



Seedhead News

A Newsletter for Members of Native Seeds/SEARCH

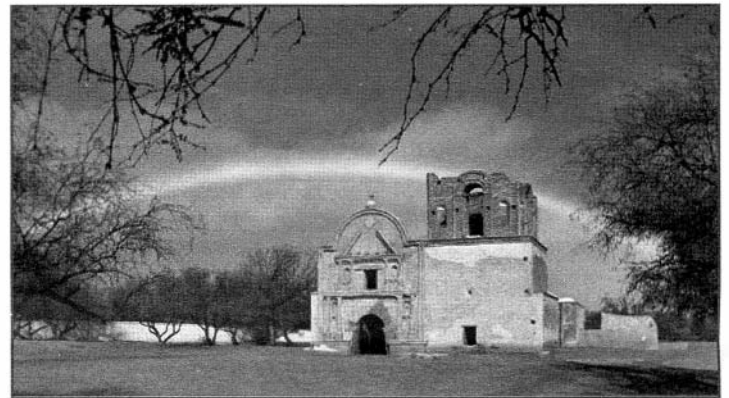
Number 101

Autumn Equinox 2008

Spanish Additions to the Agriculture of the Sonoran Desert

by Barney Burns, PhD

Prehistoric farming began around 2100 B.C. in and around southern Arizona according to recent archaeological discoveries. The first crops planted were corn and squash. The prehistoric residents of the Sonoran Desert, including the Hohokam of Southern Arizona, maintained a much richer inventory of domesticated agricultural crops than the two original cultivars. These arid land adapted crop varieties were both dry farmed and irrigated with live water drawn from local rivers and streams such as the Santa Cruz, Rillito, Gila and Salt Rivers. The Sonoran Desert's original crops included several varieties of corn, squash, common bean, tepary bean, jack bean, tobacco, amaranth, gourds, and panic grass. In addition, cotton was widely grown for its fiber that was spun and woven into intricate clothing and blankets. The food crops produced enough food for the various Native American groups living across the Sonoran Desert to live in fairly large villages and create complex societies with rich material cultures.



Mission San José de Tumacácori was established in January 1691 by Jesuit Father Eusebio Francisco Kino. Photo courtesy NPS.

The European missionaries of the Society of Jesus, or Jesuits, entered southern Sonora in the early 1600s. Father Eusebio Francisco Kino, a native of Italy, became the first Jesuit missionary resident of Sonora's northern frontier called the Pimeria Alta and the home of the O'odham or the Pima Indians as they were originally called. He started a string of Jesuit Missions hoping to plant the seeds of Christianity. But he also brought European crop seeds and cuttings that added a new layer of richness to the existing Sonoran Desert agriculture. These additions augmented the area's summer crops by allowing food production to take place in the winter and spring. Kino and his European Jesuit colleagues also introduced perennial trees and bushes to the Sonoran Desert.

The first European crops to be adopted by the Sonoran Desert's Native Americans were watermelons and other sweet melons like cantaloupes. These delicious crops even arrived in northern Sonora and southern Arizona before the Jesuit missionaries did. Melon seeds were traded north from tribe to tribe and were heartily welcomed as a sweet addition to the local cuisine.

Father Kino and the Jesuits quickly introduced horses, cattle, burros, goats and chickens. Kino immediately brought in European grains, including barley, but especially wheat. At Kino's main

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From our director



*Continuity gives us roots; change gives us branches,
letting us stretch and grow and reach new heights.*

~Pauline Kezer

In life, change is a constant. Dwellers of the Southwest welcome change every summer with the coming of monsoons. We muddle through the suffocating heat of June to then greet the cool winds and rains of July and August. The desert comes alive in blankets of green and bursts of whites, pinks, yellows, reds, and orange.

But with change comes challenges. While many a farmer hopes for rain to quench the thirst of their crops, it is true that there can be too much of a good thing. Having received over five inches of rain in a two-week period this year, Native Seeds/SEARCH's farm in Patagonia is lush with growth. The rains have encouraged tremendously the melons, chiles, devil's claw, sunflowers and corn that we planted this spring. Our pollination cages are literally bulging at the sides and tops. But with that tremendous growth, we have experienced a loss- the watermelons have succumbed to *Anthracnose*, a fungal disease, and we will not be able to harvest seed from many of our watermelon accessions this year.

The great gains and loss that we are experiencing at our farm this year have also been experienced in other parts of the organization. As we have been celebrating 25 years of amazing strides, we have had to say goodbye to a number of highly cherished staff members and volunteers. And with their departures, we have experienced the loss of their knowledge, experience and dedication.

But amidst this change, we perceive great opportunity to stretch and grow and reach new heights. Thus, with changing staff, we see the opportunity to restructure to meet the changing needs of a growing organization and bring new experience, energy, and ideas to take us into the next 25 years. With momentum building in our capital campaign, we feel excitement for a new facility that will be better equipped to permanently preserve the seeds we steward, bring more staff under one roof, and foster a partnership with Pima County to educate the region's youth and citizens on the history and importance of Southwestern agriculture. And with a growing local food movement that emphasizes sustainable agriculture and global food security, we find ourselves poised to be a leader toward those goals.

