Nature Notes

Volume 12, Number 3 Fall 2013
Your Nature Center in Los Alamos

The Pajarito Plateau

Photo by Michele Altherr: the view from the future nature center.

by Dorothy Hoard

The Pajarito Environmental Education Center's mission is in *enriching people's lives by strengthening their connections to our canyons, mesas, mountains, and skies*. In order to implement the mission, they have declared the Pajarito Plateau as their environment of concern.

But, just what and where is the Pajarito Plateau?

To answer that question, we must first know about the Jemez Mountains or, more technically, the Jemez Volcanic Pile. The pile lies at the intersection of two lines of weakness in the earth's crust. Pressure from magma welling up through the weak crust formed a giant circular dome. In two episodes, the dome failed, erupting first as an ash cloud, then as hot, liquidized ash flows. The flows spilled out around the entire circular perimeter, then cooled into skirt-like plateaus. The Pajarito Plateau is the skirt on the eastern slope of the resulting collapsed caldera. The plateau's bedrock consists of a buff- to orange-colored rock call tuff.

Using this definition, the Pajarito Plateau extends about 22 miles from Santa Clara Canyon on the north to Cochiti Canyon south of Bandelier National Monument. The eastern border is a ragged line just west of the rim of White Rock Canyon; the western border is a ragged line across the face of the Sierra de los Valles, the mountains above Los Alamos County.

In the early 1900s, archaeologist Edgar Lee Hewett named the Pajarito Plateau in reference to the many birdlike petroglyphs at a large ruin called Tshirege Pueblo. *Tsire* translates as bird in Tewa, *pajarito* is little bird in Spanish. Hewett applied for national park status for his definition of the plateau, which included the same geological area of tuff as well as the ridgeline of the mountains on the west and the Rio Grande in White Rock Canyon on the east. PEEC has modified Hewett's definition to include Los Alamos County.

Can one travel on the Pajarito Plateau?

It is unlikely that one human being can go everywhere on the Pajarito Plateau. Santa Clara Pueblo owns the strip north of Garcia Canyon; the pueblo enforces its no trespassing policies with hefty fines. *(contd. Pg2)*

San Ildefonso Pueblo encompasses that part of the plateau north of Guaje Canyon and east of the Los Alamos County Line, as well as a swath between Tsankawi and White Rock. It, too, has a vigorous no trespassing policy. Los Alamos National Laboratory owns the midsection from Los Alamos Canyon on the north to State Road 4 on the south and from State Road 4 on the east to State Road 501 on the west. Much of the area is within the Lab's explosives testing buffer, restricted even from most employees. The State of New Mexico manages the land south of Bandelier and has restrictive policies on entrance.

In fact, one cannot even go to namesake Tshirege Pueblo, located on the bluff above the White Rock fire station. Tshirege is on Lab land and closed to the public.

Hikers and equestrians can wander on U. S. Forest Service land in Los Alamos County north of Rendija Canyon to the Santa Clara boundary and west of the San Ildefonso boundary. Motorcycles can travel on some designated routes. High clearance vehicles can try the poorly-maintained road system at their own peril. Santa Clara has blocked some of the roads. Bandelier National Monument is open to hikers and some non-motorized traffic. The Forest Service land south of Bandelier is in the Dome Wilderness, open only to hikers.

Well, can one at least SEE the Pajarito Plateau?

Most of it. The best views are from Forest Road 144 out of Española that climbs into the northern Jemez Mountains. It is a gravel road that the Forest Service tries to maintain, but that is a challenging endeavor after a wet winter or heavy monsoon. It is also a bit scary with no guard rails on the steep downhill side. A second option is to climb Guaje Mountain, the little knoll above the Sportsmen's Club in Rendija Canyon. The trail starts at the forest service parking lot at the end of the pavement off the Rendija Canyon Road. It winds its rough and rocky way up over the hillocks to the rim above Guaje Canyon. From there, a branch trail climbs up to the peak. The little ridge, of which Guaje Mountain is the high point, extends out away from the mountains, allowing good views in all directio

What is there to see on the Pajarito Plateau?

