



NEWSLETTER

Pajarito Environmental Education Center

P. O. Box 547, Los Alamos, NM 87544; www.pecnm.org

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Spring 2004

President's Message

Michele Altherr

Resting on top of the floodlights attached to the outside of our garage is the twiggy nest of a pair of House Finches, *Carpodacus mexicanus*. Amazingly these two started building their nest in early February. The snows came down and the female sat on her nest snug under the eaves. During the days the male with his bright red forehead and breast perched himself on the bare branches of the nearby apple tree.

I have wondered where he goes to seek protection from cold nights and storms. Certainly it cannot be far. For ingrained in his nature is a steadfast dedication to stand guard and ensure the survival of their offspring. Spring mornings are beautiful, yet I rarely get to enjoy them for long, as I rush off to work. But I take a moment on my way to the car to glance up at the nest and wonder if the pair will succeed and be parents of hungry chicks.

The House Finches are heralds of the spring. When I look at the fuzzy plump buds of our fruit trees, I feel a sense of excitement as new leaves prepare to burst forth. Yet the springtime also brings the realization that not all our trees have survived this last cycle of the seasons, especially our ponderosa pines. This past fall I watched the needles of our courageously bent and contorted "Dr. Seuss" tree turn from a deep cool green to a sickly lima bean color and finally to a deathly clay brown. The blue fungus that came in the wake of the bark beetle infestation had clogged the

tree's transport system. However, as so often happens in nature, the demise of one organism benefits the others in the ecosystem. In search of food, the White-breasted Nuthatches defied gravity and hopped upside down on the ponderosa's branches, and the Downy Woodpeckers stripped off rings of bark on its trunk. While the tree had died of thirst, the insect-eating birds had feasted.

When March arrived, the fuel reduction project came to our canyon. I spoke to one of the workers on the removal of our favorite "Dr. Seuss" tree. He puffed on his cigarette and looked at me with a weather-creased face. We both agreed it had been a wonderful bird-feeder tree, and its loss was a shame. He pointed out the trees that would surely be dead by summer's end. However, I could not bring myself to euthanize them. Hope springs eternal when it comes to the trees in our backyard. He took down the "Dr. Seuss" tree and fed its limbs to the shredder. A clearing now stands in its place. Yet through nature's progression, I know a meadow has been born.

PEEC's mission is fundamentally simple: to nurture a sense of appreciation of the wonderful natural world outside our back doors. We are citizen volunteers who believe an environmental education center in Los Alamos would provide opportunities for people of all ages to discover the wonders of

CALENDAR OF PEEC EVENTS

April 15-25, Earth Week/Day Events: See schedule inside.

June 6, Wildflower walk with Chick Keller in the Jemez. Meet at 12:30 at Sullivan Field.

the Pajarito Plateau's forests, wildlife, wetlands, canyons, and stars. We envision a center that brings together the young with the old, the scientist with the amateur, the volunteer with the school child. Over the past five years, the PEEC Board has gathered community input and studied possible sites for the location of a center. Using a process of visits and a sieve of questions, the abandoned Olive Street Sewage Treatment Plant overlooking Pueblo Canyon ranked as the site that best met the criteria.

We have begun to open up a broader community conversation on the idea of an environmental education center at this location by taking a Powerpoint presentation to government boards and civic organizations. We would like to hear from you if you belong to a group that would like to have a presentation

This is PEEC's fifth year of leading Earth Day celebrations in our community. We have a dedicated volunteer planning committee led by Diana McPherson and including Becky Shankland, Sarah Meyer, and Hedy Dunn. This year the committee has been collaborating with the county government and LANL in an effort to reach a wider audience.

As part of the Earth Day celebrations, I would like to invite each of you on a PEEC

hike on Saturday, April 24 at 2 p.m. The hike will be part natural history tour of the geology of Pueblo Canyon with geologist Dave Broxton and part conversation on transforming the abandoned sewage treatment plant into an environmental education center.

As I close, I would like to leave you with the words of Georgia O'Keeffe. When asked why she painted flowers so large, she replied, "Nobody sees a flower really, it is so small - we haven't time, and to see takes time, like to have a friend takes time." This Earth Day, I hope each of you will take time to step out your back door and enjoy a small part of your immediate natural world.

Flower Hike June 6

Chick Keller will lead a wildflower hike on Sunday, June 6, near the Valles Caldera across from Poncha Campground. Fairy slipper orchids, red columbine, and other mountain species are likely.

Bring water, sunscreen, hats, and good walking shoes. Meet at Sullivan Field parking lot at 12:30 p.m.