The strong roots Native Seeds/SEARCH has cultivated for the past twenty-five years has allowed us to preserve the region's precious agricultural resources and the inextricable ties people have to those resources and associated traditions. This year, we articulated that which we are ultimately working toward and I leave you to savor it as much as I do:

We envision the Greater Southwest as a place where farms and gardens, kitchens and tables, stores and restaurants are brimming with the full diversity of aridlands-adapted heirloom crops; people are keeping the unique seeds and agricultural heritage alive; and the crops, in turn, are nourishing humankind.

Bryn E. Jones
Executive Director

The mission of Native Seeds/SEARCH (Southwestern Endangered Aridland Resources Clearing House) is to conserve, distribute, and document the adapted and diverse varieties of agricultural seeds, their wild relatives and the role these seeds play in cultures of the American Southwest and Northwest Mexico.



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Spanish Additions continued from page 1

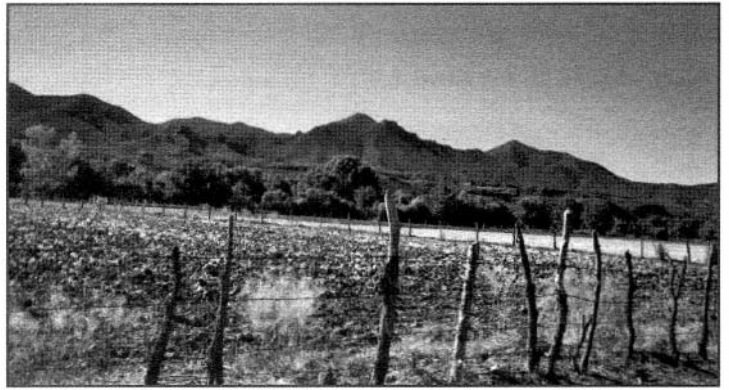
mission of Dolores near Magdalena, Sonora, he planted apricots, figs, grapes, peaches, pears, pomegranates and quinces. The Jesuits later brought in apple, mulberry, orange and plum trees. Some of the earliest vegetable varieties added to the local diet included cabbage, garbanzo beans, lentils and onions. Between 1687 and 1706, the parade of mostly northern European Jesuits further introduced lettuce, carrots, garlic, leeks, radishes and turnips to the mission gardens, as well as black-eyed peas and fava beans. In the realm of herbs and spices, they brought in anise, black mustard, coriander and mint varieties. In frost-free areas of northern Sonora they even planted sugarcane for the production of highly prized sugar.

Father Kino died in 1711 leaving his string of missions at risk especially because of the increasing attacks by the Apaches who supported themselves largely by raiding and warfare. Because of these increasing raids and an O'odham revolt, the Spanish viceroy in Mexico City ordered the establishment in 1752 of a military fort or presidio at Tubac in the Santa Cruz Valley some 40 miles south of present day Tucson, Arizona. The initial Tubac location was selected because Spanish settlers and miners had recently moved into that portion of the Santa Cruz River Valley.

Father Juan Nentvig, a Jesuit, visited Sonora and travelled widely among the O'odham missions taking detailed notes that he incorporated into a book called the *Rudo Ensay: A Description of Sonora and Arizona in 1764*. He noted many additional European crop varieties being grown in northern Sonora. These included: millet, endive, celery, citron, sour seville oranges, olives, bananas and hemp. His notes add the following herbs, spices and medicinal plants of European origin to the region's crop inventories: borage, fennel, mallow, marjoram, oregano, parsley, rosemary, rue, cumin and castor beans.

In 1775, Tubac's military fort or presidio was relocated northward to the present site of Tucson and was named the Presidio of San Augustin de Tucson. The immediate impact of the new presidio at Tucson was much greater protection of the O'odham villages at San Xavier and Tucson. The relocation brought many more Spaniards further north into Arizona. The complement of garrison soldiers, their families and assorted Spanish civilians greatly outnumbered the handful of Jesuit missionaries assigned to Kino's farflung O'odham missions. Irrigated fields strung out along both banks of the Santa Cruz were planted mostly with corn and wheat, but beans, squash, watermelons and other melons were also planted every year.

The increased number of Spaniards in the Tucson area put real pressure on the water of the Santa Cruz River, as well as exerting pressure on the original O'odham farmers of the valley. As military officers and soldiers left the service of the Spanish crown, some of them took up farming and ranching around Tucson's walled presidio, often buying local native lands or perhaps, just as often, appropriating lands for their own use.



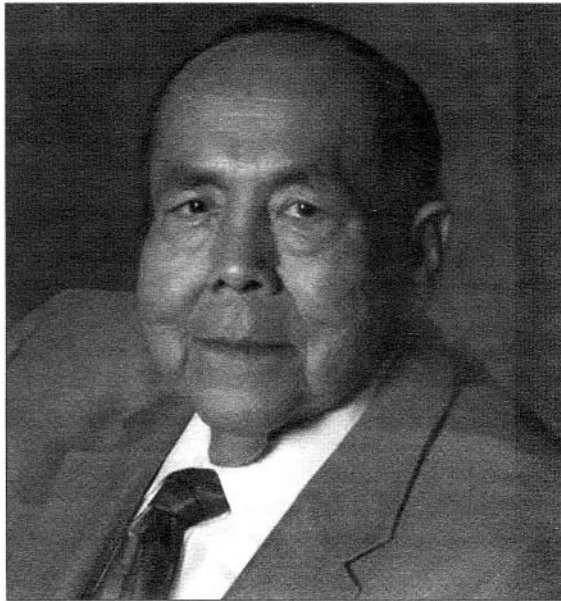
Milpas de Sonora (Sonoran farm fields). Photo courtesy NPS.

