

# *La Ventana en los Valles*

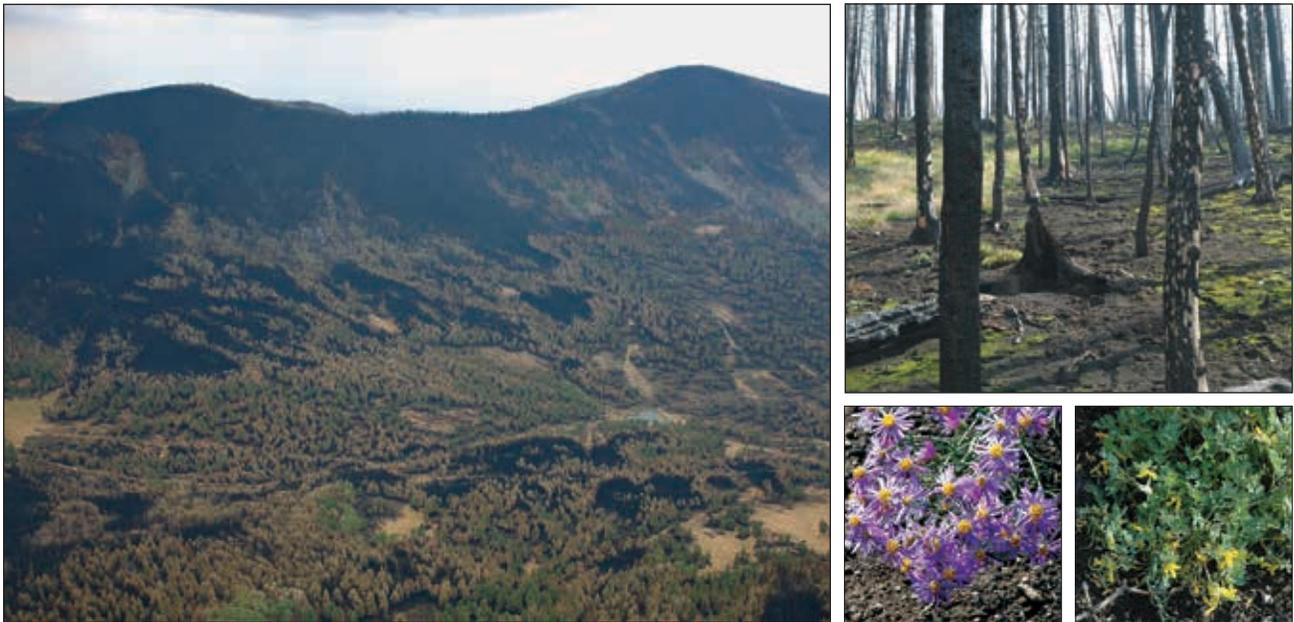
*News of the Valles Caldera National Preserve  
from the Valles Caldera Trust*

---

---

## **After the Las Conchas Fire: Life from the Ashes**

*By Bob Parmenter, Director, Scientific Services Division*



[Top left] View of the eastern Valles Caldera, showing the mixed-severity burn pattern in forests and meadows on the west side of Pajarito Mountain. (Photo: R. McDermott). [Top right] In 2012, surviving and recolonizing grasses and mosses begin the long process of vegetation recovery on the forest floor of a burned mixed-conifer stand on Cerro del Medio. [Bottom right] Purple asters (left) and a golden corydalis (right), a.k.a. “scrambled eggs,” sprout from the ashes. (Photos: R. Parmenter)

In the summer of 2011, the Las Conchas wildfire swept across the eastern half of the Jemez Mountains, scorching over 156,000 acres of forest and grasslands. Included in this area was approximately 30,000 acres, or one third, of the Valles Caldera National Preserve. Some of the Preserve’s forests burned extremely hot, killing all the trees in a “stand replacement” fire. Other forest areas experienced low- to moderate-severity fire, burning through the understory vegetation and litter layers, sparing the tree canopy. The valle grasslands also sustained widely distributed burning—the fires backed slowly westward into the wind and consumed only the aboveground standing leaf blades and stems from the previous summer’s growth. The live roots of the grassland vegetation survived underground, unscathed by the surface flames. When the fire was declared “out” in early August, the eastern third of the Preserve looked like a giant jigsaw puzzle from the air, with patches of burned and unburned forests and grasslands scattered across the landscape. So now in the autumn of 2012, over a year later, how have the plants and animals of the Valles Caldera responded to the fire?

