



# the Seedhead News

## Toasting El Chiltepin!

Wild Chile Botanical Area Established in June

by Suzanne Nelson, Director of Conservation and Seed Bank Curator

**O**n June 3, 1999, the Wild Chile Botanical Area was officially designated a special management area within the Coronado National Forest (CNF). The 2500-acre area is home to perhaps the largest and healthiest population of wild chiles (*Capsicum annuum* var. *aviculare*) north of the Arizona-Sonora border. With fewer than 10 populations of wild chiles documented in the state, this designation recognizes the importance of the site as a region rich in genetic resources, in particular, wild crop relatives.

Native Seeds/SEARCH's involvement with the wild chiles began nearly 10 years ago. The identification of wild chiles growing in canyons just north of the border attracted the interest of a number of intrepid plant folks, who, being well-versed in plant geography, realized that these populations occurred at the

"northernmost edge of wild populations of chiles anywhere in the world", and may, therefore, contain genes for traits that differed from those occurring in more tropical regions of its range – in particular, genes for frost tolerance. World-wide, chiles are a multi-billion dollar industry and the wild chile is considered to have played a prominent role in the development of most of the domesticated varieties on the market – a real "mother of all chiles".

In 1993, NS/S entered into a Memorandum of Understanding (MOU) with the Coronado National Forest to conduct research on the site. The MOU was granted in response to the NS/S proposal seeking special designation for the Rock Corral Canyon site as an "*in-situ* genetic reserve for the protection of wild chiles and other plants of economic importance or of conservation concern." An *in situ* reserve for wild chiles would allow for better understanding of the ecological conditions that

effect their growth and reproduction, helping ecologists or land managers develop conservation strategies for managing wild chile populations.

Over the years, research efforts have involved identifying other wild chile populations in the U.S. (wild chiles also occur in Texas), tagging and mapping individual chiles at Rock Corral

Canyon (a.k.a. "The Chile Reserve" and now, Wild Chile Botanical Area), sur-

veying the plants, birds, mammals, reptiles and amphibians (fourteen species of sensitive plants were identified at the site), constructing fenced enclosures to examine the effects of grazing, sampling the native vegetation and establishing permanent sampling plots, producing a GIS database for the area, interviewing local residents about historical use of the chile resources, studying seed dispersers and predators and the effects



Celebrating: L to R: Angelo J. Joaquin, Jr., John McGee and Mima Falk of the U.S. Forest Service, and Suzanne Nelson.

of different chile consumers on chile plant germination and distribution. The site has also been used for educational and training activities, including an on-site training course for Mexican Natural Resource Managers interested in wild plant genetic resources and natural areas management.

Wild chiles, otherwise known as *chiltepinos*, are a culturally and economically important resource south of the border. They can be found in every kitchen and restaurant in northern Mexico. In Sonora, entire communities participate in wild-harvesting chiltepinos from surrounding hillsides from late September/early October to late November/early December. By some estimates, *chiltepineros* (chiltepin harvesters) may pick as much as thirty tons of chiltepinos in a season.

Prices for chiltepinos vary with supply but can reach upwards of \$72/lb. During a trip to chiltepin country last December, Jesús García and I came upon a room of boxed and ready-to-ship chiltepinos weighing in at 1-1/2 tons!

In October, 1998, Josh Tewksbury (see side panel for more on his research), Rigoberto Lopez and I headed into the bold and beautiful chiltepin country of central Sonora. Rigoberto, from the University of Sonora in Hermosillo, had been working with ranchers in the area trying to develop a program in sustainable use of natural resources. The chiltepin figured prominently on his list of potential candidates for a model pro-

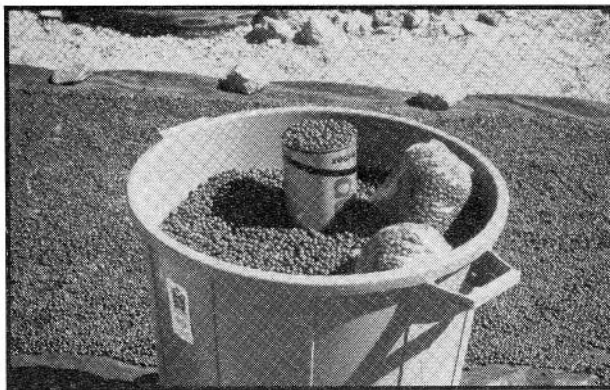
gram. The economic importance of chiltepinos to local communities in northern Mexico, coupled with extensive ranching activities and lack of any cohesive strategy for managing the resource makes the chiltepin industry a commercial endeavor on the brink of potential disaster. Though chiltepin is nearly ubiquitous along the flanks of the Sierra Madre Occidental, it is nonetheless vulnerable to a host of potential threats, including overharvesting, grazing pressures, fire and drought.

This year's plans for chiltepin work in Sonora include setting up long-term plots for monitoring and investigating the effects of different harvesting strategies on chile fruit production, holding a design contest in local schools for a poster focusing on chiltepin awareness and conservation,

and organizing ranchers, chiltepineros, chiltepin buyers and others interested in helping to develop harvesting protocols and management strategies that serve to

protect wild chile stands while also supporting local communities both economically and culturally.