In 1821 Mexico became independent from Spain. The Presidio at Tucson continued to be staffed but with Mexican citizens rather than Spaniards. The number of Mexican residents continued to grow across southern Arizona as well as northern Sonora in spite of the almost constant Apache attacks and raids on mines, farms, ranches and any other form of commerce. The increase in Mexican families probably resulted in the introduction of many kitchen garden herbs and medicinal plants to the Tucson area, but specific dated references are lacking.

John Russell Bartlett visited Tucson in 1852 while surveying the proposed new Gadsden Purchase boundary of Mexico and the United States. As the official U.S. Boundary Commissioner he briefly mentioned the crops being grown about a mile west of Tucson in the irrigated fields below Sentinel Peak (A Mountain). He specifically mentioned beans, corn, lentils, onions, peas, squash or pumpkins and wheat. The local orchards included apples, grapes, peaches and pears; however, Bartlett missed noting the valley's lush pomegranate and quince trees. He did not do any sort of exhaustive review of what was present in Tucson's fields or gardens, but it is obvious that the area's crop inventory was a melding of indigenous and European crop varieties, the result of over 150 years of contact between the native O'odham and Spanish and Mexican settlers.

Much of the above information on European crop varieties coming into northern Sonora and Southern Arizona has been extracted from William W. Dunmire's fabulous book *Gardens of New Spain, How Mediterranean Plants and Food Changed America* published by the University of Texas Press. In this excellent piece of research, Dunmire also outlines when and where Mediterranean crops were first introduced by Spaniards into New Mexico, Florida, Texas and the Californias. What is really exciting about his compilation of many historic accounts is that most of these European crop varieties have existed in the Greater Southwest for as long as 200 to 400 years. This discovery demonstrates that these varieties have adapted to our arid region and therefore are potential crops to be added to the collection that NS/S stewards.

Remembering...



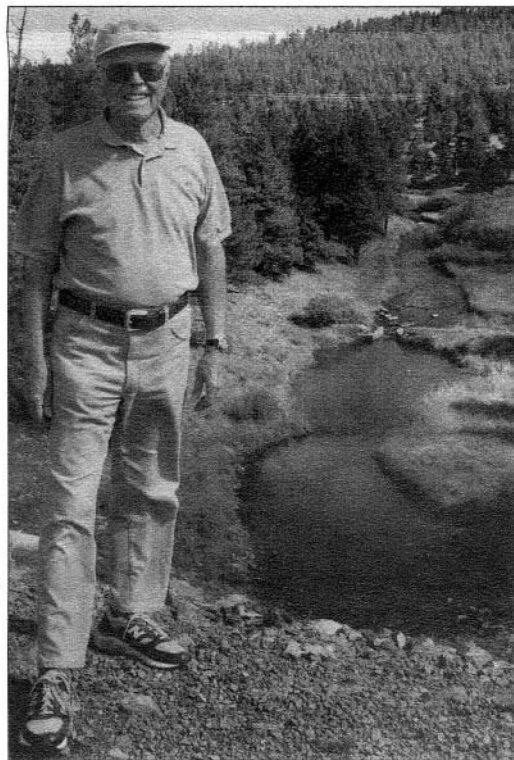
Hartman Lomawaima
1949 –2008

I first worked with Hartman Lomawaima ten years ago when I was the executive director of Native Seeds/SEARCH and he was a member of the Board of Directors. His was the voice of reason—always listening respectfully and considering what had been spoken before responding in a calm, clear manner. His presence at the board table certainly helped the organization work through complex matters of growth and cultural significance. Last October, we again joined forces when I was hired to coordinate the Arizona State Museum's Southwest Indian Art Fair.

He was a compassionate man who always took the time to find out how one was doing. I was going to lunch a couple of weeks ago when I ran into Hartman in the museum lobby. He invited me to sit with him on one of the couches. Putting aside his cane, he asked about the progress of my recovery from a nasty fall last month. After listening to my story, he encouraged me to be patient. And he reminded me that, at our ages, we simply didn't heal as quickly as in the past. He reassured me, however, that I would be well again soon.

Indeed, over the past decade, I would receive a handwritten note or card from Hartman just at the moment my spirit needed a boost. This endearing trait—particularly in this era of impersonal email—of conveying heartfelt messages of encouragement set him still further apart from others. I will miss my friend, colleague and mentor more than I can imagine at this moment. However, I am confident that when I need inspiration, my memories of Hartman will bring a smile to my face and enable me to work through whatever lies in front of me.

—Angelo Joaquin. Photo courtesy Jannelle Weakly, Arizona State Museum



Bruce Symonds
1923 –2008

Bruce Symonds, a long-time Native Seeds/SEARCH volunteer and recent board member, died on March 13, 2008 at the age of 85. I was fortunate to get to know this wonderful man during his six years of volunteer service to Native Seeds/SEARCH and am saddened to lose this special friend. He was a dedicated advocate of our mission and was proud to represent Native Seeds/SEARCH at every opportunity.

When I first met Bruce, I was pleasantly surprised to learn we had something special in common. It turns out he graduated from Dartmouth College as did my father and two older brothers. As part of Tom Brokaw's Greatest Generation, Bruce and my father also served in World War II and later returned to graduate from college. True gentlemen.

