



Seedhead News

A Newsletter for Members of Native Seeds/SEARCH

Number 106

Spring/Summer 2010

2

From Our Director

3

Harvesting the Dream

4

An Exciting—and
Challenging—Time for
Ex Situ Conservation of
Crop Diversity

6

Genetic Erosion Through
Plant Variety Loss

7

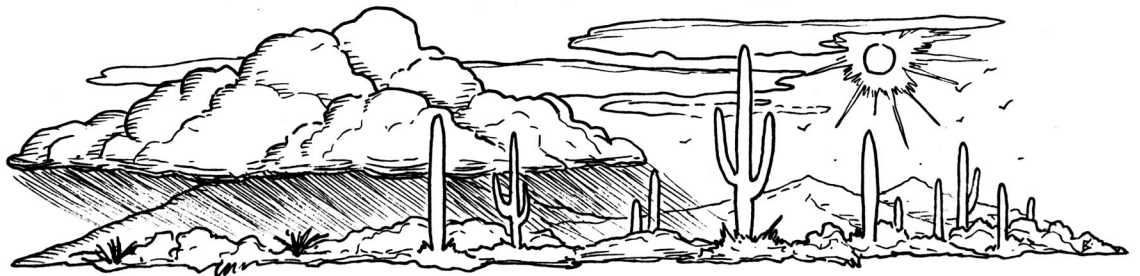
Interactive Fruit
NS/S Staff Highlights

8

From Our Friends
Volunteer Highlight

9~12

Summertime... and the
Giving is Easy Contest!
On the Road with Alex
Flavors of the Desert 2010
To Contact NS/S Staff
Summer Store Hours
Donate Online
News & Notes
Coming Up in 2010
and more!



HELP CALL THE SUMMER RAINS TO THE DESERT! *Celebrate San Juan's Day with Native Seeds/SEARCH*

The annual tradition of celebrating the onset of monsoon season in the Southwest begins with San Juan's Day or *El Dia de San Juan*. According to legend, Spanish explorer Francisco Vasquez Coronado stood on the parched banks of the Santa Cruz River on June 24, 1540 and prayed to St. John the Baptist, the patron saint of water, for rain so the crops would grow. San Juan's Day is linked to the natural cycles of the weather to help desert dwellers appreciate the rich heritage of agricultural traditions from the past.

This year, we'll celebrate at our new Agricultural Conservation Center in the Binghampton National Historic Landscape. Activities will include poetry readings by Ofelia Zepeda and possibly a planting project. Tour our new facility and help call the summer rains to the desert.

Join us for a famous NS/S potluck lunch at 11am. Bring a favorite dish to share. We'll provide the drinks, cups, plates, and eating utensils.

Saturday, June 26
9–11am

at our new AGRICULTURAL
CONSERVATION CENTER in the
Binghampton National Historic
Landscape, 3584 E. River Road

Potluck to follow

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.

— VISION STATEMENT

From our Director

First comes thought; then organization of that thought, into ideas and plans; then transformation of those plans into reality. The beginning, as you will observe, is in your imagination. — Napoleon Hill



Transformation. A state of being that so aptly describes Native Seeds/SEARCH in this moment of time. After five years in the works and with much excitement, in June we move into our new Agricultural Conservation Center in the Binghampton National Historic Landscape across from Brandi Fenton Memorial Park in Tucson! This new center, coming on the heels of opening a new retail store on North Campbell Avenue in Tucson, will provide a safer and more secure location to protect the seeds we steward in the long-term and increase our visibility and opportunities to collaboratively present educational opportunities about the region's rich agricultural legacy, traditions, and resources. In this newsletter, you can read more about how this exciting project has moved from imagination into action — from a dream into reality.

The past few years have required us to focus internally, while we invested our resources on accomplishing the big task of building the new conservation center while maintaining our core operations during challenging economic times. Seeing the facility come to fruition is indeed thrilling and transformative for the organization! As our capital campaign winds down, and as the economy begins to show signs of improvement, we shift our gaze outward again into the regional, national, and global context in which our work exists.

In this issue, you can read how our transformation is keeping up with and contributing to the international movement to conserve agricultural diversity. While our new Agricultural Conservation Center is a very visible transformational step for us, Conservation staff is also working diligently behind the scenes to increase our ability to exchange information with other institutions (including improving our database to be able to “talk” to the universal database Chris Schmidt mentions in his article) and the public (for example, check out our new Southwest Regis-tree webpage online: www.nativeseeds.org/regis-tree).

Our efforts to advance an international agenda and our mission do not stop there. In the Sierra Madres of Mexico, our work with Tarahumara communities is expanding to include a cutting-edge evolutionary breeding program that will recombine traditional seed varieties toward selecting “new” local varieties that best meet communities’ needs. You will read more about this in a future issue, but I wanted to share with you now how truly exciting it is realizing the potential of seeds that we steward.

These projects are not just about what NS/S is accomplishing. They are forward steps as part of a movement to save agricultural diversity for its genetic potential and cultural importance, a movement advanced for generations by a wide diversity of people — gardeners and farmers, chefs and foodies, anthropologists and historians, indigenous peoples and explorers — to name only a few.

For me, our movement has become even more personal than ever, as my husband and I are about to bring our first child into the world.* Nothing makes one think more about the future than one's own children. I have greater motivation than ever to see our greatest thoughts transform into reality, and thus, will be asking all of my friends, family, and colleagues to join us in growing a stronger movement. As members of NS/S, you are part of this movement, and as such, we are also calling upon you to help it grow even stronger by recruiting your friends, family, and colleagues to become NS/S members. Please join me in inviting them to stand strong with us as we continue to forge ahead in accomplishing what is arguably the most critical work for our future survival.

