



Kids and adults alike have gotten outside, exercised their bodies and minds, and learned about the nature around them through our Take It Outside program! (Photo by Siobhan Niklasson)

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PAJARITO ENVIRONMENTAL EDUCATION CENTER, LOS ALAMOS, NM

Celebrating 20 Years of Our Love of Nature

By Katherine Bruell, Executive Director

It's hard to celebrate your birthday during a pandemic. You can't have a party, people can't easily shop for presents, and even sharing a piece of cake is risky. But thanks to you, PEEC had a great birthday celebration in April. We hope to continue the party as soon as restrictions on gatherings ease up a little.

The best part about our birthday was reading all of your responses to our birthday card — over 200 people wrote in to tell us what impact PEEC has had on their lives. You, our members and donors, have impacted thousands of lives with your support of PEEC. Since there isn't room here for you to read every person's story, I'll share a few of the highlights.

“PEEC is such an important part of my life! I have met wonderful people and learned lots about NM Nature! AND learned to appreciate snakes after being snake phobic my whole life.”

“Happy birthday, PEEC! And thanks for the Passport program! It got our whole family out and hiking, even when we were bringing the youngest along in a backpack or stroller. Now we are redoing the early passports so our youngest can officially finish them!”

“When I was in high school, working at PEEC's Nature Odyssey Summer Camps was my first real job! I

loved sharing the beauty and excitement of exploring our home world with younger kids, and I came back for several years of teaching. I'm so grateful for that experience because PEEC started me on a career path I didn't even know existed.

“Fifteen years later I'm still an environmental educator, helping students explore the outdoors in other parts of New Mexico. Happy Birthday PEEC! Thank you for opening doors (both literally and figuratively) and taking me on wonderful adventures!”

“Our family was introduced to hiking by visiting PEEC when we first moved to Los Alamos. We've been hooked on outdoor time ever since.”

“It is gratifying to see PEEC's education efforts target the next generation to instill a deep respect for nature and the environment. It brings hope.”

“The nature center is a very special place. It is much more than a beautiful building with great exhibits. It is the friendly, helpful, caring, farsighted, knowledgeable staff and volunteers that make it this way. Thank you for being here for our children/grandchildren and all of us! We are so proud of you!! Happy, Happy 20th Birthday!!”

“Happy birthday! This was the first place to make me and my kids feel at home when we moved here.”

“PEEC was a wonderful learning program for me as a child. It really fueled my love for the outdoors. On top of that, PEEC nature camps helped me learn what it

meant to be kind to the environment and people around me. I later became a counselor of those same camps that helped me. There I learned to be a leader and pass my passion of the outdoors on to new, young learners. I will forever be grateful for the positive impact PEEC has had on my life.”

“I keep learning unexpected things about our area — thanks to PEEC! Geology, wildflowers, birds, and so much more! I’ve gotten to meet a lot of great community members that I might not have met otherwise.”

“When I first moved to Los Alamos I knew I wanted to stay here forever when I first went into the nature viewing room.”

“It’s comforting to know children will be learning about our beautiful Pajarito Plateau environment and our place in the universe, too, long after we’re gone. PEEC staff and donors and volunteers, THANKS for your dedication!”

“PEEC has helped me enrich the learning I am able to provide my students between bringing experts into the classroom to bringing my astronomy class to the planetarium to learn about black holes. I feel absolutely indebted to PEEC for helping us teachers make learning fun, place-based, and relevant!! Thank you PEEC!”

“I was involved with PEEC for years — I don’t think it’s an exaggeration to say that I would not be who I am today without PEEC. It was incredibly influential in my life, and I am thrilled that it has been around for 20 years!”

“PEEC is one of the many reasons that we love this



Volunteers, members, and other PEEC supporters joined us for a live-streamed birthday bash via Zoom. Though it wasn’t the same as celebrating in person, it was wonderful to bring our community together to celebrate. (Photo by Kate Cleveland)

community! When we were first deciding where to move we found PEEC and it really demonstrated to us the spirit of the Los Alamos community.”

“Happy Birthday PEEC!