Bruce was a devoted husband, father and grandfather. His widow, Zillah, told me how much helping Native Seeds/SEARCH meant to Bruce and how honored he was to be asked to serve on our board of directors. His extensive background in marketing and consulting for agribusinesses, both domestic and international, made Bruce an ideal addition to the Native Seeds/SEARCH board.

He was a man who knew the importance of community and the impact of giving time, experience and support. In addition to Native Seeds/SEARCH, Bruce volunteered at St. Alban's Episcopal Church and The Nature Conservancy. What struck me most about Bruce upon meeting him was how dedicated he was to conservation and global issues. Many of our visits were spent catching up on world events and I always walked away learning something new from this knowledgeable man. Bruce also loved sharing news about his wife, three children and six grandchildren and never failed to ask about my family.

Thanks, Bruce, for being part of Native Seeds/SEARCH and my life. Your presence is deeply missed.

—Diana Peel, friend and Native Seeds/SEARCH staff. Photo courtesy Zillah Symonds: "Bruce in one of his happiest times: in the outdoors with his walking clothes on, investigating the beauty of nature. Greer held something very special and spiritual for him."

Support Native Seeds/SEARCH with a tour of Mexico



Mexico's Copper Canyon: Land of the Tarahumara

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*Join Baja's Frontier Tours and
NS/S founders Barney T. Burns, PhD,
and Mahina Drees for a truly
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You may have been to Copper Canyon before, but you don't know the place and its people until you've traveled there with Dr. Barney T. Burns, who has worked and traded with the Tarahumara for nearly 40 years. Barney will discuss the Tarahumara culture in detail, plus the Yaqui, Mayo, Mennonite and Mormon people and Casas Grandes archaeology as we pass through Sonora, Sinaloa and Chihuahua. Short walks on uneven ground; no hiking required. What sets this program apart is the quality of your learning experience and the knowledge and affability of our leaders and interpreters, not to mention our guests! *Reserve now; this trip fills in advance.*

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NATIVE SEEDS/SEARCH RECEIVES A PORTION OF
THE COST OF THESE TWO TRIPS AS A DONATION.

*We thank Piet and Mary for
their many years of support.*

On the Road with Alex



Joseph Jaramillo. Photo courtesy NS/S.

Isleta Agriculture

Isleta Pueblo, one of nineteen indigenous pueblo tribes in New Mexico, is located thirteen miles south of Albuquerque. Isleta farmers have been tilling the soil for many centuries, long before the Spanish arrived in New Mexico in the 1540s. It has been mentioned that the watermelon seeds originally brought from Africa were introduced in the greater southwest before Francisco Vasquez de Coronado found his way here.

The great pueblo farming tradition continues today. Joseph E. Jaramillo, for example, has farmed all his life. He cultivates 55 acres of land on which he plants blue corn, squash, Anasazi beans, melons, native tobacco, four varieties of chile, and alfalfa hay, grown for his saddle horse and donkey. It was Joseph's discovery of NS/S that prompted him to add tobacco, Anasazi beans, and other seeds to the vast array of crops in his fields.

Mr. Jaramillo earned his bachelors degree at Northeastern Oklahoma University at Talequah and a Masters Degree in Education at Eastern New Mexico University, Portales. For many years he served as Dean of Students at Southwestern Indian Polytechnic Institute in Albuquerque. He is retired and now enjoys being a full-time farmer and sells his alfalfa hay to local cattle growers and horsemen. In recent years he has expanded his farming practice into a business venture called Native Natural — Southwest Dry Foods and he has sold his Anasazi beans and parched blue corn internationally to farflung customers like the Hyatt Hotel in Osaka, Japan. Joseph E. Jaramillo can be contacted at jjsunchaser@comcast.net.

Alex Sando, NS/S Native American Program Coordinator, travels primarily in Arizona and New Mexico and occasionally to Mexico visiting farmers with small family gardens, community gardens, and larger scale farms. On the Road with Alex is a regular feature in Seedhead News. Native Seeds/SEARCH has a free seed policy for Native Americans in the Greater Southwest and details can be found on our website and in our Seedlisting.

Volunteer Highlight

Special Friend to NS/S Takes a Hiatus from the Seeds *by Diana Peel*

Maggie White, one of our long time volunteers, has taken a leave from volunteering with Native Seeds/SEARCH to teach in Ecuador for two years. When I first met Maggie she was an art teacher at the same school where my husband teaches. She was an exceptional addition to our talented volunteer group and eager to learn all about "the seeds". We could consistently count on Maggie to provide quality assistance to any project, working with quiet confidence alongside staff and fellow volunteers. We wish her well as she embarks on her new adventure and look forward to her return. Here are some thoughts from Maggie about volunteering with Native Seeds/SEARCH.



"I've been a volunteer with NS/S for four and a half years. It's really been exciting learning so many aspects about the organization: from

organizing files at the Annex, to planting and harvesting at the Conservation Farm, to packing seeds and assisting customers at the store, to setting up germination tests and trying not to mess up the huge database at Sylvester House. Now I'm preparing for a new adventure: teaching in Quito, Ecuador for the next two years. Although I'll miss NS/S and the quiet, well-behaved seeds, I'm indulging in a longtime dream of living overseas and finally becoming proficient in Spanish. My experiences as a volunteer have opened my eyes to the incredible variety of Southwest native crop seeds, and I look forward to seeking out local varieties in the mercados of Ecuador."

