



Pajarito Environmental Education Center

Nature Notes

Volume 13, Number 2 Spring 2014
Your Nature Center in Los Alamos

Northern Shoveler

Photo by Dave Yeamans

Notes by Esta Lee Albright

On the PEEC trip in February to the Bosque del Apache Wildlife Preserve near Socorro, the bright colors of wild ducks flashed across watery inlets for admiring birding families. One was the northern shoveler, which is giving beauty to the top of our cover, thanks to trip leader Dave Yeaman.

Los Alamos County is on the fringe of these birds' winter territory; if seen on Ashley Pond they might be taking a high elevation side trip on migration to the southern half of the state for winter or to summer homes from Colorado to Alaska. Twenty were reported at Leonora Curtin Wetland Preserve in Santa Fe on February 15.

These ducks usually are found in shallow, marshy ponds or flying in bunches making weaving patterns. They rarely tip up and dive. Instead, they find bits of food by skimming the water and filtering mud through their long, spatulate bills.

In color, the photo shows the beautiful plumage of this adult, breeding male. His wingspan would be about 30 inches and we might hear a rattling sound when he takes off flying .

Find this handsome duck in color on the PEEC web site with all issues in the "Publications" section, where this will be posted soon. See new issues immediately by subscribing to receive them online.



Los Alamos Outdoors

This is the title of a much-beloved book by Dorothy Hoard, which Dorothy has said was made out-of-date by two wildfires (in 2000 and 2011). Nevertheless, we love the history, descriptions, drawings, and unique impressions of our high-elevation hiking. Below is an example of Dorothy's way with words:

Between Tschicoma and Caballo Mountains, Santa Clara Canyon, largest on the Pajarito Plateau, stretches around the north flank of the Valles Caldera. It was an old route from Jemez Pueblo to the Rio Grande valley. Two members of Coronado's expedition allegedly traveled the route in 1541...

Aqua Piedra Trail continues across the summit of Caballo Mountain and down the east ridge to Agua Piedra Canyon. From there it connects with the trailhead at Alamitos mesa on Forest Service Road 446 and with Caballo Trail 277.

From the summit of Caballo Mountain, all our worlds lie below us: the pueblos of the Indians, the deserted fields of the homesteaders, the bustling laboratory and town of the scientists, the tree-covered slopes of the forest creatures. The Sangre de Cristo Mountains line the eastern horizon and the Rio Grande flows beyond the southern horizon. The Cerros del Rio Plateau and White Rock Canyon are dwarfed in the vast sweep of the rift valley.

(continued on page 2)

Beyond Guaje Ridge and the spine of the caldera rim are the ski slopes of Pajarito Mountain. To the southwest across Cerro Rubio rise the resurgent domes and rounded volcanos within the caldera. On the far horizon lie the Nacimiento Mountains, western boundary of the Rio Grande rift.

In the silence of the wilderness the wild mountains and canyons and mesas etch themselves forever into our memories.

(*Los Alamos Outdoors*, by Dorothy Hoard, Los Alamos Historical Society, 1993, p. 112)

□

Ed. Note: it's time to put on the hiking shoes and be on trails. Be sure to check on recent news of trail conditions and closures. Useful web sites:

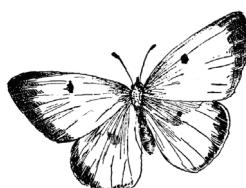
//www.losalamosnm.us/parks/trails/Pages/LACTrailNet.aspx; //www.fs.fed.us/ then search by state; //www.nps.gov/band/index.htm. PEEC has two publications for sale: *Sky Terrain Trail Map: Santa Fe, Los Alamos* (2012), and *Los Alamos County Trails, Hiking, Mountain Biking and Cross-Country Skiing*, by Craig Martin (2006). Also at PEEC, find a reference file of trail brochures and a give-away map, *Los Alamos County Trail Network*, with more web sites. You might look for the Los Alamos Trails Facebook Group. The best way to find it is to search “Los Alamos Trails” in Facebook.

