



Nature Notes

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

PEEC Butterfly Watchers

by Dorothy Hoard

There appears to be increasing interest in butterflies in our area – and indeed, in the country as a whole. This interest may be because of concern about the nationwide threat to the monarch butterfly migrations due to climate change and habitat destruction. It is certainly aided by good field manuals and close-focusing binoculars.

An indication of increasing interest is a nationwide effort by National Garden Clubs, Inc., called *Butterfly Gardening Across America*, whereby each state has its own contest. The Los Alamos Garden Club entered Selvi Viswanathan's Barranca Mesa garden in the state contest sponsored by the New Mexico Garden Clubs, Inc. Our Selvi won the New Mexico first prize for her garden, which already is a certified wildlife and butterfly garden.

Watch for the 21st annual Los Alamos Butterfly Count on August 17, with a pre-count talk by Steve Cary on August 15. Also keep an eye out for monarch butterflies to add to Steve's Monarch Watch Program. Send data to the PEEC butterfly watchers or DorothyH@swcp.com.

Local birders and wildflower groupies are demonstrating a desire to communicate with each other. To encourage these special interest groups, PEEC has set up so-called Yahoo Groups email networks, *PEEC Birders* and *PEEC Wild Plants*. (Look under

"Outreach" on the PEEC website to join:

www.PajaritoEEC.org.) Members post sightings of birds and wildflowers, sometimes many posts per day. These activities are aided by current information on the PEEC website about *What's Blooming Now* for plant guys and *Birds* for birders. under "Nature Guides" on the PEEC web site.

To narrow the choice of possible identifications, the web page uses a computer program written by Jennifer Macke's son, Calvin Loncaric. The program sorts through the list of photo captions that are in between their start and end dates. These dates are based on the appearance of the butterfly in previous years. Butterfly watchers are not to be outdone; Jennifer has set up a *What's Flitting Now* list. It shows only butterflies you can expect to see at this time. (Few things are more discouraging than to find a butterfly in a guidebook that looks most like yours, only to find that it flies in Florida in winter.) Our computer guru, Heather Burke, set up a Yahoo Group for butterfly watchers; Jennifer has links for joining on the website in the "Outreach" list.

These Citizen Scientist activities aren't really all fun and games. The lists will generate censuses of local populations and their blooming or flying times that can be informative for future generations of nature watchers.



Note: Butterfly photos above are by Selvi Viswanathan, taken in her garden. They are :

Southwestern orangetip,

Spring white on cherry shrub blooms,

Rocky Mountain duskywing on ponderosa tree trunk. ☀

Watching for Butterflies This Year

From the view outside her office window, Selvi Viswanathan sees winged visitors to her butterfly garden. She communicates with specialist Steve Cary and here are notes he sent about her photos that we see on the cover:

·Sara, now called Southwestern orangetip, fly once each year, always in the spring. After mating, females place eggs on native mustard plants. Caterpillars hatch quickly and begin feeding on fresh spring mustard foliage. They keep eating until time to pupate (~ 1 month). They remain in chrysalises until the next spring, when the whole cycle repeats.

·Spring whites have a life cycle nearly identical to Southwestern orangetip.

·Rocky Mountain duskywings place eggs on gambel oaks. Larvae hatch and eat fresh spring growth.

Dorothy Hoard is a good example of the expertise to be found on the PEEC interest groups. She's been the local data keeper for the Los Alamos Annual Butterfly Count for 20 years. Local butterfly watchers were sending her photos even before the interest group was formed, and she has used them as she maintains the PEEC web site section *What's Flitting Now*. Here are examples of her notes (in 2013) posted on the interest group:

·Why are there fewer butterflies seen so far this year? It's drought. We see that in the Butterfly Count for every droughty year; the butterflies just seem to stay in their chrysalises. The biggie was 1996 when we saw two butterflies on Burnt Mesa and six in Valle Canyon vs. 200-350 on Burnt Mesa and up to 300 in Valle Canyon on a good year. Camp May isn't as hard hit. But the numbers come back up if we have decent rains. In 1997 we found 258 on Burnt Mesa and 67 in Valle Canyon. The striking thing is that since 2006 all the numbers have been depressed compared to the 1990s. (In 2011 we couldn't count at Burnt Mesa or Valle Canyon, both closed after the Las Conchas Fire.)