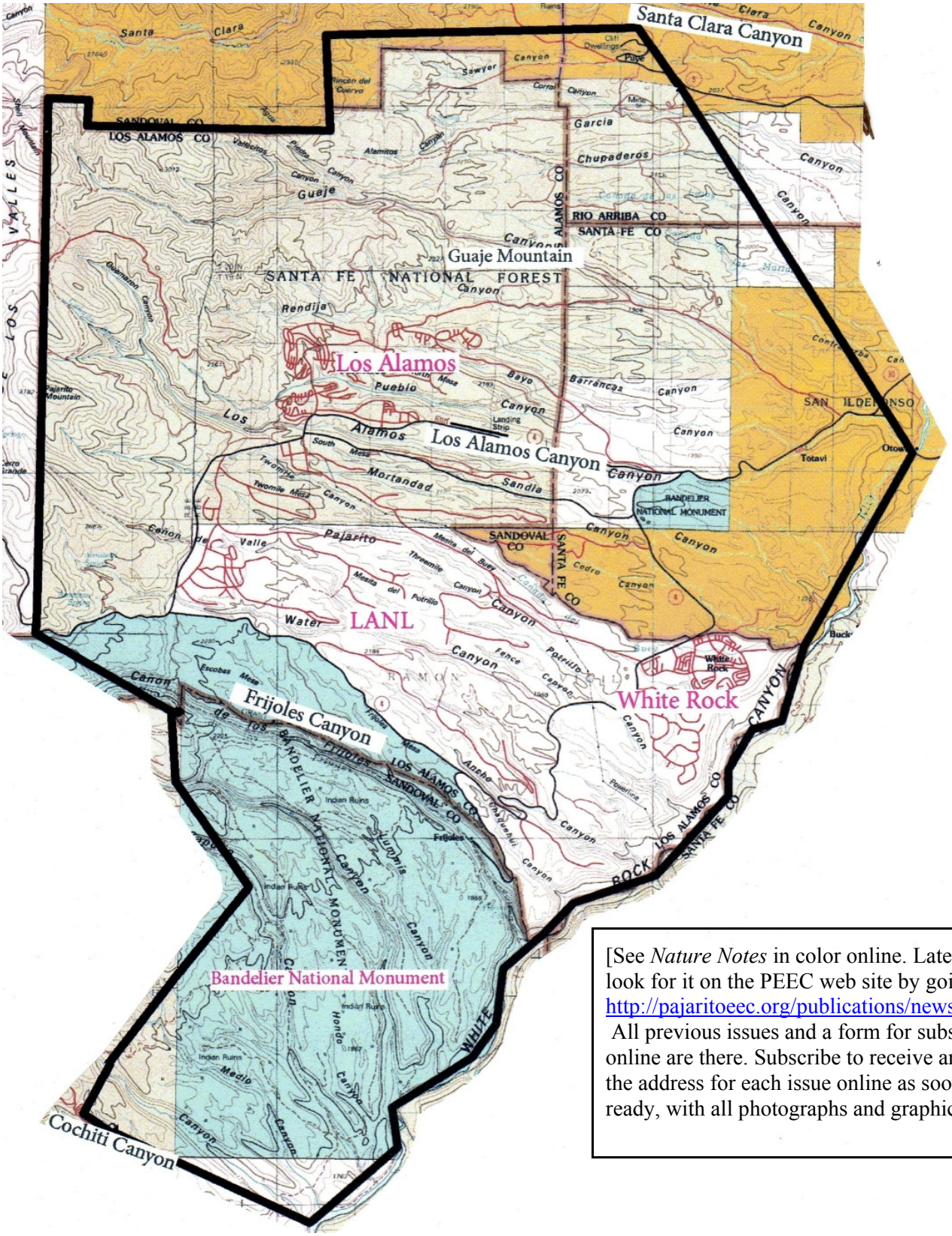
PEEC literature mentions our vertical mile. This refers to the elevational extent of Los Alamos County, which varies from its low point of 5,391 feet in White Rock Canyon at its junction with Frijoles Canyon on the southeast corner to the high point of 10,496 feet atop Caballo Mountain at the northwest corner. The area encompasses six life zones: juniper-grassland in White Rock Canyon, pinyon-juniper in the lower mesas, ponderosa forest on the upper mesas, mixed-conifer/aspen on the mountainsides, and spruce forest on the ridgelines. In addition, the canyons harbor riparian zones. Inhabiting these zones are all the associated plants and animals. In addition, migrating birds seasonally pass through mountain passes or the wide corridor of the Rio Grande Valley.

