



Nature Notes



A young Bear Festival attendee explores bear books from the Los Alamos Library. Festival goers learned about living with black bears and predators through educational booths, activities, and more! (Photo by Skip Wecksung)

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PAJARITO ENVIRONMENTAL EDUCATION CENTER, LOS ALAMOS, NM

Celebrating Our Community This Fall

By Katherine Bruell, Executive Director

Fall is arguably the best time of year in Northern New Mexico: green chile, yellow aspens, the last sunflowers, and perfect hiking weather. We can enjoy being outside even in the middle of the day since the sun feels good instead of too hot. Fall is also a time when we start thinking ahead and planning for winter – have the kids outgrown their gloves again? Did I ever fix that big scratch I got on the bottom of my skis last year?

At PEEC, we plan ahead in the fall by celebrating those who make our work possible – you. In October we have our annual member picnic, the PEECnic, which features a delicious dessert buffet made by PEEC's board members. We have games for kids, cider pressing, and activities for all ages. I hope you can join us at the nature center on October 16th. It'll be a chance to catch up and to meet all of you who joined our community in the past year and a half.

And you, our generous supporters, plan ahead in the fall, too. Many of you make annual gifts to PEEC at this time of year, some of you choose to become Lifetime Members, and others leave a gift to PEEC in their estate plans. You're all doing your part to make sure that people in Northern New Mexico continue to connect with and cherish nature. Thank you. PEEC wouldn't exist without you.

I hope you have a chance to get outside this fall



PEECnic attendees celebrating fall by making leaf art in 2018. (Photo by Rachel Landman)

and enjoy the chill in the air, the departure of the hummingbirds, the sun, or whatever parts of nature you most enjoy. And I hope you feel great while doing it, knowing that your support of PEEC gives back all year long. 🌿

Join Us for the PEECnic!

Saturday, October 16
1 – 3 PM

At the Los Alamos Nature Center



Ana helps take care of the critters at the nature center every week! (Photo by Natanya Civjan)

The Best Day at the Nature Center

By Ana Saenz

“Almost done,” I said to Oliver as I added the last of the small, cube-like pellets to the huge fish tank. The fish had already started splashing to the top to grab a mouthful of food, but when I added these, they went crazy, splashing so much that some water got onto the top of the tank. These were their favorites. They always loved the larger floating pellets.

I closed the lid and climbed down the ladder, then started to stroke the smooth, colorful body of the snake that Oli was holding. Rosa had always been my favorite snake, with her soft belly, smooth scales, and the little freckle on one of the white rings around her tail. Not to mention, she was also the nicest snake out of the four that I’ve known.

“You better put Rosa away,” I told Oli. He reluctantly let the snake slither into her tank. She reminded me of a water snake, gliding majestically through the water. I helped Oli as he closed the glass door and slid the shiny, round lock into place.

After washing my hands in the bathroom, I went into the office to put my name tag away and record my hours. We usually did about half an hour of volunteer work, but today I had done one hour.

I finished writing “Critter Care” on the sheet for Oli’s and my names and walked out of the room. Oli had gone to the bird room, so I headed there.

When I got there, Oli was talking with some random

person. The guy was older, with graying hair and a scrunchy smile. He had a PEEC shirt and binoculars and a big camera, so I supposed he worked there. I walked up and sat on the chair next to Oli. The guy looked at me and told us his name, Bob.

I said, “I’m Ana. This is my brother, Oli.” Bob started showing us the different birds.

“That one right there, with the yellow body, is a Lesser Goldfinch. You know what’s funny? There’s a Lesser Goldfinch, but not a Greater Goldfinch. And that one over there, that’s ruffling his feathers, is a Pygmy Nuthatch. He is asking for food,” he explained, “And do you see that woodpecker over there? That’s a female Acorn Woodpecker. They love the suet feeder.”

He showed us the difference between male and female Acorn Woodpeckers, recorded all the birds he saw, and showed us some House Finches. Our mom, who was in a meeting, said, “I have one more meeting. Do you mind them staying here for another half an hour?”

He said no, and proceeded to tell us about different birds.

Suddenly, he shouted “There!” A little white and gray bird with a black hood on its head flew over to one of the feeders. “That’s a Black-capped Chickadee. And there’s a White-breasted Nuthatch!”

He told us about them and tried to take some pictures, but they wouldn’t stay still. They darted to and from the bird feeder like an eagle swooping to catch a fish then soaring back into the sky. A little hummingbird with a dark blue and purple throat that changed colors in the sunlight zipped to the bright red feeder designed especially for the little birds, landed lightly on the red bar, and dipped its porcupine-quill-like bill into the sweet “nectar.”

“That’s a Black-chinned Hummingbird,” Bob said. “And it’s a female because it doesn’t have very bright colors.”

A bit later, our mom said, “Okay Ana and Oli, time to go.”