Do you work for a large company?

Many companies have a giving program but an employee must put forward the name of a non-profit in order for them to support the organization. Please consider sponsoring Native Seeds/SEARCH with your company. Call 520.622.0830 for more information.

Cooking with Carolyn

Goat Cheese and Sun-Dried Tomato Rellenos

Reprinted with permission from: *The Great Chiles Rellenos Book*, by Janos Wilder, ©2008. Published by Ten Speed Press.

To make four rellenos:

- 1 cup soft goat cheese
- 2 tablespoons milk
- 4 tablespoons roughly chopped, oil packed sun-dried tomatoes
- 4 tablespoons chopped cilantro
- 2 tablespoons finely chopped scallions
- 4 Anaheim chiles, roasted, peeled, and seeded
- Beer Batter
- Vegetable oil for frying

Blend the goat cheese with the milk so that it's soft and creamy. Fold in the sun-dried tomatoes, cilantro and scallions. Divide the filling into quarters and carefully stuff the chiles. Dip in batter and seal with toothpicks to help contain the stuffing.

Fill a large, heavy skillet with 1 inch of oil and heat to 375 degrees F. Dip the chiles into the batter and fry until golden brown and the filling is hot. Finish in the oven if they turn too brown before the cheese is melted.

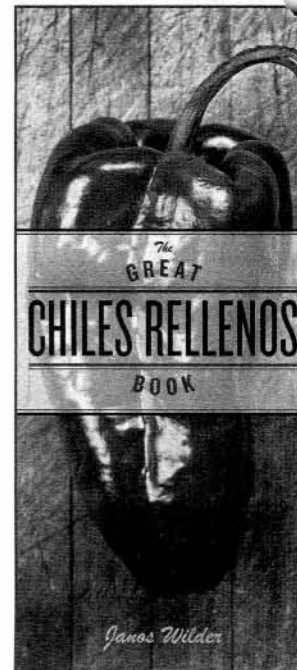
Beer batter:

For 4-6 rellenos: 2 egg whites, 1 whole egg, 1 cup flour, 2 teaspoons olive oil, ½ cup light beer. Whip egg whites until stiff. In a separate bowl, beat the egg, add ¾ cup flour and oil gradually and beat until smooth. Add the beer and mix until lump-free. Fold in the egg whites and refrigerate for up to 30 minutes until cold. Roll rellenos in remaining ¼ cup flour and dip in the batter.

Carolyn's comments: With apologies to Janos! Okay, I could've sworn I had cilantro and scallions when I set out to make this, but no. I had some of Trader Joe's sun-dried tomato pesto that I used with the goat cheese instead and it was a rather good substitute. The richness of the goat cheese needed the bright flavors of fresh herbs and scallions though — I will include those next time. I used Pasilla chiles just because I prefer their flavor for rellenos.

Janos recommends a beer batter for this recipe but a friend taught me to make rellenos with only whipped egg white with a bit of yolk mixed in. It makes a very light batter but you must use it right away. You can scoop the egg around the chile or place the batter in the pan then lay the chile on it and scoop batter around your rellenos. You only need a bit of oil in the pan, just cover the bottom. I find toothpicks get in the way more than help; this filling is nice and solid and held together very well without toothpicks.

I think next time I make this I will not batter the chiles at all. The goat cheese was very rich, and with the batter it was too much for me. I shall roast them *sans* batter — wrapped in bacon and using smaller chiles like yellow or jalapeno, and serve as an appetizer.



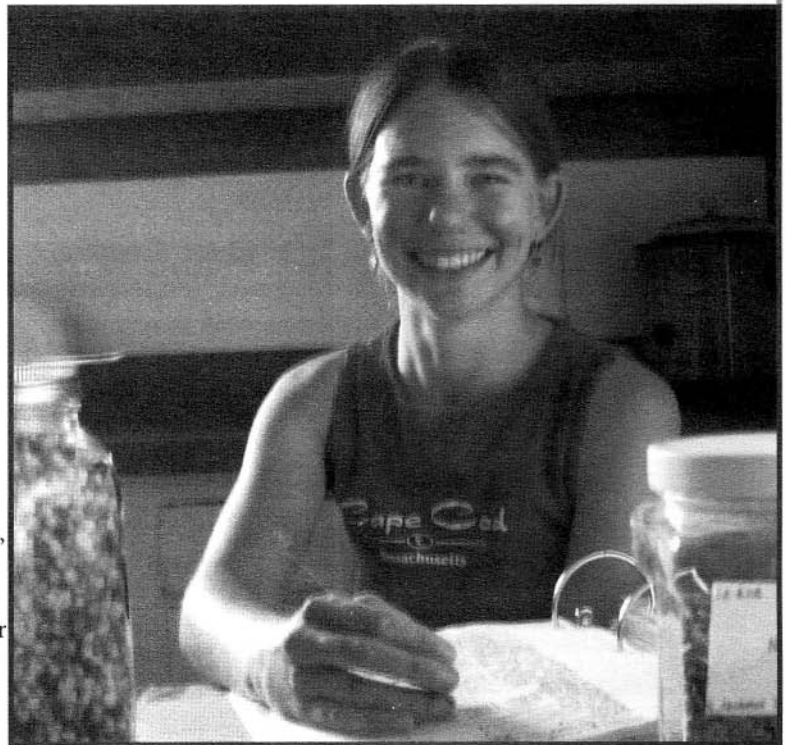
Staff Highlight

Meet Lindsay Werth *by Diana Peel*

What actually does a collections manager do in a seed bank? That question, among others, was put forth to Lindsay Werth as I sat down to talk to her about her position at the Native Seeds/SEARCH seed bank. Lindsay, a recent graduate of Iowa State where she not only earned her undergraduate degree in Agronomy, but also co-masters in Crop Production and Physiology and Sustainable Agriculture, has been working with Native Seeds/SEARCH since April 2008. Summers throughout college were spent doing field research in Farmington, New Mexico, and her thesis was titled "Characterization and Classification of Native American Maize Land Races From the Southwestern U.S."

