

PEEC 3540 Orange Street Los Alamos, NM 87544 Mail: P.O. Box 547 505-662-0460 Open: Tu-F:12-4: Sat.10-1 http://www.PajaritoEEC.org

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# You're invited to the PEECnic! Come to PEEC's annual meeting for members and friends. Beautifully illustrated bird talks, activities for kids, and delicious refreshments. Baturday, October 15th, 2-4 p.m. the PEEC, 3540 Orange Street FREE!

# Election of Board of Directors at PEECnic

Nominees for members (2-year term): Michele Altherr Steven Becker Robert Dryja Jennifer Macke Felicia Orth Karla Sartor Selvi Viswanathan

Nominees for officers in the coming term: Secretary -- Sue Watts Treasurer -- Paul Arendt Members and officers continuing through next year: President --Rebecca Shankland Vice-president -- Terry Foxx Chick Keller Kelly Larson Siobhan Nicklasson Dave Yeamans

Youth Advisory Board continuing: Nathan Clements Melanie Boncella

# Save Water All Year

by Mary Carol Williams

What You Can Do to Save the Earth is a book available in the PEEC library. It gave me some good ideas about saving water, a concern even in a year with this year's rains.

· When washing dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water.

· Some refrigerators, air conditioners and ice-makers are cooled with wasted flows of water. Consider upgrading with air-cooled appliances for significant water savings.

· Adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street.

· Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.

· Choose shrubs, groundcovers or stones instead of turf for hard-to-water areas such as steep slopes and isolated strips

· Use the garbage disposal sparingly. Compost vegetable food waste instead and save gallons every time.

· Plant in the fall when conditions are cooler and rainfall is more plentiful.

For cold drinks keep a pitcher of water in the refrigerator instead of running the tap. This way, every drop goes down you and not the drain.

· Monitor your water bill for unusually high use. Your bill and water meter are tools that can help vou discover leaks.

· Wash your fruits and vegetables in a pan of water or sink instead of running water from the tap. Save the water to rinse dishes.

· Spread a layer of organic mulch around plants. It retains moisture and saves water, time and money. Los Alamos has lots of pine needles for mulch.

· Use a broom instead of a hose to clean your driveway and sidewalk and save water every time.

# Easy Funds for PEEC

Here is an easy way to help PEEC! Please link your Smiths Rewards card to us through the Earn and Learn program. Last year, with only 59 of us signed up, we earned \$900! We hope to do even better this year. If you enrolled last year, you must

still re-enroll this year.

There are two ways to sign up:

1. Tell the Smith's cashier you want to register and for PEEC to be the recipient. Show your Rewards or Fresh Values card. You can also pick up a copy of the barcode at PEEC.

2. Open an account on the Smith's website and choose PEEC as your Earn and Learn recipient. You can do that from here:

http://www.smithsfoodanddrug.com/mysmiths/706/Pag es/earnandlearn.aspx ¢

## What a Difference a Little Rain Makes by Terry Foxx

As I write this, it has been over three months since the Las Conchas

fire began over ninety days since our hearts felt the heaviness of fear and sadness "Not another fire" were

the words



Burnt Mesa two weeks after the Las Conchas Fire. exclaimed by

many. Two weeks after the fire, I drove down State Route 4 and took pictures from the road at the entrance to Burnt Mesa. Everything was black.

Two weeks later (one month post-fire), I walked to my study areas. Shimmering against the blackness of the ash were shoots of oak, New Mexico locust, and gooseberry

- some sprouts a foot tall. A squirrel foraged and western bluebirds fluttered from tree



Burnt Mesa – 91 days post fire. Photo by Terry Foxx.

to tree. Today, if you take a walk on Burnt Mesa, vou will see the amazing resilience of nature. The rains have come and replenished and refreshed the earth. Burnt Mesa is no longer black but various shades of green with dots of yellow and red wildflowers. Before the fire, the dominant plants in the meadow were several species of wormwood (Artemisia spp.) that are more drought-tolerant. Grasses were stunted and drought-ridden. But the nutrient-rich ash and the rains have revitalized the meadow. Blue grama grass (Bouteloua gracilis) dominates, with large seed heads gently waving in the wind. Flowers like Indian paintbrush, lupine, wild chrysanthemum, desert four o'clock, evening primrose, globe mallow, and willowweed dot the landscape. Patches of fetid goosefoot (Chenopodium graveolens) will soon be bright red, adding another color to the fall landscape. The singed ponderosas are putting out new needles. And that squirrel I saw foraging last time is still there.