Unfortunately, much of the plateau is undergoing fire recovery. The 2000 Cerro Grande Fire burned the plateau north of Frijoles Canyon; the 2011 Las Conchas Fire burned the rest of it south of Los Alamos Canyon. These were both massive fires, in some places even stand-replacing – the extensive evergreen forests will not return in our lifetimes or even those of our grandchildren, if ever. Only stringers of remnant forests remain here and there. Shrubs dominate the hillsides, forming a new mountain oak-shrubland life zone. Intertwined with the fires were severe droughts, which weakened pinyon pine, ponderosa pine, and Douglas fir trees enough that bark beetles could kill them.

Even so, scattered forest enclaves escaped the fires and offer pleasant refuge. And, for anyone with eyes to see, fire recovery is truly an amazing process. Aspen groves are forming large, green to golden swaths across the mountain slopes. Exuberant masses of wildflowers and grasses cover new meadows that formed after the fires. In addition, craggy cliffs and hidden canyons are newly revealed without the cover of their former forest canopy.

The Pajarito Plateau is the home of Los Alamos, a fully functioning town of 18,000 with much to offer residents. The town has a vigorous open space program with a wide network of trails and connections with forest service trails. Bandelier National Monument claims 70 miles of

trails. Paved roads provide access to the high altitude life zones at Pajarito Ski Mountain and at State Road 4 over the mountains. In White Rock it is easy to look down on the lowland ecosystems from Overlook Park or along the spectacular White Rock Canyon Rim Trail. Hardy explorers can negotiate rough trails down rocky canyon walls embellished with extraordinary petroglyphs through juniper-grassland meadows to the Rio Grande as it carves its way through White Rock Canyon. ☼



[See *Nature Notes* in color online. Later this month, look for it on the PEEC web site by going to http://pajaritoeec.org/publications/newsletter.php. All previous issues and a form for subscribing online are there. Subscribe to receive an e-mail with the address for each issue online as soon as it is ready, with all photographs and graphics in color.]

Bird Migrations and Park Flight

by Siobhan Niklasson

See also
www.PajaritoEEC.org/programs.park_flight/php.

"Last Tuesday, I volunteered with the PEEC program that takes school children on field trips up to the Park Flight bird banding station in the Jemez Mountains. As a volunteer, I was responsible for moving half of one of the three groups of children back and forth between the bird banding table and a demonstration mist net. That day each child got to release at least one bird. Staff estimated there were 120 birds banded. While I was there, they banded a Cassin's vireo, chipping sparrows, juncos, Lincoln sparrows, yellow-rumped (audubon's) warbler, orange crowned warbler, dusky flycatcher, hermit thrush and northern flicker."

[Excerpts from a message posted on PEECbirders online interest group, September 20, 2013, by Rozelle Wright.]

Park Flight is a partnership between the National Park Service, National Park Foundation, and National Fish & Wildlife Foundation. The Park Flight Migratory Bird Program works to protect shared migratory bird species and their habitats in both U.S. and Latin American national parks.

Our local Park Flight Migratory Bird Program this year took place at Bandelier National Monument in September. PEEC had funding for fifth- and sixth-grade classes from Los Alamos and other area schools to learn about research on migratory birds, the methods scientists use to study them, animal relationships, and geography of North and Central America. There were classroom presentations and field trips to Bandelier. The bird banding component in the field helped students understand scientific observation of migratory birds in Northern New Mexico.

This year Bandelier wildlife biologist Stephen Fettig and two international interns, Vanessa Sandoval from Bolivia and Jaime Garizábal from Colombia, led the study of changing populations of migratory birds. Mistnets were set during mornings in wooded and riparian areas in Bandelier backcountry. A bird would fly into it and become caught, but it was not injured and the net was approached within a half hour. The bird was gently removed from the net, taken to a table where a band was affixed to the bird's leg and data about the bird was collected. This data was tied to the unique code on each band and included species, age, sex, size, weight, and condition. It was then entered into an international migratory bird database and became part of the permanent record on migratory birds. Students learned how to hold a bird safely, then had the opportunity to release a bird. The experience of setting free a wild bird was never to be forgotten.

During the field trip, students also learned about animal-habitat relationships and observed how field science was conducted. They practiced setting up a demonstration net and used props to simulate catching a bird and carefully removing it from the net. They also explored the area, saw the habitat through a bird's eyes, and played a game where they became the migrating birds. They collected and analyzed data about themselves (as birds).