(continued on page 10)

## Valles Caldera Trust

Dennis Trujillo, *Executive Director*  
18161 Hwy 4, Jemez Springs, NM 87025  
[www.vallescaldera.gov](http://www.vallescaldera.gov)  
505-661-3333

### **Board of Trustees**

**Kent Salazar**, *Chair (2014)*  
[kentsala@aol.com](mailto:kentsala@aol.com); 505-220-7083

**Karyn Stockdale**, *Vice Chair (2014)*  
[kstockdale@audubon.org](mailto:kstockdale@audubon.org); 505-983-4609

**Jason Lott**, *Secretary*  
*Superintendent, Bandelier National Monument*  
[jason\\_lott@nps.gov](mailto:jason_lott@nps.gov); 505-672-3861 x502

**Ray Loretto**  
[towavet@windstream.net](mailto:towavet@windstream.net); 505-274-5758

**Melissa Savage**, (2013)  
[forests@ucla.edu](mailto:forests@ucla.edu); 505-983-8515

**Ken Smith** (2013)  
[ksmith@sewanee.edu](mailto:ksmith@sewanee.edu); 931-598-3219

**Virgil Trujillo** (2013)  
[abiquiugenizaro@yahoo.com](mailto:abiquiugenizaro@yahoo.com); 505-929-3900

**Maria Garcia**  
*Supervisor, Santa Fe National Forest*  
[mtgarcia@fs.fed.us](mailto:mtgarcia@fs.fed.us); 505-438-5312

The Board of Trustees is composed of seven members appointed by the President of the United States and two who serve ex officio (Superintendent of Bandelier and Supervisor of Santa Fe National Forest). The appointed Trustees generally serve four-year terms and, except for the Chair, receive no compensation for their work.

*The Valles Caldera Trust oversees the Valles Caldera National Preserve, formerly the privately owned "Baca Ranch." The 89,000 acre property is located in the Jemez Mountains in northern New Mexico. It was purchased by the federal government in 2000 under the Valles Caldera Preservation Act. The property is known for its huge meadows, abundant wildlife, meandering streams, and remarkable scenery. The mission of the Trust is to create a successful model of public land management that protects and preserves the unique values of the Preserve. Toward that end, the Trust will operate the Preserve as a working ranch; endeavor to become financially self-sustaining; meet the varied needs of visitors; strive to use and steward the multiple resources of the Preserve; and work collaboratively with our neighbors.*

If you would like a copy of the Comprehensive Management Framework, the Annual Report to Congress, the State of the Preserve, or notices regarding events, public Board meetings, or planning of the Valles Caldera National Preserve, contact:

The Valles Caldera Trust  
P.O. Box 359, Jemez Springs, NM 87025  
505-661-3333 (phone); 505-661-0400 (fax)

## From the Chairman

*By Kent Salazar*  
**Chairman, Valles Caldera Trust**

This past September, less than seven months after I was sworn in as a member of the Valles Caldera Board of Trustees, I was elected by my fellow board members to the post of Chairman of the Board. I consider it not only an honor but also a privilege to be called to such a duty and responsibility.

I shall fill the position formerly held by Dr. Raymond Loretto who finished eight years of service to the Trust as a board member and most recently served as board chairman. Under Dr. Loretto's leadership and dedication to the principles of the Trust, the organization grew and the Preserve flourished. He helped guide the organization through challenges presented by the Las Conchas Fire and its aftermath while transitioning to new leadership and organization. Dr. Loretto is to be commended. He will be a tough act to follow.

We are also facing the loss of Dr. Ken Smith, Dr. Melissa Savage, and Mr. Virgil Trujillo whose terms expire at the beginning of 2013. Their contributions to the Trust helped solidify the organization and placed the "Experiment in Public Land Management" on a firm footing. It is from this foundation I believe the Trust is poised to expand public access and use, while ensuring the preservation of the land.

Fortunately, I'll have the core team of Karyn Stockdale, Maria Garcia and Jason Lott to help me guide the next panel. Once fully constituted, only two of the board's seven presidential appointees will have at least a year's service with the Trust. There will be a period of adjustment but our focus will be to safeguard the land by putting forth responsible budgets which enable the Trust staff to execute the recently approved strategic plan.

I am confident that, given the tools and support necessary to accomplish the goals detailed in the strategic plan, the staff will succeed beyond expectations. It is through the hard work and dedication of the staff that the preserve has been so well cared for and crossed the threshold of 100,000 visitors a year.

We still have a long way to go. But because of the great staff, the direction set by the board, collaboration with organizations like Los Amigos de Valles Caldera, and your support, I believe we can make this Experiment in Public Land Management a model for New Mexico and the country.