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Facts Written in a Unique Style

[Dorothy Hoard wrote answers to questions from the public and reports on her discoveries in graceful, accurate paragraphs that relayed a description of Dorothy herself. A few selections are included here. The first is from the PEECButterflyWatchers group, where Dave Yeaman made the first report this year of a butterfly sighting, posting the following on that interest group's site:

“Ancho Canyon at the Rio Grande, January 15, one individual butterfly very active from one low bush to another and onward, 3/4" long, yellow with possible dark edge to fore and hind wings.”]



Drawing:
//etc.usf.edu.clipart/

[*Dorothy posted the identification.*] I am 95 percent confident that your butterfly is an orange sulphur, Dave. They are very hyperactive and fly low and fast a few feet above the landscape. They make sharp turns and if they alight at all it is only for seconds. We have four sulphurs, three of which are the same size. This one has a definite orange color on the upper side with a black band on the upper outer edge of both fore and hind wings. It is one of our most common butterflies. I'm not too surprised that it would be in a warmer place like the depths of White Rock Canyon at this time of year. The other two sulphurs are more of a lemon yellow and rather more lethargic. They too have the black bands.

□

[*Here is one of Dorothy's notes from the interest group PEECWildPlants.*]

On Friday July 5, I went to Frijoles Canyon to check on the ladders at Alcove House (nee Ceremonial Cave), which are closed but still there. I saw a little stand of wilted-looking horsemint, *Monarda menthaefolia* (name has been changed but I'm too lazy and cranky to look it up). Also the sacred datura was thinking of blooming. The place is so dry, one is afraid to sneeze for fear of riling up a dust storm.

□

[*Dorothy's mother's family came from Big Sur, California, where Dorothy continued finding plant treasures during trips to the west coast.*]

My flower of the year ... *Calochortus frimbriata* This flower was my inspiration to join a rare and endangered plant inventory group from California Native Plant Society, verifying sites in our wilderness this summer. This was a flower I had always wanted to find in the harsh serpentine out-crops on the south coast ridge road near Alder Creek and Lion's Den Botanical Areas. I had to return alone some weeks later to find it in blossom. It was a fine day with the goddesses of wild flowers guiding my steps – I was perfectly happy that day!

✿

Monarch Butterflies

by Dorothy Hoard

Reports and articles documenting problems in the monarch migration and with the butterflies themselves are becoming more frequent. We in Los

Alamos see monarch butterflies that migrate to winter in the mountains of central Mexico in forests of a type of fir tree called *sacred oyamel*. The forests are threatened by woodcutting on the part of impoverished natives, even though monarch tourism has become an additional source of income. Storms have ravaged the forests and monarch areas are included in the drug wars devastating Mexico.

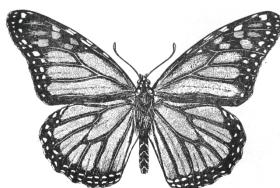
The famous migration from Mexico to summer breeding grounds in Canada has been threatened for years by destruction of United States habitat of the only host plant for monarch caterpillars: milkweeds. The plants are indeed weedy and most are quite poisonous; they need somewhat damper soil. Are these valid reasons for extermination and replacement by “good” crops?

In recent years, scientists who monitor these trends have been enlisting the public to help document monarch activities and trends. Groups have set up web sites to facilitate sightings in order to find where exactly the butterflies go on their travels, what are the routes, are the routes changing with climate conditions, and can large milkweed fields be restored along those routes?

In 2013, PEEC established PEECButterflyWatchers as a yahoo group. People have recorded whatever butterflies they see. In 2013 we also reported our monarch sightings to a website recommended by our butterfly guru, Steve Cary, called www.learner.org. The site actually records a number of other monitoring programs for species under duress, such as whooping cranes, hummingbirds, bald eagles, gray whales, and (surprise to me) robins. The sighting maps are informative and color-coded by month.