Lindsay's primary responsibility is weekly data collection from the Summer 2008 seed grow out at the Native Seeds/SEARCH Conservation Farm in Patagonia, Arizona, including measurements and photographs. Once harvest time arrives in the fall, Lindsay will be busy processing the seeds from the farm and setting up new freezer samples for the collection. She has also been spending considerable time doing an inventory of the thousands and thousands of accessions stored at the seed bank, including the huge number of freezer samples. This detailed procedure requires cross checking with the data base and an analysis of archival requirements.

Now that Lindsay has completed the inventory at the seed bank, she commented to me, "we have way too much seed and not enough room to store them!... all five freezers are filled to capacity". She is looking forward to relocating this precious collection to the new seed bank currently in the planning



stages: "How exciting it will be to keep all the seeds in the same place - safe and secure and climate controlled!" We are all looking forward to that day too!

Visit our website — www.nativeseeds.org — for full details on the Native Seeds/SEARCH Capital Campaign and how you can contribute to our success.

New in the Store

Come get your Native Seeds/SEARCH Chico Bag! It's the reusable bag that fits in your pocket.



ChicoBag's mission is to inspire humanity to adopt a healthy reusable bag habit by making it easy for people to say no to single-use bags. This full-size durable polyester bag has a 25lb capacity, but easily folds inside itself to the size of a change purse. A carabiner clips the bag to a key chain, purse, or belt loop. Buy your NS/S ChicoBag for yourself or as a gift and show your support for Native Seeds/SEARCH... and make a sustainable choice.



Book Review

Rainwater Harvesting

for Drylands and Beyond

VOLUME 2
Water-Harvesting
Earthworks

Brad
Lancaster

Foreword by Andy Lipkis

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Rainwater Harvesting for Drylands and Beyond Volume 2: Water-Harvesting Earthworks

by Brad Lancaster, Foreword by Andy Lipkis. 2008, 419pp, Trade paperback, \$32.95, published by Rainsource Press, Tucson.

Review by Kevin Dahl

On the block one down from where I live (in mid-town Tucson) there are two very different front yards right next to each other. One is a holdover from the '60s — a flat plantless expanse covered in gravel you can tell at one time was painted green. I've seen a postcard of such a yard in Sun City on which the owner put an old lawnmower strung with a sign that reads, "Retired!"

There are lots of descendants of the green gravel yard, only slightly improved, covered with different grades and shapes of gravel, mined from various remote and once-beautiful places in the desert and shipped in oil-gulping trucks to provide just the right decorator color (earthtones, of course). Such a yard might boast a small hill or a couple of cacti. These "xero-scapes" might be saving water over a conventional lawn, but...

Look at the yard next door. Bruce and Judith have laid out some meandering paths through several deep and wide basins filled with natural mulch, interesting shrubs, an occasional herb or vegetable, and an abundance of wildflowers in season. The basins collect rainwater (nothing runs off this yard). Cisterns store water collected from their roof to be used in the basins when it doesn't rain. The yard supports several large native trees. It is lush, cool, productive, attractive to our eyes and all sorts of wildlife, and uses no more groundwater than the neighbor's.

Brad Lancaster has studied, created, and championed such rain-fed landscapes, not just in the Southwest but from other arid lands as well. His new book has an incredible amount of information on how to use earthworks (basins, berms, and other features) to direct and store rainfall. His techniques, tips and success stories are inspiring. The reference material astounds me, and there are updates on his website. The illustrations make it seem

all so easy (which some of it is). Put it into practice, and the result creates habitat for both wildlife and us that is so much better than what most landscapers are doing these days. It can restore and refresh.

The book is not just for someone planning for an urban lot. Developers can make good use of these techniques; instead of leaving a big hole at the lowest part of a project, how about collecting water to grow shade trees covering the parking lot (which I think you'd agree is a whole lot better than the mosquito-laden stinking pond that shows up after storms). Well-planned earthworks can also do wonders on the wider landscape, where mismanagement of forests and grasslands has caused huge erosion problems. For instance, Brad includes the story of how Arizona ranchers Joe and Valer Austin have used gabions (wire-net filled rock dams) — 20,000 gabions at last count — to bring back healthy watersheds on thousands of acres. Their efforts benefit both cattle and endangered species alike.

Brad's first book was an overview of water harvesting, concentrating on the principles of how it works. The next in the series will cover more active systems, like cisterns. This book is a how-to manual, and if you are ready to start managing your landscape it is perfect for you. With it, you learn all you need to create functional terraces, French drains, infiltration basins, check dams and diversion swales. I know you want to build and use a bunyip (both an Australian mythical creature and, in this case, a simple water level) — who wouldn't? Brad shows how imprinting, mulching, greywater (kitchen, laundry and shower) harvesting, and replacing hardscape with permeable paving can improve your life. All of our lives, really.