The winners of PEEC's bird poetry contest at the awards ceremony at Otowi Station, where Colleen Olinger presented field guides. Left to right are Lynn Barlow, Sam Pearson, Sharifa Lookman, TJ Kohlrust, Chris Ussery, and Samantha Stutz. Darlene Koontz, superintendent of Bandelier National Monument where some students took field trips, is center back. The poetry contest was part of the Park Flight Program grant funded by the National Park Foundation.

Science Fair Winners

Diana McPherson and Michele Altherr chose this year's PEEC Science Fair winners:

Samantha Stutz (10th grade), Pinon Trees--the Next Generation

Cameron Ott (8th grade), The Rate That Standing Burned Trees Fall after a Forest Fire

Jonathan Thoma (7th grade), Are Your Trees a Savior or a Danger?

Alyson Richmond (6th grade), Tree Rings

Petey Priedhorsky (4th grade), Hummingbirds: Their Favorite Color

Several of the winners' summaries appear in this newsletter. We are impressed with the creative ideas of these young thinkers.

Science Fair Winner

Tree Rings

Alyson Richmond (6th grade)

For my science project I studied Dendrochronology. The word literally means "tree time." The study of tree rings is called Dendrochronology. I learned a lot about how drought and rainfall affect tree growth. I had both complacent and sensitive trees. Sensitive means that the tree has varied ring size dependent on how much moisture was absorbed per year. Complacent means that all the tree's rings are the same size or really close in size regardless of that year's climate. I had different kinds of trees. I had a slice from near the bases of an apricot tree, a poplar, 2 cherries, 3 pinons, and 1 huge ponderosa pine.

I found that the ponderosa pine was my #1 tree; it was not always easiest to read but it was easy to find patterns in this 185-year-old tree. I matched it with my largest pinon and its ring pattern coincided with historical drought and rainfall patterns. My #2 tree was definitely my largest pinon; it was really difficult to read but it was very old and could be used to compare. All of my other trees were either too hard to read or had "complacent" rings (neighborhood trees are watered).

By making graphs I looked at patterns and decided that we go through 35- to 40-year-long wet periods followed by 30- to 70-year-long

dry periods. I believe we just entered into a long dry time. It may be dry for several more decades.

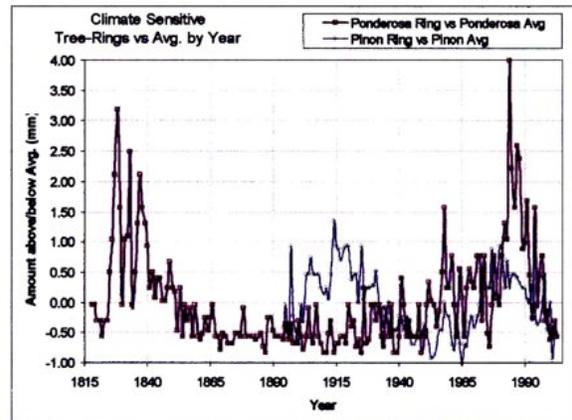


Figure 1 shows my data from two climate-sensitive Los Alamos trees. The dry period ending around 1957 and wet period centered around 1986 are easy to see.

As a result I believe we may be entering a long period of below-normal rainfall. I believe that we should conserve water because our community is growing and water is likely to become scarcer.

April Membership News

Hedy Dunn, Membership Chair

What does April mean to you? It should mean April showers (hooray), Earth Day, and also TIME TO RENEW (or JOIN) PEEC. Your board of directors has been hard at work trying to develop an environmental education center here in Los Alamos. Come talk with members of our organization at Earth Day on April 24 at the Community Center to learn more about our activities this year.

Check the mailing label on your newsletter to see if your membership is due for renewal. Please use the membership form printed in the newsletter and send your check by mail or stop by the booth on Earth Day and renew at that time.

Earth Week 2004: "Water for Life"

For all hikes, bring water, snacks, sunscreen, hat, good walking shoes, protective clothing.

Thursday, April 15

7pm. "Water Conscious Gardening with Native Plants in Northern New Mexico" with Andy and Sally Wasowski, Taos authors of xeric and native plant gardening books, sponsored by Native Plant Society of NM. Mesa Public Library, meeting room 3.

Saturday, April 17

All Day. Clean Up Los Alamos Day sponsored by Los Alamos County. Groups can clean up a neighborhood, park, or trail. Information at www.lac-nm.us or 662-8383 to receive trash bags and free disposal of waste.

