



the Seedhead News

OUR 10th ANNIVERSARY!

Sowing Native Seeds for a Decade of Growth

Back in 1983, when four friends chipped in \$100 each to found Native Seeds/SEARCH, no one could have foreseen the organization 10 years later with diverse initiatives in diabetes research, a Native American farmers' association, protecting habitat and agriculture in the Sierra Madre, establishing a botanical area of wild crop relatives, and preserving heirloom fruit and nut trees. Uniting all these projects is the mission stated in the 1983 incorporation papers: "To conserve and promote the use of native or adapted agriculturally valuable plants and to establish by research their cultural, nutritive, and ecological value..."

In celebration of our tenth-year milestone, we asked the four founders—Gary Nabhan, Mahina Drees, Karen Reichhardt and Barney Burns—to share some memories of the early days and thoughts on NS/S today.



Photo by Sandra J. Turner

The Germination of Native Seeds

By Gary Nabhan

At the root of Native Seeds/SEARCH are friendships, an interest in seed diversity, and respect of indigenous cultures.

For me, Native Seeds germinated in a rich medium of friendships. I recall the warm conversations with Mahina on our first seed-collecting trip in 1976—a search for heirlooms at the Cochise Co. Fair and wild teparies in the Huachuca mountains.

Upcoming Events

April 15: People & Plants of the Southwest lecture series: *Mother Corn, the Hopi Tradition*, by Denise Masayesva, TBG, 7 pm, \$5–6.

April 17: Waila Festival, Arizona Historical Society, 949 E. 2nd Street, 5–11 p.m. FREE! See page 6 for details.

June 24: San Juan's Day sunrise ceremony at NS/S garden. Celebrate the summer rains! See page 5.

June 26: Summer Planting Workshop at NS/S garden. 7–9 am, \$8–10. See page 5 for details.

A partial gathering of Native Seeds/SEARCH staff and friends in 1987. Front row (L–R): Dale Turner, Esther Moore, Muffin Burgess, Sue Skirvin with son, Carl, and Kevin Dahl with son, Brian. Back Row (L–R): Joe Laferriere, Barney Burns, Robert Wheeler, Bob Sullivan, April Baisan, Mahina Drees, and Linda Parker.

Sharing the excitement of field work with Karen Reichhardt goes back to 1973, when we explored the Seri Indian coast of the Sea of Cortez during a Prescott College ecology course. And then there were the endless swaps of stories with Barney Burns, as we looked at Mayo weavings and Tarahumara runner beans when he lived in a "miniature museum" a few blocks north of the University and during our hilarious burro ride into the Guarjio barrancas in search of panicgrass. We raised a lot of cane (sorghum) but little panic.

Other friends were just as important in keeping the seed bed warm and fertile in those early days: Tom Orum, Nancy Ferguson, Cynthia Anson, Carrie Niethammer, Charlie Miksicek, Laura Merrick, Amadeo Rea, Tom Sheridan, Helga Teiwes, Cary Fowler, Kent Whealy, Noel Vietmeyer, and Howard Gentry. They gave us encouragement when there was

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Germination of Native Seeds (cont'd)



Seedsavers All—Robert Bye, Bill Feldman, Richard Felger, and Gary Nabhan flank Howard S. Gentry, the great plant explorer of northwest Mexico and leading authority on agaves. The Sierra Madre trip that NS/S founders Nabhan and Burns recall here retraced Gentry's 1935 journey into the Guarijio barrancas, where Gentry found the rare grain panicgrass still in cultivation. Gentry died April 1 in Tucson at the age of 89.

no organization, no funds, just abounding interest. The others who joined us—Kevin, Linda, Muffin, Vicki, Junie, Denise, Daniela, and many others—have that same interest.

We share a fascination with the diversity of seeds and their stories—the heat adaptations of teparies, the heat of chiltepinas, the cultural holocausts that had nearly wiped out Sonoran panicgrass, grain amaranth, and Hopi sunflowers. We love their beauty and rich cultural histories.

We recognized that some cultures had been exchanging seeds and stories for millennia. We hoped we could exchange both seeds and information with a reciprocity and mutual respect between parties. We knew that we live in a multicultural region, and each culture has its own contributions and peculiarities. We learned from many people of various cultures, and tried to return something to them, as well: Joe and Ruth Giff of the Gila River Pima; Adalberto Cruz and the Sanchez family of northern Sonora; Fred and Alice Kaboutie at Hopi; Chester Gaspar of Zuni; Jerome Ascencio, Delores Lewis, Aloysia Valenzuela, and Laura Kerman of the Tohono O'odham; Valentin, the Guarijio harp player, and Cruz Castellano of the Mt. Pima.