*NS/S extends a heart-felt (and at times, heartburn-felt) thanks to all those folks who have worked with the wild chiles at Rock Corral Canyon: Cindy Baker, Dan Cariveau, Kevin Dahl, Jim Donovan, Othelia Kiser, Suzanne Nelson, Don Norman, Pilar Rivera, Josh Tewksbury, John Tuxill, Caroline Wilson and the most fiery one of all - Gary Nabhan.*



*The "mother of all chiles," harvested and ready for market.*

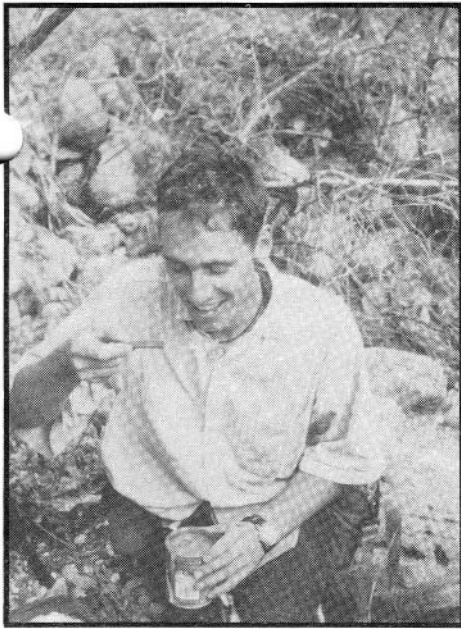
## The Chile Man: Josh Tewksbury's Chile Experience

It is 4:30 a.m. on October 12th and Tumacacori peak is black against the night sky. Dan Cariveau and I stumble down the rough slope from our field camp, each loaded down with binoculars, video cameras, battery packs, tripods, vials of fruit, clipboards, notepads, cereal bowls, and a thousand metal tags - the accoutrements of field research in Rock Corral Canyon. The Curve-billed Thrashers will start singing soon. The question seemed so simple when Gary Nabhan first came up with it: Why are peppers hot? What do they get out of having all that heat? Four years later, I am running six different field protocols and still working on the question.

Our headlamps burn small circles into the black landscape, coursing over the rocks and grass - we are looking for little piles of fruit we set out the night before. We move up the wash, placing cereal bowls over little piles of chiltepinos and hackberry fruit. We will return later in the morning to examine the feeding preference of the insects and mammals that visited our offerings during the night. Now it is off to set up video cameras to record any activity at chile bushes. Our hope is to find out who aside from humans, is actually eating the chiles in Rock Corral Canyon. As it turns out, it takes many hours of observation to answer this question.

After setting up four cameras, we check a series of small mammal traps - metal boxes baited with peanut butter and oatmeal. The traps fall into three categories: empty, containing very fat stinkbugs, or hosting a line of ants busy carrying off the oatmeal and peanut butter. Two, however, are different: one contains a pocket mouse, still eating the oatmeal, the other is so heavy it can only be a packrat.

We carry the traps back to camp, put the mammals in shaded terrariums with water and desert vegetation, and head back into the field. In the evening, we provide these mammals with a plethora of native foods - hackberry fruit, the fiery chiltepine, and another pepper which looks like a chiltepine, smells like chiltepine, and tastes like chiltepine except that it lacks the heat. Through these taste preference tests, we are isolating the effects of capsaicin - the heat in peppers - on the feeding preferences of birds and mammals. Additionally, when we let the birds and mammals free from their temporary enclosures, we sift through the pellets and droppings left behind and germinate the seeds. By comparing germination



*Brunch - Josh style!*

rates with seeds from fruit that have not been eaten, we are trying to figure out the effects of different consumers on the chile plant itself.

Back in the field, we will count the fruit under the bowls - most of the hackberry fruit will be gone, eaten by small mammals most likely - but the chiltepinos most always remain, barely touched. We pick up the remaining fruit and head out to record the foraging movements of thrashers and mockingbirds - connoisseurs of chiltepinos - and map the location of chile bushes to see how well the foraging behavior of these birds predicts the location of chiltepine plants. As we find new chile bushes, we tag the plants, count their fruit set, and measure them so we can track their survival and reproduction from one year to the next. At the end of the day, we pull down video cameras, set up more piles of fruit, feed the mammals, and recharge the batteries for the next day.

This was the daily ritual at Rock Corral Canyon last fall, site of the now official Wild Chile Botanical Area. With the help of Suzanne Nelson and Pilar Rivera, Dan and I managed to tag, map and measure almost 400 chile plants. This work is essential in estimating the viability of the chile population in Rock Corral Canyon, which we currently estimate to be 700-1200 plants. The research in Rock Corral Canyon is an exciting mixture of highly applied conservation research and pure scientific inquiry, and the recent designation of the area as a special botanical area shows that asking evolutionary questions often leads to sound conservation solutions.

*Josh Tewksbury has been conducting research on wild chiles at Rock Corral Canyon for the past four years. He is a graduate student at the University of Montana.*

**Win a Mayo Indian blanket or Katsina Doll in our Holiday Contest. See the back of this newsletter for details and photos.**

**Native Seeds/SEARCH Holiday Contest**

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

**\$10 for 1 ticket or 5 tickets for \$40!**

Send money and tickets to:  
 Holiday Contest, NS/S, 526 N. 4th Ave., Tucson, AZ 85705

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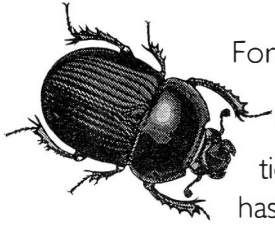
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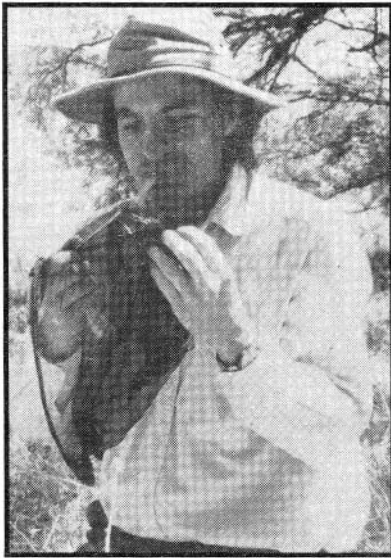
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# BUGS AT THE FARM!