“We remember when you were just a little squirt before you even lived in the Orange Street building! You did a lot of growing and changing with all the kids and classes who visited you and went for hikes, played with puppets and critters, and rolled down your great hill. Now you are all grown up, livin’ in your own beautiful home, creating new memories and life changing experiences for another generation of kids and families visiting your gardens and treehouse, planetarium and classroom, learning and growing every day. We are so proud of all you have accomplished in your first 20 years, and how much you contribute to make our community beautiful and unique. We all wish you the happiest of Happy Birthdays!”

If you’re a little teary-eyed at that last comment, or at any of these, don’t feel bad. You should feel incredibly proud of what you have helped to build for Los Alamos and our whole region. Thank you from the bottom of our hearts for your friendship and support. And, Happy Birthday! 🌩

House Finch Nursery

By Sue Watts

On Monday, April 27, I heard little pinpricks of sound coming from the House Finch nest in the upper corner of my front porch. The bird that had been sitting on this nest was now feeding her chicks! I observed the family's activity from my window over the next few weeks and watched these baby birds grow up and leave the nest.

Here are my observations:

Day 1: The mama bird that had been sitting on the nest for thirteen days has disappeared. Later, I hear tiny pinpricks of sound coming from the corner and find the male House Finch 'feeding' the female, who then turns to the nest and begins to poke food downward. By lunchtime, the tiny points of sound have become more noticeable. The male appears, and three little beaks poke above the rim. By 5:00 PM, the triplets' heads and necks are above the rim and their peeps have become chirps. Things settle down for the night. I can't see either parent on the nest.

Day 2: According to a nest-watchers site, the female House Finch does the feeding, but this male must not have read the book because he is feeding the little ones. He keeps giving food to the largest of the three, the one who sticks his head up higher than the others and chirps more loudly. Mom is more even-handed when she appears. She methodically goes down the line from right to left. The largest one takes its share, then crowds himself between chick number two and three. Mom feeds the second chick, ignores the big one, and feeds the third chick. The male gets the message. He begins feeding all of them.

Day 3: Another website reports that the male does help with the feeding for five days, but the female seems to have had it with him. When he approaches the nest in the afternoon, she shoulders him aside, feeds the chicks herself, and then sidles up to him, pushing him farther from the nest. The male has to content himself with sitting glumly on a nearby branch and chasing hummingbirds away from the feeder. Night falls. Neither parent is sitting on the nest.

Day 4: Nevertheless, the male persists. He returns to feeding. The female seems to be the one doing the housekeeping, piling up fecal sacs on the edge of the nest and doubling the height of the nest.



Young House Finches huddle in a nest under a carport roof in White Rock. (Photo by Mouser Williams)

Day 5: Both parents continue to feed the youngsters, who pop up like stair steps ... the large, loud one whose mouth is always open, the middle one who is almost as big, and the little one whose beak barely shows above the rim of the nest. They are growing fast. By evening, there is much moving around and muttering as the triplets search for a comfortable fit.

Day 7: The big one perches on the edge of the nest. His baby fluff makes him appear larger than the parents.

Day 9: At 7 AM, all is quiet. I wonder if the little ones have fledged. Mom appears on the rim of the nest, but there are no chirping demands, no gaping mouths. I begin to worry. She flies to a nearby branch and sings away. Three large heads pop up and begin to chirp. It appears that, like all teenagers, they need a mother to wake them up.

Day 10: The triplets have grown so much and they all seem to prefer perching on the rim of the nest.

Day 11: The chicks have left the nest in the night. Like the Say's Phoebes that have nested over my back door for the past few years, they fledged at night. I wonder if it is a safety measure.

Subsequent Days: The little ones appear to have flown to the oak patch in the back yard, which I think of as "the kindergarten." Often, the three erupt from the patch, cartwheeling through the air. And so the little ones begin to pursue their feathered life on the wing. 🌀