.The hot weather and drought seem to have squelched butterflies for now, even though the year started out well. For the record, Selvi Viswanathan sent me spring sightings of mourning cloak (3/14), hoary

comma, spring white, Sara (now Southwestern orangetip) (4/7), Rocky Mountain duskywing (4/13), western tiger swallowtail (4/28), plus some small butterflies that flew too fast and wouldn't perch. Selvi is on Barranca Mesa.

·Earl Hoffman sent lovely photos of a pale swallowtail he saw on June 12. It is very similar to a western tiger swallowtail except it is more of a cream color as opposed to the livid yellow of a western tiger. Earl is in the Woodland area.

·There seems to be some confusion about two-tailed swallowtails. They have two tails PER

HINDWING; calling them four-tailed would be less confusing. ✨



Photo by Selvi Viswanathan

Metamorphosis for Butterfly Watchers

The following are excerpts from *National Audubon Society Field Guide to Butterflies*, 1981.

After mating, female butterflies lay eggs either singly or in rows, chains, or clusters of a few to several hundred eggs. Some eggs do not hatch until the following spring, while others hatch before winter. The caterpillar, or larva, has simple eyes, chewing jaws, and three pairs of jointed legs near the front, as well as five pairs of grasping, cylindrical prolegs near the rear. Like the adult, the caterpillar has a row of small, pointed spicules along each side of the body. It spends its life feeding, molting (shedding its skin) as it grows. The final molt produces the chrysalis, or pupa; it's a resting stage and does not feed.

Butterfly caterpillars can produce silk, which they use to bind leaves together for shelter for the chrysalis and butterfly. Chrysalises of many butterflies hang by the tail end from a silken pad;

others hang upright, supported by a silken girdle. As the adult butterfly begins to form inside the chrysalis, the shape of the compacted wings are visible in the surface. When the adult is fully formed, the chrysalis' skin splits open and the butterfly crawls out. It pumps fluid from its swollen body into its shrunken wings. Courtship begins as soon it can fly. Lifespans range from two weeks to six or eight months. The transformation from egg to adult butterfly is known as complete metamorphosis. ☼

Selvi's Butterfly Garden, an Update

The summer 2010 issue of *Nature Notes* had an article with step-by-step information about how Selvi Viswanathan built her butterfly garden. The issue and article are at http://www.pajaritoeec.org/publications/newsletters/newsletter_v9n3.pdf, in the section of the PEEC website where all issues of *Nature Notes* are posted. Also, there is a photo in that 2010 issue on page four, showing the pad Selvi made of stones, where butterflies sun themselves. It should be no surprise that Selvi won an award for this garden. She built it as a memorial to her mother, which is further explained on the web site, [//tinyurl.com/Selvibutterflygarden](http://tinyurl.com/Selvibutterflygarden).

Her butterfly sightings are proof that a carefully built garden brings butterflies. Now Selvi writes the following paragraphs to emphasize the two kinds of plants needed for a successful butterfly garden.

1. Host plant. The adult female black swallowtail butterfly laid eggs on rue plants and the caterpillars ate the foliage. So rue, an herb in the butterfly garden, turned out to be a host plant for the black swallowtail. I sent this photo



Photo by Yvonne Keller

of it to the butterfly award application through garden club. The judges liked it a lot.

Two years ago I actually watched the female black swallowtail laying eggs. It went to three or four rue plants laying eggs. This is a host plant. I saw many very, very tiny black eggs on each plant. Eventually they became caterpillars. This picture shows the caterpillar grown big and ready to move to a place for the next stage, the chrysalis. I never saw a chrysalis, but I did watch three stages of the metamorphosis right in our yard. That was exciting to me.



Photos by Selvi Viswanathan

I think it is very important for a butterfly garden to have host plants. I have gambel oak, aspens, New Mexico locust, and others, but the rue has nice foliage and yellow flowers. I am watching again, as I see the rue now has yellow blooms.

2. Nectar plants. Blossoms attract butterflies and provide food for them. For success it is helpful to use plants that grow and bloom well in the local garden, especially native plants.

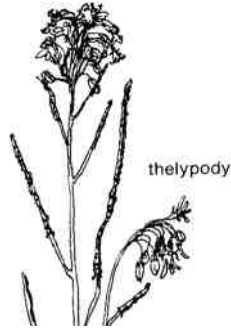
When many people gathered at PEEC to create a butterfly garden, they planted "Mountain Gold" alyssum, "Jupiter's Beard" red and white valerian, purple cone flower, globe thistle, bee balm, pine-leaf penstemons, and yarrow. The garden thrived until last winter, when the plants could not survive drought and freezing temperatures. Watch for a rebirth of PEEC's gardens, especially with the new nature center to be built next year. ☼

DON'T FORGET to view this newsletter online at <http://www.PajaritoEEC.org/publications/newsletter.php> to see all the photos in COLOR !