Conservation Update

by Richard Pratt pratt.3@osu.edu

Rich Pratt, maize breeder at Ohio State University, has joined conservation team members Suzanne Nelson and Lindsay Werth in a study of kernel pigment content in Native Seeds/SEARCH's maize accessions. Rich is in Tucson on a short-term research assignment funded by an Ohio Agricultural Research and Development Center Seed grant. The team has been busy pollinating a replicated nursery at the NS/S Farm near Patagonia. The same entries have also been planted in Ohio so that the influence of environmental conditions on pigment variation can be studied. Studies have revealed that carotenoid (responsible for yellows, oranges, and reds) and anthocyanin (responsible for purples and blues) pigments may be of considerable benefit to human health. Unlike Corn Belt maize that is almost exclusively yellow in color, traditional maize varieties from the semi-arid regions of the western USA and Mexico (Arido-America) display incredible genetic diversity for plant, cob and kernel pigment colors.

Rich attended high school in Tucson, and went on to attain his B.S. and M.S. degrees at the University of Arizona. His primary collaborator at OSU is Dr. Joe Scheerens, also a UA alumnus (B.S. and Ph.D. degrees). Joe will oversee the laboratory analyses of pigment content by graduate student Si Hwan Ryu. Rich is enthusiastic about learning more about maize from AridoAmerica and reacquainting himself with the many fascinating people and plants of the Sonoran Desert. This is his first monsoon season in many years, but Rich says the good folks at NS/S are making sure that both he and the plants in the field are staying hydrated!



Thanks Awfully, Julie!

by Betsy Armstrong

Julie Kornmeyer and I met when she was working at Tucson Botanical Gardens and I was starting my career at Native Seeds/SEARCH. Later, after she left TBG, I ran into her when she was working in the Garden Shop at the eastside Home Depot. I didn't see her again until she arrived at NS/S in 2000 to interview for Junie Hostetler's position as Distribution/Retail Manager.



Julie and I have several things in common: she grew up with brothers as did I. We both attended Treehaven School in Tucson (she from 1969-1974 and I in 1957) as a result of our both having asthma. Julie was born in England and I consider myself an Anglophile. I miss our language lessons — Julie taught me the phrase, "packed up" to describe something, such as a refrigerator, that has broken down.) I miss our morning discussions of all things Masterpiece Theatre, Mystery and the Britcoms.

Not only did Julie throw herself into her job at NS/S, but she made it a family affair. Her husband, Rich, did flooring and carpentry projects. Her son, Trevor, came in as needed to assemble donated metal shelving as well as schlep 50 pound bags of beans, etc. Julie's dad, Roy Harris, is still joining us as part of the highly skilled Thursday volunteer group. Julie's daughter, Molly, would appear periodically over the last year with Julie's grandson, Jordan.

Thanks awfully, Julie, for your positive dedication to your job and to the organization. I appreciate your friendship and support over the years and I wish you loads of luck and satisfaction in whatever you decide to do next.

Update on Adopt-A-Crop

by Jules Richelson

It's mostly good news for the Sweet & Spicy Adopt-a-Crop growout. The chiles are thriving and bearing healthy fruit. This year's watermelons were not so lucky. Most of the watermelons were affected by a nasty case of Anthracnose, a fungal disease that is favored under warm, moist conditions. We will likely get healthy seeds to conserve from some, but not all, watermelon varieties. The melons, fortunately, have not been affected. We are optimistic there will be a plentiful harvest of both chiles and melons for future generations to sow again. Thank you to all who have contributed to the 2008 Adopt-a-Crop. Donations for Adopt-a-Crop are welcome year-round online, by mail, and in the store.

Update on our Capital Campaign

by Bryn Jones



Hopefully you've heard the good news: NS/S is well on its way to build a new seed bank to safely store the growing seed collection that we steward. To date, we have raised over \$880,000 toward our \$1 million goal and couldn't be more excited for our future. We have been working very hard with Pima County and The Architecture Company to design a plan at Brandi Fenton Memorial Park to honor, highlight, and educate the public about the agricultural traditions at the site and throughout the region. In addition to our building, which will house our seed bank and processing facilities and much of our staff, the County's plans include classrooms, a plaza for farmers markets, demonstration gardens, and heirloom orchards. Our board has approved a final conceptual floor plan for the NS/S facility and we have just selected a contractor who will soon be working as part of our team towards detailed designs for a facility that will meet the needs of a growing organization. We anticipate beginning construction in the Spring. If you have not yet had the opportunity to support this important step forward for Native Seeds/SEARCH and would like to, please contact Bryn Jones at 520.622.0830 or brynjones@nativeseeds.org, or visit our website at www.nativeseeds.org.

To Contact NS/S Staff

Main office: **520.622.5561**

Toll free: **1.866.622.5561**

Mailing & Store address:
**526 N. Fourth Ave.
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Conservation Assistant Laura Davis

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Distribution Assistants Claire Seesman, Brenna Franco, Dalton Flanagan

Administration 520.622.0830

Director of Operations Julie Evans
Community Relations Coordinator Diana Peel
Native American Program Coordinator Alex Sando
Membership Coordinator Jules Richelson
Bookkeeper Inga Simmonds
Administrative Assistant Sharon McKenzie

News & Notes

Farewells and Welcomes

It has been a busy year for Native Seeds/SEARCH in 2008, with lots of changes in the making. Besides the excitement of our progress with plans for a new seed bank at the Brandi Fenton Memorial Park, we are making great strides with our Adopt-a-Crop Campaign to benefit our Conservation Farm and appreciating increased media acknowledgement.