9-10:30am. Hike Pueblo Canyon to enjoy the canyon and discuss concerns of potential development. Led by Larry Ticknor. Meet at Orange St. parking lot next to School Annex.

2-5pm. Photography hike led by Norman Hunter. Tips on photographing nature subjects. Contact Diana McPherson (672-9408) or Norman Hunter (nhunterjr@mindspring.com). Bring a camera. Select your best photo from the hike for display at the Celebration on the 24th at the Community Building. Meet at Sullivan Parking lot (football field).

Sunday, April 18

9am-12pm. "Rock Art and Prehistoric Water Control Features." Strenuous hike in White Rock Canyon led by Rory Gauthier, archeologist at Bandelier. Meet at Smith's parking lot in White Rock and caravan to trail head.

Monday, April 19

7-8:30pm. "Local Initiatives and Self-Reliance in a Navajo Environment." Talk and discussion with Pat Kutzner and three Navajo Torreon Chapter leaders. Sponsored by the League of Women Voters. Refreshments. United Church, Graves Hall, 2525 Canyon Road.

Tuesday, April 20

7-8:30pm. Discussion of the Draft Framework for Management of the Valles Caldera National Preserve, led by Marty Peale of the Valles Caldera Coalition. Refreshments at 6:30. Mesa Public Library upstairs meeting room.

Wednesday, April 21

3-4pm. "All Things Connected," environmental stories with puppets and animal balloons, led by Los Alamos storyteller Terry Foxx. Mesa Public Library, downstairs in the rotunda.

3-4pm. Nature journaling for kids (adults welcome, too) with Diana McPherson. Bring notebook and pencil. Meet at White Rock Public Library meeting room and walk to a nearby trail. Attendance is free, but folks must call 672-9408 to register so that the correct number of handouts will be available.

Thursday, April 22

10am-2pm. Los Alamos County and LANL Earth Day celebration at Ashley Pond, rain or shine. Enjoy live music, food from Farmers' Market vendors, participate in fun, educational activities with various local environmental groups; first drawing for bike punch cards.

10am-12pm. Tree-planting with Craig Martin, County Open Space Specialist. Meet at Ashley Pond at the County booth at 10 am to carpool to the work site above 48th Street.

7-8:30pm. Elk Talk: "Living and Working in the Urban-Wildlife Interface: A Historical, Scientific, and Socioeconomic Review of Elk Issues in the Jemez Mountains," talk by Susan Rupp, LANL researcher, at Bradbury Science Museum.

Friday, April 23

9am-12pm. Facilitated Meeting for Response to Draft Framework for Management of Valles Caldera National Preserve, sponsored by Valles Caldera Trust, Golf Course, 4250 Diamond Dr.

Saturday, April 24

10am-1pm--PEEC Earth Day Celebration at Community Building (former Teen Center)

- **Hybrid car display** (parking lot south of Community Building)
- **Live music** by Peace Meal
- **Videos** - "Who's Counting?" "Global Banquet: The Politics of Food," "Life and Debt: Jamaica and the IMF," "Global Exchange," and "Affluenza"
- **Photo display** from April 17 water photography hike
- **Exhibit tables** from many organizations: PEEC, Coop America, NW Earth Institute, Sierra Club, Friends of Bandelier, NNM Citizens' Advisory Board, Renewable Energy Campaign, LANL-RRES-ECO, NM Solar Energy Association, Los Alamos County – Solid Waste, Valles Caldera National Preserve, League of Women Voters, Bandelier
- **Silent auction** held from 10-12. Help PEEC raise money for its building fund. Bids close at 12 (must be present to win). See list of auction items at www.pecnm.org.
- **50/50 Raffle** to raise money for PEEC's building fund. Tickets at PEEC table. Raffle closes at noon. Must be present to win.
- **Prize awards** begin at noon for the raffle, silent auction, bike essay, and bike-to-work contest winners.

10am-1pm. Orienteering for kids and adults. Street Orienteering event led by New Mexico Orienteers. Start and finish at Ashley Pond. One course will be set for children in the downtown area (people will be on hand to help with street crossings) plus a regular street orienteering course. Meet in front of the Community Building.

8am (all day). Hike Cerro Pedernal (near Abiquiu) with the Sierra Club. Enjoy the spectacular view after a strenuous climb up this Georgia O'Keeffe landmark. Meet at the Y (1/2 mile NE of Tsankawi) at 8am. Bring lunch. Contact Rainer or Ilse Bleck at 662-2368 or ibleck@yahoo.com in advance.