PEEC and a "Strange" Plant

by Chick Keller

Doris Lodwig photographed a plant about five feet tall that was in her yard last year. She asked Dorothy Hoard what it was. Dorothy wasn't sure and sent it to me. It was *Thelypodium wrightii* (thelypody), grown tall from fertilization by fire residue. But it looked a bit strange.



So I went to the new New Mexico floral identification book (*Flora Neomexicana III: An Illustrated Identification Manual*), where you can "key out" all our native plants. A key is an identification guide that lists characteristics; recognizing the right ones moves identification to the genus and species.

The key didn't seem to work; I couldn't get to a species. So I asked Patrick Alexander, the new curator of the New Mexico State University herbarium and a really good plant person. He verified that yes, it was *T. wrightii*, but he agreed the key in the new book was defective and sent me his version, which works well. We volunteered it to Kelly Allred, who authored the *Flora Neomexicana*. He replied with thanks that he would modify the key. This will benefit anyone who uses the state ID book.

Thus, PEEC is able to affect how plants are identified state-wide. And this was made possible because people are noticing plants more and asking PEEC about them. I went to Starbucks for coffee recently and a PEEC member wanted to know about a beautiful plant she saw growing where she had sown lots of native seeds. It was *Penstemon palmeri* (Palmer's penstemon). More and more people are coming to PEEC with questions: what's this butterfly—this bird—this flower?

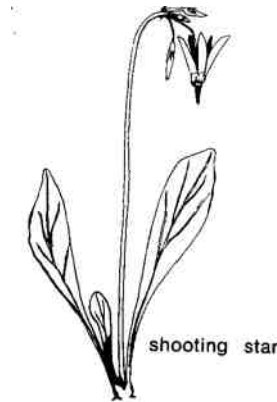
Pretty neat. Congrats to all who participate. PEEC is clearly the "go to" place for strange plants, helping beginning plant people, enriching their enjoyment, and improving how our major plant books help botanists across the state. ☼

Years of Watching Plants and Climate

by Chick Keller

On June 15 Roy Greiner and I walked the five miles of Bandelier National Monument's upper Frijoles Canyon, which is in Los Alamos County. We started where the Apache Springs Trail goes down into the canyon, what I call "upper, upper crossing." Once on the canyon floor we were often stumbling through the fire and flood devastation. The creek was incised about five feet deep in places, effectively lowering the water table from the 2010 Las Conchas fire. It was a revealing trip.

I think we found two new species for Los Alamos County: *Carex interior* (inland sedge) and *Silene mensizii* (white catchfly), as well as a number of other sedges already known for the county, and some 30 other species of wildflowers. One special one was a single shooting star, *Dodecatheon pulchella*. This wetland beauty is the favorite wildflower of Bandelier's manager, Jason Lott. I had told him the floods would result in its being washed away, but a little way above upper, upper crossing, where the flooding had not been so bad, I found a single one.



We're trying to record the recovery of that area year by year to see which plants, if any, were lost. The local endemic, *Packera hartiana* (Hart's butterweed), was doing surprisingly well, with hundreds blooming all the way down the canyon.

However, *Lilium philadelphicum* (orange wood lily), rare *Lactuca biennis* (tall blue lettuce), *Trautvetteria caroliniensis* (bugbane), and *Krigia biflora* (dwarf dandelion) may be gone. Given the flooding in Los Alamos and Guaje Canyon, these species may no longer grow in Los Alamos County.

On the bright side Brian Jacobs reports he found a few *Cypripedium parviflorum* (yellow lady's slipper) in the only place it is known to grow in the Jemez Mountains. I wonder if it can survive in the years to come with no shade. Maybe some leafy shrub will

protect it.

All the conifers are dead. The mixed conifer canyon bottom will transition to a deciduous tree and shrub environment, as I don't expect new conifers to reappear naturally for decades or more.