On www.learner.org monarch maps, most of the sightings are east of the Mississippi, with the southwest having spotty records. This is undoubtedly due to fewer viewers as well as (presumably) fewer butterflies. (This region has never been known as a principal monarch migration route.) One can view our local sightings – and Earl Hoffman’s beautiful

photos – on the map for 2013. Sightings are staked to location. We have recorded all our sightings on the general location of Los Alamos County. Santa Fe has many



records, mostly by Steve Cary, a few from Jemez Springs and Bloomfield nearby. From the map, it appears that a monarch migration route might be forming down the Rio Grande valley.

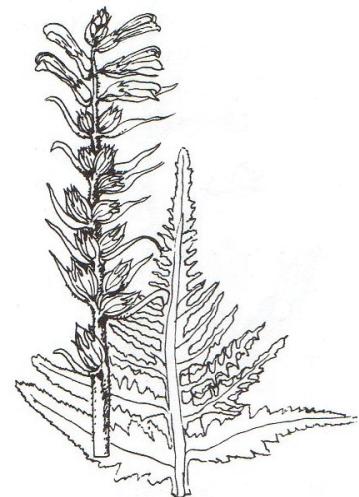
Selvi Viswanathan sends our monarch sightings from PEECButterflyWatchers to the website. Earl Hoffman submits his own with his photo documentation. To view the map, go to http://www.learner.org/jnorth/maps/monarch_all_fall_2013.html.

The cursor will be on *i* (information). Locate Los Alamos – Dave Yeamans’ report will be the top dot and appear in a separate window. Move the cursor to the + (plus/enlarge) icon and repeatedly click on a dot. They will eventually separate so you can see each sighting.

*Butterfly drawing from
//etc.usf.edu/clipart*

Lousewort drawing by

*Dorothy Hoard in Flowering
Plants of the Southwestern
Woodlands, by Teralene S.
Foxx and Dorothy Hoard.
Otowi Crossing Press, 1995
(out of print).*



lousewort

My Friend Dorothy

by Terry Foxx

One of PEEC’s greatest supporters and teachers, Dorothy Hoard, died

March 3, 2014, after a short illness. She will be missed by many of us who found her love of the out-of-doors catching. I first met her in the 1970s when I was teaching at UNM-LA. We became friends, co-authors, and collaborators. I can’t think of anything related to plants and animals that Dorothy did not take an interest in. She often spurred me by her enthusiasm to learn more.

She loved the out-of-doors and wrote several books on hiking. We have taken excerpts from *Los Alamos Outdoors* for this *Nature Notes*. Her writing challenged us to get out and hike. I particularly loved her three-dimensional trail maps. These drawings always gave me a good indication about whether it was going to be an easy trail or one more difficult to traverse.

Her books are full of history. Aldo Leopold said, “A sense of history should be the most precious gift of science and the arts....” Dorothy’s sense of history made us look where we have been and where we want to go. Whether it was old homesteads or old roads, she showed us we are connected to the future by the past. She exemplified that triad of history, science, and art. And where else is more history stored than in big trees, another of her interests and loves.

Dorothy was particularly interested in plants. Eighty-eight percent of plants have a pollinator such as butterflies or hummingbirds. Curiosity about plants led to fascination with butterflies and their plant hosts. She helped establish our butterfly garden and was responsible for yearly butterfly counts. She understood the principle that all things are connected. A beautiful butterfly can tell us whether we are caring for the earth or abusing it. The article about monarch butterflies is an example of her interest in these fascinating creatures that migrate thousands of miles.

What I will miss most about Dorothy, beyond her friendship, is her companionship in this journey of discovery. I will miss her simple drawings depicting a plant or animal, her gentle smile, her no-nonsense approach to life, her demand for correctness, and most of all her curiosity.