*I invite you to come visit us and see how we're doing.*



## Winter Events at the Valles Caldera National Preserve

### **Winter Hours**

Fridays, Saturdays, and Sundays, 9 a.m. – 5 p.m. at the Valle Grande Staging Area. **Special holiday hours** are extended to December 26th through January 6th every day. The Preserve will also be open Martin Luther King Jr. Day, January 21st & President's Day, February 18th. **Open every day free of charge** are the Valle Grande Trail, Coyote Call Trail, and the surrounding area on the south side of State Highway 4.

### **Skiing and Snowshoeing**

The season opens December 7th, weather permitting. Fees are \$10 for **adults**, \$8 for **seniors (62 years and older)**, \$8 for **youth (5-15 years)**, and free for **kids (0-4 years)**. Five-day passes are available for \$40 per adult and \$32 for seniors & youth. Reservations are not required but all must check in and depart from the Valle Grande staging area. A limited number of snowshoes are available for rent at \$15 for adults and \$10 for youth.



Enjoy a brisk ski tour of the Valles Caldera, day or night! (Photo: VCT)

### **Free Days**

**Public Appreciation Day, Saturday, December 15th and Winter Trails Day, Saturday, January 12th.** Enjoy free skiing and snowshoeing! Parking is limited, carpooling encouraged. Check in and check out at the Valle Grande staging area is required.

### **Christmas Trees**

Sales begin after Thanksgiving on Friday, November 23rd, and will continue through December 23rd at the Staging Area during regular business hours on a first come, first served basis. Trees are \$20 and all proceeds go to support the Preserve.

### **Special Moonlight Events**

Friday December 28th, Saturday January 26th, and Sunday February 24th, 5 p.m. – 9 p.m. Enjoy the full moon guiding your self on skis or snowshoes. Permits are \$15 for adults, \$12 for seniors, \$10 for youth, and free for kids. Walk-in registration welcome with available parking. Visitors should prepare for high elevation, winter mountain weather, and night conditions.

### **New Year's Eve Celebration**

Reserve your ticket today to enjoy an evening starting at 5:00 p.m. of skiing, snowshoeing, food, bonfires, and fireworks! Tickets are \$25 for adults, \$20 for seniors & youth, and free for kids—and include reserved parking, a ski/snowshoe permit, food, and a door prize raffle ticket. Visitors who want to see the 8:00 pm fireworks display only can park for \$20 per vehicle at the main gate—first come, first served. Admission into the Preserve closes at 7:45 p.m.



Snuggle up with ten of your friends or family on a sleigh ride! (Photo: VCT)

### **Sleigh Rides**

Interested in a horse-drawn sleigh or wagon ride? Rides are \$30 for adults, \$24 for seniors and youth, and free for kids. Visit [www.vallescaldera.gov/comevisit/rides](http://www.vallescaldera.gov/comevisit/rides) to view the schedule and save a seat.

*Details on events and reservations can be found on our website at [www.vallescaldera.gov](http://www.vallescaldera.gov) or by calling 1-866-382-5537. Due to weather, or other causes, we may have to cancel activities or close the Valle Grande. Please call our hotline (505) 216-2690 for an automated message that will include up-to-date information about weather, available activities, closures, and more.*

## Young Teen Catches the Elk of Dreams

*By Terry McDermott, Public Affairs Specialist, Valles Caldera Trust*

Marcus Pierce prides himself on being a veteran hunter. The fifteen-year-old Wisconsin native has hunted Whitetail deer, ducks and turkey in the forests around Madison. But none of those experiences compared with the Catch-A-Dream hunt he shared with his father, Blair, on the Valles Caldera in late September.

“We went out at about 6:30 in the morning and almost immediately we heard a bunch of bugling,” began Marcus. “We saw a few bulls but Mick and Dennis said we needed to keep looking.”

Valles Caldera Trust Hunt Manager, Mick Trujillo and Trust Executive Director, Dennis Trujillo, served as guides on the hunt.

“We tracked down a good sized bull that was lying down in the grass about 400 yards away,” said Marcus. “Mick managed to get his attention and bring him to his feet, while Dennis ranged the huge bull and helped me set up. I took my shot.”

“It was a great shot,” said Dennis.

The shot harvested a trophy bull that measured 363 and 2/8ths.

“Before this, the farthest target I ever hit was about 75 yards away,” said Marcus. “I surprised myself with this one.”

The hunt was scheduled for four days but reached a conclusion within the first two hours of the first day! Marcus and his dad spent the rest of the time fishing and relaxing on the Preserve. And what was the best part of hunting on the Valles Caldera?

“The scenery,” answered Marcus without hesitation. “This is a beautiful place.”