BY JESÚS GARCÍA, NS/S INTERN



For the second year Native Seeds/SEARCH has hosted an intern from the University of Arizona's Conservation Internship Program. This program has been funded through a grant from the National Science Foundation, forming a partnership between the University of Arizona and conservation organizations throughout the Tucson area and southern Arizona. There are two primary goals of the program: one is to familiarize the intern with the daily workings of a conservation biology organization in the area; the other one is to provide the student with an opportunity to create a scientific research project geared to conservation biology. Every student is assigned two advisors, one from the U of A and another from the organization. I was very lucky to have had Dr. Rob Ro-



*Jesús trapping insects in a net.*

bichaux, Associate Professor in the Department of Ecology and Evolutionary Biology, and Dr. Suzanne Nelson, Director of Conservation & Seed Bank Curator at NS/S, as advisors during this summer experience. While the program lasted eleven weeks, the fun still continues. The first few weeks were used primarily to become familiar with the organization -- its goals, mission and projects, as well as getting to know the staff, and assisting with the maintenance of the seed collection, crop maintenance and a major systematic planting at the NS/S Conservation farm in Patagonia, Arizona.

My summer research project was defined as: A general survey of the insect fauna within cultivated and adjacent natural areas of the farm. This project is part of a larger one that seeks to integrate riparian restoration with

farm management by emphasizing the improvement of habitat for wildlife providing pollination and other ecological services on or adjacent to farmlands. The focus of this year's project is to identify the beetles, flies, bees, wasps, moths, butterflies and other insects currently inhabiting the cultivated fields and adjacent native habitats at the NS/S Conservation Farm.

The insect collection and study took place in three areas at the farm: (1) Area A is within the cultivated fields; (2) Area B is located in an open, abandoned agricultural field; and (3) Area C is located in a riparian/mesquite forest. The method of collection consisted of a number of pitfall traps, basically, several yellow plastic bowls filled with soapy water. This system of traps was set up once a week for 24 hours at a time in all three areas. Specimens were collected, labeled and stored for further analysis of numbers and diversity.

A great part of this experience has been processing and collecting insects by using a net. It was not a rare scene to see me chasing bugs all over the farm or at the Sylvester House gardens. In addition to observing, spreading, and pinning insects, the interactions with the entire NS/S staff and volunteers has been probably the most rewarding experience for

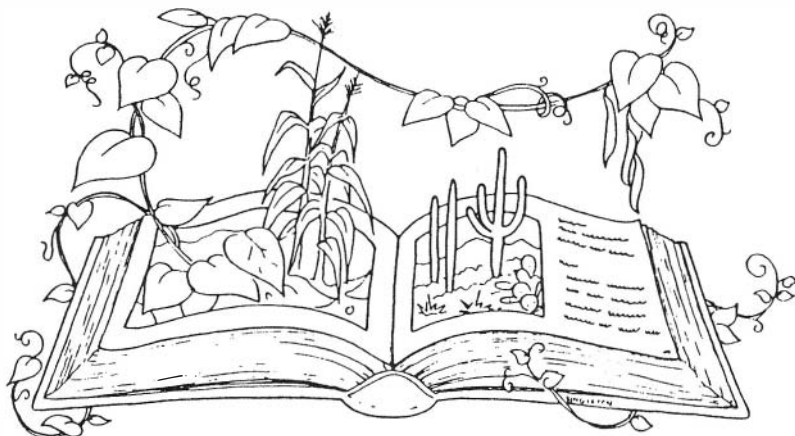
me. Once the specimens collected are processed, they will provide a great reference point to begin understanding the insect fauna and the interactions with the cultivated crops. Also, this collection will become an incredible educational tool that will complement the already fascinating conservation efforts that Native Seeds/SEARCH provides to the community.



*Jesús García was born and raised in Magdalena, Sonora, México. He is currently a junior in the University of Arizona's Department of Ecology and Evolutionary Biology, with a minor in Cultural Anthropology. His career goals are to go to graduate school and become an Ethnoecologist. NS/S staff have enjoyed Jesús tremendously, and we greatly appreciate his contributions to our work. Thanks, Jesús!*

# 1999 FALL EVENTS CALENDAR

*Don't miss this year's Voices of the Land*



## ***This Year's Voices of the Land Readers...***

→ → See sidebar for details on the Voices of the Land event → →

**Terry Tempest Williams** was born in 1955 and grew up within sight of the Great Salt Lake. Her writing reflects her intimate relationship with the natural world. She is the author of several books, including *Pieces of White Shell – A Journey to Navajoland*, *Coyote's Canyon, Refuge – An Unnatural History of Family and Place*, *An Unspoken Hunger – Stories from the Field*, and most recently, *Desert Quartet – An Erotic Landscape*. Her forthcoming book, *Leap – A Traveler in the Garden of Delights*, will be published in 2000.

**Luci Tapahonso** is a distinguished poet, essayist, and writer of short stories. She was born in Shiprock, NM, Navajo Nation. Ms. Tapahonso's writing is grounded in the rich traditions of Navajo verbal arts: storytelling, song and prayer. Her collected works include *One More Shiprock Night*, *Seasonal Woman*, *A Breeze Swept Through*, *Sáanii Dahatáál: The Women are Singing*, and *Blue Horses Rush In*. *Hayoolkáál: an Anthology of Diné Writers* is forthcoming. She is currently faculty in the American Indian Studies Department at the University of Arizona.