We live in a fire-prone ecosystem. As I explained in the last newsletter, plants that live in this type of ecosystem are adapted to fire. Many sprout from unharmed roots that lie below the heat penetration. Some seeds lie dormant until the fire breaks the seed coat and allows for germination. For other plants, the smoke stimulates them to sprout or their seeds to germinate.

Beyond the amazing regenerative adaptations are the methods of seed dispersal from adjacent sites. Little parachute-like seeds of many of the composites float to the open burned areas. Hitchhiker seeds attach to socks, fur, feather, or tires and are deposited in new places. The birds that frequent the burned areas and non-burned areas eat seeds that go through the digestive system unaltered and find a new home via the discharges. With the



Burnt Mesa over three months post-fire. Photo by Terry Foxx

lack of competition from other plants, seeds take hold.

Yes, it is hard to believe that 80 days ago the mesa was black. Rain makes all the difference and nutrient-rich ash contributes to the recovery. I was curious how the weather compared to the aftermath of the La Mesa, Cerro Grande, and Las Conchas Fires. Using the LANL Weather Machine and other databases, I compared the months of the summers of 1977, 2011, and 2000. According to my 30 years of data, the rate of continued recovery of trees and other species will be dependent on winter moisture. But nature has begun to heal with the refreshing summer rains.



I encourage you to take a walk and see the beauty of nature's healing. Burnt Mesa is an easy flat walk and you don't have to go far to experience the renewal. A short walk into the meadow will uplift your spirit.

## The "Betty Lunge:" a Class with the Critters by Esta Lee Albright

The exhibit animals at PEEC provide one-on-one interaction between a viewer and a local animal. Those beady little eyes obviously are watching us as we watch them. We read their exhibit labels and some of us "adopt" an animal that stays at PEEC (see our web site). However there's nothing like the experience we had in a class taught recently by Jennifer Macke, critter caretaker, and her assistant Melanie Boncella. There were four girls, three boys and three adults in the class. The children each drew a slip of paper naming a "chore" to do for an animal, usually involving feeding. Jen's teaching style did a good job of mixing experience and critter-fascination with facts about each one as we visited them in turn. She just slipped in the instruction painlessly and let the kids guess or question as they wished.

A first attention-getter: they started out on the patio with the worms. The "worm farm" contains peat moss, worm castings, vegetable scraps, and compost worms. Each child was to find a worm, and pick it up and put it in a paper cup. Nobody even batted an eyelash. Of course, some of the worms crawled out of the small cups, but that brought added attention. Jen asked if they could tell the front end from the rear and nobody could. A little worm anatomy got through there. Then they were told all the worms would be fed to Elf, the red-eared slider turtle who is a real favorite at PEEC. Nobody seemed overly attached to his or her worm, but everybody wanted to go commune with Elf. It was Elf's lucky day: later he also was fed veggies and grapes.

Betty the big bullfrog performed her usual lightning-quick lunge for her worm held over her tank in long tongs. She can be seen waiting for a big Canadian nightcrawler anytime during the day but her lunge is so fast it's easy to miss. Then she had to endure Jen's holding her by her hind legs so kids could gently touch her skin. They soon compared that with touching Woody the toad's bumpy skin. Woody had to be held over the wastepaper basket because he tends to urinate when held – that just added to the fascination. Jen explained no one was allowed to hold Tam the salamander because his skin is so moistly delicate. He actually breathes through it. All had the opportunity to wash hands or use antibacterial liquid.

Anyone could volunteer to hold Foxxy the hognose snake. Each child sat on the couch next to Melanie. The little girl in the party dress holding a snake is Madison Ross, daughter of one of PEEC's teachers.



Our "wild" fish from the Rio Grande were a good show. The fish seemed

attracted to a group of potential feeders and gathered at the corner of their aquarium quite promptly. The child with the chore card about feeding the fish was barely able to touch the top of the tank when standing on the stool, but she reached up and over well.

Flash demonstrated why he was named. One glinty look at the group and he was off his basking log. The scorpion didn't come out of her hide but

was fed quite quickly just in case she did.

At the end of the chores and class, Jen asked if anyone wanted to go back and play with the worms. Hands went up. All ran out the doors to the patio, almost knocking over a visitor who was coming in. Those are PEEC kids !