The Catch-A-Dream Foundation grants once-in-a-lifetime outdoor experiences to children 18 years old or younger who have a life-threatening illness. The organization’s purpose is to provide outdoor experiences to fill the “gap” created when the Make-



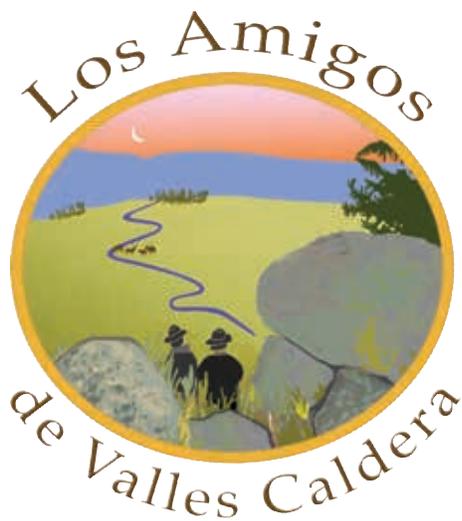
*[Top left] Father & son, Blair and Marcus Pierce pose with the trophy bull that Marcus scouted with Dennis Trujillo [top right]. (Photos: Debra Reed)*



*Marcus' bull measured 363 points according to SCI scoring. (Photo: D.Reed).*

A-Wish Foundation established a national policy to preclude wishes that use “firearms, hunting bows, or other hunting or sport-shooting equipment.”

The Catch-A-Dream Foundation is a 501(c)(3) tax-exempt organization based in Starkville, Missouri and serves children across the United States and Canada. For more information on Catch-A-Dream, email [catchadream@ext.msstate.edu](mailto:catchadream@ext.msstate.edu) or visit [www.catchadream.org](http://www.catchadream.org).



# News from Los Amigos

*Supporting the  
Valles Caldera National Preserve  
for Present and Future Generations*

## Valle Santa Rosa Restoration

*By Rachel Boothby, Administrative Assistant, Los Amigos*

This year, the Valle Santa Rosa had two monumental work weekend campouts that brought together a grand total of 74 volunteers. It was great to have Los Amigos and Albuquerque Wildlife Federation (AWF) working together again. For the second wetland restoration work weekend we also welcomed five members of the Western Hardrock Watershed Team (WHWT),



*Claire Catlett, of WHWT, works on a one-rock dam designed to slow water flow & catch sediment to fill these pools. (Photo: R.Boothby)*

which is a program of the Office of Surface Mining and AmeriCorps VISTA focused on watershed restoration and community development.

Los Amigos Volunteer Coordinator Jack Crane coled the first workshop with Van Clothier of Stream Dynamics and the second with Steve Vrooman of Keystone Restoration Ecology. In all, people worked hard through cold mornings and hot afternoons to build 64 structures in the Valle Santa Rosa during the weekends



*Active volunteer, Kristina Fisher poses by her "Zuni bowl" structure. She's a master by now! (Photo: AWF)*

of July 21 and August 18, 2012. Attendees enjoyed colorful potlucks as well as grilled bison and veggie burgers in July and authentic Mexican tacos in August.

Restoration of the Valle Santa Rosa will help us improve the water quality of San Antonio Creek, which currently does not support its high quality coldwater aquatic life designated use. The local objective is to restore healthy slope wetlands that discharge water slowly through ground saturation rather than through surface channels.

Unfortunately, damage caused by development, overgrazing, and poor range improvements have concentrated flows to incise gullies and channels that drain and impair the slope wetland habitats. Healthy wetlands provide a wealth of ecological services to watersheds, such as: reducing sediment loads and removing suspended solids; storing floodwaters by spreading water over a large area; decreasing runoff

*(continued on page 7)*

# Wetlands Project Along Sulphur Creek

*By Barbara Johnson, Chair, Los Amigos*

Riverine wetlands are one of the most impacted and degraded wetland types in New Mexico. Riverine wetlands are commonly dewatered and disconnected from the stream system that sustains them. Sulphur Creek in the Valles Caldera National Preserve is no exception. Several historic activities have caused headcuts and incisions in Sulphur Creek that dewater and adversely impact adjacent wetlands and springs. These activities include livestock over-grazing, logging, well development for geothermal energy exploration, poorly placed roads, gravel mining, and unmanaged elk foraging.

## **Project Description**

The Wetlands Program of the New Mexico Environment Department has received a grant from the EPA to work on Sulphur Creek. This project will demonstrate and evaluate innovative, cost-effective restoration techniques unique to New Mexico inspired by natural processes and simple bioengineering. The project is expected to restore ecologically significant hydrological processes to the degraded riparian systems by: (1) raising the water table and volume of subsurface groundwater storage; (2) increasing the frequency/duration of floodplain inundation and decreasing the magnitude of flood peaks and (3) decreasing annual runoff and increasing baseflow.