Interesting is the post-flooding profusion of *Moehringia macrophylla* (large-leaf sandwort), a rather rare species which now carpets some areas. Also are the "forests" of *Apocynum androsaemifolium* (dogbane). Ferns, except for bracken and a few others, and *Apiaceae* (parsley family) seem to be mostly gone -- washed away. Perhaps these will be naturally reintroduced flowing down from the upper reaches of the canyon where flooding was less.

On the climb out up the south-facing canyon wall the beautiful *Aesclepias tuberosa* (orange butterfly milkweed) is just coming into bloom, a real treat to the eye.

But what might the ultimate fate of this once rich and beautiful canyon be? If you would like to get some idea, consider walking up Rendija Canyon from the North Community Mitchell Trailhead. In 1999, walking among the tall ponderosas was like walking in a cathedral. The cool, moist areas had several species of pyrolas (wintergreens, ferns, etc.). The entire walk was cool and gentle. In 2013 there is not a ponderosa. Even though it has been 13 years, many dead snags still stand but do little to shield from the blazing sun. The stream area is unrecognizable, torn and reshaped by floods. Lots of weedy stuff still is growing and the canyon is now one of deciduous leafy shrubs, mostly gambel's oak and New Mexico (thorny) locust. The number of species is much reduced—no wintergreens, etc.

Frijoles Canyon might fair better because its stream is perennial and will contribute moisture to the recovering land. But there will be no pines, and we'll watch each year to see what the canyon will become.

Drawings and Interest Groups

We'd like to thank Dorothy Hoard for her drawings that often appear in *Nature Notes*, this time in the articles above by Chick Keller. They are from the book by Teralene S. Foxx and Dorothy Hoard,

Flowering Plants of the Southwestern Woodlands, Otowi Crossing Press, 1995 (out of print).

Most of the articles in this issue were enlarged developed from postings on PEEC interest groups. Our thanks go to members of the interest groups who share such interesting events. To see a list and follow instructions for joining a group, go to the PEEC web site, www.PajaritoEEC.org, and find "Outreach" on the tool bar. Pull down and click on the interest group about birds, butterflies, wild plants or family nature activities. ☼

And Then the Rains Came ...

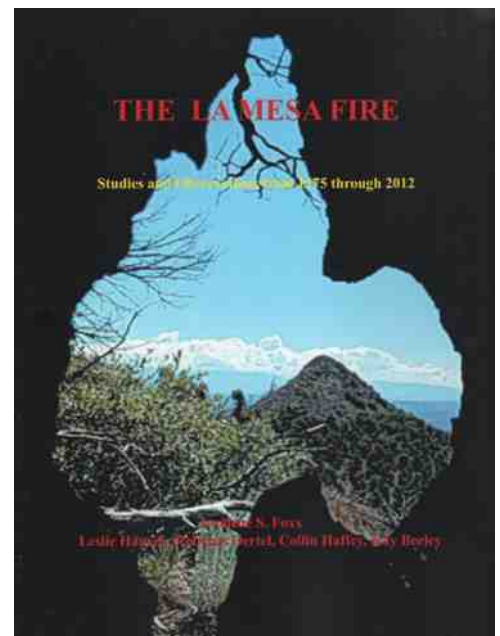
What good news that monsoon-like conditions arrived on time about the Fourth of July. Continuing the timely reports posted to interest groups, here's one about fast, new growth after rain on PEEC Wild Plants by Becky Shankland, "In White Rock, the road edges are absolutely overflowing with poison milkweed ..."

Fire in the Ecosystem: Reports

by Teralene Foxx

The La Mesa Fire, Studies and Observations from 1975 through 2012. 2013. Teralene Foxx, Leslie Hansen, Rebecca Oertel, Collin Haffey, Kay Beeley. Los Alamos National Laboratory, LA-UR-13-24499.

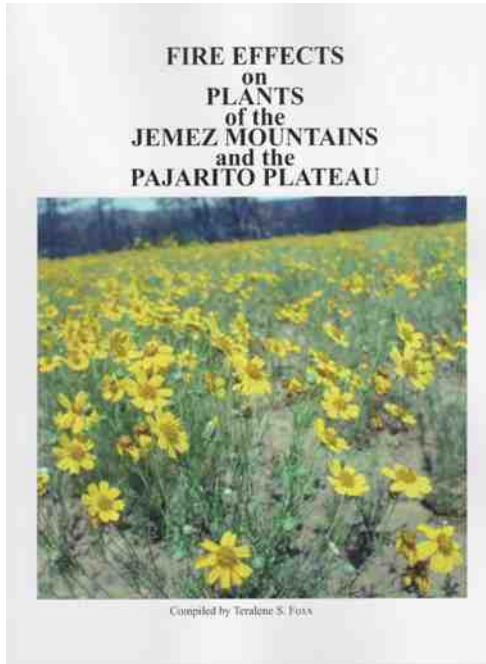
For the past 37 years, I have studied wildfire recovery in plots established in 1975 in Bandelier National Monument. This document compiles my observations, matching photography, and thoughts about the role



of fire in the ecosystem. This technical report has been published at www.osti.gov/servlets/purl/1084501/ by the U. S. Department of Energy.