Along with these changes, we are also experiencing changes in our staff. We say sad farewells to **Julie Kornmeyer, Chris Bertrand, Crecencio Elenes, Kelly Johnson, Carolyn Owens, Sanjeev Pandey, and Sandy Paris.**

While we will miss the staff that has moved on, we are excited to extend a warm welcome to **Sharon McKenzie, Jules Richelson, Lindsay Werth, J.P. Wilhite, Dalton Flanagan, Laura Davis, and Brenna Franco.** Each new addition comes with great experience, energy, and enthusiasm for Native Seeds/SEARCH's work. We are thrilled to have them on board.

Our Condolences

To the families and friends of Hartman Lomawaima & Bruce Symonds.

Wishlist *Call 520.622-5561 for details*

\$3000 for the purchase of a zero-turn riding lawn mower
(contact Suzanne Nelson)

Portable Electronic Cash Register for outreach events
(contact JP Wilhite)

New computer for bookkeeper (contact Inga Simmonds)

Digital camera for outreach and distribution (contact JP Wilhite)

Calendar Highlights



Arizona Harvest Dinner Presented by Chef Janos Wilder A unique benefit dinner to support Native Seeds/SEARCH

Join us at Janos Restaurant, located on the grounds of the Westin La Paloma Resort in Tucson. Start by sampling mouthwatering bocaditos on the patio. Then sit down to savor a four-course dinner featuring desert foods in a menu created especially for this special event. Wines personally selected by Janos accompany each course. Be sure to save room for the decadent dessert!

Tuesday, October 7 at 6pm — Janos Restaurant, 3770 E. Sunrise Drive in Tucson

\$150 per person, includes wine, tax & gratuity. Seating is limited and reservations are required.

Call Janos Restaurant at 520.615.6100 to reserve your space today.

Raffle tickets for this beautiful 25th Anniversary Commemorative Quilt on sale now!

Tickets for this art piece created exclusively by Linda McKittrick, Native Seeds/SEARCH board member, are \$25 each or 5 for \$100 and can be purchased at the retail store. Contact 622.5561 for details. The lucky winner will be announced at this year's Harvest Dinner on October 7. Need not be present to win.



Fall Harvest Celebration!

Saturday, October 18, from noon to 3pm at the NS/S Conservation Farm in Patagonia, Arizona

Join us at the NS/S Conservation Farm in Patagonia for an activity-filled and fun day, including live music, chile roasting and a special activity just for kids! Don't forget your favorite dish for the native foods potluck lunch! Take a tour of the farm, help with one of our harvesting projects or just take in the beautiful views.

Directions to the Conservation Farm from

Tucson: Take 1-10 east for 25 miles, exit at Highway 83, the Sonoita/Patagonia exit. Continue south for 25 miles. In the town of Sonoita turn right towards Patagonia onto Highway 82. After approximately 12 miles look for the green "Welcome to Patagonia" sign on your right. Immediately take the next left onto San Antonia Road. The sign above the entrance reads "Red Mountain Ranch". Drive across the wash. The big, green barn will be on your right. Volunteers will direct you where to park.



Mark Your Calendars!

Saturday, November 22, 1-3pm: **Great Bean Tasting**

Come sample delicious bean recipes, including our famous bean pecan pie, just in time for the holidays! At the NS/S Store, 526 N. Fourth Avenue

December 12, 13 & 14: **Fourth Avenue Winter Street Fair**

Stop by the NS/S store while strolling down the Avenue and find special gifts for those on your holiday list!

Volunteer Opportunities



We have a variety of volunteer opportunities at Native Seeds/SEARCH at all of our locations. Weekday and weekend opportunities are available.

Conservation Center Seed Bank 2130 N. Alvernon Way, Tucson

Seed cleaning and packing, record-keeping, germination tests, data entry, administrative assistance, and cataloging

Fourth Avenue Store & Distribution Center

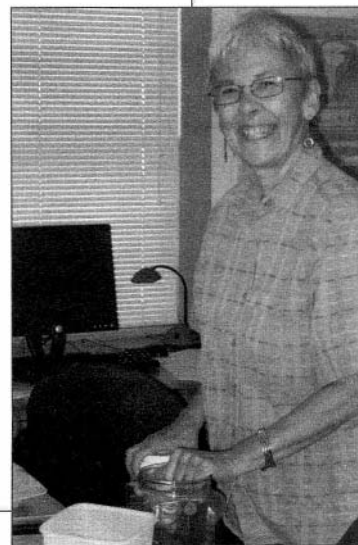
526 N. Fourth Avenue, Tucson

Bag beans, chiles, and other native foods; store clerks; and public outreach

Administrative Offices 220 E. Sixth Street, Tucson

Office assistance such as filing; cataloging small library collection; special events support

Volunteer applications are online at www.nativeseeds.org or contact Diana Peel, Community Relations Coordinator at dpeel@nativeseeds.org or 622.0830.



Native Seeds/SEARCH
526 N. 4th Avenue
Tucson, Arizona 85705



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