Thank you and all the best,

A handwritten signature in black ink that reads "Suzanne Nelson".

** Please note that I will be on maternity leave for the months of July, August, and September. Suzanne Nelson, Director of Conservation, will be Acting Director during that time.*



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Design: Julie St. John



The southern elevation of our new Agricultural Conservation Center features photovoltaic solar panels donated by Tucson Electric Power and installed by Technicians for Sustainability. A courtyard is enclosed by the building's walls and a beautiful gabion wall.

Harvesting the Dream *by Julie Evans, Director of Development*

Back in 2004 when I joined the staff as Operations Manager, my first big project was to work on assessing the physical space needs at NS/S. Our seed bank facility was filled to the brim, leaving little room for collecting new seeds or for their human caretakers to maneuver around them. We were also renting office space to fit our growing staff.

The first few years of the project were devoted to working with local consultants to plan out what type of space we needed and how much money was feasible to raise from our supporters. Our initial architectural rendering was a grand vision of a soaring structure in the middle of a mesquite bosque and included a restaurant.

Over the ensuing years, we refined our design, discovered an opportunity to partner with Pima County on a parcel of land, and began raising funds. The feasibility study projected our fundraising capacity at \$500,000. To date, we have raised over \$1.1 million in gifts for our new Agricultural Conservation Center. The center will be co-located with Pima County's Environmental Education program within the Binghampton National Historic Landscape.

In mid-June, we will be moving into our 5,200 square foot center, which will house our seed bank, processing area and office space for conservation and administrative staff. The County envisions adding a commercial kitchen, classrooms and a plaza for farmers markets and other community oriented events.

Although I'm often at the site meeting with our contractors or giving tours to existing and potential donors, I never cease to be amazed at how far we've come. I used to talk about the "potential" of Native Seeds/SEARCH; now it's become reality. Thank you for helping us harvest the dream of a new home for our precious seeds. If you have a chance to join us for our San Juan's Day celebration (June 26, beginning at 9am), it will be the first time the center is open to the public. We will have our official dedication ceremony this fall (October 22), which will be a wonderful celebration of all we've accomplished over the past several years.

We welcome your support of this project. There are many ways to contribute. Gifts of cash or stock earmarked for the capital campaign are wonderful (www.nativeseeds.org — right side of home page — or contact me at 520.622.0830). Gifts of furnishings are greatly needed as well. Visit www.alternativegiftregistry.org and type Native Seeds/SEARCH in the search window to see our wish list and current needs. And if you're shopping for a new home or office, please consider purchasing our existing home which we refer to as "Sylvester House". The main house is an historic 1920s adobe located near the Tucson Botanical Gardens. It was built with mud bricks made on site and sits on a three-quarter-acre plot. The buildings (there is also a guest house) are named for the Sylvester family who grew alfalfa, watermelons, onions, and potatoes. For more information about the house or to see the property, please contact Michael Chaisson at Long Realty 520.225.8414 or email him at mcazrealtor@yahoo.com.



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.

An Exciting —and Challenging— Time for *Ex Situ* Conservation of Crop Diversity

by Chris Schmidt, PhD, Curator of Collections

At its core, Native Seeds/SEARCH strives to conserve diversity. From the myriad varieties of agricultural crops and wild plants traditionally utilized in the Southwestern United States and northwest Mexico, to the cultural knowledge of how to grow and use them, we are working to protect the raw materials of food security and sustainability in this arid region. Our dual conservation strategies — *ex situ* preservation of seeds frozen in our genebank, and *in situ* promotion of diversity on farms and in wild places — are aimed at preventing the loss of unique genetic traits and enabling the continued adaptation of crops to environmental change. Worldwide many other organizations, both governmental and non-governmental, pursue similar strategies to conserve crop diversity. At a time when this diversity is becoming ever more critical to dealing with the world's mounting social, economic, and environmental crises, it seems appropriate to reevaluate the priorities and strategies of global crop conservation efforts and examine the larger context in which NS/S operates.

In many ways the infrastructure, opportunities and outlook for global crop conservation have never looked better. New technologies are improving our ability to conserve species that are otherwise difficult to maintain *ex situ*. Advances in data management, networking and geographical information systems (GIS) have the potential to revolutionize how genebanks collect, organize, utilize, and share information about their collections. And an increasing appreciation for *in situ* conservation provides encouragement that this neglected, but vitally important aspect of crop conservation will play a larger role in the future, as it must.

Encouraging signs are apparent at the political and institutional levels as well. The development of a global cooperative system of crop conservation has been acknowledged through international treaties as fundamental to world food security and development. A major step was taken in 2004 with the founding of the Global Crop Diversity Trust, which works to fund crop conservation efforts worldwide. Among its many achievements, the Trust was instrumental in the creation of the Svalbard Global Seed Vault. Completed in 2008, this “doomsday vault” serves as an emergency backup repository of seeds from the world's genebanks. Even more ambitious is the Kew Millennium Seed Bank project, which aims to conserve *ex situ* 25% of the 300,000 described plant species on Earth by 2020; while not focused on agricultural species, the Kew effort will conserve a wealth of useful wild species, including wild relatives of crops. Finally, Bioversity International and the Consultative Group on International Agricultural Research (CGIAR) continue to



Two crop wild relatives in the NS/S collection. Left: Wild Cocolmecha bean (*Phaseolus maculatus maculatus*). Wild relatives of domesticated crops are increasingly being targeted for conservation worldwide because of their unique and invaluable genetic material for crop improvement. Right: Wild luffa (*Luffa operculata*).

do invaluable work to promote the preservation, research, and use of agricultural diversity.