Circumnavigating the Caldera

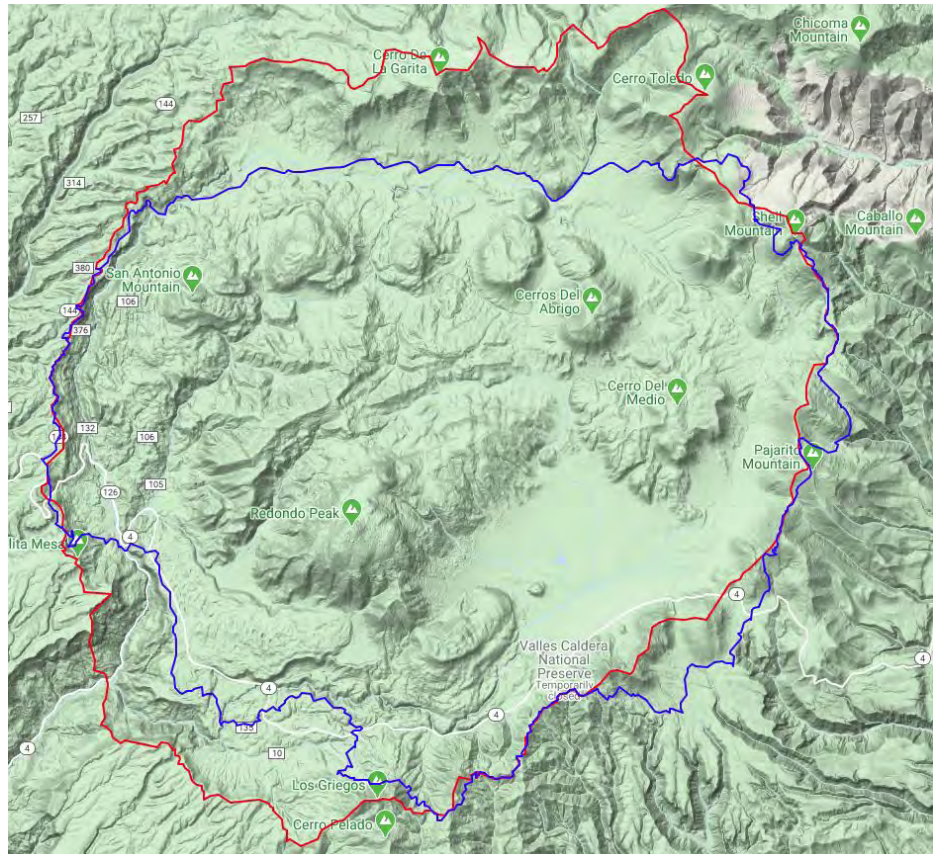
By Blake Wood

In 2009, local naturalist Dorothy Hoard published a series of proposals for a Valles Caldera Rim Trail (visit <http://vallescalderarimtrail.blogspot.com> to learn more). In these documents, she specified an approximate route that followed the rim as closely as possible, eschewing existing trails and dirt roads that weren't directly on the rim, but acknowledging them as a starting point for a trail system. She noted that one of the major impediments to establishing such a trail was access restrictions imposed by the Valles Caldera Trust, which administered the VNCP at the time, and the Santa Clara Reservation.

Since 2009, two major changes have occurred. First, in 2011 the Las Conchas Fire burned about half of the rim from about the 6:30 position counter-clockwise around to the 12:30 position, wiping out many of the trails and dirt roads that would have constituted a Rim Trail route. Ironically, in her report Dorothy Hoard frequently commented that the heavy forest obscured views of the caldera. That isn't a problem anymore!

Second, in 2015 the National Park Service took over administration of the Valles Caldera National Preserve (VCNP) from the Valles Caldera Trust, and greatly expanded access to it. Currently, the sections of trail lying in Bandelier National Monument, Santa Fe National Forest, and the Valles Caldera are open for mostly unfettered foot travel. Only a small section of the rim, from about the 1:30 – 2:30 position, is still restricted by virtue of lying in the Santa Clara Reservation.

Having long been fascinated with Dorothy's proposal, in early May I circumnavigated the entire Caldera in a single long run, using existing trails and dirt roads, and trying to stay as close to the rim as feasible. My route was 67 miles in length and took me 25 hours, starting from Pajarito Mountain Ski Area and going in a clockwise direction. My wife, Rebecca, met me in five locations over the first 12 hours with food, water, and gear.