I was disappointed, I wanted to learn more about the different birds, but I reluctantly followed her out the door and into the parking lot.

In the car, I told my mom about the different birds and all I had learned about them. It had been the best day at the nature center yet. 🌿

Finding a Place to Perch

By Terry Foxx and Sue Watts

Do you find peace and a feeling of being connected when you go outside and listen to the sounds, smell the air after a rain, or take a deep breath? It is time to find a place to perch, slow down, breathe deep, and listen to the world around you. It is time to listen to the sound of the wind, the call of the crow, or the buzz of the bee. It is time to get out in nature! You'll be amazed by what you see, hear, and smell and by how invigorated you become when you find a perching place and experience the wonders of the world.

There are few tools you need when you find your favorite perching place, be it your backyard, a park, or a wide spot on a trail. Take along a journal and pencils (colored ones too) so you can record the mysteries you observe in your favorite place. And for safety and picture taking — take your cell phone. Your journal may be anything from a spiral bound notebook to a bound book with many blank pages. Just be sure you have a firm surface.

One of the biggest reasons for not recording your observations we hear, is “I am not an artist; I can't draw a straight line.” But recording observations is not about how well you draw, but the benefits of slowing down, investigating the world around you, and recording for memory's sake. In our busy world, we tend to remember the present and forget the nuances of the past. But our journals help us remember the mysteries we have discovered. The secondary benefit is the more we record and remember what we have learned, the more our brain retains. A journal is not just about pretty pictures!

The more you draw and write, the better you will get! John Muir Laws, an expert on journal writing, showed his journals beginning in 1980 and every 10 years to 2020 in one of his videos. In the video, his journals go from primitive drawings in 1980 to more sophisticated journals with years of practice. He calls his progression “pencil miles.” The term “practice makes perfect” is true — you will get better by logging more pencil miles!

You will also have a brighter look on life. Research by the Nature Connectedness Research Group at the University of Derby (UK) concluded that it is the level of engagement, not the time spent, that increases our connections with nature, as well as increasing our feeling of well being. As part of their research, they found that merely noticing three good things a day for a week lifted people's spirits for a

month. Think what spending time at your perching place can do ...

So, how do you go about getting started? Terry has a system:

- 1) First, label your journal “Nature Journal” in big letters.
- 2) Always take it with you to your perching place or on a trail. If you don't, you won't journal.
- 3) Pull out your journal and write the date, time, weather, and location.
- 4) Begin a sensory scan of your perching place. Ask yourself these questions and record your observations:
 - a. What do I hear?
 - b. What do I smell?
 - c. How do I feel?
 - d. What do I see?
- 5) After your sensory scan, record these three basic prompts to focus your thoughts on what you see, what you wish to learn, and how you are connected to the world around you:
 - a. I notice
 - b. I wonder
 - c. It reminds me of



Terry discovered this tiny spider, no bigger than a pinhead, while perching along Apache Springs Trail. The spider was something she would have never noticed if she had not closely observed her surroundings. (Drawing by Terry Foxx)

Once you have chosen your perching place, go back again and again, at different times of day, in different weather conditions. You'll discover when the most active time of the day is for creatures of all kinds. By making keen observations, you become a nature detective and a citizen scientist! But most of all, you find peace, connectedness, healing, and comfort in the world around you.

Stay tuned for an upcoming journaling blog from Terry and Sue. Plus, join our new email group, called “Let's Journal.” Members can share observations and Sue and Terry will provide brief hints about writing or drawing what you observe. Subscribe to the email list by emailing publicity@peecnature.org.



A mother mountain lion with two subadult cubs. The mother is on the left and appears smaller since she is further from the camera, but is actually larger than the cubs. (Photo by Hari Viswanathan)

Observing Animal Patterns on the Pajarito Plateau

By Aditya Viswanathan

My family has been observing the wildlife that comes to our backyards for about 10 years. Our house and my grandparents' house both border canyons in Los Alamos and have ponds. We put trail cameras at both ponds and soon found out that many animals come to the ponds, especially at night when no one is around. Without the cameras, we wouldn't even know they had paid a visit! Raccoons and ringtails visit our house on Pueblo Canyon almost daily. My grandparents' house gets almost daily visits from raccoons and skunks.

Since the cameras are watching the ponds at all times, over time we see more rare visitors as well, like gray foxes, bobcats, coyotes, and even black bears. We started figuring out their patterns. Bears come in for a bath on hot days during the summer, but never became a problem since only human food, such as that found in unlocked trash cans, turn bears into a nuisance.

The most rare and interesting visitor, to me, is the mountain lion. I can see why they are called Ghost Cats. They visit rarely, and when they do visit, they only stay for a few minutes and then are gone. Based on the few visits we get, mountain lions are not relying on our ponds for water and often pass by without taking a drink. From reading, I learned that they have large territories (25 – 390 square miles) and the main thing that can cause problems with mountain lions is keeping pets outside at night or feeding wildlife, such as deer, which are mountain lions' main prey.