According to a recent report by the UN Food and Agriculture Organization (FAO), there are now more than 1,700 genebanks worldwide, plus major *ex situ* collections in many of the world's 2,500 botanical gardens. Together they hold an estimated 7.4 million individual accessions (an accession represents a single sample from a plant population, collected in a particular time and place), an increase of 23% since the previous FAO report in 1996. For comparison's sake, the Native Seeds/SEARCH collection contains roughly 2,000 accessions — a small percentage of total global holdings, to be sure, but extensive and important in a regional context. A striking pattern that emerged in the FAO analysis was the increasing concentration of the world's seeds in fewer collections — 40% of all accessions are now located in the national genebanks of just seven countries (Brazil, China, France, India, Japan, the United States, and the Russian Federation). An additional nine percent of accessions are held by the eleven genebanks of the CGIAR system, with the remainder held by smaller national and international genebanks, universities, the private sector, and non-governmental organizations. This highlights the need for greater cooperation and exchange among genebanks to ensure that researchers, farmers, and other users of crop diversity retain access to the vast collections of relevant material held by foreign institutions.

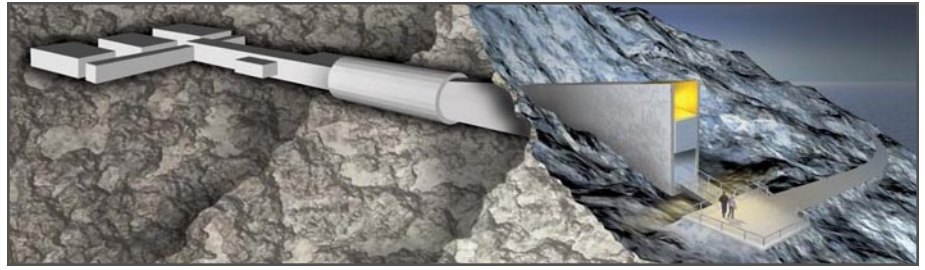
Obtaining an accurate picture of the diversity contained in the world's genebanks is complicated by inconsistencies in species identifications and shortfalls in data management and exchange. Still, a sense of the scale of conserved diversity can be gained by examining data from select genebanks. FAO reports that the eleven CGIAR genebanks together hold germplasm (seeds or other live tissues) for about 3,145 species, while the extensive national genebank system of the USDA holds germplasm of 13,367 species

(four to five percent of all described plant species). For comparison's sake, the NS/S collection includes roughly 106 species of regional importance. The known species diversity within the world's genebank collections has increased more rapidly than the number of unique accessions itself, probably due to an increased focus on the collecting of minor crop species and wild relatives of crops, the latter providing unique and invaluable genetic material for crop improvement. Despite this, the total rate of new collecting has dropped during the past two decades as emphasis has shifted to maintenance, characterization, and evaluation of existing collections, all of which have improved as a result.

Within individual crops, the scale of conserved diversity is astounding, and its distribution among crop types is instructive. Among the millions of accessions held in the world's genebanks, FAO estimates that 45% are grains (including roughly 945,000 accessions of wheat, 780,000 of rice, and 330,000 of maize) and 15% are food legumes (including 260,000 accessions of beans), reflecting both the importance of these crops to world food security and their genetic diversity. (The NS/S collection is similarly concentrated: grains account for 32% of our accessions and legumes account for 30%; cucurbits make up an additional 23%.) While the *ex situ* collections of many important food crops are considered nearly complete, major gaps remain, particularly for wild relatives of crops and minor food crops; future collecting efforts should continue to emphasize these species.

The FAO report and a recent study by Colin Khoury (a former NS/S staff member) and colleagues both highlight a number of challenges for the next decade of global *ex situ* conservation. At a basic level, shortfalls in funding threaten many collections worldwide. This is reflected in an inability to maintain facilities, hire qualified staff, keep proper records, provide adequate storage conditions, regenerate accessions as needed, characterize and evaluate accessions to promote their use, or create security backup collections. The other main constraint preventing the development of a truly global integrated system of *ex situ* crop conservation is the lack of adequate information about most accessions. These data, concerning the origin, appearance, disease and pest resistance, yield, and climatic tolerances of an accession, are needed if the accession is to be found and utilized by farmers, breeders, or other users. A related problem is the absence of a global system for exchanging collection information among genebanks, due in part to poor data standardization and the inability of some genebanks to afford the necessary infrastructure (fortunately, the planned release of a free genebank database package later this year promises to provide a partial solution to this problem).

It appears that great progress has been made in the *ex situ* conservation of crop diversity worldwide. Technological advances, international agreements, and improvements to institutional capacity have laid a solid foundation for the next decade. The onus is on genebanks, national and international political bodies, and current and potential funders to build on the past decade of progress and meet the challenges of the next. A similar story holds



Artist's rendering of the Svalbard Global Seed Vault. Courtesy of Global Crop Diversity Trust.