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### Tales from a Nature Odyssey

by Sarah Gustafson

It's the first morning of Nature Odyssey in June 2010. To help us get to know each other, my co-teacher Michele Altherr and I ask the two dozen fourth-through-sixth graders in our program to introduce themselves by prefacing their names with a descriptive word that begins with same letter. As we go around the circle, we meet Rockin' Richard, Jumping Jenny, and Super Sean. Then we come to a slim girl with her head down. Very quietly, she identifies herself as Inside Ingrid.

Over lunch in the Valles Caldera, I ask Ingrid about her interests. She likes playing on the computer and reading, she tells me. She does not like being outside.

It takes Ingrid a day or two to come out of her shell, but by the middle of the week, she's giggling with other girls, catching crayfish, and scrambling over boulders like a pro.

Fast forward to the first day of Nature Odyssey, 2011. Ingrid arrives, happy and confident, her backpack carefully packed with the gear we'll need for a week of exploring the Rio Grande Valley.

"Are you still Inside Ingrid?" I ask as I check her in. "No," she says, smiling. "I'm Outside Ingrid now!"

That's all it takes to make my day. After months of researching, planning, and finding a path through the inevitable obstacles Michele and I encounter while putting two weeks of Nature Odyssey into place, I begin this year's adventure knowing it's worth the effort.

Michele and I took a new approach with Nature Odyssey this year. In addition to offering a smorgasbord of outdoor activities, we delved deeply into each week's theme, building every day's activities on those of the day(s) before. By carefully interweaving environmental education and adventure, we crafted a cohesive, unique—and fun!—summer program that helped the kids connect deeply with the natural world on both an intellectual and experiential level.

For *Wet 'n Wild Along the Rio Grande* (week 1), we looked at how humans have changed the river system

over the past several hundred years, along with the importance of fresh water to vegetation and wildlife. During *Where in the Valles Caldera Are We?* (week 2), we explored our relationship to the natural world by using the sun to tell time and direction, and natural features to navigate through the landscape. Along the way, we met with a variety of field scientists to learn about the natural and cultural history of each area.

We began most days in the PEEC classroom, working together to build a three-dimensional model out of fabric, couch pillows, and laminated pictures of plants and animals, before heading out for the day's adventures. As they helped create these models, the kids learned key concepts by channeling the Rio Grande watercourse – then changing the bosque ecosystem as a result (week 1) – and simulating volcanic eruptions and the subsequent filling and draining of the Valle Grande to create the Jemez River (week 2).

The kids responded beautifully to this approach. For instance, while discussing the effects of drought and competing demands on river water around the Rio Grande model one morning, we replaced native trees and shrubs with invasive species. That afternoon, while visiting Tesuque Pueblo Farm, we walked down to the waterless Tesuque River basin. If not for the kids' hats, Michele and I were pretty sure we'd have been able to see the wheels turning in their heads as they made connections between the model and the dry riverbed under their feet, pointing out salt cedar and Russian olive amidst the native bosque species.

We ended each afternoon in a closing circle where we asked the kids to name their favorite activity of the day. Here are the top ten things they mentioned during our week along the Rio Grande:

• catching tadpoles at Bill Orr's farm along the Velarde bosque;

• learning to Fox Walk, which allows us to move through a natural environment without disturbing its inhabitants;

• building stream models in Bandelier;

• playing Pooh Sticks in Frijoles Creek;

• watching a show on the seasons at the Santa Fe Community College Planetarium;

• playing team-building games led by our intrepid teenage counselors;

• visiting the Leonora Curtin Wetlands Preserve, where we learned to focus binoculars and identify

birds, checked out a rotting log hotel, and played migration hopscotch;

- discovering solstice markers at Tsankawi;
- hiking a slot canyon at Kasha-Katuwe Tent Rocks;

• helping biologists catch and measure fish in Cochiti Lake – followed by playing in the lake, of course.

Highlights from the Valles Caldera and beyond included:

• creating pocket sundials—then using them the rest of the week to tell time;

- orienteering;
- making and using a variety of maps;

• taking a blindfolded walk through the woods to practice navigating without sight;

- building a shelter from branches and pine needles;
- learning how scientists track elk calves using radio telemetry;
  - seeing many elk—and a bear!
  - playing Camouflage in History Grove;

• visiting several spots along the Jemez River, from its spring-fed headwaters in Valle Grande to Hidden Valley (where we caught and studied macroinvertebrates), to a perfect spot for splashing and building rock dams near Jemez Springs;

• spelunking in Alabaster Cave. And from both weeks:

• making new friends!