This project will: 1) restore at least 30 acres of wetlands damaged by geothermal exploration activities and other impacts within the Sulphur Creek watershed using the innovative “plug and pond,” porous road fill, and other restoration methods; 2) collect baseline



*Jack Crane viewing an eroded stock pond in the Sulphur Creek watershed where we hope to do some work. (Photo: M. McGraw)*

and post-implementation data from Sulphur Creek wetlands, and compare these data to other areas on the Preserve where “plug and pond” restoration has recently been implemented to determine the effectiveness of these methods for high mountain meadow streams; 3) prepare a report and technical guide about the use and effectiveness of the “plug and pond” innovative hydrological processes to degraded riverine systems; 4) disseminate information about the restoration methods through volunteer field work days, roundtables, newsletters, websites, and conferences.

## **Objectives**

The environmental outcome of the project is to restore at least 30 acres of wetlands. Other outcomes in the project area will be improved conditions of the natural resource: improved width-to-depth ratios, sinuosity, and riffle/pool ratio, stabilized elevation of bed and channel slope, increased and improved conditions for wetland vegetation along the creek, and increased water availability to the slope wetland/wet meadows. Success will be shown by: favorable trends toward attaining stable stream channel types; an increase in aerial extent and desirable species composition, cover, and condition of wetland vegetation; favorable trends in turbidity; increase and expansion of hyporheic water; an increase in wetland vegetation habitat and dispersal of flow downstream of the road; a decrease in the amount of sediment from the road; and a reduction in head-cuts.



*Sulphur Creek along VC 08 where old beaver dams are still causing pools that allow wetland vegetation to grow. (Photo: M. McGraw)*

# Santa Rosa Restoration

(continued from page 5)

velocity; storing and releasing water over a long period, to name a few (Fretwell et al. 1996). Wetlands have shown to help cool stream temperatures, especially during the summer months, via groundwater inflow (Webb & Zhang 1999), thereby helping to maintain healthy fisheries and cold water habitats (Bogan et al. 2003; Fretwell et al. 1996).

Thankfully, our work weekends are making a difference. The “Zuni-bowls” and one-rock dams hand built this year follow over 50 others made upstream in head cuts and eroding areas. Since the Las Conchas Fire of 2011 and subsequent rains, the structures have demonstrated their success at reducing erosion and capturing sediment like ash and debris, which nurtures wetland vegetation growth and provides organic mass to fill eroded channels. After dedicating the last two years to restoring the Valle Santa Rosa, the time has come now to monitor our progress and move on to other projects. Thank you to all of our hardworking and tenacious volunteers and contractors!



### Los Amigos Membership

Los Amigos currently has over 200 members. If you are interested in joining, you may visit our website, [www.losamigosdevallescaldera.org](http://www.losamigosdevallescaldera.org), or make your check payable to Los Amigos de Valles Caldera and send it to:

Los Amigos de Valles Caldera  
3250 La Paz Lane  
Santa Fe, NM 87507

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
State \_\_\_\_\_ Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
Email \_\_\_\_\_

<input type="checkbox"/> <b>Basic</b>	<b>\$35</b>
<input type="checkbox"/> <b>Family</b>	<b>\$50</b>
<input type="checkbox"/> <b>Student</b>	<b>\$25</b>
<input type="checkbox"/> <b>Senior (62+)</b>	<b>\$25</b>
<input type="checkbox"/> <b>Senior Family</b>	<b>\$35</b>
<input type="checkbox"/> <b>Lifetime</b>	<b>\$1,000</b>
<input type="checkbox"/> <b>Other</b>	_____

[Left] The hardy volunteers pause in the cold after a hot breakfast before a long workday on August 18. (Photo: AWF)

### Order Your Morton Print to Help Restore the Bond Cabin!

Los Amigos de Valles Caldera is selling signed and numbered 18” by 22” lithographs of *Peace in the Valle* by Gary Morton (see page 8), for \$125, which includes shipping and handling. The proceeds from the sale of the prints will be used for restoration work on the Bond Cabin.

To order, please see the Los Amigos website, [www.losamigosdevallescaldera.org](http://www.losamigosdevallescaldera.org), or mail a check with your order to Print, Los Amigos, 3250 La Paz Lane, Santa Fe, NM 87507. Prints will be given free to each new Los Amigos Lifetime or Obsidian Guild member.

#### Obsidian Guild

The Valles Caldera Obsidian Guild recognizes individuals who provide support for the Valles Caldera National Preserve through planned gifts. Membership belongs to those who have made deferred gifts to Los Amigos de Valles Caldera through one or more of the following methods:

- » Provision in a will or revocable trust;
- » Retirement plan beneficiary designation; or
- » Life insurance policy beneficiary designation.

