I saw the Greythorn plant. Thank you this was so fun to go on.

Sincerely Erica Group 3

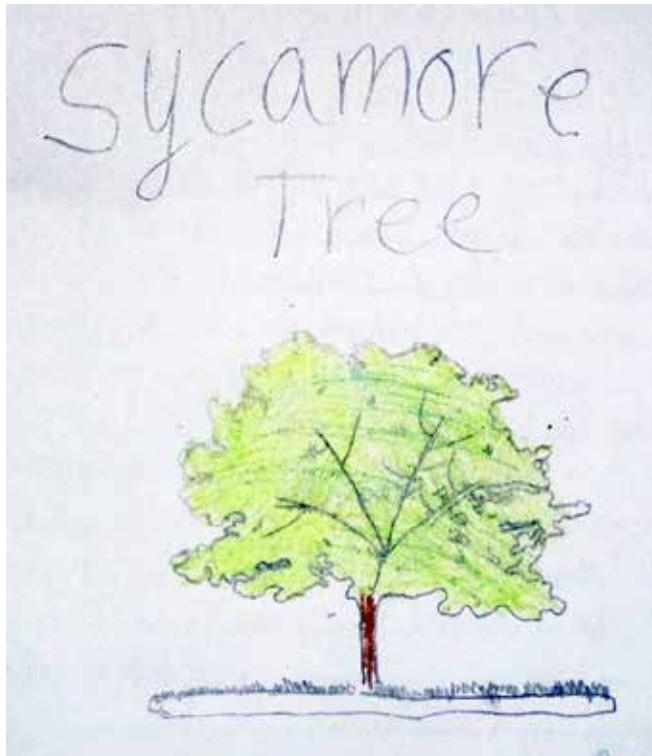


A study of Acorn Woodpeckers by Erica

Dear Ms Nancy,

Thank you so much for being our docent. You were so kind, and I did not know that soap berry existed until you told me! You told me so many things that I never knew. Also, thank you so much for the compass, and it was free! It was sad to hear about the Morales family, but it was cool that they kept the old crosses. I think the old crosses were cooler than the new ones. It was fun to make the flour with the manos. The wait-a-minute bush was super funny. You said it was like their panchere. We saw a lot of gray thorn bushes. The carpenter bees, I never saw bees actually eat wood. I wish we could see deer but that is just fine. I knew about algae but I did not no about litken-fungus and algae together.

Sincerely Joicie, Group 2



A Sycamore Tree by Joicie.

## Recent Publications

### **Book Review. Crossings, How Road Ecology is Shaping the Future of Our Planet. W.W. Norton, New York. \$30.**

Crossings by Ben Goldfarb is a thought-provoking exploration of the profound impact of roads on our environment and the urgent need to rethink road design through the lens of road ecology. Goldfarb, an accomplished environmental journalist, presents a compassionate and compelling narrative that challenges our perception of roads as mere infrastructure and encourages us to consider them as agents of ecological disruption.

In the book's opening pages, Goldfarb boldly states that roads are “not merely a symptom of civilization, but a distinct disease.” This sets the tone for an eye-opening journey into road ecology, where he describes the study of roads’ impact on plants and animals as “empathy manifested as science.” Through meticulous research and engaging storytelling, Goldfarb highlights the far-reaching consequences of road networks that span the globe.

One of the most striking revelations in the book is the sheer scale of road infrastructure. With approximately 40 million miles of roadways crisscrossing the Earth, roads have become integral to modern life. Goldfarb reminds us that roads aren’t limited to highways but also include parking lots, driveways, suburbs, pipelines, gas stations, and more—an all-encompassing ecosystem designed for cars.

The book delves into the alarming increase in wildlife casualties caused by roads, particularly in North America. In the 1960s, only 3 percent of land-dwelling mammals died on North American roads, but by 2017, that number had quadrupled. Every day, about a hundred people and one million wild animals are killed by cars in the United States alone. Goldfarb’s meticulous research