I've been lucky to go on safari to India, Africa, and Brazil,

where I've seen tigers, lions, and jaguars in the wild. I found it amazing that mountain lions can often be as large as jaguars, making them one of the largest cats in the world, and they live near my hometown! We caught a fleeting glimpse of a mountain lion and cub in Brazil, and our guide was so excited since they are so difficult to see. Although seeing one in Los Alamos (or anywhere) is rare, they've been here all along. I read a book called *Cougar Conundrum* by Mark Elbroch that describes the challenges America has faced with mountain lions because conservationists, hunters, and worried homeowners are often at odds with one another. In addition to the societal issues, the book also describes how important mountain lions are for a healthy ecosystem.

Mountain lions keep deer, elk, and other prey populations in check. They are critical for black bears, coyotes, and even beetles that scavenge on their kills. *Cougar Conundrum* said a mother cougar is responsible for raising her cubs and is often with cubs about two-thirds of the time. This fact caught my attention since, although we've seen many other animal babies visiting over the years on our camera traps, we had never seen a mountain lion cub.

The book said that mountain lion mothers are cautious and will not bring cubs near houses in most cases. Also, many of the mountain lions that visit the ponds seem pretty small compared to pictures I've seen. The book explained that subadult mountain lions are often the ones that come near houses soon after they are kicked out by mom. They haven't established a core territory yet and many core territories (no humans) are patrolled by a dominant male and mature females who will not tolerate a subadult.

I wondered if in Los Alamos, the core territory might be in the canyons. So, we set up a camera in a nearby canyon



A large male mountain lion in the rain photographed by the camera trap in a canyon. He is likely the dominant male of the area. (Photo by Hari Viswanathan)

to check if the bigger mountain lions and even cubs may simply stay safely in the canyon. We gave it a try and for three months, almost the same animals coming to the pond were in the canyon too. But, no mountain lion.

Then, amazingly, we did get a photo of a mother mountain lion with two subadult cubs! A few weeks later, an enormous mountain lion that must be the dominant male passed by. It was really amazing to learn that they are around, but try to avoid the populated areas most of the time. Our camera traps have captured wildlife over the years that are equal to what we've seen on safaris around the world. I'm glad our community is able to coexist with the diverse wildlife here on the Pajarito Plateau. 🌿

Book Review: *Ring of Bright Water*

By Else-Maria Tennesen

After having a dog as an animal companion, what do you choose next? Well, an otter, of course! This is the very real story of Scotsman Gavin Maxwell and his relationship with a pet otter, called Mijbil. In the 1950s, Gavin lived with Mijbil in Scotland in a remote cottage with a waterfall where they could hear the sea.

That cottage was called Camusfearna and in Maxwell's first years there, he and his dog, Jonnie, trekked to see the waves and all their creatures: seabirds, dolphin pods, orca whales, and more. Inland were the Highlands and a variety of wildlife, such as red deer and lynx-like wildcats. His closest neighbors raised goats, who liked to roam and enter the cottage whenever the thought occurred to them. But for Maxwell, the enduring symbol of his home was the waterfall: "the soul of Camusfearna, it is the burn and the sea that give its essential character, that sparkling silver that rings the green field and makes it almost an island."

The author's rich, lyrical prose takes us right into his environment and shows his great love for the area.

When Jonnie died, Maxwell knew he could never have a dog again. Wanting a companion, he started to think of otters, and while traveling in Iraq in 1956, he and his friend, Wilfred, set off to catch one in the Tigris marshes, "where [otters] were as common as mosquitoes."

His first otter, Mijbil, turned out to be a species of otter never before classified: *Lutrogale perspicillata maxwelli*. Traveling back to Scotland became an adventure as Maxwell and the otter learned about each other. The otter's antics and behavior are colorfully described in the book, and through numerous photos and drawings of Mijbil, the reader also feels engaged in the otter's "domestication."

At Camusfearna, Mijbil bloomed. "Into this bright, watery landscape, Mij moved and took possession with a delight that communicated itself as clearly as any articulate speech could have done...he became for me the central figure among the host of wild creatures with which I was surrounded." The otter ran free, sliding down the waterfall, swimming in the sea by day and sleeping in the author's bed at night. Mijbil lived with Maxwell for a year and a half.

In the years that followed, Camusfearna became an animal sanctuary of sorts. Maxwell got another otter, Edal, and raised geese and a wildcat. The book ends with reflection; Maxwell cannot live at the cottage year-round, but "while there is time, there is the certainty of return." It is his sanctuary and place of sanity. Here he loves and is loved by the wild things he tames.