1:30-4pm. Snake Program "We Are All In This Together, Even Us Snakes" with Jan and Stephanie Macek and friends Cleopatra, The King, Portulaca, and 10 others. Mesa Public Library, downstairs children's section. Beanie baby drawing and photo opportunities.

2pm. Turning a Blight into a Community Asset: Hike to the Pueblo Bench with Michele Altherr, PEEC president, and Dave Broxton, geologist. Discover the geological aspects of the Pueblo Bench and discuss transforming the old sewage treatment site into an environmental education center. Meet at the Aquatic Center for a 1-mile hike from Kinnikinnick Park to the Olive Street site and back.

Sunday, April 25

9am. Old State Road 4 hike led by Dorothy Hoard. Bring water and lunch. Moderate hike of about 4 miles on abandoned roads, with some deadfall and short off-road stretches. Meet at Sullivan Field parking lot.

1-4pm. Tree planting with Craig Martin (Volunteer Task Force). Wear long-sleeved shirts and long pants. Tools will be provided. Meet at Mitchell Trailhead at Yucca and Arizona.

1-3pm. Introduction to Common Bird Sounds of Los Alamos, led by Stephen Fettig, Bandelier biologist. Attendance free, but folks must call 662-6785 to register so enough handouts will be available. Limited to 20. Betty Ehart Senior Center downstairs classroom.

Science Fair Winner

Hummingbirds: Their Favorite Color

Petey Priedhorsky (4th grade)

I wondered if hummingbirds have a favorite color of flower that they go to. And I wondered if they could learn to go to a certain feeder even if it wasn't a color they liked.

So, I got two hummingbird feeders and painted one blue and the other red. I put sugar water in both and saw which one they preferred. I called this Case 1. I would watch for ten minutes and I wrote down how many sips were on the blue feeder and how many sips were on the red feeder. Each time a hummingbird puts its head forward and back to drink was one sip. I switched the position of the feeders from right to left side almost every day. By doing that I know they will have to learn the color, not which side.

I saw they preferred red, then I put plain water in the red one instead of sugar water. I put sugar water in the blue one. I called this Case 2. I continued to watch them and wrote down how many sips were at each one.

On Case 1 the hummingbirds like red much better than blue. I know that because red got 178 sips and blue got 93. On Case 2 I learned that they could go to a color they didn't like. I learned that because red got 46 sips and blue got 593 sips.

I learned that if they could get food from both red and blue flowers, they liked red flowers better. But they could learn to go to a color they didn't like if they got food from it.

Silvery Minnow a Warning Sign for All

Note: John Bartlit, well-known spokesman for NM Citizens for Clean Air and Water, wrote this column for the Monitor of December 8, 2002. Like last issue's 1957 Tony Hillerman article about bark beetles, it gives us historical perspective on an environmental problem.

The humble canary bird stands tall in the history of coal mine safety. Many are the little yellow birds who gave their lives to detect the dangerous gases deep in mines. The bird's response gave an early warning that left time for informed action before the creep of a deadly gas would cost miners their lives.

Today the status of New Mexico water threatens the silvery minnow in the Rio Grande. The conflict is not, as some think, a simple choice of whether minnows or farmers are owed the catbird seat. Both will surely lose unless the early warning from the silvery fish leads to some useful, timely action.

Nothing is solved if we merely take a vote on who stays this year and who leaves, like a slow-played game of "Survivor." To give up the minnow may buy a little time, but it does not change the creeping water deficit. As the coal mine was not safer without canaries, neither does casting aside minnows secure our water future. The question is sustainability--that strange word heard more and more where people congregate. The minnow sends the warning to all water users.

In the confines of a coal mine, the harsh facts are grasped in a moment: The one indivisible air supply means a shared fate for the canaries and miners of every class. With water supply, on the other hand, it seems we can vote for things to be as we wish ... for a while anyway. So we do. Yet sooner or later, water, like air, comes up against natural laws not fixable by a judge or a vote. Rulings may allot water, but cannot create it. Water has facts beyond our reach.

From time to time we count on thwarting nature. It seems we can: We know how nature keeps things from falling off the Earth into space, yet we see a rocket ship work. Off it goes, out beyond the pull of Earth's gravity. We also know of the vast flow of energy resources and tax dollars behind what we saw.

Maybe great feats can defy the limits of New Mexico's water. And who will donate the big dollars to do so, how soon, for how long? Last month's election promised less, not more, federal funds for public works. To those who will hear, the lowly minnow warns about the declining prospect of water.