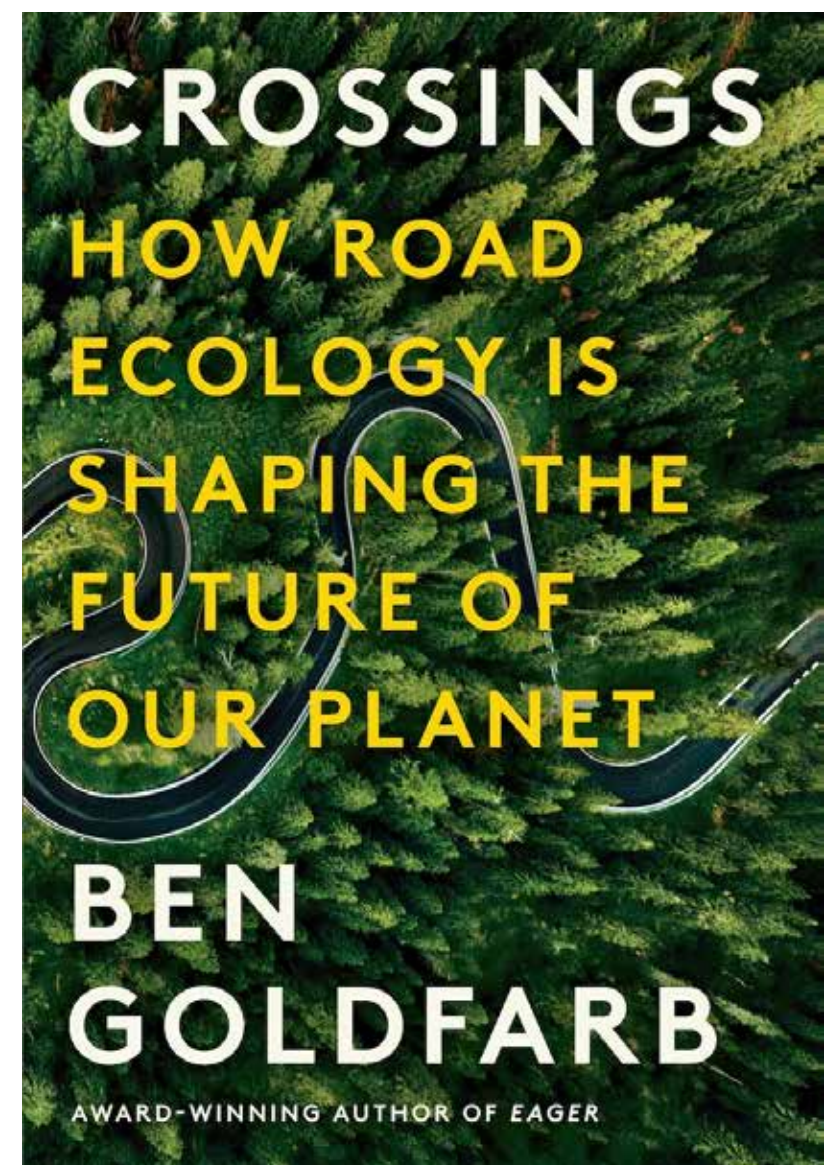
sheds light on the plight of many species that face extinction due to roadkill.

Beyond direct casualties, roads disrupt animal migration patterns, contribute to habitat loss, contaminate rivers, pollute soil, and alter ecosystems. Goldfarb’s eloquent writing paints a vivid picture of how roads negatively impact our natural world, even going so far as to mention

how they can affect genes, such as cliff swallows evolving shorter wings to avoid collisions with cars.

Throughout the book, Goldfarb introduces us to various scientists and experts dedicated to studying and mitigating the effects of roads on wildlife. He showcases innovative solutions, including wildlife crossings like overpasses and rope courses that allow animals to traverse roadways safely. These initiatives offer hope for reducing roadkill and preserving biodiversity.

The author doesn’t shy away from addressing the racial disparities associated with roadways. He draws attention to the fact that highways and freeways have historically divided cities along racial lines, with communities of color disproportionately affected by air pollution due to their proximity



to highways. Goldfarb skillfully connects environmental issues with social justice concerns, providing a comprehensive view of the complex relationship between roads and society.

Goldfarb’s writing is not only informative but also reflective. He discusses the changes brought about by the COVID-19 pandemic, which led to a reevaluation of urban infrastructure. The temporary redesign of city streets for walking and biking and the reclamation of space from cars showcased the potential for more sustainable urban planning.

One of the book’s most compelling aspects is its exploration of how highways have been used as tools of racial segregation. Goldfarb reveals the deliberate use of freeways to fragment Black communities in the United States. He also highlights ongoing efforts to address this historical injustice by removing some freeways and proposing alternative uses for the land, such as affordable housing and green spaces.

“Crossings” challenges readers to consider the profound impact of roads on our environment and society. Ben Goldfarb masterfully weaves scientific research, personal anecdotes, and societal observations to present a holistic view of the road ecology crisis. His book serves as a call to action, urging us to rethink road design, prioritize wildlife conservation, and address roadways’ social and racial implications. In a world where roads are an undeniable part of our daily lives, “Crossings” compels us to see them through a new lens—a lens of empathy and ecological responsibility. JCM

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## 40.7% of Amphibians Threatened with Extinction

A new study published in *Nature* in October has found that more than 8,000 amphibian species are at a substantially higher risk of extinction than they were in 2004. Today, two in five amphibians are threatened with extinction, making them among the most imperiled animal groups.