Fire Effects on Plants of the Jemez Mountains and Pajarito Plateau. 2013. Foxx, Teralene S. and Leslie Hansen. Los Alamos National Laboratory, LA-UR-13-24500.

Over the 37 years of observing ecological recovery after wildfire, I have been amazed at the resiliency of nature. This publication documents, in color, a number of plant species and their recovery after fire. This technical report has been published at



www.osti.gov/servlets/purl/1084502/ by the U. S. Department of Energy.

Collective Nouns: Fun With Language

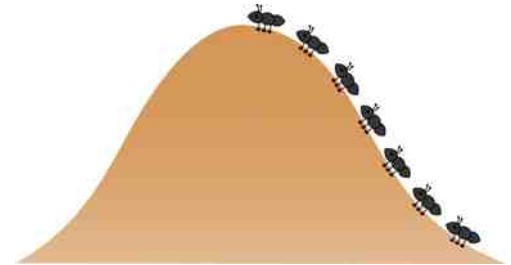
by Dave Yeamans

Over at PEECbirders, the online interest group, we've been having fun again with collective nouns. You know the kind; one singular noun stands for a group of things – such as a flock of sheep or a school of mosquitos. Then there are more exotic ones, such as a kettle of vultures. That's how this whole threat got started: somebody noticed a kettle of 30 or more turkey vultures circling above their roost in Los Alamos Canyon and posted it for the group. Then somebody else mentioned more vultures in a kettle farther down the canyon.

So, how many vultures are in a group before it

becomes too many for a kettle and it ought to be a kitchen? Or, consider a murder of crows. How many fewer crows would there be in a mere manslaughter or an assault? Or, if an entire colony of ants live in a hill, hive, or nest, what about the ones that gather together outside to cooperatively haul a bit of food home? That's not a colony but it ought to be more poetic than a "bunch" or a "group." How about a "formation?"

That is at least a good pun based on *Formicidae*, the animal family name for ants.



Source: sweetclipart.com

We can make up our own names for things. People have been doing it for a long time, but only the writers who use the term first seem to coin the phrase into our language. It's just as well. Not being great authors, we get to keep on just making things up. Such as a coacervation of siskins, a wake of mourning doves, a brood of pessimists, a correction of Japanese language teachers, or a herd of audiologists.

By now one might even welcome an erasure of authors.

Green Hour Hikers on Walnut Rim Trail

by Carrie Talus

Green Hour hikes get families on trails together to explore. On one hike on Walnut Rim Trail, the kids found a wet area with green grasses and we stopped to let them play. We adults ended up sitting and talking while the kids had so much fun playing in the small amount of mud and pretending they lived together in nature. They spent a long time working together pretending to make cement. One of the older boys had fun hopping from rock to rock. On the hike back to the cars all the kids made a scavenger hunt of finding things on the ground. They all worked together. No one was ready for the hike to end!

Meet Some New Friends of PEEC

by Katherine Watson, Executive Director

You may have noticed that PEEC has a lot more going on these days! We're thrilled to be growing but have realized that we need some help. Here are the people who have come to our rescue. We're so glad to have them on board.

Many of you know Beth Cortright (ally@pajaritoeec.org), our Nature Center Administrator for the past 10 months. She is the friendly voice on the phone and the helpful greeter when you come to the Center. We've been lucky to have her 40 hours per week as a Public Ally. Now that she's graduated from Public Allies, we've hired her as the ... Nature Center Administrator! The difference? Now she'll get time off for tiger beetle collecting, caving, and all her other interests.