Members of the Obsidian Guild share a common bond of generosity and visionary leadership, nourishing the Preserve’s unique assets. For further information, please contact Larry Icerman, [licerman@aol.com](mailto:licerman@aol.com).

## Los Amigos de Valles Caldera

3250 La Paz Lane  
Santa Fe, NM 87507  
www.losamigosdevallescaldera.org

### Board of Directors

**Doug Fraser, Chair**  
15 Calle El Gancho, Santa Fe, NM 87507  
505-474-7615; dougfraser21@gmail.com

**Peggy Gautier, Vice Chair**  
855 Calle David, Santa Fe, NM 87506  
505-988-7307; peggyg@thuntek.net

**Jim Counce, Secretary**  
1111 Sulphur Creek Rd., Jemez Springs, NM 87025  
575-829-3885; jcounce@valornet.com

**Larry Icerman, Treasurer**  
2999 Calle Cerrada, Santa Fe, NM 87505  
505-473-2102; licerman@aol.com

**Anthony R. Armijo**  
P.O. Box 100, Jemez Pueblo, NM 87024  
575-834-7359; aarmijo@jemezpuablo.org

**Ben Chavarria**  
P.O. Box 580, Española, NM 87532  
505-753-7326; bchavarria@santaclarapueblo.org

**Jack Crane**  
427 Elk Trail, Jemez Springs, NM 87025  
575-829-3648; jdcrane@valornet.com

**Barbara H. Johnson**  
3250 La Paz Lane, Santa Fe, NM 87507  
505-474-6689; lunah3@comcast.net

**Virginie Pointeau**  
1020 Lopez Street, Santa Fe, NM 87507  
505-264-3546; virginiepointeau@yahoo.com

**Steve Stoddard**  
4557 Trinity Drive, Los Alamos, NM 87544  
505-662-0482; sbstoddard@q.com

## From The Chair

*By Doug Fraser, Chair, Los Amigos*

I hope you all had a good year in 2012. Los Amigos has been moving forward on several projects, and we are beginning to get some hard scientific data on the efficacy of our work. We are very excited! Below is a photo from Google Earth showing one of our projects. You can see what we have been accomplishing from space!

We are also pleased to have Virginie Pointeau of the Quivira Coalition join our Board and to have Rachel Boothby (see page 9) join us as Administrative Assistant. She has done this issue of the newsletter. I hope you like it as much as we do.

We have been having a great response to our Annual Appeal, and we want to thank our many members and volunteers. We would not be able to do the work we do with you! We hope you will consider joining us for our 2013 member events and volunteer work weekends. We will probably be working on Jaramillo Creek this coming field season. See you in the New Year!



[Above] Peace in the Valle by Gary Morton. [Left] This is a photo of one of our work sites on San Antonio Creek from Google Earth. It shows a "plug and pond" structure that our contractors, Stream Dynamics and Keystone Restoration Ecology, used to plug an old road in two places, and move the flow from two tributaries back into their former channels. Each tributary had about 1 square mile of watershed area, but only one tributary flowed. With the structure, more water will flow late in the season to San Antonio Creek from bank storage, which should help moderate water temperatures and levels.

## Welcome, Rachel!

*By Barbara Johnson, Los Amigos*

Rachel Boothby is joining Los Amigos as our Administrative Assistant. Rachel comes to us with experience in all aspects of outreach, communication, and constituency development for rural and urban community organizations. Her previous job with the Railyard Stewards in Santa Fe built local partnerships and recruited thirty volunteers to a new environmental stewardship program at the Railyard Park. With Los Amigos, she looks forward to competing for a Collaborative Forest Restoration Program grant (cross your fingers!) and bringing new members and volunteers to the Valles Caldera.

One of the first places she explored upon moving to New Mexico was the Valle Santa Rosa, and already she has shared it with fellow OSM/VISTAs of the Western Hardrock Watershed Team (learn more on page 5). Rachel was an active VISTA member for two years, serving first the Uncompahgre Watershed Partnership to build public local trust and recognition through educational events, volunteer workdays, and media presence in Southwest Colorado.

“I find my work extremely gratifying,” Rachel says. “By sharing the progress of Los Amigos’ restoration projects in the Valles, I am honing my skills as a communicator and protecting a real ecological treasure.”

To build on her Bachelor’s Degree in Arts Administration from Simmons College, Boston, Rachel is pursuing a Master’s Certificate in Graphic Design at the University of New Mexico. She lives in Albuquerque with her fiancé and adorable shepherd collie.