Watch for announcements about next summer and contact PEEC for more information about taking part. ☼

Park Flight kids learn bird banding.

Mistletoe: Not Always a Problem!

by Bernard Foy

Reprinted from *PEEC Newsletter*, v. 4, no. 2, Spring 2005.

Mistletoe is a parasitic plant that often attaches itself to one-seed juniper trees in our area. A tree that accumulates enough of these leafy green outgrowths (usually found near the tips of branches) can suffer because of losing nutrients and other resources to this sneaky thief.

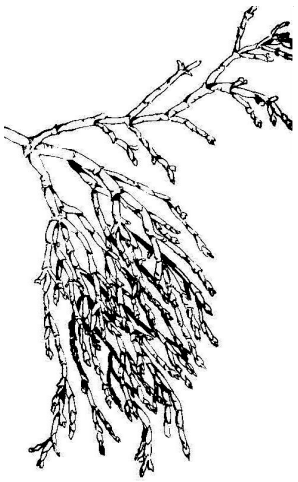
One of the junipers in my yard seemed to be under mistletoe attack last spring, so I approached with a long rake and started to clear some of the plants away. I started to tug on one of them about 12 feet above the ground when I noticed that some twigs and grassy material were attached to it. Stopping to look more closely, I found the nest of an American robin built on top of the clump and partially camouflaged by it. Fortunately, I stopped in time to prevent the nest from being torn apart, and left a few remains of that particular clump of mistletoe in place.

I learn slowly, however, and continued removing other clumps in the same tree. I brought down another from a height of about 15 feet and again noticed some foreign material attached. I was puzzled initially, but a few minutes' inspection revealed that this clump contained the beginnings of the nest of a bushtit, that tiny bird commonly found in pinyon-juniper habitat throughout New Mexico. It dawned on me that I had been seeing a bushtit flying into this tree quite often in the previous week or two, uttering its frequent sharp chip notes on its way into the vegetation.

The bushtit nest is an elaborate hanging "gourd-shaped pocket" up to a foot long, made of mosses, lichens, leaves, and grasses, and lined with plant down and wool, according to the *Peterson Field Guide to Birds' Nests.* For such a small and plain looking bird, it is an astonishing construction, many times larger than its architect. This nest had been carefully woven into the branches of the mistletoe clump in a way that provided even better camouflage than usual. I sat holding the treasure in my hands, shattered that I had destroyed such lovely work by an act of carelessness.

Fortunately, the bushtits managed a new nest in a nearby juniper, and again it was carefully woven into a mistletoe plant. As for the robin whose nest I had almost destroyed, she continued to incubate, although with considerably less cover. Unfortunately, she abandoned it a few weeks later, probably because of either predation on the eggs or infertile eggs.

I have learned an important lesson: mistletoe is not altogether a bad thing, despite its reputation as a parasite that can threaten an otherwise healthy tree. Native birds have learned to take advantage of mistletoe, even if we humans have not. Unless that juniper in your front yard is near death, I would recommend leaving the mistletoe alone: wildlife will figure out a good use for it! ☼



Juniper Mistletoe drawing is from *Flowering Plants of the SouthwesternWoodlands,* by Teralene Foxx and Dorothy Hoard, Otowi Crossing Press, 1995 (out of print).

Searching PEEC's Web Site

by Esta Lee Albright

Bits of the mistletoe article reside in the memory Becky Shankland and I needed to find it complete and in published form. Already I knew all 11 years of newsletter issues are posted on the PEEC web site: PajaritoEEC.org. On the home page in the right-hand column, I found “Search This Site.” Just the last name of the author, “Foy,” brought me four hits: two articles from the newsletter, one “PEEC Speaks” column from the *Monitor*, and a mention in the site’s “Local Authors” listing.

Obviously, the web site is a goldmine of information!

Just browsing the divisions of the web site through the pull-downs on the home page finds illustrated nature guides about birds, butterflies, geology, wildflowers and more. There are special postings, such as a list of birds in New Mexico, works by local authors, and biographies of famous naturalists. What's happening at PEEC and the calendar with the many programs and projects are sections worth reading.