Throughout both weeks, our young odysseans amazed us with their positive energy, curiosity, and sense of adventure.

I'll leave

Nature



Photo by Michelle Altherr

Notes readers with one final anecdote from this year's program:

To explore how native cultures used the Valles Caldera, we spent a morning with VCNP archaeologists. One taught us to throw spears with an atlatl; another flint-knapped stone tools out of obsidian. At a third station, we used a grindstone to process native rice grass seed, producing a couple of cups of flour by the end of the activity. Viewing this as more than an exercise, Ryan asked if he could take the flour home. He returned to PEEC the next morning with a loaf of home-made rice grass bread, still warm from the oven. It was delicious!

PEEC would like to thank the following people, who contributed in key ways to the success of Nature Odyssey 2011: Bob Parmenter, Stacy Urich, John Swigart, Rob Dixon, Jamie Civitello, Nicholas Hearth, Bill Meyer, Rachel Cowan, Branden Willman-Kozimor, Giselle Piburn, Bill Orr, Elena Gustafson, Ron Barber, Chris Judson, Emigdio Ballon, Natali Steinberg, Sue Watts, Dave Yeamans, Shari Kelley, Hal Wershow, Angela James, and an anonymous donor of scholarship funds. We appreciate your support!

#### Weeds: Wonderful or Woeful?

by Rebecca Shankland

The wet summer has produced a prolific sprouting of roadside vegetation and lawn intruders. Dandelions, mustards, stickseeds—we mostly dismiss them as weeds, and rip them out or spray them with something whose label we'd rather not read too carefully.

But Gerard Manley Hopkins, the Victorian priest-poet of Romantic sentiment, had another perspective:

Nothing is so beautiful as spring— When weeds, in wheels, shoot long and lovely and lush....

Did he have a point, or was he ignorant of the difficulties of raising a golf-green lawn?

Let's start with dandelions, the most ubiquitous and easily recognized "wheels." If you don't like them, they're deep-rooted and hard to dig out. Those splendid little lollipop seed-heads are a Darwinian masterpiece—not only do they sail off like small umbrellas to colonize uncharted territories, but they get our children's cooperation in setting them off in the breeze. Are they pretty? Look at the airport road strip or any nasty, trash-ridden scrap of dirt; then look at the tailored lawn by the police station and Ashley Pond—probably dandelions get an A when they peek up from a concrete slab and an F when they dare to spoil a solid sweep of labor-intensive, man-made green. Even if you love their bright yellow cheerfulness, you may be surprised at the same spot when the flowers all go abruptly to seed, looking like a bunch of dust kitties under the bed.

But you must also give dandelions credit for their usefulness to humankind. They've long been recognized as being tasty salad greens (field greens bring \$7.99 a pound in the supermarket) and as a natural diuretic. The scientific name is *Taraxacum officinale* – the latter word always refers to plants that are used medicinally. The French are more specific about its effects: they call it *piss-en-lit*, suggesting that a large dose may result in wetting the bed.

The mustards have won the population race this year. I've never seen so much of the frail, skinny, grey-leaved stalks of tansy mustard. It's everywhere – along nearly all the road edges like State Road 4 in White Rock and shooting upward in unmowed grama grass lawns. In well-watered areas it begins to branch and gets bushy. Up to three feet tall, it makes a cloud of pale yellow with its tiny four-petaled heads at the tops of stalks. The give-away characteristic is the seed pods or siliques: they march down the main stalk below the flowers and have a 1/2-inch stem and a 1/2-inch silique, a tiny hot-dog shaped seed pod. The siliques are numerous, slightly upturned, quite decorative, but eager to spread their seeds in abundance. The grey-green leaves are heavily dissected, like parsley.

Tansy mustard is scientifically *Descurainia richardsonii*, the first name referring to a French apothecary and the second to an English naturalist. Like the dandelion, it can be useful—Native Americans grind the siliques into food and pottery paint.

Mixed in with tansy mustard, one may find the occasional shepherd's purse. Again the siliques are the obvious characteristic, in this case giving the plant its name. Imagine tiny perfectly heart-shaped pods on tiny stalks below the minute white flowers – much like tansy mustard but with distinctly green foliage and fatter leaves. The fat pods reminded pastoral people of purses carried by



shepherds, and the connection is shown in the scientific name *Capsella bursa-pastoris*, (translated as "little case" and "purse of shepherd"). Grigson's "Englishman's Flora" points out that the resemblance to a purse is made by inverting the pod, then hanging it from a string around the waist of a poor man (shepherds were always considered to be at the bottom of the economic ladder), and thinking of the seeds as money. These purses can be seen in Renaissance paintings of peasants, such as Brueghel's. Interestingly, the French and Germans use the same name: malette de berger and Hirtentaeschen.