*Little did anyone know that when Rachel (left) volunteered to work in the September 2011 Santa Rosa restoration workshop that she was building relationships with future work colleagues! (Photo: S. Vrooman)*



## Prescribed Burn

*By Terry McDermott, Valles Caldera Trust*

The Valles Caldera Trust conducted a successful prescribed burn of a 360 acres opposite the Banco Bonito staging area and adjacent to the Jemez Falls Campground entrance near mile marker 30 of New Mexico Highway 4. The late September burn was the final stage of a project to reduce fire hazard and improve forest health. Pretreatment of the forest before the burn substantially reduced the amount of fuel in the project area and lessened the associated production of smoke. Valles Caldera Trust Fire Management Officer, Marla Rodgers, helped manage the week-long event.

“It was part of a collaborative effort with the Santa Fe National Forest to make conditions in that area of the Jemez Mountains less susceptible to catastrophic events like the Las Conchas fire of 2011,” said Rodgers. “More projects are needed and are in the planning stages.”



*[Above] Fire crews conduct and monitor the September prescribed burn across from the Banco Bonito staging area. (Photo: VCT)*

Fire practitioners from the Santa Fe National Forest, Bandelier National Monument, the Bureau of Indian Affairs, the City of Santa Fe, and the Nature Conservancy assisted the Valles Caldera Trust with the prescribed burn. The Nature Conservancy crews included land managers from Argentina, Mexico, Spain, and Costa Rica who came to learn from, and share knowledge with, fire managers and their U.S. counterparts. The Valles Caldera Trust Science and Education Center in Jemez Springs served as a base of operations for one of the international teams.

# Life After the Las Conchas Fire

(continued from page 1)

## Vegetation Responses

In the first year after the fire (which included two summer monsoon seasons) the most conspicuous plant responses in severely burned forests were the patches of grasses, mosses, and wildflowers that have begun the successional process to revegetate the burned landscape (the ecological term “succession” refers to the changes through time in soils, plants, and animals following a disturbance). Some grasses and wildflowers survived the fire underground, and sprouted as soon as the rains came; others colonized the newly exposed soil as wind-blown seeds, and established during the summer of 2012. In the coming decade, these plants will produce more seed, or expand via root sprouts, eventually converting the former forest into a mountain meadow.

In aspen forest stands, new aspen shoots immediately began to emerge as suckers from live roots, attaining a height of at least a foot by autumn 2011.



Billions of aspen tree seeds filled the air on the spring winds this year, hopefully taking advantage of the exposed post-fire mineral soils to re-establish aspen forests on the Preserve. (Photo: R. Parmenter)

In 2012, many of these saplings grew quickly and reached heights of three to six feet by the fall. Aspen densities still remained incredibly high (thousands per acre), but competition will soon begin to thin their ranks. Fortunately, the elk herd has not been able to browse all of the vast numbers of new aspen shoots, allowing many to survive thus far. Those that reach 10 feet tall above browse level will become part of the establishing aspen forest on the severely burned sites.

In addition to aspen suckers, there may be recolonization via aspen seeds. Large numbers of aspens in the Valles Caldera flowered and set seed in May 2012, and the billions of wind-blown seeds permeated the Preserve. Some of these seeds will establish in exposed soils of burned forests, leading to plant canopy coverage in otherwise barren sites.



[Left] Sarah Kindschuh, VCT wildlife biologist, conducts small mammal mark-release study on burned and unburned forests in summer, 2012. Rodents, like the deer mouse [right] are live-trapped, marked with fur-dye, measured, weighed, and released on site to calculate population structure. (Photos: J. Martin)

## Wildlife Responses

While larger mammals like elk, bears, mountain lions, deer, coyotes, and bobcats were likely to have escaped the fire on the Valles Caldera, smaller species like squirrels, chipmunks, and mice would have experienced the full fire impact. Monitoring of forest stands throughout the burned area has revealed no surviving tree squirrels in severely burned sites, but plenty of surviving and recolonizing deer mice. Deer mice, chipmunks and golden-mantled ground squirrels survived the fire within their burrows that function like miniature bomb shelters, but emerged to a radically changed habitat! By autumn of 2012, most of the burned forests were devoid of chipmunks and ground squirrels, so these species will likely have to await regrowth of new meadow vegetation before re-establishing their populations.

Collaborating partners from Hawks Aloft, Gail Garber and Erin Greenlee, conducted a series of monitoring surveys of breeding birds in burned and unburned forests and grasslands in early summer 2012, the first breeding season after the fire. In the forests, they

(continued on next page)

## Life After the Las Conchas Fire

(continued from page 10)

recorded 54 species of birds, and these forest birds appeared to have recovered very quickly by spring of 2012—only two species showed significant reductions in abundance: the White-breasted Nuthatch and the Ruby-crowned Kinglet. In contrast, three species increased in the burned forest: American Three-toed Woodpeckers, American Robins, and Mountain Bluebirds. The remaining 49 species exhibited similar abundances in both burned and unburned forests.