**Byrd Baylor** is the author of many delightful books for children, among them *When Clay Sings*, illustrated by Tom Bahti, a Caldecott Honor book; *They Put on Masks*, illustrated by Jerry Ingram; *Everybody Needs a Rock*, illustrated by Peter Parnall; *The Desert is Theirs*, also illustrated by Peter Parnall, a Caldecott Honor book; *The Way to Make Perfect Mountains*, illustrated by Leonard F. Chana; and *And it is Still that Way: Legends told by Arizona Indian Children*, illustrated by Lucy Jelinek. Ms. Byrd has lived in the Southwestern U.S all her life, but she is most at home in Arizona.

**Margo Tamez** was born in Austin and raised in San Antonio, Texas. She is a direct descendent of Nde-Dne, Coahuilteco and Spanish peoples who co-mingled, sometimes hospitably and often times not, in the southern-most tip of Texas and the northern Mexican state of Tamaulipas. Her work has appeared in *American Poetry Review*, *Hawaii Pacific Review*, *Cimarron Review*, *Haydens Ferry Review*, *Americas Review*, and several anthologies. She teaches English at Arizona State University, and at Cook College and Theological School in Tempe.

**Chile Festival 3 at Janos**  
Elegant and fiery 5-course meal at the renowned *Janos*. \$100/plate. September 28. Call for details. Eat at *Janos* or the *J Bar* during September and October and eat the NS/S "signature dish." Both benefit NS/S.

**Patagonia Fall Festival**  
Enjoy the festival in Patagonia and visit our farm. October 9-10.

**La Fiesta de Los Chiles**  
October 23-24 at the Tucson Botanical Gardens. Sorry - no reduced price admission for NS/S members this year.

**Voices of the Land**  
Our annual benefit literary reading featuring the authors described in the article on the left. Thursday, November 11 at 7 PM. International Arts Center-Nations Hall, 516 N. 5th Ave. Advance tickets available October 15 at the NS/S store: \$9, NS/S members \$8. \$10 at the door.

**Christmas Open House**  
Join us for holiday shopping at the Native Seeds/SEARCH store. November 20, 526 N. Fourth Avenue. 10-6:30.

**Fourth Avenue Street Fair**  
Complete your holiday shopping outside our front door! December 10-12.



# Achieving a State of Balance

## A Letter from Executive Director, Angelo J. Joaquin, Jr.

Hello, Friends and Members!

I hope most of you are about to celebrate a successful harvest. The monsoon season blessed our area with much rain this year. The crops (and weeds!) at our Conservation Farm in Patagonia certainly took advantage of the moisture as demonstrated by their abundant growth.

As NS/S Native American Outreach Coordinator, I recently arranged an informal meeting of three organizations whose work takes place in two vastly different climates — Hawaii and the Sonoran Desert. Yet, whose focus on culture as it relates to plants, people and a state of wellness is similar. In early June, 'Ano'ano Aloha Executive Director Lani Yamasaki and I visited with Tristan Reader, Co-Director of Tohono O'odham Community Action (TOCA) in Sells. The purpose of the meeting was to compare organizational programs and to acknowledge the challenges and successes of the efforts. We brainstormed on many issues including the criteria used by granting foundations to evaluate projects on Indian reservations and other culturally-based communities.

The mission of 'Ano'ano Aloha is to celebrate family life and the cultural diversity in Hawaii's communities through the traditional Hawaiian values of aloha, aloha 'aina (love for the land), and lokahi (inter-relationship between the Creator, humanity and nature). The non-profit creates and manages innovative community-based social economic development projects which include educational programs and technical assistance. The organization encourages families in Hawaii, especially Hawaiians, to grow native plants used for food, healing and spiritual health in their backyards and community gardens.

TOCA is a non-profit that serves O'odham communities by working to create sustainable community development and cultural revitalization. The group's work includes bringing youth and elders together for basketweaving and gardening activities. The group encourages community members to grow traditional O'odham crops including devils claw which makes up the black portions in O'odham basket designs. A subgroup of TOCA is the Tohono O'odham Basketweavers Organization (TOBO) which buys baskets from 200 member weavers and sells them at art shows and other events.

We toured TOCA's community garden located within walking distance of the Indian Health Service hospital in Sells. Tristan informed us that the number of participants had dropped off — not because of disinterest but due to many of the O'odham starting gardens in their own

back yards. The community garden concept, it seems, was designed for the urban setting where a centrally-located plot allowed neighborhood residents to participate. The Tohono O'odham Nation's 56 communities are scattered throughout a 2.8 million-acre reservation (about the size of the state of Connecticut). Distance is a factor in all aspects of life — getting to work, to medical appointments and other services, to the grocery store, or to other villages to visit friends and relatives — and was a major motivation for people to start their own gardens.

Granting foundations, Tristan pointed out, would probably consider the community garden project a failure. Yet, as one realizes that forty back yard gardens have sprung up where there were none, one concludes that the project was successful in many unexpected ways. The value of O'odham planting traditional crop seeds — tangible connections to their ancestors — and passing these seeds along to their children, with the associated cultural knowledge, cannot be measured. Lani suggested that perhaps it is time that a panel of Native Americans working in Native communities convenes to educate granting foundations and corporations about the cultural values and practices of Native peoples in relation to projects on reservations and on traditional homelands. She felt it was pertinent that Native community leaders be encouraged to participate in defining and implementing this educational service.