Dorothy Hoard's proposed Valles Caldera Rim Trail is outlined in red and Blake's Caldera Circumnavigation run is marked in blue. The Valles Caldera is a circular volcanic caldera roughly 15 miles in diameter, which was formed in a massive eruption and caldera collapse about 1.25 million years ago. The northeast section of the rim was formed during an earlier caldera collapse about 1.62 million years ago.¹

I roughly followed Dorothy's route for the first 18 miles through the scars of the Las Conchas Fire. The cross-country sections were moderately difficult — there was abundant thorny locust, and many downed trees to climb over.



The Valle Grande from the ridge above NM4, showing damage from the Las Conchas Fire. Blake was running along the ridge on the far skyline 12 hours later. (Photo by Blake Wood)

Over the next section, from near the Las Conchas Picnic Area along NM 4 to La Cueva, I followed a route through the Banco Bonito. At 40,000 years old, it is one of the most recent lava flows in the Valles Caldera. This was a somewhat more interior than Dorothy's route, and took me to about the 31-mile point.

From La Cueva, my route followed Dorothy's to the outlet of Valle San Antonio, which I reached just after full darkness had fallen. Shortly thereafter I made a navigational error, which caused me to miss the road climbing out of the Valle, spoiling my plan to follow Dorothy's route over Cerro de la Garita on the north rim. I think this would have added 3 hours to the alternate route I followed along VC 08 through Valle San Antonio.



The sunrise along the trail between Cerro Rubio and Pajarito Mountain. (Photo by Blake Wood)



Running at dusk along the Mainline Trail on the rim of San Antonio Canyon. (Photo by Blake Wood)

It got cold enough during the night that the grass was crunchy with frost. I carried an emergency mylar bivouac sack that would have prevented me from freezing if I had needed to bed down for some reason, but thankfully I didn't need to use it.

I left the Caldera floor at about 12:30 AM, at the outlet of Valle Toledo, my 53-mile point, ascending back to the north rim at Sierra del Toledo. This brought me back into the Las Conchas burn area, and the next roughly 6 hours and 10 miles involved picking my way through a maze of downed trees — very difficult terrain to traverse!

I reached the summit of Cerro Rubio at 5 AM, about five miles from my car at Pajarito Mountain. I texted Rebecca, asking her to pick me up at the ski hill, as I didn't think I could make the drive back to town safely in my sleepy and tired condition. She hiked in to the bottom of Cañada Bonita to run the final mile with me.

This is a beautiful route, even in the burned areas! The

burned areas are not a wasteland — in the years since, much of it has filled in with aspen, which will become taller and more beautiful with each passing year. All of this route is easy for the average hiker to traverse in sections, except for the areas of the north rim that were burned in the Las Conchas Fire, from Rito de los Indios to past the descent from Cerro Rubio. That section is quite rough due to all the downed trees, and route finding is tricky due to the multitude of parallel logging roads

Except when crossing the paved roads, I never saw another person. In addition to my cell phone, I carried a SPOT satellite transmitter so Rebecca could follow my progress online, and this gave me the ability to call for help should I have a serious accident.

I'd urge you to try a grand hiking adventure in the Caldera. It doesn't have to be something as ambitious as this, but it is worthwhile to attempt something that will really stretch your capabilities. For some, that might be a 10-mile hike. For others, a 20-mile hike, or a climb of one of the major peaks. It might be uncomfortable for the last bit, but you'll feel really good about it afterward. This is how you find out what your limits are, and I can guarantee that those limits are much further than you think they are!

We are incredibly fortunate in Los Alamos to have this vast, beautiful, and mostly deserted wilderness just above town! Go and explore! 🌲

1 See Fraser Goff's excellent book *Valles Caldera, A Geologic History*, University of New Mexico Press, 2009, for more details.



A juvenile Sharp-shinned Hawk stares at the author's bird feeders. (Photo by Paul Lisowski)

It's Not Easy Being Small

By Marilyn Lisowski

A Sharp-shinned Hawk floats through forested Bayo Canyon. For a hawk, she is tiny, at just under a foot long. Her species is the smallest hawk found in the United States and Canada. She's headed for food out of her territory to a porch of hanging feeders, far from her four hungry nestlings. Suddenly, a shadow appears above. She dives into dense foliage. A Cooper's Hawk soars overhead and disappears. She was lucky, this time.