If there was one moment that I knew Native Seeds/SEARCH had to come into existence, it was when Mahina and I were still seed banking through Meals for Millions. We had submitted a modest budget proposal to travel into Mexico with some Tohono O'odham farmers to look for seeds and small farm technologies that had once served them, but had been lost over the years. Our proposal was turned down, because Mexico was in MFM's Latin American program, and we were in the U.S.; any seed collecting in Mexico (45 miles from us) had to be done by the Latin American office (1,000 miles away!). When the rejection call came, we were dumbfounded. We asked, "Where are you calling from?" The bureaucrat replied, "From Santa Monica, you know, in Greater Los Angeles." To which we responded, "Isn't that in Latin America, just as Tucson is?"

If there was a way to bring down artificial barriers while at the same time respecting cultures, we needed a new organization to do just that. Native Seeds was it.

Scent of a Vulture

By Mahina Drees

The beauty of the seeds is what drew me to seek out and protect the domestic crops and their wild relatives of the Greater Southwest. The colors of the corns and beans caught my eye, but the lasting intrigue is in the incredible diversity of shapes, shades and their manifestation in myriad plant forms. Desert farming and gardening can lead one to wonder if agriculture is what created the love for gambling in humans. You can fertilize, weed, protect, and water, but the bottom line is still, "If the creek don't rise"—or perhaps in the Southwest, "If the creek *does* rise."

Although our organization may seem a little "funky," it was our ability to operate on a low budget with little technology that allowed Native Seeds/SEARCH and the seeds to survive our early years—sometimes even when our *simple* technology failed.

When we first spun off from Meals for Millions, we had the seeds and one old refrigerator, which were stored in Gary and Karen's "guest house." The seed collection was still fairly small then, and Gary used the refrigerator's freezer section to store road kills for a colleague who had a scientific collecting permit to study pesticide residues in dead birds.

Gary had obtained a dead vulture and was holding it in the freezer until his friend could retrieve it. One day, unbeknownst to anyone, the electricity went down in the guest house. When I opened the refrigerator door, the smell of the rotting vulture practically knocked me out the door! I spent hours rebottling and rebagging the entire collection of seeds outdoors, but the odor clung to the labels. It wouldn't surprise me if there aren't still a few old collections that have a faint pungent odor of dead vulture. Luckily, the seeds were unharmed.

There were many times when, if we had stopped to think about it, we might have felt overwhelmed by trying to create Native Seeds/SEARCH. In 1984, the four of us sent out 30,000 catalogs in order to expand our base. Fortunately, I



Charlie Miksicek and Mahina Drees confer over corn accessions from an early collecting trip.



Corn Mother—Mahina notes row and kernel numbers, cob size, and other characteristics to accession more than 200 corn collections from Mexico and northern New Mexico.

had a three-bedroom home where we could spread out, and Barney had a Blazer for hauling the mail bags. That marathon mailing took several weeks and many trips to the post office. That same house also allowed us to spread out and accession over 200 collections a few years later when we got a corn collecting grant from Pioneer Hybrid.

When we finally moved into a real office at the Tucson Botanical Gardens, we had only one of the six rooms we currently occupy. And *now* even they are overflowing.

Taking the Seeds Back Home

By Karen Reichhardt

Nearly every year for the past 15 years, I have visited an elderly O'odham woman in Topawa, AZ. She lives in an adobe rancheria surrounded by an ocotillo fence. In the same yard is a smaller adobe where her brother Jose (pronounced Hoo-see in O'odham) lived. Next to his house is a large garden plot, which Jose carefully tended. This is the first time in all those years that weeds are growing in the garden instead of native foods. Jose has gone to a nursing home.

Some of the first collections of Native Seeds/SEARCH seeds came from that garden. Jose's garden was also one of



Laura Kerman and Gary Nabhan share a dance in April 1991.

the early fulfillments of Native Seeds/SEARCH's promise because we returned to Jose other traditional seeds that had been lost from his family. Teparies and corn were always planted in summer. In winter these would be replaced with even rows of

lentils, peas, and garbanzos. Bottle gourd plants graced a fence near a water faucet. Jose's sister, Laura Kerman, has been one of our best sources of knowledge on O'odham ways of farming. She spoke at our first San Juan's Day Fiesta, and sang rain songs accompanied by a gourd rattle her brother had grown.