Moonset

Sue Watts has been busy for months visualizing exhibits for the new nature center, especially along the line of PEEC’s mission statement, “Enriching people’s lives by strengthening their connection to our canyons, mesas, mountains, and skies.” Her inspired view of the moon on the site follows:

I was out and about around 7:10 this morning, and I thought I’d swing by the site of the new nature center. When I parked there facing west toward Pajarito Mountain, the full moon was just setting. It seemed to drop behind the saddle just north of the ski hill. Instead of watching it move, I made myself view the moon as the stable object. With that small shift in perception, I could sense the movement of our earth as it kept up its rotational spin; I could “feel the



“Mountain Moonset,” California desert, by Jessie Eastland, August 1, 2012, for Wikipedia Commons.

[//commons.wikimedia.org/wiki/File:Mountain_Moonset.jpg](https://commons.wikimedia.org/wiki/File:Mountain_Moonset.jpg)

earth move under my feet.” Just as the moon disappeared from sight, a strip of blue light outlined the panoramic ridge, following its contours exactly. The strip quickly disappeared, leaving a rosy beige mountain full of light. Moments like that, my friends, is why we’re working so hard as a team to create this place for nature. Take time to renew your own connection to our canyons, mesas, mountains, and skies.

Remarking on Sue’s experience, we remember that movements of sun and moon, especially in relation to mountain peaks, have many uses and meanings around the world. A resident of a nearby pueblo says one member is appointed to watch the moon rise and set along the ridge of mountains almost surrounding the pueblo. The moonset behind a peak may be interpreted as a signal to plant or harvest crops, hold a religious ceremony, or observe a more secret celebration.

Naturalist Bob Dryja provided a web site address to help us “be in the right place at the right time” for moonrise and moonset. Find it at [//timeanddate.com](http://timeanddate.com), click “Sun and Moon,” pull down, click on “Moon Calculator,” and set it for U.S.A. - New Mexico - Santa Fe.

Photographer Mike R. Jackson near the Grand Tetons in Wyoming warns, “The closer you are to the mountains, the sooner the moon sets. Conversely, the farther away you are, and the higher you are in the valley, the later it sets.”

He likes to be exact by using an app – “The

Photographer's Ephemeris." He gives an example at [//www.bestofthetetons.com/tag/moon-set/](http://www.bestofthetetons.com/tag/moon-set/) with a selection of his moonset photographs. Another example comes from photographer Kelly Bellis on his site in Maine: [//panocea.us/2011/07/31/sunrise-moonset-on-cadillac-mountain/](http://panocea.us/2011/07/31/sunrise-moonset-on-cadillac-mountain/).



Are Cranes Flying North Too Early?



Source://4vector.com

There was some concern among birders when flocks of sandhill cranes were heard migrating overhead in February. Their continuous *kkrrroo* descending yodel was unmistakable.

Dave Yeamans did some research and wrote the following:

In conversation with workers at Bosque del Apache yesterday (2014-2-15), I was led to believe that the near total absence of cranes remaining there is not unexpected. Yes, they'll hit some cold weather but with the ground warming up and the cranes fat from winter forage, they ought to do just fine.

Searching the *ebird.com* database for Taos and Los Alamos counties in New Mexico, places where the cranes don't winter in big numbers but do fly over in spring migration, I see that all of February and the first three weeks of March are the peak of the migration in all reporting years since 1900. Keep in mind that the data are probably minimal before about 1980. The highest number of cranes and the number of sightings is the last week of February. That makes this year seem early by a week or two.

Colorado sightings are later yet and Nebraska follows. It looks like the cranes move gradually northward and aren't headed to the breeding grounds of Idaho, Canada, and Alaska in one long flight. We all wonder if the expected global warming effects will happen faster than organisms can adapt. My guess is that the cranes will be just fine for quite some time, so I'd save money by not buying the cranes that sign, "Turn Back If You Know What's Good For You" just yet.

Science Fair, January 2014:

PEEC Awards

Each year PEEC awards small cash prizes to science fair projects that we feel are good examples of research related to the natural world around us. Here are this year's winners and titles of their projects.