Some of The World's Largest Genebanks

- National Plant Germplasm System (USA)** World's largest collection of plant germplasm. 530,000 accessions
- Svalbard Global Seed Vault (Norway)** Emergency backup repository of seeds. 500,000 accessions
- ICGR (China)** Chinese national germplasm collection. 392,000 accessions
- NBPGR (India)** Indian national germplasm collection. 366,000 accessions
- VIR (Russia)** The world's first seedbank. 322,000 accessions
- ICARDA (Syria)** Holds world conservation mandate for several legumes and grains of importance to arid regions. 140,000 accessions
- CIMMYT (Mexico)** Holds world conservation mandate for wheat and maize. 120,000 accessions
- ICRISAT (Kenya, Niger)** Holds world conservation mandate for several legumes and grains of importance in the semi-arid tropics. 115,000 accessions
- IIRI (Philippines)** Holds world conservation mandate for rice. 109,000 accessions

Sources: FAO (2009); GRIN (www.ars-grin.gov/npgs/searchgrin.html); SINGER (www.singer.cgiar.org/)

for global *in situ* conservation efforts; these will be reviewed in a later newsletter.

At NS/S we face many of the same challenges that confront genebanks everywhere, and we are working hard to meet them in innovative ways as we enter an exciting period of evaluation, change, and planning for the future. In the next issue of *Seedhead News*, we will highlight the work we are undertaking to improve our collection of crop diversity from the Southwestern United States and northwestern Mexico, and to make it more accessible to everyone who values it as we do. From our new state-of-the-art genebank to improved data tracking and new online tools, 2010 promises to be the start of an exciting new era for conservation at NS/S!



Further Reading

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- Global Crop Diversity Trust: www.croptrust.org/main
- Khoury, C., B. Laliberté and L. Guarino. 2010. Trends in *ex situ* conservation of plant genetic resources: a review of global crop and regional conservation strategies. *Genetic Resources and Crop Evolution*.

Genetic Erosion Through Plant Variety Loss *by Barney T. Burns, PhD*

The loss of crop varieties over time is often called genetic erosion. This ongoing loss has been calculated in a number of different ways by different researchers, usually based on special plant species. Seed Savers Exchange of Decorah, Iowa has tabulated the number of varieties of many garden vegetables offered by commercial seed companies early in the twentieth century. They compared these totals to the number of varieties still being offered by seed companies at the end of the twentieth century. In all cases, the number of varieties available commercially declined, often dramatically. One of the broadest estimates of genetic erosion deals with apples.

It is estimated that in 1900 there were approximately 8,000 to as many as 15,000 named varieties of apples grown across the United States. Obviously, there were cases where the same variety of apple was given different names in different locations, but the vast diversity of apples is apparent. Many named varieties were not widely distributed, but they had unique traits or qualities and were given their own varietal names. By 2000, the number of apple varieties grown in the U.S. dropped to around 2,000 to 3,000. Thus, in only one century, at least 75% of the genetic diversity of U.S. apples was lost. The dramatic reduction in the number of small and medium-sized farms (with their attached orchards) during the twentieth century is well known and is largely to blame for a significant portion of the genetic erosion of apples. The constantly increasing commercialization and conversion to corporate farming of the apple industry also reduced the availability of apple varieties at nurseries, grocery stores, and restaurants. During the 1980s and 1990s most groceries only offered red and golden delicious with an occasional two or three other popular apple varieties. Today, approximately one dozen apple varieties show up in most supermarkets. This is a slight improvement and a response to recent public pressure. Local farmers' markets all across the U.S. are rapidly increasing in numbers and popularity and offer many additional dozens of unique apples. But to really see and taste the rich diversity of our heirloom apples, one must visit individual apple growers and their orchards.

Southern Arizona is home to a number of commercial apple and fruit orchards. Several well-visited apple orchards are located near Willcox and one smaller orchard is just off the paved road that leads to Mt. Graham south of Safford. Beatty's Orchard is situated in the Huachuca Mountains. This orchard offers approximately thirty varieties of apples on 6½ acres. Varieties include such popular types as McIntosh and Spartans. Nine or ten varieties, including Freedom and Enterprise, recently were developed by commercial nurserymen and are patented and available at Beatty's Orchard. A complete listing of this orchard's varieties is available at www.beattyguestranch.com. Ripe apples are available in Southern Arizona during the fall of most years.

One of the most interesting apple orchards in Southern Arizona is located between Sonoita and Elgin at an elevation of forty-five hundred feet. Mark Douglas started this orchard in the early 1970s. The orchard now occupies almost eight acres of bottomland. Mark began his research or experimental orchard slowly, but it now contains six hundred trees including 300 distinct varieties. He has a number of common or popular varieties such as Golden, Yellow, and Red Delicious apples. But he also has approximately 250 heirloom apple types, many of which are quite old and rarely available to the public. The heirlooms include the Northern Spy, my Canadian mother's favorite, along with types sporting such interesting names as Cavill Hiver, Rocksberry Russet (looks like a potato), Ozark Gold, Arkansas Black, Newton Pippin (a good keeper), Grimes Golden (which has a fruttu tutti taste), Cox Orange Pippin, Winter Banana, and Beverly Hills, to name just a few.



Mark comes by his attraction to botany honestly. His grandfather homesteaded in nearby Gardner Canyon, and his father was an ecologist. Mark studied mathematics in college, but became fascinated with apples in the early 1970s. He launched his apple variety-saving efforts shortly afterward. His small orchard helps preserve what remains of the 8,000 – 15,000 named apple varieties that existed in 1900. Without people like Mark Douglas, the world's food supply would be even more limited.