The Boncella family joined PEEC in 2007. You may know Melanie, an early member of the Kinnikinnick Club, a Nature Odyssey and L.E.A.P. camper, and a dedicated animal caretaker. Linda (linda@pajaritoeec.org), Melanie's mom, has been a loyal volunteer, stepping in whenever needed. But now she's on the other side — she's PEEC's new volunteer coordinator. She'll be spiffing up our volunteer program, recruiting new volunteers, and making sure our wonderful volunteers get the recognition they deserve.

Laura Loy (laura@pajaritoeec.org) is new to PEEC, but not to Los Alamos. She grew up here, moved away for a while, and is now back with her husband and 7-year-old daughter. Laura has an extensive career in communications and marketing, which she's excited to use as our new Communications Coordinator to help people learn about all the great things PEEC is doing.

Finally, you may know Siobhan Niklasson (educator@pajaritoeec.org), a PEEC board member since 2010, who recently resigned to become PEEC's Education Programs Director. A geologist by training, Siobhan has taught with Audubon New Mexico, the Santa Fe Watershed Association, and PEEC for many years. She's also completing her teacher certification. We were sad to see Angelique Harshman leave for Illinois but are thrilled to have Siobhan take her place.

With this great team in place, who knows where we'll take PEEC next! As always, send me YOUR ideas at director@pajaritoeec.org. ☼

Green Hour Hikes

The hikes are presented on Wednesdays by Katie Watson and Petra McDowell. Call PEEC for more information; here's what it's all about.

"Green Hour" was founded by National Wildlife Federation in attempt to increase unstructured outdoor time for children. In today's scheduled world, children have less and less opportunity to interact with nature "on their terms," in unorganized and unstructured way. We have brought the idea of Green Hour hikes, where families meet at various trail-head locations, not with a particular hike distance as a goal but to let children explore and let them set the pace. Sometimes that leads to great distances covered and sometimes it is just throwing rocks off the nearby bridge. The gathering lasts about two hours. Parents need to accompany children and need to be comfortable traveling in the woods. ☼

Nature Notes is the quarterly newsletter of the

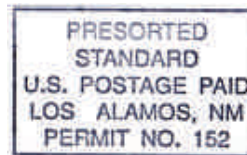
Pajarito Environmental Education Center, Los Alamos, New Mexico 87544

Board of Directors: Terry Foxx, *President*; Felicia Orth, *Vice-Pres.*; Sue Watts, *Secretary*; Nancy Arendt, *Treasurer*; Becky Shankland, Chick Keller, Michele Altherr, Robert Dryja, Selvi Viswanathan, Jennifer Macke, Mary Carol Williams, Dave Yeamans, Karla Sartor, JoAnn Lysne.

Youth Advisory Members: Amanda Mercer, Emily Pittman.

Staff: Katie Watson, *Executive Director*; Beth Cortright, *Nature Center Administrator*; Siobhan Niklasson, *Education Programs Director*; Linda Boncella, *Volunteer Coordinator*; Laura Loy, *Communications Coordinator*; Jennifer Macke, *Webmaster*; Esta Lee Albright and Heather Burke; *Nature Notes* editors

PEEC
 Pajarito Environmental Education Center
 3540 Orange St.
 P.O. Box 547
 Los Alamos, NM 87544
 www.PajaritoEEC.org



Highlights inside:
 Butterflies
 Metamorphosis
 About a Plant Key
 Climate and Plants
 Fire Ecology Reports
 Fun with Language
 Green Hour Hikes
 New PEEC Staff

	General Membership	\$35
	Living Lightly	\$20
	Penstemon	\$60
	Sunflower	\$100
	Wild Iris Donor	\$250
	Skyrocket Gilia Donor	\$500
	Wood Lily Donor	\$1000

	Non-Profit Membership <i>One newsletter plus PEEC This Week for up to 3 organizational members.</i>	\$75
	Corporate Membership <i>One newsletter plus PEEC This Week for up to 3 organizational members.</i>	\$100

PEEC's Mission Statement:
 Enriching people's lives by
 strengthening their connections to our
 canyons, mesas, mountains, and skies.

Joining or Renewing Is Easy!

Fill out this form and mail it in with your check or go to the website www.PajaritoEEC.org. Do it today! Thank you.

Name(s): _____ Address: _____

Phone: _____ E-mail to send receipt: _____

Subscribe this email address to PEEC This Week (circle): YES / NO / Already subscribed

PEEC is a non-profit 501(c)3 organization.

Donations are tax-deductible.

 Mail checks to: PEEC PO Box 547 Los Alamos, NM 87544 Att: Membership