Kevin Dors, *Man vs. Plant: Who is Better at Stopping Erosion?*

Amaya Coblenz, *What's Living in the Backyard Pond?*

Kaylee Rogers, *Shaking for Suds and Which Type of Water is the Hardest.*

Than Povi Martinez, *Chili, Chili, the Heat of New Mexico.*

Kaley Muller, *Plant vs. Plant.*

Mrs. Lynne's Class, *Water Pollution Exposed!*

Gavin Coy, *Spot On!*

Declan O'Leary, *Boiling Water at Different Altitudes.*



Wildflower Counts 2012 and 2013

by Craig Martin

To amuse myself during twice daily walks with a 60-pound Husky, I count the number of wildflower species in bloom along the way. From home on Arizona Avenue, we often head east on the Perimeter and Rendija trails through the Rendija Crack, then take the Upper Rendija, Dot Grant, and Woodland trails back for three miles.

The Dot Grant Loop is a shorter version of the trip, and the Woodland Standard a one-mile morning jaunt. In 2012 I started keeping records of the counts and, although not very scientific, the data show some interesting trends.

Spring of 2012 was wetter than in 2013. May of 2012 brought an inch of rain, but in 2013 only 0.1 inches fell. As you can see on the graphs, spring counts in 2012 were greater than those in 2013, in fact were almost double. In 2013, there were many spring species that just didn't bloom in their usual time frame.

The next feature of the graphs is data that are missing for the Rendija Crack and Dot Grant Loop in 2013 from late-May to