Mark has had indirect contact with Native Seeds/SEARCH over the years. He claims to have bought the very first copy of a poetry book written by Gary Paul Nabhan, one of our founders. The book was a small collection of poetry written by Gary and offered to Mark for free. Mark insisted on paying for the book and, therefore, may have been responsible for accelerating Gary's prolific writing career. Perhaps those early poems inspired Mark to pursue his pomology hobby. Excitingly, Mark has offered apple cuttings from his wonderful trees to NS/S when it expands its own heirloom orchard at the Conservation Farm in nearby Patagonia. We hope agricultural genetic erosion will slow down dramatically during this century and efforts to save heirloom crops will ensure our grandchildren will be able to experience the rich flavors and textures of *Malus malus* and its allied apple species as well as the rich diversity of heirloom vegetable varieties that sustained earlier generations of gardeners all over North America.

The mission of NS/S is all about ensuring that further genetic erosion of our region's 4,000-year agricultural heritage is reduced or stopped. Thank you for supporting our mission and ensuring our unique and rich inventory of heirloom vegetables and crops remain available for generations to come.



Interactive Fruit

by Chris Schmidt, PhD,
Curator of Collections

In 1990, Native Seeds/SEARCH launched an innovative project to document, celebrate, preserve, and promote surviving heirloom fruit and nut trees in Arizona. Eventually expanded to the entire Southwest and renamed the Southwest Regis-Tree, this effort catalogued nearly 100 sites containing historic orchards, homesteads, or exemplary individuals of useful wild perennial species. From 1880s apple orchards and 1920s date groves to ancient agave clones and stands of wild chiles, the Regis-Tree has documented a delicious wealth of local food legacy and its fascinating history.

As part of a grant-funded project with RAFT (Renewing America's Food Traditions), NS/S recently entered this information into a new database and has placed it on our website for the public to explore. The new interactive tools will enable searches for sites with specific criteria: the type of plant present (including common name, variety, and/or taxonomic name), location, establishment date, elevation, and/or distance from an address. Sites matching the supplied criteria will be mapped and described, with links to detailed descriptions of the fruit varieties at each site, when available.

In order for the project to remain relevant, we need updated information about the registered sites. If you know anything about one of the sites, such as changes in land ownership, the current health of the trees, or potential threats to their continued existence, please let us know! If you are familiar with a site that should be included in the Regis-Tree but currently is not, you may download a nomination form from our website and help us keep the Southwest's heirloom trees from fading away. We are most concerned with trees that have been established in the area since before WWII, or descendants of such trees. For further information visit www.nativeseeds.org/regis-tree or email registree@nativeseeds.org.

above: A Jonathan apple tree from 1912 dwarfs Jack Turner.



NS/S Staff Highlights

Meet our 2010 Seed SEARCHers of the Month!

Each month, NS/S employees select one of their peers as the Seed SEARCHer of the Month in recognition of his or her achievements and accomplishments for the organization. We're proud to present our Seed SEARCHers for the first quarter of 2010.



NS/S staff selected Seed Distribution Coordinator **Dawna Gravley** as the January 2010 Seed SEARCHer. Only having been on board a few months, Dawna immediately demonstrated her attention to detail and willingness to take on additional responsibilities in fulfilling seed orders for our retail store. She and her husband have two beautiful daughters, two cats, a dog, and a recently rescued puppy. Dawna currently is pursuing a degree in

landscape architecture and enjoys gardening, singing, reading, hiking, and knitting. Dawna's positive personality is a perfect match for Native Seeds/SEARCH. "I love my job and am thrilled to be part of this organization!" she says. We are fortunate to have Dawna as a member of our NS/S family.

Kieran Conner was named February's Seed SEARCHer after single-handedly cooking a scrumptious breakfast for more than one hundred volunteers, staff, and board members at the annual Volunteer Recognition Breakfast while eight months pregnant with her first child. Coffee cake made from squash grown at the Conservation Farm topped the menu of delicious quiche, potatoes, and fruit and left everyone full and happy. This is Kieran's second award as Seed SEARCHer of the Month.



In March, Director of Distribution **JP Wilhite** was voted Seed SEARCHer of the Month for his Herculean efforts to move our retail store from Fourth Avenue to the new Campbell Avenue location. Supported by his hard-working staff, JP oversaw the entire relocation and was open for business in the new store after only a few days. "I love our new store," he says. "It's beautiful, it's easy to get to, and our new neighbors have been so welcoming." JP has been with NS/S since 2008.

"Everything he touches turns to gold," was one reason NS/S staff overwhelmingly chose Collections Curator **Chris Schmidt** as the April Seed SEARCHer of the Month. In less than a year, Chris' efforts have impacted NS/S in numerous ways. He's focused on making information about our collections more accessible both to staff and the public and created a searchable web page for the Southwest Regis-Tree project. Quick to offer his smile and his help to his co-workers, Chris also was honored with a Seed SEARCHer award in August 2009.

From our friends...