The three of us then traveled to a nearby village, located in a traditional farming area, to view the field of an elderly O'odham. Today, the area no longer receives flood water because of dams and other water diversion devices constructed decades ago by U.S. government agencies to keep the village from being washed away. Tristan told us how the almost eighty year-old gentleman — who uses a cane to walk — had carried water in a small pail to each of his plants on the nearly one acre plot during an extended drought a couple of years ago. Each round trip from house to field equaled about a quarter of a mile. TOCA is interested in finding out whether any flood water might be allowed back into some communities so that farming in the traditional method can again take place. In the meantime, the group is working with another elder farmer to re-plant a field where flood waters still run.

The remarkable work of groups and agencies on the Tohono O'odham Nation, unfortunately, is not common knowledge among the residents of the Nation or amongst the groups themselves. Many projects incorpo-

rate the O'odham "Himdag", or "Way of Life", through the use of the O'odham language, the teaching of traditions, and the sponsoring of cultural activities such as harvesting the foods of the desert. It is time to bring these groups together to acknowledge and to celebrate their efforts to keep the Tohono O'odham culture alive. And, to allow the groups themselves to see how these projects might complement and enhance their own work.

The meeting between representatives of 'Ano'ano Aloha, TOCA and Native Seeds/SEARCH illustrates the benefits that result from gathering to compare notes on organizational projects. We parted feeling rejuvenated on many levels. And, with the hope that we will all display the courage, belief and commitment to meet the challenges in our lives in a manner such as the O'odham elder farmer. He continues to respect the cycles of life in the desert, to honor the work of those who have gone before, and to recognize the importance of passing the seeds as well as the farming traditions on to future generations. To do this while faced with almost insurmountable odds, requires the balance of physical, mental and spiritual health. It is vital that we, as organizations and individuals, help each other achieve that balance — that state of wellness — to allow us to continue our work.

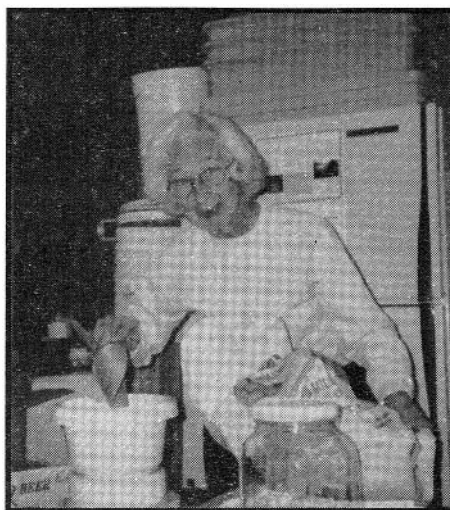
Respectfully,

Angelo J. Joaquin, Jr.  
NS/S Executive Director



## Wishful listings

- Table-top refrigerator
- File cabinets
- CD player for the store
- Computers with Pentium processors
- Folding tables—we are desperately needing 4, 6, and even 8 footers.



Right: Ruth Puller, who has been a NS/S volunteer for almost 10 years, bags beans on Volunteer Thursday at the store.

Thanks, Ruth!

Photo by  
Mary Sarvak

## Volunteers Help Us Grow

by Mary Sarvak, Volunteer Coordinator

With the summer monsoons soon to leave us thankful desert dwellers, we've been busy on volunteer days at NS/S. We've been stompin' on beans and peas (that's threshing for you seed folk) and harvesting succulent melons. We've been continuing the eternal task of prepping our seeds for the Fourth Avenue store, for our catalog, and for the seed bank. We've also been busy down at the store and in the distribution center packin' up tasty guajillo chiles, chipotle flakes, red corn meal, and packaging seeds, a never-ending but ever-rewarding task.

It's great to see so many people checking out our beautiful seeds. A lot of love and good energy is going into the great stuff you buy at NS/S. I really want you to know that!

We've been doing fundraising and membership mailings as well — people are always needed for mailings. When we have a day of mailing, there is always an INCREDIBLE potluck. Should you decide you want to help out at one of our mail fests, please be forewarned not to eat at least a day before you come!

Our crew has also been taking great trips down to the Conservation Farm in Patagonia, AZ. It's a beautiful one hour and 15-minute drive southeast of Tucson. It's also 10 degrees cooler down there — and there's corn, sorghum, squash, beans, melons, tomatoes, chiles, and gourds that you can help grow and tend!

We really need your help! If you're interested in helping our newly sprouted farm, or with any of our other volunteer opportunities, please call Mary at 622-5561.

## Garden Reports: Growing Chiltepin in MD?

Hi! I sowed some chiltepin seeds a while ago, and I've got some nicely sized plants, but they're not too willing to set fruits. Can you give me some general tips on growing chiltepin? Thanks in advance!

Shan Bentz  
College Park, Maryland

Dear Shan:

I'm not sure what kind of care would be best in Maryland, but here we grow chiltepin with some shade. They like a good soil and regular waterings. Chiltepin plants are perennials here, dying back in the winter if there's a frost and coming back in the spring. Mine are beginning to bloom now and I'll probably get ripe fruit by late September and into October and November. You can bring the chiltepin in for the winter. They would need a lot of light – a sunny window would be great. Then when it's warm in the spring you can put them back outside.

Junie Hostetler  
Distribution Department



Dear NS/S: Thank you for providing and propagating your rare seeds. I am now growing Tohono O'odham 60-day corn – it is very vigorous here in central Texas. I'm also growing Punta Banda tomatoes – they are very strong erect plants and are now flowering. Our summers here can be very hot and dry but with a lot of humidity. I feel many of your seeds will do well here. My soil is very sandy – because of my good drainage I'm gradually eliminating raised beds and using your desert method of basins plus grain-straw mulch. I value your catalog over all others. Thank you.