Another white mustard similar to shepherd's purse (also about 1 1/2 feet tall) but with round siliques is peppergrass. This forms lovely white masses in a few spots around town.

A new discovery for me is a purple mustard with coarse dark green wavy-edged leaves and a thick, hairy stem 1 to 2 feet tall. The elongated violet-purple flowers are a mere 1/4 inch across, but that's big enough to show the four-petal structure

that is always a characteristic of the mustard family, which used to be named *Cruciferae* for the cross-shaped flowers it bears. I finally found the plant in Robert DeWitt Ivey's excellent "Flowering Plants of New Mexico," which lists it as local to just our region. It has a strange name, *Chorispora tenella*; "chori" means "separated," "spora" is "seed," and "tenella" is simply "narrow"—all of which describes the inch-long narrow silique with its tiny circular bands separating the seeds. Evidently its only common name is purple mustard.

A final notable in the current catalog of weeds is stickseed, *Lappula redowskii* or *marginata*. It starts life as a 12-inch tall plant with long, narrow, fuzzy leaves clasping the stem. The pale blue flowers are like miniature forget-me-nots, which are members of the same borage family. The flowers are almost invisible in their clumps at the tops of the stems; then they rapidly turn into little round burs with tiny claws waiting to hitchhike on your socks or pants. Of course the burs are less visible than the flowers, so the passerby hasn't a chance to escape without contributing to stickseed's survival. If you've ever had to de-bur your socks, you will find this the least appealing of the weeds.

My conclusion: when weeds pop up in wasted areas or when they create a wash of roadside color, Gerard Manley Hopkins is right. But when they invade the lawn or garden, outnumber the flowers you prefer, and have nasty reproductive habits, then they're woeful weeds. *Drawings: ClipArt* 

# PEEC Has Active Birders

by Esta Lee Albright

Frequent informal birding is led by Dave Yeamans, well-known outdoorsman and birder. Sightings from walks and back yards are shared online at PEECbirders. All this is fun, educational and free. Now PEEC plans three birding trips as fund raisers through the generous leadership of experts Dave, Steve Fettig and Terry Hodapp. You needn't belong to PEECbirders to register, but do so early and *contact Esta Lee Albright for times and details: estalee@whalesail.com.* Also read more on PEEC This Week and check the PEEC web site to register online.

The back roads, which are open only Sundays in November, at Las Vegas National Wildlife Preserve, will help us locate migrating birds on the Central Flyway on Nov. 13. 254 species use the LVNWP (Google: Las Vegas NM wildlife). Cost: \$25 benefit for PEEC. Register early by Nov. 9; limited to 12 people.

A real birding challenge for experienced birders will be on Dec. 10 at Bosque del Apache near Socorro. Steve says, "...scanning for shorebirds in the mud or walking roads to look for swamp sparrows on shrubs; [we will seek the] blue form Ross's geese, along with any rare birds reported..." Preregister by Dec. 5; the trip is designed for 4 - 8 birders. Cost: \$40 for PEEC members; \$50 for non-members; PEEC benefit.

Here's an exciting learning trip if you know the difference between a duck and a sparrow and want some help with basic identification. Jan. 7, 2012, at Bosque del Apache (Google: Bosque del Apache). Cost: benefit for PEEC \$20 per adult, with half price for an adult bringing a young person ages 8 - 16. Preregister by Jan. 2

Experience has us urging you to make the January trip a birding weekend. On your own, visit cranes and geese at Bernardo Wildfowl Refuge (Google: Birds of Benardo) just north of the bosque. On Sunday visit the rosy-finch banding project (all three species!) atop Sandia Crest (Google rosy-finch Sandia).

> See Nature Notes in color at www.PajaritoEEC.org, Publications



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#### **PEEC** This Week

weekly e-mail alerts about classes, events, nature and the environment. Anyone who has an e-mail account can receive them. To start, send a message to Webmaster@pajaritoeec.org. These weekly e-mail alerts always include PEEC activities and local information about nature. You also can contribute appropriate notices.

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PEEC's Mission Statement: To provide a nature center and outdoor education programs that allow people of all ages to explore the rich natural and cultural heritage of the Pajarito Plateau and to appreciate our connection to the natural world.

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