NS/S friends are widespread around the globe. Our website and Facebook page have tracked log-ins from visitors in countries as far away as the Czech Republic, Vietnam, Liberia, Mexico, Greece, Singapore, Dominican Republic, India, Argentina, Ireland, and Taiwan. Thank you for sharing the following with us:

Muchas gracias for your assistance in creating one of the electrical elements of our Ramada. Please come and visit, experience our garden, and know that we appreciate your creative assistance and fiscal element—it's all about growth and plants. Many thanks for supporting our funky Patagonia Community Garden. In fine friendship,

Anita Clovesko-Wharton, Patagonia, Arizona

I have a house in Tucson, but am Canadian and spend the summers in Penticton British Columbia across the border from Yakima, Washington. Penticton is high desert and gets very little rain—between eleven and fourteen inches a year—and is quite hot in summer with long, sunny days. This past summer I took various seeds from Native Seeds/SEARCH and tried them out. I took several kinds of squash, several kinds of beans, some melons, and most importantly chiles. I germinated the seeds around April 1 and had immediate success with the chiles. I chose seeds from your catalog that could grow at 4,000-5,000' elevation. The peppers loved it! I planted Isleta, Escondidas, Tabasco, San Juan, and Negro chiles. In Penticton you put your plants out around the third week in May. My chiles were three to five inches tall. By June 23, they had grown to twelve to eighteen inches. I harvested peppers from the Negros and the San Juans on July 24 and the Escondidas shortly after. By summer's end—late September—the plants were almost four feet high and loaded with peppers. All my neighbors enjoyed fresh peppers through the summer and fall. There were so many that we all ate peppers and peaches, pepper and blackberries, peppers and pears, as well as dried peppers and hot sauces of many different kinds. Thanks!

Aaron Anderson, Penticton, British Columbia

Thank you, thank you, THANK YOU!

I could not be happier with my order. In approximately two weeks, I'm seeing almost one hundred percent germination on the Hermosillo Select seed and the Tohono O'odham seeds are beginning to break though. Even if I don't get a single sprout from the South Texas pequins, I'm already way ahead of my last attempts. Thanks again!

Mark A. Kaczynski

Recently I discovered your interesting website in search of coloured varieties of maize. Of course, the commercial side of farming only makes a tiny subset of all the variety available—which is why I was so glad to see the amazing range you keep for posterity. I also see that you sell Teosinte and Devil's Claw—things I've only heard about—never seen—which is splendid! Cheerio and thank you! Best wishes,

David Hopkins, Sleaford, Lincolnshire, United Kingdom

SHARE YOUR EXPERIENCE!

Have you had fun and success growing NS/S seeds? We love hearing your stories and would like to highlight them in our newsletter. Please email your experience and photos to membership@native-seeds.org

Volunteer Highlight

Meet Suzy Lillis

*by Jules Richelson,
Volunteer Coordinator*

Meet Suzy Lillis. Chances are you already have. Suzy has volunteered with Native Seeds/SEARCH for approximately ten years as a core volunteer at the store. Suzy and her husband Bill were long-time members of



(this is a woman not interested in sitting still!) Suzy continually searches for intriguing projects. At the store, Suzy's tasks involve preparing mail orders, checking in the seeds the store receives from the Seed Bank, putting them in their appropriate boxes, and general stocking of merchandise. A few years ago, Suzy was an integral part of a major shift that happened in the organization. At that time, the distribution store had its OWN wall of seed jars, just like the Seed Bank. Volunteers, most notably Suzy and Maggie White, would stand by a table and tediously fill seed packets. If the store ran out of packets for something a customer asked for, a staff member or volunteer would run to the seed packing table, weigh and measure out the seeds, stick them in a packet, smack a label on the front, and sell them. The decision was made to keep all seed jars together, safe and climate controlled at the Seed Bank, and free up space at the store. It was a wise move, but took A GREAT DEAL of effort to make it happen, with special thanks to Suzy and Maggie for the overtime they put in to help us through it. The seeds are now kept safely with the Seed Bank, and kinks are ironed out of the system. Today, seed packing is done by the Seed Bank Wednesday volunteer group, after being prepared by Seed Bank Tuesday volunteers, all under the oversight of our Seed Distribution Coordinator, Dawna Gravley.

What is Suzy's inspiration to put in all of her hard work? She calls it a firm toss-up. The mission and work that NS/S does with environmental conservation and local food production are high on Suzy's values list. To exemplify this, she also volunteers with Tucson's Community Food Bank and purchases beans, agave nectar, chia, chiles, moles and craft items from the NS/S store. And then there are the people of NS/S, staff and other volunteers. Betsy and Suzy have grown to be close personal friends, even outside the organization. Suzy's Tuesday cohort is Susan Anderson. Suzy and Susan make quite a pair, except when either woman is traveling. And whenever I run an idea past Suzy about the volunteer program, she emphatically responds, "Make sure to run it by the other volunteers!" Suzy and her husband continue to be staunch supporters of NS/S, attending Flavors of the Desert and our other numerous gatherings and potlucks.

Summertime... and the giving is easy!

Recruit your friends, family, and colleagues and win!

Saturday, June 12 — Saturday, July 31

Here's your chance to add members to the NS/S family and win cool prizes while doing it! Don't know what to get Dad this year for Father's Day? Clueless about a gift for a new grad? This summer make the giving easy with a NS/S membership. A twelve-month membership gives all year long with store and online discounts, special invitations to events, and more.

Your membership dollars help:

- ✧ Ensure important and threatened crops grow in our fields every year
- ✧ Provide free seeds to Native farmers and gardeners to sustain their agricultural traditions
- ✧ Promote the use of ancient crops through public events such as cooking demonstrations
- ✧ Safeguard access to more than 1,800 varieties of traditional agricultural crops of the Southwest
- ✧ Run the freezers that preserve the seeds for generations to come

This summer, more than ever, we're looking for new members to join our family and support our conservation efforts. Each time you recruit a friend or buy a gift membership, you increase your chances of winning spectacular prizes. The more people you get to join NS/S, the more chances you have to win!