In the grasslands, the ornithologists recorded a total of 51 species; however, they found significantly fewer bird species in burned versus unburned grasslands, a surprising result given that the grassland vegetation appeared to have recovered quickly in late summer 2011. One clue to this mystery was that grassland grasshopper populations had been significantly reduced by the fire and would have limited the food resources to breeding bird populations.

Another diverse group of animals being monitored are the beneficial and pest invertebrates—grasshoppers, beetles, bees and wasps, moths and butterflies, aphids, spiders, centipedes, and millipedes. Functioning as pollinators, herbivores, predators, detritivores (decomposers), and parasitoids, these groups play important roles in the ecological processes of the post-fire environments. In collaboration with the USDA's

Systematic Entomology Laboratory and the Smithsonian Institution, scientists monitored these invertebrate populations using pitfall traps for ground-dwelling species, malaise traps for flying insects, and black-light traps for nocturnal moths. Results showed that grassland invertebrates generally survived the fires in good shape, except for the aforementioned grasshoppers. In the forest, many species of ground-dwelling insects, centipedes, and millipedes also survived or recolonized quickly; however, moths were significantly reduced in both abundance and in the number of species in burned forest stands (not too surprising, given that moths are flammable!) and their caterpillars need fresh green leaves to feed upon and grow.

### **Aquatic Responses**

The streams of the Valles Caldera National Preserve have been hit repeatedly by flash floods in 2011 and 2012, as a result of the monsoon thunderstorms pouring rain on denuded mountain slopes. Fortunately, these floods resulted in only limited scouring of stream channels, and although an estimated 95% of the trout populations were killed, the native non-game fish survived. Trout populations in 2012 were recovering, but in areas like the Valle Toledo (Rio San Antonio, Indios Creek) their densities were still only about 10% of their pre-fire levels. The good news is that the aquatic insect community, which forms the food base for the trout population, was only slightly damaged by the floods, and has shown signs of rapid recovery.

Overall, the plants and animals of the Valles Caldera are demonstrating yet again their resiliency to ecological changes brought on by the Las Conchas fire. Many species, having survived or avoided the immediate impact of the fire, are thriving in the post-fire environment. The normal successional processes are underway, with wildflowers, grasses, and aspens quickly colonizing the burned forests to create lush, green, mountain meadows. Invertebrate pollinators, herbivores, and predators have already re-established their populations, and larger wildlife species (from rodents to birds to bears) are adapting to the new landscape. Stream water quality is improving, and the fisheries are recovering from the post-fire floods. As such, the outlook for a biologically rich and diverse landscape is very bright indeed!



Entomologists (left to right) Alicia Hodson, Arden Jones and Eileen Schaeffer collect invertebrates from the tent-like “malaise trap” shown, pitfall traps (white square tiles on the ground), and a black-light trap to record differences between arthropod assemblages in burned and unburned forests. (Photo: R. Parmenter).



[Right to left] Old-timers Toni Broaddhus, Ramona Capland, Ray Trujillo, and Richard Boyd reminiscent on the ranching days. (Photo: D. Davanzo)

Los Amigos de Valles Caldera  
 3250 La Paz Lane  
 Santa Fe, NM 87507

Presort STD  
 US Postage  
 PAID  
 Permit #1029  
 Albuquerque, NM

## Winter 2012

1. Life After the Fire
2. From Trust Chairman
3. Winter Events
4. Teen Catches A Dream
5. Santa Rosa Restoration
6. Sulphur Creek Project
8. From Los Amigos Chair
9. Welcome, Rachel!
9. Prescribed Burn

## Oldtimers BBQ

*By Rachel Boothby, Los Amigos*

See a familiar face? The Oldtimers BBQ on August 4, 2012 brought together friends of the Valles Caldera to celebrate the progress of restoration work and share experiences that keep the land at heart. Pictured here are members of Los Amigos de Valles Caldera, “oldtimers” who served the land when it was a working ranch, and people who spend time on-the-ground of the Preserve today ensuring its ecological health.



[Above] Photographer Donatella Davanzo captures a dramatic sky over San Antonio Creek. (Visit [anthrophoto.net](http://anthrophoto.net))

[Clockwise] David and Francesca C de Baca; Barbara Johnson and Steve Vrooman; Buck and Nina Wells; Merlinda and Agustín Garcia. (Photos: R. Boothby)