"Search This Site" uses a key word, so spelling has to be exact. Two different spellings can require two searches, as in "pinon" and "pinyon." Searching on "pinon" gave 20 hits, while "pinyon" only 11, and quite different. More than 10 of them were articles in the newsletter about forest recovery, landscaping, biggest trees, birds, wildflowers, Science Fair, Earth Day, trails and hikes. Others ranged the whole site. The article by Bernard Foy is a good example of readable writing and unexpected information. ☼

Some Surprises on PEEC's Annual List of Wildflowers

A group of very busy people have been making a list of flowering wild plants seen locally on or before October 12th. Chick Keller is building the list, as he does each year. Comparing lists over time gives an interesting record of plants and the influence of differing weather, moisture, locations and other details. He reports that one of the best discoveries so far this year has been Barbara Calef's *Zinnia grandiflora*, a yellow wildflower in the aster family. It was in White Rock Canyon.

Last month Chick posted this message about another new species, "Paul, Yvonne and I visited White Rock Canyon near Newspaper Rock. We found, among other things, a new and interesting plant, *Kallstroemia parviflora*. This brings Los Alamos county to about 951 species/varieties."

Another discovery in White Rock has been a profusion of tall plants with erect stems and showy, yellow blossoms. However, among these plants of the same genus were found two different leaf shapes. During the discussion online at PEEC Wild Plants interest group, Jennifer Macke posted photos of both leaf shapes found on plants in her yard. Terry Foxx and Dorothy Hoard identified them as the following:

Dalmatian toadflax leaves

1. **Dalmation toadflax**, a Class A invasive in New Mexico, with oval leaves, was not prolific.

2. **Yellow toadflax** may not be on the list of invasive plants in New Mexico, but is considered invasive and noxious in Colorado. It was found "all over" White Rock this year, but project leaders felt it was not widespread enough for concern.

Yellow toadflax leaves

Toadflax has been popular in the past for dyes and for both external and tonic medicines. It is slightly toxic so look for professional help if you use it. (//health-from-nature.net/Toadflax,html) ☼

PEECnic 2013

The annual PEECnic was October 21st. This year it was a celebration of plans for the new nature center, which is expected to be opening in Spring, 2015. The dragonfly has become its symbol. Work is progressing, led by the Board, and more is to come. Whereas the County will fund construction and has contracted with PEEC to run the center, we must raise funds to furnish the building and exhibits. With mountains of work to do, the current board, with one new member, will continue through the next two-year term (see below). ☼

From the Executive Director:

Katherine Watson

I'm thankful for you.

It's the time of year when we start thinking about what we're thankful for in our lives. The weather turns colder and the trees start to look like gingerbread house decorations (at least they do on my drive in every day from the Jemez – just like perfectly iced decorations). Knowing the year is about to end makes us look back at what kind of a year it's been and take stock of where we are.

I'm happy to say that, thanks to all of you, PEEC is in a great place. Your support as members and donors has enabled us to enrich so many lives by connecting people with the nature outside our back doors. I love writing thank you letters for memberships, because it gives me a chance to look back and see how long people have been PEEC members. Many of you have been members since 2005 (or earlier--I just wrote a thank you to someone who has been a member since 2001) – and it makes me glad that you've been strong supporters for so long. Others of you have just joined this summer or fall – and that makes me glad, too, because it's great to bring new people into our PEEC community. Still others prefer just to donate to PEEC but not join, and that's appreciated, too. However your gift comes to us, we use it in the same way – to make people's lives better by connecting them with nature.

I'm thankful for much more than just your financial support, though. You aren't the kind of members and donors who just write a check and forget about us. You do so, so much more. Many of you volunteer your time to staff the nature center, open and close for programs, help with classroom visits, stuff envelopes, put together puzzles whose pieces have flown far and wide, garden, mount plants for the herbarium, record data, answer visitors' questions, and much more. Many of you come to our programs, join us on hikes and outings, and bring your friends and family to spend time in the nature center. You also talk to us – you tell us what programs you'd like us to offer, give us good suggestions of places to explore nearby, and even offer to lead programs. PEEC really is a community because of the way you all stay so involved in everything we do.

It's great to have you as part of PEEC. Happy Holidays from all of us. ☼

Nature Notes is the quarterly newsletter of the
Pajarito Environmental Education Center, Los Alamos, New Mexico 87544

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PEEC's Mission Statement:

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

Joining or Renewing Is Easy!

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