BE SURE YOUR FRIENDS TELL US YOU SENT THEM!

The top three recruiters will win:

FIRST PRIZE: *Two tickets to the Fourteenth Annual Harvest Dinner with Chef Janos Wilder and a one-night stay at Westin La Paloma on October 21, 2010*

SECOND PRIZE: *A backpack cooler from REI*

THIRD PRIZE: *A NS/S gift basket filled with delicious flavors of the Southwest*

It's quick and easy to become a member:

- ✧ Choose a level: \$30 Squash, \$50 Gourd, \$100 Bean, \$250 Chile, \$500 Corn, \$1000 Sunflower
- ✧ Return remittance envelope
- ✧ Visit www.nativeseeds.org
- ✧ Email membership@nativeseeds.org
- ✧ Call 520.622.0830



In order to win, your name must be listed as the recruiter.

Name _____

Address _____

City _____ State _____ Zip _____

Email _____

I was recruited by _____

On the Road with Alex: Native Views on Sustainable Foods

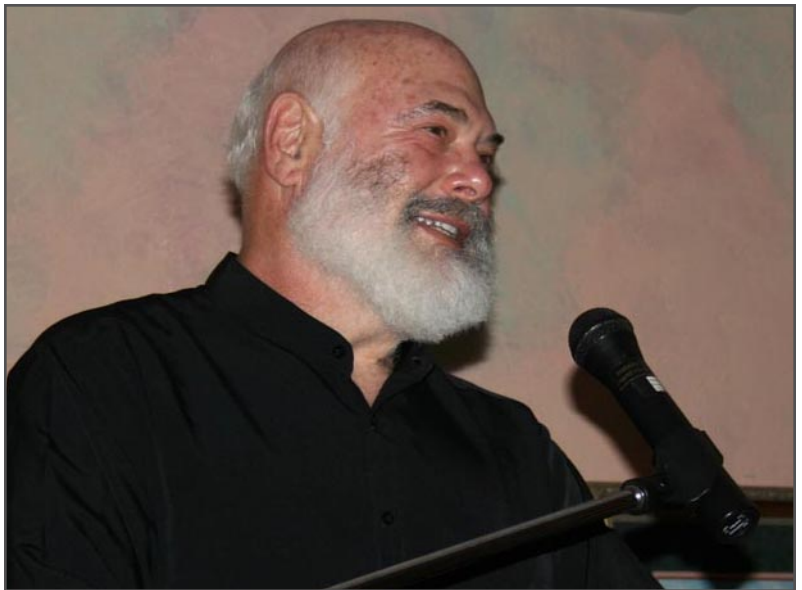
In April, I joined nationally acclaimed author, orator and Native activist Winona LaDuke (Anishinabe) and environmental historian Ken Zontek, author of *Buffalo National: American Indian Efforts to Restore the Bison* as part of an Earth Day celebration at The Smithsonian National Museum of the American Indian George Gustav Heye Center in New York City. We spoke to a diverse audience of almost 400 people, including a student from the Tohono O'odham Nation. Ms. LaDuke discussed her efforts in establishing Honor the Earth and White Earth Land Recovery Project in an attempt to raise awareness of and increase support for indigenous justice in the protection of agriculture on Native land. Mr. Zontek talked about his recent book and I shared information about traditional indigenous agriculture, seed saving, NS/S' Cultural Memory Bank Project, and our mission. A lively question-and-answer session followed our presentations and ended with a wonderful comment by a woman in the audience. "This is the best way to celebrate Earth Day!"



Alex Sando, (Jemez Pueblo) NS/S Native American Program Coordinator, travels primarily in Arizona and New Mexico and occasionally to Mexico visiting small family farms, community gardens, and larger scale farms.

Tokens for Bags Program at Buffalo Exchange

Buffalo Exchange has chosen Native Seeds/SEARCH as one of three non-profit organizations in its Tokens for Bag Program. From July through December 2010, customers in the Tucson store may opt to take a token worth five cents and donate it to NS/S rather than take a plastic bag. Buffalo Exchange has generated nearly \$358,000 for hundreds of local non-profit organizations since 1994 and saved 7.2 million bags. We're proud to be part of this important program. *Thank you Buffalo Exchange!*



Dr. Andrew Weil challenged the audience to re-examine how and what they eat.

Flavors of the Desert 2010

NS/S friends and supporters braved a rainy March evening and gathered at the Historic Manning House in downtown Tucson to celebrate Flavors of the Desert 2010. Chef Elizabeth Blair prepared a delicious feast of culinary treats that included bean mole with roasted squash calabacitas, chile-roasted game hens with jalapeno-orange sauce, grilled fish with melon and jicama salsa, and green corn chile casserole. For dessert, guests dined on chocolate-ancho chile mousse and Mrs. Burns' lemon basil squares. The musical group *Entre Peruanos* serenaded the crowd with traditional folk music from the Andes mountain regions of Peru, Bolivia, Argentina, and Ecuador. Poet Luci Tapahonso (Diné) offered a pre-dinner reading before Dr. Andrew Weil's keynote address.

NS/S Board Member Michael McDonald (right) served as Master of Ceremonies and donned a bee outfit to encourage guests to make donations to fund interns to pollinate the crops at the Conservation Farm this summer.