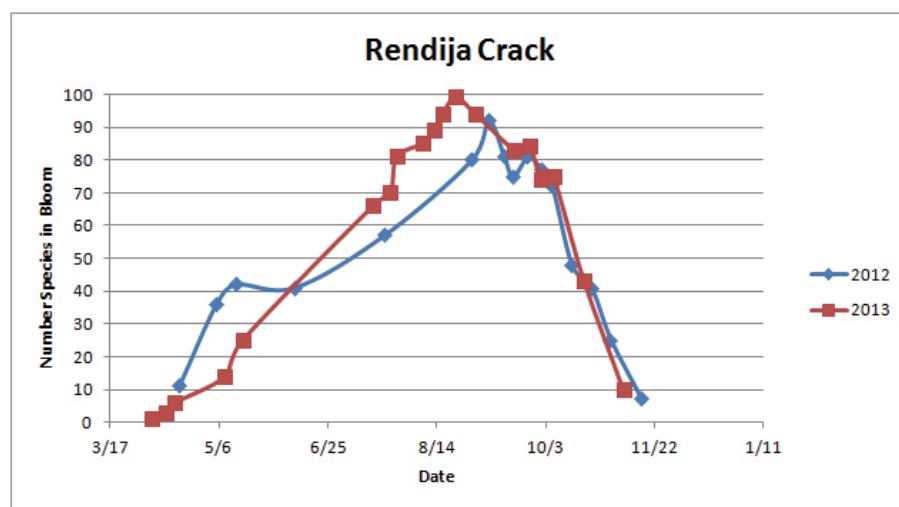
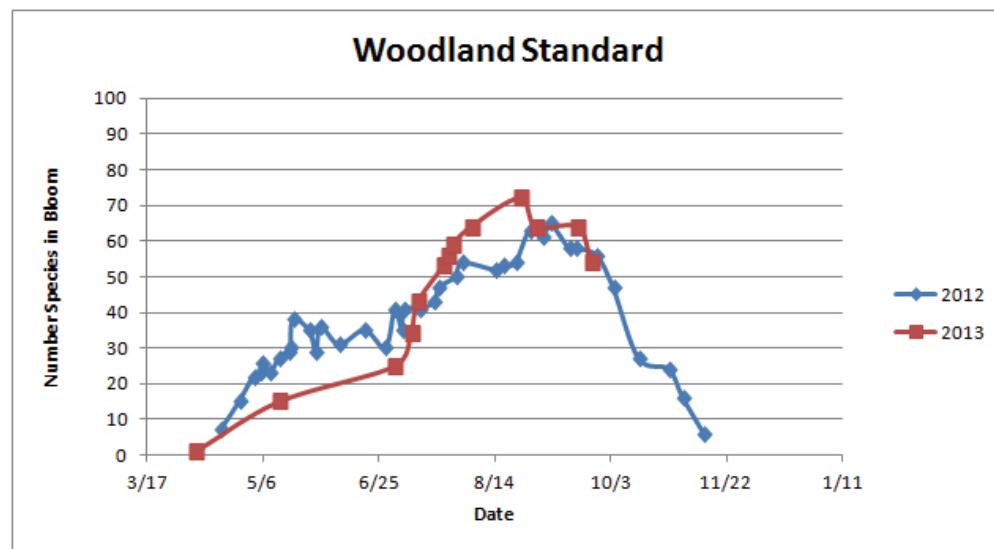
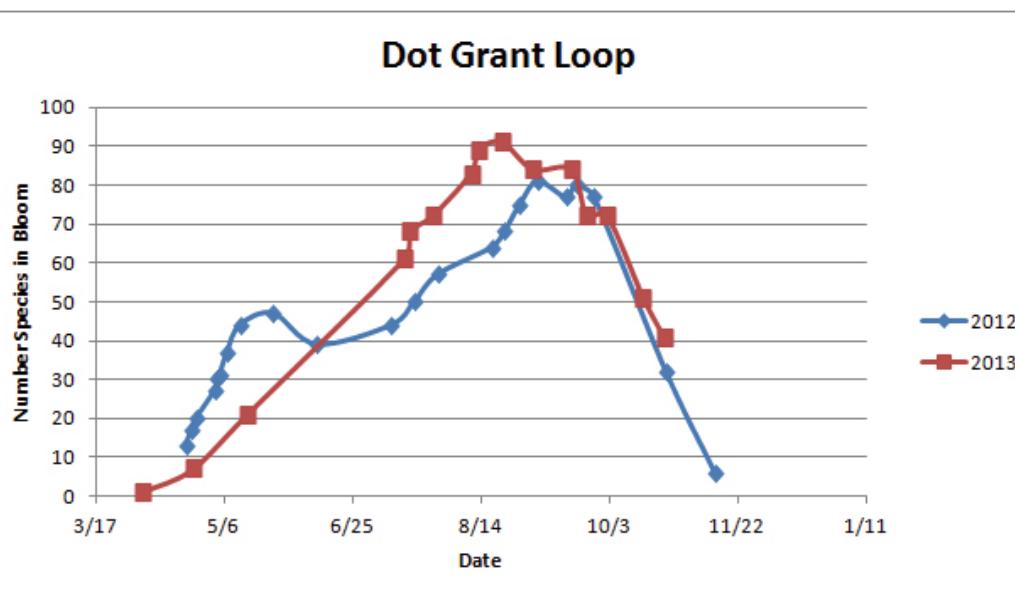
mid-July. The reason? The Santa Fe Forest was closed to public entry. It was dry!

Summer precipitation patterns were very different in the last two years.

Beginning on May 13, 2012 we experienced a 44-day stretch without precipitation; in 2013 we went from April 10 to June 29, a stretch of 88 days, with only 0.1 inches that fell over a four-day period in early May.

The onset of the summer monsoon was July 4 in 2012 and June 29 in 2013. The difference in the two years is in the amount of rain in the first two weeks of the rainy season: 1.5 inches in 2012, 3.7 in 2013.

Plants responded to this rainfall pattern accordingly. By mid-July the 2013 counts were about 20% higher than in 2012, and remained as much as 30% higher through the end of August. The Woodland Standard chart (not affected



by the forest closure) clearly shows the rapid increase in species just after the onset of the monsoon.