Robert Ayers  
Thorndale, Texas  
6/18/99

Hi Folks: A comment, plus a request/suggestion: your culture/propagation info is VERY useful. Please keep giving us more detailed information on the seeds, how to cultivate them, when to plant, easy/hard to germinate from seed, easy/hard to transplant from starter pots, and so on. With a small garden, I try to plant in "square foot" style with a limited number of plants (of any given type) to produce for my household's use... We might only get a jarful of tepary beans from two or three plants, but it provides interest, variety, and pleasure to have them for a few meals. However, I haven't the space to put in a dozen chile plants, say; I put in only a few. Therefore, the loss (or failure to thrive!) of any one or two plants means I sometimes get no results. (That has been the case with amaranth, bergamot and – while they grew like weeds – my 4-5 gourd plants from last year produced NOT ONE gourd!) But, the amaranth and bergamot, being such small seeds... Yes, I planted more than one or two! Actually, I put in the whole package of bergamot and half the amaranth... got a single amaranth that didn't really thrive, and no bergamot at all. In short, the culture advice is a HUGE help.

Liz Danforth

Dear NS/S: HELP! I had a friend in Tucson purchase some Anasazi Bean seeds from you. I planted them and they are loaded with beans. Now I do not know when they are ready to harvest. Can the whole pod and bean be cooked or canned? Or, do I wait for them to dry out or pull them and dry them? How? I know this is probably a pretty dumb question, but I have only grown bush-type green beans in the past. I would appreciate a quick answer since I do not want them all to go to waste. Thank you and I love all your seeds my friend brought to me. I plan to order more from your website!

Brenda Hobbs

Dear Brenda: It's good to hear so much enthusiasm for our beans! We've never tried cooking Anasazi beans as green beans and don't know how they would turn out. You could try it as an experiment! (Let us know how it turns out.) We always let them dry on the vine and then pick them and prepare them as a dried bean. I hope this is helpful!

Junie Hostetler, Distribution Department

## Life on the Web

Dear Native Seeds/SEARCH: Hi! I was given your web site address by a friend and basket maker, and am very impressed with your site! I have some questions about your Tarahumara items. I am particularly interested in the baskets. The baskets are described as beargrass and sotol, but underneath there is a notation about pine needle baskets. I have seen several baskets offered for sale on the internet, labeled "Tarahumara pine needle baskets." Since your site doesn't contain photos, I am assuming they are similar to the others I have seen, and those didn't look like pine needles to me. I make coiled pine needle baskets and cannot imagine how pine needles can be plaited in that manner, and would love to have a basket of plaited pine needles. Can you fill me in at all? Are pine needles used, or is that just something people call the baskets? I am also interested in the devil's claw seeds. I have very sandy soil, but we have mostly shady (deciduous trees) and alternating hot and very wet. Do you think they will grow under the shade in sandy soil? Is the R4. Tohono O'odham Domesticated. *P. parviflora* var. *hohokamiana* edible, too? Do you know of any written instructions for stripping the claws for use in basketry? Thank you for your attention.

Pamela Zimmerman

Dear Pamela: Thank you for your inquiry about Tarahumara pine needle baskets. The baskets are made in quite a few sizes and shapes such as square, round, and triangular. The Tarahumara use the needles of Apache, Chihuahua and Pino Triste or "Sad Pine" which are 8-10 inches long, if not longer. The baskets are woven in the twilled style with the needles which are soaked in water to make them more pliable. If kept out of the sunlight, the baskets will stay green and keep their piney smell. The devil's claw seeds are edible, but I don't think they will do very well if grown in the shade. For information about the use and stripping of devil's claw fiber in basketry, contact the Tohono O'odham Basketweavers Association at (520) 383-4966.

Betsy Armstrong, Distribution Department

CHECK IT OUT!

[www.nativeseeds.org](http://www.nativeseeds.org)



*This summer NS/S decided to make a big change: we chose to send out a Monsoon Postcard reminder instead of the Monsoon Catalog. We encouraged members and customers to order from their Seedlisting or to check out our catalog on line at [www.nativeseeds.org](http://www.nativeseeds.org). We were a little worried about how people might respond, but so far the response has been overwhelmingly positive. Here are a few samples:*

"I am currently receiving a hard copy of your catalog. I would be happy to view it online, however, I was wondering if you have email notification of updates? To be honest, one reason I like getting the hard copy is that I miss the desert and the catalog keeps me (vicariously) in touch! I'm sure the web site will do the same."

*We will have email notification of updates and reminders when to plant, etc. Ed.*

"Thank you for sending the postcard about the "Monsoon Sale." Please make a note that I am interested in stopping the hard copy of my Seedlisting catalog ... We do pass the copies around with the family and neighbors but let's save the trees and postage money."