Thank you to our Flavors of the Desert 2010 Sponsor
Desert Diamond Casinos

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We appreciate the help and collaboration of the
Sonoran Food Poetry Coalition

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Director of Development Julie Evans
Membership & Events Coordinator Suzanne Jameson
Volunteer Coordinator Jules Richelson
Administrative Assistant Maureen Moynihan

Summer Store Hours

Beginning June 1 through August 31,
our summer store hours are:

Monday—Saturday: 10am–5pm; Sunday: Closed

(Avoid traffic delays during construction on Campbell
and Ft. Lowell by taking Hedrick east from Mountain)

Donate Online

Visit our website at www.nativeseeds.org and donate online. Now it's even easier to support Native Seeds/SEARCH on our secure website. Go to Support and select how you'd like to make a donation. Your ongoing support ensures the precious agrobiodiversity of the Southwestern U.S. and northwest Mexico given to us by past generations remains available to current and future generations.

Please email donate@nativeseeds.org if you need assistance. *Thank you.*

News & Notes

Farewells and Welcomes

We're happy to welcome **Elaine Terrell** as our new weekend Retail Associate. Previously a Tucson Botanical Garden employee, Elaine brings years of gift store experience and a wealth of plant knowledge with her. Please stop in the store and say hello.

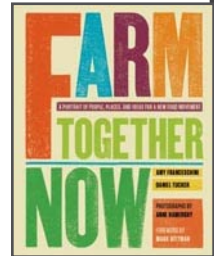
After many years of serving on the NS/S board, we bid farewell to former chair **Susan Kunz** and former treasurer **Jacob Bernal**. We appreciate their tireless work to preserve Southwestern biodiversity and wish them well.

We're pleased to introduce new NS/S board member **Bill McDorman**. Bill is president of Seeds Trust, one of the world's only seed companies specializing in non-hybrid vegetable and wildflower seeds adapted to high elevations. He is a member of the Arizona Native Plant Society and the Northwest Coalition for Alternatives to Pesticides and currently serves on the Arizona Humanities Council.

We were Recognized!

Native Seeds/SEARCH is one of twenty groups across the U.S. selected to be in a book about people engaged in sustainable practices, politics, and community building. *Farm Together Now: A portrait of people, places, and ideas for a new food movement* is written by Amy Franceschini and Daniel Tucker

with photographs by Anne Hamersky. The authors visited twenty farms coast to coast, talking with farmers about their roles in sustainable food production, public policy, and community organizing efforts. The book will be published by Chronicle Books in late 2010 and the authors will deposit half of their profits into a fund to encourage like-minded documentary projects. More information about *Farm Together Now* may be found at farmtogethernow.org or on *Facebook*.



Another new book, *edible: A Celebration of Local Food*, lists Native Seeds/SEARCH in its exploration of America's local food heroes and traditions. Written by Tracey Ryder and Carole Topalian, *edible* offers engaging, inspiring profiles of farmers, artisans, chefs, and organizations that are making a difference, and shares eighty seasonal recipes that highlight the very best local foods across the country. In an interview with eatdrinkbetter.com, Tracey Ryder was asked: "With local food awareness on the rise, which organizations and places are doing the best at helping us find ways to give back to our local communities?" Her response: "There are so many, ...but in terms helping folks grow better food (the most local of all food, since it comes from their own backyard), there are two standouts: Native Seeds/SEARCH in Tucson and Seed Savers Exchange in Iowa — both do an amazing job at preserving native foods and heirlooms and have amazing product and seed lines available to the public." You can read the complete interview at eatdrinkbetter.com — and search for "edible" in the book review category. The book is available at bookstores or at ediblecommunities.com.

Find us on Facebook!

Join almost 2,000 other NS/S fans and get the latest on news and events!



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Native Seeds/SEARCH
3584 E. River Road
Tucson, Arizona 85718

Coming Up in 2010

Saturday, June 12 — Saturday, July 31

Sizzling Summer Membership Drive

Saturday, June 26

San Juan's Day Celebration at the new
Agricultural Conservation Center
3584 E. River Road, 9–11am
Potluck to follow

Saturday, October 16

Harvest Fest at the Conservation Farm
Patagonia AZ, 10am–noon
Potluck to follow

Thursday, October 21

14th Annual Harvest Dinner
with Chef Janos Wilder
3770 E. Sunrise Drive, 6–10pm

Friday, October 22

Ribbon-cutting and Dedication of
NS/S Agricultural Conservation Center
3584 E. River Road

Who Uses Native Seeds/SEARCH Products?

Many of you have asked which restaurants use NS/S products in their cuisine. Here's a partial list of those eateries that support biodiversity and sustainable agriculture.

Angelica Kitchen *New York, NY*

Canela Bistro *Sonoita, AZ*

Deseo at The Westin Kierland *Scottsdale, AZ*

Desert Diamond Casinos *Tucson, AZ*

Dos Silos *Tubac, AZ*

Frontier Grill *Chicago, IL*

Hacienda del Sol *Tucson, AZ*

Hash House a Go Go *Las Vegas, NV*

Janos *Tucson, AZ*

Kai at the Sheraton Wild Horse Pass Resort *Chandler, AZ*

Pastiche *Tucson, AZ*

Petite Maison *Scottsdale, AZ*

Stables Ranch Grille *Tubac, AZ*

Tonto Bar and Grill *Cave Creek, AZ*