My anecdotal observation is that many spring-blooming species held out through the dry days, just waiting to pop their flowers when rain finally arrived. I noticed that many plants greened up in May, shriveled and looked

dead in June, then responded quickly to the first rains. So the summer counts for 2013 essentially held summer

flowers and a lot of spring species.

The almost six inches of rain in July and August 2013 stimulated a great number of annuals that bloomed in September and October, keeping the 2013 counts higher than in 2012. Of

interest but not part of this story, September 2012 brought 1.7 inches of rain, September 2013 had 8.7 inches. The high autumn rains total might influence next year's story. ☺

From the Executive Director, Katherine Watson

A Peek Inside the Exhibit Design Process

Have you ever been a part of a group of people who are incredibly creative, knowledgeable, resourceful, and fun, working on an exciting project? Well, if you have, you'll know the fun we at PEEC are having in working on the exhibit design for the new nature center.

When the process started, we didn't know what to expect. Some of us had a vision in our minds of handing over our interpretive plan (on which dedicated board members and volunteers had worked tirelessly for nine months!) and being handed back finished, perfect exhibits. Boy, were we wrong, as we found out at our first visioning meeting with the designers. They sat us down in front of big pieces of paper, handed us markers, and said, "Draw the exhibits." What?!? Well, we did, but inside we were thinking, "Wait a second....I thought we hired them to..." The exhibits that we drew were interesting and creative, but we all felt that Becca Shreckengast and her team from Andrew Merriell and Associates (our design firm) could come up with something better. The original concept that we settled on was a "pop-up book" idea, based on our mission statement's desire to connect people with our canyons, mesas, mountains and skies. Taller and taller sections (canyons, then mesas, etc.) would lead viewers toward the windows, with a "river" of animal tanks near the Children's Discovery Area. This was the conceptual design which many of you have seen in pictures.

At this point, we thought we were done with the

overall design, and that the rest of the work would involve figuring out the details. Boy, were we wrong again! As we moved into the schematic design phase, Becca presented us with three completely new floor plan ideas, all of which we loved. We finally settled on a curving, organic-feeling design that naturally leads visitors through the canyons, mesas, mountains and skies, still with the river of tanks. We loved this new idea, and were thrilled at how it was even better than we had imagined the exhibits could be.

Now, it seems that at every meeting, Becca, with Rici and Melanie (our two content developers), presents us with new and even more exciting ideas. Why not move the docent desk into the lobby a bit to make it more inviting and useful? Let's create an arched entryway into the exhibits to draw people in. How about a touch table in the lobby to involve people right away in the stories of the Pajarito Plateau? A few weeks ago we met with an aquarium specialist, which resulted in our completely changing the design of the animal tanks. The animals could be integrated into their proper places in the canyons, mesas, mountains and skies, and just a few touchable, hands-on animals in a smaller space by the Children's Discovery Area.

The process just keeps getting more and more fun. I look forward to our weekly phone calls about the same way my kids look forward to Hanukkah – I know that wrapped up in that phone call there's going to be something really exciting and interesting and fun to play with. And I look forward to the exhibits opening up to the public in April 2015 in the way I look forward to Hanukkah—I can't wait to give this fantastic gift, that we've worked so hard to design, to all of you!

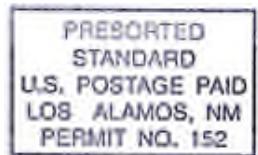
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PEEC

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Celebrate Earth Day:

Special tabloid included in *Monitor*: Apr. 16
Groundbreaking for new nature center: Apr. 22.
Lecture about Edward Abbey, *All About Ed*,
By Jack Loeffler, at the Bradbury, Apr. 22.
Annual Earth Day Fair at PEEC, May 3.

What's Inside This Issue:

Articles by and about Dorothy Hoard, pp.1-3
Northern Shoveler, p.1
Moonset, pp. 4
Crane Migration, p. 5
Science Fair, p. 5
Wildflowers, pp. 5-6
Designing Exhibits, p.7

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Enriching people's lives by strengthening their connection to our canyons, mesas, mountains and skies.

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