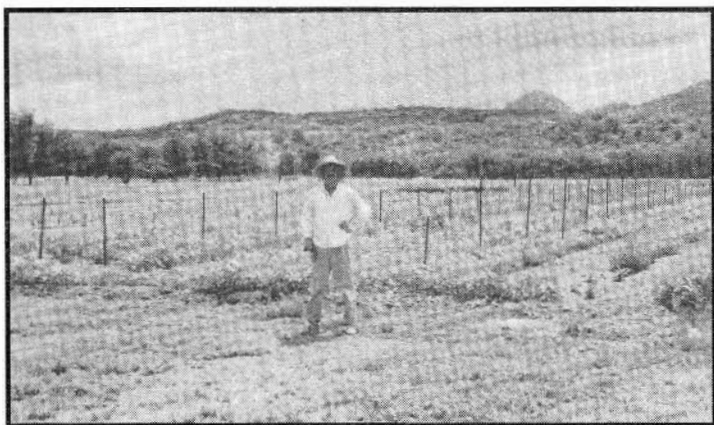
"I really appreciate everyone's hard work and dedication to your very worthwhile projects. I see Native Seeds/SEARCH as an organization that will help us, the inhabitants of this planet, hopefully learn from past misinformation and mistakes, working together, to overcome corporate greed that is trying to develop methods to control plant seeds and farming. Stay well! Peace on Earth!"

"Congratulations on your decision to go online! Please save the paper/printing/ mailing costs and take me off your mail list. I will enjoy watching you build your website. Thanks and keep up the good work."

"First, let me commend you on a clear and well-organized website! ... The Monsoon postcard is a fabulous idea. Kudos to whomever thought to make a mailing of them. A very season-specific attention-getter like this is wonderfully helpful. I love my garden, but it's sadly not my first priority. You guys are great. Someday I'd like to move back to Tucson, and if I ever make it, I'll come pester you in person."

# History in the making at the Conservation Farm

NS/S staff and volunteers just finished planting over 150 varieties of beans, the largest single grow-out in Native Seeds/SEARCH history! All of these beans were over ten years old, so getting them in the ground was critical. We've also planted over 20 varieties of crops to be sold in the catalog, including the favorite varieties of corn, beans, squash, sunflowers, and other popular crops. We're hiring additional staff to help with the added grow-outs, harvesting, and seed processing. Here are a few scenes of what's happening at the farm:



*Farm Manager Matt Suhr standing in front of the grow-out at the Conservation Farm. While Matt has been the only staff stationed at the Farm, he is now joined by Amy Schwemm, our new Conservation Farm Gardener (see the box at right).*



*For the large bean grow-out, small plots of beans were planted 12 feet apart with other crops planted in between to prevent cross-pollination. Each plant which is being grown for regeneration of seed is tagged with a colored flag.*



## News & Notes

**Krishna Raven-Johnson**, Membership & Events Coordinator, left us in August to pursue her massage practice full time. For almost three years, Krishna planned and coordinated all of our events, sent out hundreds of thank you's to members, and generally helped expand our membership and events programs. She also contributed a tremendous amount of class to our organization! Her loss will be felt by all of us for a long time. Thank you, Krishna, for all your hard work and friendship. Good luck!

After many years of hard work, **Brooke Gebow** will no longer be the *Seedlisting* editor. Thanks for putting up with all the "feedback" and for helping us create a wonderful newsletter! We expect to see you around!!

**Shannon Scott** has been hired as the new Membership and Events Coordinator. Shannon has a great deal of experience which we think makes her the ideal candidate for this job. Among other things, Shannon was a travel coordinator for Backroads in Berkeley, taking people on biking and hiking tours all over the world. She has also been a pastry chef, which certainly didn't hurt her chances to join our ever-snacking crew!!

**Amy Schwemm** has been hired as our first Conservation Farm Gardener. She will assist the Farm Manager in planting, harvesting, monitoring, weeding, and other farm activities. Amy has been a faithful volunteer in the Sylvester House gardens for the past year. Welcome, Amy!

**Thank you** to our many donors and funders. Without you we would not be able to continue our conservation efforts. Special thanks to the **Arizona Community Foundation**, who recently granted us \$2500 for the Desert Foods for Diabetes Project.

**Thanks to Doug Biggers and Kay Sather** of the *Tucson Weekly* for a great article about NS/S! If you missed it, you can view the article online at

[www.tucsonweekly.com](http://www.tucsonweekly.com).



**Native Seeds/Search** works to conserve traditional crops, seeds and farming methods that have sustained native peoples throughout the southwestern U.S. and northern Mexico. We promote the use of these ancient crops and their wild relatives by gathering, safeguarding and distributing their seeds, while sharing benefits with traditional communities. We also work to preserve knowledge about their uses. Through research, training and community education, NS/S works to protect biodiversity and to celebrate cultural diversity.

**Board of Directors:** *Chair*, Mahina Drees; *Vice Chair*, Barney T. Burns; *Secretary*, Ed Hacskaylo; *Treasurer*, Don Falk; Bill Fowler, Dody Fugate, Phyllis Hogan, Angelo Joaquin, Jr., Peter Q. Lawson, Hartman Lomawaima, Gary Nabhan, Suzanne Nelson, Simon Ortiz, Ricardo Tapia, & Anita Williams

**Staff:** *Executive Director and Native American Outreach Coordinator*, Angelo Joaquin, Jr.; *Bookkeeper*, Bill Fowler; *Office Director of Conservation & Seed Bank Curator*, Suzanne Nelson; *Assistant Seed Bank Curator and CMB Database Operator*, Yajaira Gray; *Sylvester House Gardener*, Michael Ommaha; *Farm Manager*, Matt Suhr; *Farm Gardener*, Amy Schwemm; *New Mexico Field Manager*, Brett Bakker; *Development Director*, Laura Alexander; *Membership & Events Coordinator*, Shannon Scott; *Diabetes Project Coordinator*, Felipe Molina; *Distribution Manager*, Junie Hostetler; *Distribution Assistant*, Betsy Armstrong; *Assistant Retail Manager and Volunteer Coordinator*, Mary Sarvak; *Retail Assistant*, Marilyn Klepinger.