Flitting ahead to the edge of the canyon, the Sharp-shinned Hawk spies the porch. Swarms of birds mob seed trays and suet feeders. She glides between ponderosa pine branches and perches. Her dark gray and red-brown colors blend with the bark. The hawk selects her prey, a male Black-headed Grosbeak snacking on sunflower seeds. Our female hawk is a third larger than her jay-sized mate, and this grosbeak is twice the bird that the male can deliver to the nest. She plunges downward like an avian terrorist, and flips her needle-sharp talons forward. An Acorn Woodpecker screams from a sentry point above the feeders. The



An adult Sharp-shinned Hawk patrols the feeders at the Los Alamos Nature Center. (Photo by Bob Walker)

grosbeak tries to flee, but the hawk is too fast. Her razor-sharp talons pierce the muscle on his back into his organs. He is doomed.

The hawk hefts her lifeless burden to a boulder to rest. Making short hops, she plucks her prey clean before lifting it to her stick nest, high in ponderosa pines, a nest she and her mate use each year. The young hawks rip the meal to pieces, gorging on the meat, avoiding the bones. Her mate, guarding the nest, now lifts off to hunt for a finch or mouse. What he brings is just a snack after he bites off and devours the head, but without his help, she could not raise her young. Her mate always supplies her food while she sits for a month on light blue, speckled eggs, and weeks longer while she broods the young. He guards against invaders. When the young fledge, he will help her feed them for a month longer.

Our hawk's instincts were honed in Asia millions of years ago. A sub-species of the sparrowhawk, her ancestors soared across the Bering Land Bridge later than the larger Cooper's Hawk she's often confused with.

In her youth, the hawk sported brown upper and mottled brown underparts. Now, in adulthood, her dark-gray back and red-brown barred underparts camouflage her. Her yellow eyes have become an orange-red. Her skinny legs, ridged on the leading edge, give her species its name. Shorter wings, a squared-off tail, and a smaller head with less contrast between the back and crown, help differentiate our Sharp-shinned Hawk from the larger Cooper's Hawk, one of her main predators.

Sharp-shinned Hawks migrate as far north as Alaska in summer. Our hawk, nesting farther south on the Pajarito Plateau, finds no need to migrate in winter.

The now-exhausted hawk sinks into a crook in the branch holding her nest. This is her third motherhood in as many years. She may not survive another winter. Her mate is older, too. He is slower and easy prey if he isn't very careful. Their nestlings are ready to fledge. The pair has raised a dozen healthy hawks in their lifetime to help the species endure. Satisfied, she rests. 🦅

VIRTUAL
SUMMER FAMILY EVENINGS

Coming Up:
July 8: Energy with Explora!
July 15: Rabbits
July 22: Mesa Public Library
July 29: Bugs from Harrell House

Register at [peecnature.org/events](https://www.peecnature.org/events)

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6 PM!

Join the Summer Nature Challenge!

We're continuing our Take It Outside program with a new summer nature challenge! Participate in weekly activities throughout the summer to get outside and learn about the nature around you.

Check [peecnature.org/take-it-outside](https://www.peecnature.org/take-it-outside) to find out more and to download the challenge sheet. We'll make a new post every Monday with suggested challenges and a blog post to help you get started. You can also make up your own activities!

Participants can use the challenge sheet to write a few words, draw a picture, or take a photo to capture their outdoor experiences. You can also submit your entries online or by emailing takeitoutside@peecnature.org.

Our Mission: Enriching people's lives by strengthening their connections to our canyons, mesas, mountains, and skies.

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Take It Outside!

"I have LOVED doing your projects. Thanks for making such awesome activities!"

"These are terrific. ... I get a smile out of reading them every day."

— Take It Outside Participants & Readers

Nature Center Hours:

The Los Alamos Nature Center is currently closed due to COVID-19. Visit us online to connect with us virtually and for updates on our re-opening.

Visit us online!

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During week four of our Take It Outside program, participants were challenged to go outside and create nature art! (Photo by Jeanine Wood)

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UPCOMING EVENTS

- Nature On Tap: Local Land Managers **JULY 6**
- Summer Family Evening: Explora! **JULY 8**
- PBS Science Café: Animal Espionage **JULY 11**
- Summer Family Evening: Rabbits **JULY 15**

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