The value of the warning depends on how well it is used. One option is to ignore it and wait for a later sign. Other options are to get down to work on the details of broad-based

water data, water budgets, water savings, water banks, and water plans. To be sure, some of the work is done, but the minnow tells the grim story: The progress is too little and too slow.

Some say phoo on budgets and savings. Water use is all about ownership, written on a stack of water rights--as good as money in the bank. This view might serve if water looked like a car: See the blue Dodge Ram with its serial number stamped here, and here the bill of sale. Check? ...check.

In contrast, a water right depends on uncertain and changeable factors--challengeable things--like the water totals, how much of it is clean enough to use, how water flows above ground and below, the clauses in conflicting laws and the verdicts in water suits. Water rights work like money in at least one way: As the bank (the aquifer) comes to have too little good water to meet the outstanding rights, the system breaks down. With or without minnows on the docket, the case of farmer vs. farmer will come to trial in due course.

Close watchers will be the cities that use more water than their rights allow and, of course, the Native Americans. In each trial, who wins the verdict for the water? Whose lawyers and expert witnesses best earn their fees? Who next will land in the catbird seat?

A different landing makes for a different viewpoint. To get more use out of water will seem a smart idea to many more folks than it does right now. Yet to act soon enough, the plans are well behind time.

The means to get more use from water are built from those sturdy ideas listed above: broad-based water data, water budgets, water savings, water banks, and water plans. These are the methods of informed action that help save the livelihoods of water users of every class, including fish. How many signs will it take to get cracking?

John now poses the question for readers in 2004: In consideration of the 1-1/2 years' growth in state population, are we gaining or falling further behind in stretching water to meet a larger fraction of all needs? Are we better off or worse off?

Science Fair Winner

Pinyon Trees--The Next Generation

Samantha Stutz (10th grade)

The purpose of this project is to look at the pattern of pinyon seedling growth during the sixth year of a severe drought. One of Northern New Mexico's most common ecosystems is the pinyon-juniper forest. Unfortunately, most of the large pinyon trees have died during this drought.

Five 64 x 82-foot (0.1 acre) plots on county-owned land in White Rock were chosen. Numbers of trees and seedlings were counted. The distance and direction relative to the trunks of the juniper nursemaid tree for the pinyon seedlings were measured. The location of the seedlings in relationship to the canopy was noted. The minimum and maximum temperatures under a juniper canopy and outside of the canopy were also measured.

Pinyon seedlings are found under the canopy of juniper trees (60 nursemaid trees), and less likely under mature pinyon trees (18 nursemaid trees). The seedlings require adequate ground cover. The seedlings are found most commonly north of the juniper trunks (80) and next most commonly south of the juniper trunks (51). In each plot, at least 40 percent of the juniper trees sheltered a pinyon seedling (average 63 percent), and half the juniper nursemaid trees had 3 or more seedlings per tree. There was not a significant difference between maximum and minimum temperatures under the juniper canopy as compared to the outside.

The results of this study indicate that in about 25 years mature pinyons should be repopulating the juniper-pinyon woodland. The survival of the pinyon seedlings is dependent upon juniper trees. Because of this, the juniper trees should not be thinned. Since the dead mature pinyon trees can act as nursemaids to the pinyon seedlings and trees for the birds to perch on, they should not be removed. In addition, dead pinyon trees deteriorate readily (a few have already fallen) and will add their nutrients back to the soil. Removal of the dead pinyon trees could cause soil erosion and destroy other plant life in the area.

MEMBERSHIP

If your mailing label says "DUES DUE," it's time to renew your membership. Canvas grocery bags with the PEEC logo are given to new or renewing members at the \$50 level. Return this form and a check to PEEC, P. O. Box 547, Los Alamos, NM 87544. To give to the Building Fund, make your check to PEEC Building Fund. Membership is valid for one year; PEEC is a 501 (c) 3 tax-deductible organization.

Name: _____

Mailing address: _____

Phone number: _____ E-mail address: _____

Membership levels (make checks payable to PEEC):

- | | |
|--|--------|
| <input type="checkbox"/> Individual/Family | \$20 |
| <input type="checkbox"/> Friend | \$50 |
| <input type="checkbox"/> Benefactor | \$100 |
| <input type="checkbox"/> Additional Donation | \$____ |

Check the ways you could be involved:

- | | |
|----------------------------------|---|
| ____ Develop programs | ____ Support one-time events (Earth Day, talks) |
| ____ Lead educational activities | ____ Help with membership |
| ____ Help with site selection | ____ Raise funds/write grant |
| ____ Give a guest lecture | ____ Edit newsletter |

PEEC (Pajarito Environmental Education Center)

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