Between 2004 and 2022, climate change became the primary threat for 39% of amphibian species that moved



A male Chihuahuan Green Toad, *Anaxyrus debilis* (Girard 1854) calling near Portal, Arizona JCM

closer to extinction, according to lead author Jennifer Luedtke Swandby of the conservation NGO Re:wild. Amphibians are “becoming climate captives,” she said, “unable to move very far to escape the climate change-induced increase in frequency and intensity of extreme heat, wildfires, drought and hurricanes.”

Amphibians are highly vulnerable to climate change. Their permeable skin, essential for respiration and water absorption, makes them susceptible to changes in temperature and humidity, often leading to dehydration during droughts and heat waves. Their aquatic life stages, especially for frogs, are sensitive to changes in water conditions and precipitation patterns.

Many amphibians have specialized habitats with specific temperature or seasonal requirements that can be disrupted by climate change. Furthermore, they face increased disease risks, such as from the deadly chytrid fungus (Bsal) disease, which thrives in altered climates.

### Citation

Luedtke, J. A., et al. (2023). Ongoing declines for the world’s amphibians in the face of emerging threats. *Nature*. doi:10.1038/s41586-023-06578-4



## The Editor's Desk

### Some Threats Just Can't be Ignored

Hudbay, a Canadian Mining Company has been trying to take apart the Santa Rita Mountains for more than two decades. They say they are looking for copper but if they succeed in getting all of the permits, land, and financing they need they may very well make most of their money from gold, silver and rare earth metals. The story of why we are letting a foreign mining company dig open pit mines in a biodiversity hot spot boils down to Arizona being "business friendly." You can draw your own conclusions as to what that means. Thanks go to Bob Pitcher for putting this together.

If you feel the same way about this as the FoMC Board do we are asking you to write a letter - literally write a hand written letter, make a digital copy of it. Send the hard copy via snail mail to

The Honorable Katie Hobbs  
Governor, State of Arizona  
400 West Congress Street, Suite 504  
Tucson, AZ 85701

#### Send the digital copy to the following four people

Brett Blum, Director, Santa Rita Experiment Station,  
bcb@email.arizona.edu

Marisol Flores-Aguirre: mfloresaguirre@az.gov  
Patrick Robles probles@az.gov  
Nathalia Untiveros: nuntiveros@az.gov

#### So, what should the letter say?

On the following page there are paragraphs that can be put in your own words.

You don't have to use all of them, pick and choose the ones you like.

This effort is to literally saving the Mountain Range, its ecological integrity, and its biodiversity

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Doug Moore.

**Hudbay is a multinational mining corporation based in Canada. The company plans to operate an enormous copper mine in the Santa Rita Mountain range just south of Tucson.**

The scale of Hudbay's plans are enormous: FOUR open-pit copper mines, one of them some five miles in circumference and nearly a half mile deep. When the mining is over and the operation closes, the pits will remain as permanent toxic lakes.

The mining operation will inevitably destroy much of the scenic beauty of the Santa Rita range, rendering large parts of it an immense eyesore.

**The mining operations will generate enormous pollution: air, water, noise, light. The effects on people and on wildlife would be enormous.**

Hudbay plans to haul thousands of heavy truckloads of heavy metal ores and sulfuric acid across the Santa Rita Experimental Range. Spills, noise pollution, range fires, increased traffic are inevitable, with a significant probability of catastrophic accidents.

Hudbay's plans call for the use of 2 billion gallons of water a year in its operations – or possibly more than twice that much. The state of Arizona has recently initiated water rationing.

**Arizona law does not require a mining operation to perform remediation on the landscape it has denuded and scarred.**

The Santa Rita mountains, and in particular Madera Canyon, is world-famous for the beauty and diversity of its wildlife. Thousands come every year to watch, hunt, and admire it. Hudbay puts that wildlife in serious jeopardy.

**Tourist spending brought Pima County \$2.4 Billion in 2021. Latest figures on mining showed it to account for under 1% of employment. Is the county willing to jeopardize one of its largest industries for such an ill-conceived idea as a copper mine in a major metro area?**

Southeast Arizona -- its people, its wildlife, and its landscape -- is already under severe ecological stress from a changing climate, increasing water use, a growing population, and a long-term drought.

Tucson is a major metropolitan area, with a population over 1 million. For so many reasons, the Tucson metro area is just the wrong place for a major copper mine.

*Hudbay is currently stuck: It lacks land on which to dump its tailings. The company wants to buy state land for this purpose. The State Land Department should refuse to sell land to Hudbay.*

*The Santa Rita Experimental Range is under lease to and operated by the University of Arizona. The University should refuse access to Hudbay for its operations.*