## the Seedhead News

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**Mailing & Store Address:**  
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Tucson, Arizona 85705-8450

Phone (520) 622-5561  
Fax (520) 622-5591  
website: www.nativeseeds.org  
e-mail: nss@azstarnet.com

**4th Avenue Store Hours:**  
Open Monday - Saturday  
10 a.m. - 5 p.m.  
Sunday, noon - 4 p.m.

**New Mexico Office:**  
P.O. Box 4865, Albuquerque, NM 87196  
(505) 268-9233  
Open Thursday, 9:30 - 3:30 or by  
appointment at 144 Harvard SE

**If you would like to support our conservation work with a monetary gift, please fill out this form and send to:**

**Native Seeds/SEARCH**  
526 N. Fourth Ave.  
Tucson, AZ 85705

**YES!** I support the efforts of Native Seeds/SEARCH to conserve endangered native crops. Enclosed is a gift of:  \$1,000  \$250  \$100  \$50  \$25  
 Other \$ \_\_\_\_\_

Name(s) \_\_\_\_\_

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Payment method:  Check  Money order  
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**Thanks for your support!**

### NS/S Membership Form

Check one:  Renewal  New member  Gift

Associate (\$20 per year)

Low income/student (\$12 per year)

Family (\$35 per year—memberships at this level receive a 10-pack of San Isidro postcards)

Sustaining (\$100 per year—at this level or above, you'll receive San Isidro postcards + a Tarahumara pine bark plaque)

Patron (\$250 per year)

Lifetime (\$500)

Native American outside Greater Southwest (\$15)

Native American within Greater Southwest (free)

Please provide tribal affiliation \_\_\_\_\_

Additional contribution (\$ \_\_\_\_\_)

Check here if you do not want your name exchanged with other groups.

Name(s) \_\_\_\_\_

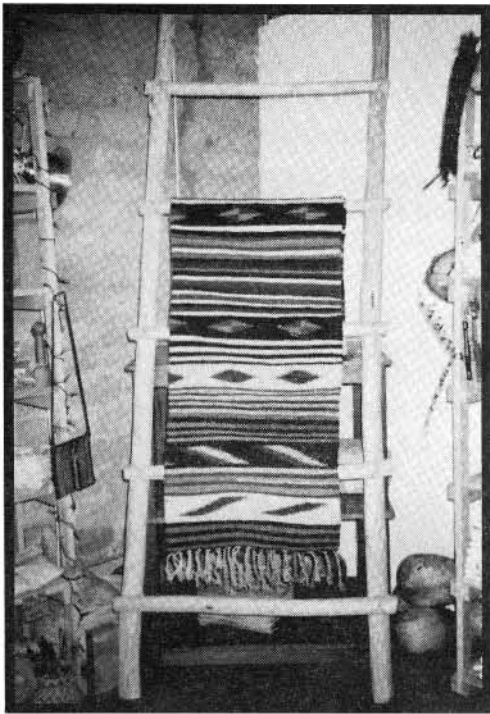
Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Payment method:  check  money order  
credit card:  Visa  MasterCard  Discover/Novus  
Card No. \_\_\_\_\_ Exp. \_\_\_\_\_  
Signature \_\_\_\_\_

# *You could win this Mayo Blanket or Katsina Doll*

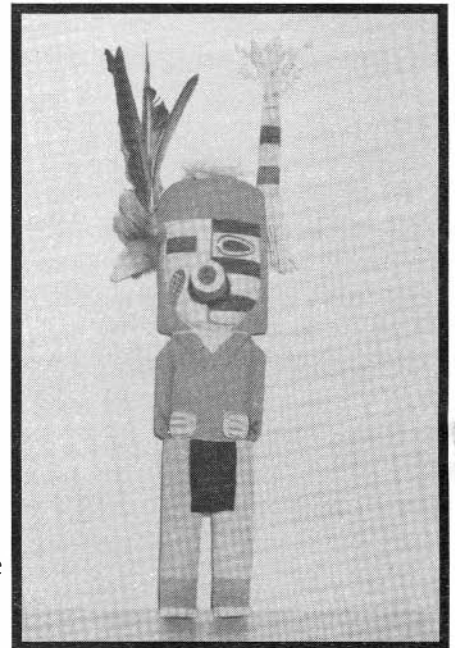
*... just in time for the holidays!*



From now until December 10, we'll be selling tickets to give you a chance to win one of these beautiful items. Just send in your ticket with name, address, and phone number. We'll draw two lucky winners on Friday, December 10, 1999 — just in time for holiday gift giving! Tickets are \$10 each, or 5 tickets for \$40. See page 3 for tickets you can clip and send in. Visit the Fourth Avenue store, where both items will be on display throughout the contest period. Both items were donated and proceeds benefit our conservation work.

The Mayo Blanket (left), donated by Unknown Mexico, was hand-woven on a traditional loom by Selsa Yocupicio Anguamea, a Mayo Indian. The blanket is 100% wool and was made using all natural dyes including Chiju (indigo) for blue, Brasilwood for browns, and tojimal for red. 3 ft. 10 in. wide, 6 ft. long. Retail value: \$600. The traditionally carved Katsina

Doll (right) was donated by Winter Sun. It was made by Philbert Honanie, a Hopi of the Coyote Clan from Hoterilla, AZ. This rendering of "Nah Took Vookeh" or "Half Clown and Half Corn" Katsina is painted with natural mineral and rock pigments and is designed to be hung on the wall. Colors include blue, green, yellow and brown. 1 ft. tall, 6 in. wide. Retail value: \$300.



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