Ring of Bright Water is testimony that humanity needs the earth and its animals. As Maxwell said, "I am convinced that man has suffered in his separation from the soil and the other living creatures of the world; the evolution of his intellect has outrun his needs as an animal and as yet he must still, for security, look long at some portion of the earth as it was before he tampered with it." For Maxwell, this portion was Camusfearna.

Reviewer's Note: Today, we live in a world where domestication of wild animals is not recommended. Animals out of their natural habitat do not usually thrive and often do not survive. Please don't try to capture and keep a wild creature. If you find a wild animal that needs help, contact your nearest animal sanctuary for advice and assistance. Rehabilitation of wild animals is the way to go. Sanctuaries help them heal, love them, then let them go back into their rightful world. 🌿



Mourning Cloak in its overwintering costume (left) and its mating colors (right). (Photos by Steve Cary)

What Do Butterflies Do in the Cold?

By Steve Cary

Butterflies are creatures of warmth and sunshine. Summer provides lush, nutritious host plants for caterpillars and nectar-filled flowers for adults. However, the days of flowery alpine meadows, hummingbirds, and bountiful butterflies will soon be behind us. How will butterflies manage autumn and the cold weather to come? Rest easy. Every plant and every animal that lives here has a plan for winter, and butterflies are no exception.

For Northern New Mexico, our 100+ different butterfly species have a couple different plans for winter. The best known is that used by Monarch Butterflies. Winter cold would kill them all, whether eggs, caterpillars, chrysalids, or adults, so they migrate to Mexico. The full round trip takes an entire year and requires four generations to complete. (It's the same on the West Coast, but overwintering sites are in coastal California.) Although this seasonal migration is routine for many birds, it seems unusual for an insect. Monarchs can emulate birds because, for a butterfly, they are fairly large and fairly tough.

So, Monarchs migrate, but what about our many other butterfly species? Here's a surprise — they all stick around, largely unseen. How do they survive six months of freezing temperatures, dead or dormant caterpillar hostplants, and no flower nectar? They do what almost all other insects do and enter *diapause*

— they stop growing, stop developing, and become dormant. Of our 100+ butterfly species, some diapause and overwinter as eggs, some as partially grown caterpillars, and some as chrysalids.

There is even a remarkable handful of species that diapause and overwinter as adults. You may be seeing them now as they emerge from their late summer chrysalids: Mourning Cloak and Hoary Comma are prime examples. Or perhaps you will see Satyr Comma, Green Comma, a California Tortoiseshell, or a Milbert's Tortoiseshell. They are fresh and new this time of year, but instead of finding mates and reproducing, they will feed for a week or two and then find a good hideaway, enter diapause, convert their body fluids to a glycol (a natural anti-freeze), then be inactive for a few months.

Hiding, immobilized by cold, through an entire winter can work only if hungry birds or mice do not discover them. Where do they hide? With wings closed, their appearance offers some clues. They have terrific camouflage: shapes, colors, and patterns that resemble dead leaves or tree bark. Who eats dead leaves or tree bark? No creature that I know. If hibernating adult butterflies select a good spot in a clump of dead leaves, in a pile of loose brush, or under some loose tree bark, they have a good chance of surviving winter undetected by predators.

At winter's end, on those occasional days when air temperature may reach 60°F for an hour, a few successful hibernators can be seen basking and



Hoary Comma in its winter disguise (left) and showing off its mating suit (right). (Photos by Steve Cary)

flying — our first butterflies of the year! All surviving hibernators exit diapause and are active by March and April when their life cycle resumes: males court females, females place eggs on host plants, eggs soon become caterpillars which eat, grow, pupate, and

produce a summer flight of adults in our mountains. Those adults promptly mate, place eggs, and produce the autumn flyers we can see this month. With another cold winter on the way, these autumn adults will forego reproduction and diapause through the next winter. 🦋

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

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Astronomy Talks That Are Out of This World

“My mind was blown! I loved the visuals!”

— Planetarium Talk Attendee

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Nature Center Hours:

- Monday: 10 – 4
- Tuesday: Closed
- Wednesday: 10 – 4
- Thursday: 10 – 4
- Friday: 10 – 4
- Saturday: 10 – 4
- Sunday: Closed

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Nature Playtime families participated in releasing a monarch from our outdoor enclosure. They became citizen scientists and learned what goes into tagging and releasing these butterflies. (Photo by Kristy Mack)

INSIDE

- 1 Celebrating Our Community This Fall
- 2 The Best Day at the Nature Center
- 3 Finding a Place to Perch
- 4 Observing Local Animal Patterns
- 5 Book Review: *Ring of Bright Water*
- 6 What Do Butterflies Do in the Cold?

UPCOMING EVENTS

- Unveiling the World of Bats **OCTOBER 7**
PEECnic **OCTOBER 16**
Spirit Lake Hike **OCTOBER 17**

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