Native Seeds/SEARCH grew out of many friendships with tribal elders such as the Kermans. What seemed as evident then as it does now was that many seed stocks would not survive without conscious and careful collection. Often, we would search for a particular bean or sunflower seed and find it growing in the garden of an elder. The gardeners and farmers seemed to know, too, that their seeds needed help to survive. They would



Karen Reichhardt in the first NS/S demonstration garden at Tucson Botanical Gardens.

reach into their seed jars and give us a handful of seed. We brought it back to Tucson to increase it. Sometimes we were able to return with a different kind of seed that our donors had wanted or asked about.

In many ways the needs of Native Seeds/SEARCH remain the same: careful maintenance of the seed collection; networking with Native Americans and encouraging gardening of native foods; and continuing to offer the seed to the public. These activities help maintain the stability and diversity necessary for the seeds to survive.

I'd like to thank everyone who has gotten involved with Native Seeds/SEARCH. In whatever way you have contributed—by volunteering or working on staff, or as a member who buys and grows seeds, your efforts are important. Those seeds will sustain us!

Memories of the Hunt

By Barney Burns

Gary Nabhan has already described in *Gathering the Desert* the search for viable panicgrass seed. But Gary did not, by any means, describe the most memorable events of that 1978 odyssey.

Gary, Tom Sheridan, and I drove from Tucson to the far western flanks of the Sierra Madre above San Bernardo,

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YAQUI DEER SONGS: MASO BWIKAM

By Larry Evers and Felipe Molina

(These excerpts from Yaqui Deer Songs, published in 1987 by Sun Tracks and the University of Arizona Press, are reprinted with permission. We are proud to offer this book, coauthored by NSIS staff member Felipe Molina, as a membership premium. See page 5 for details.)

This is a collection of writing about the enchanted talk of Yaqui deer songs. In it we offer our translations of the words of deer songs which continue to be sung in Yaqui communities in both Sonora and Arizona. These are translations from a living tradition which stretches back past the time the Spanish slave trader Diego de Guzman first encountered Yaquis in 1533 into time immemorial. The songs are still sung, and those who are interested will not have a hard time finding a place to stand and listen. Those who do will know that deer songs are more than words. Yaquis relish the preparations in smoke and silence, the sermons and speechmaking, gossip, the smell of mesquite fires and stew, as well as the rasp and rattle and rush of the dance. Before the deer singers ever utter a word, the *rama* is already full of meaning.

Yaqui and Spanish have been spoken together in Yaqui communities for some 450 years now, and the language of many Yaqui speakers shows considerable Spanish influence. The impact of Spanish on the language of deer songs, however, seems limited. Most Yaquis believe that deer songs perpetuate the oldest form of their language. In that sense deer songs are regarded as one of the most essential expressions of what it is to remain Yaqui after four and one-half centuries of attempts to destroy their communities and to dissolve them as a people. The continuance of Yaqui deer songs is thus directly related to Yaqui memories of their history and survival as a people.



At left, renowned Yaqui Deer Dancer Luis Cienfuego dances in a ceremony near Marana, AZ, in 1988.

Photo ©1988 David Burckhalter

TUKA YOLEMEM

Tukawa yolemem
hainhuni ka howaka
hiokot sem hiusaka
Tuka tukawa yolememmm

Tukawa yolemem
hainhuni ka howaka
hiokot sem hiusaka
Tuka tukawa yolememmm

Tukawa yolemem
hainhuni ka howaka
hiokot sem hiusaka
Tuka tukawa yolememmm

Ayaman ne seyewailo
naiyoli yo tuka aniwapo
chewa yolemem
Hainhuni ka howaka
hakun kukusiata
hiokot sem hiyawa
Tuka tukawa yolememmm

NIGHT PEOPLE

Night people,
though nothing is done to them,
they go sounding pitifully.
Night, night people.

Night people,
though nothing is done to them,
they go sounding pitifully.
Night, night people.

Night people,
though nothing is done to them,
they go sounding pitifully.
Night, night people.

Over there, I, in the flower-covered
cherished, enchanted night world,
I am more human.
Though nothing is done to them,
somewhere, loudly,
they go sounding pitifully.
Night, night people.

Don Jesús said that the night people in this song were bats. They make a sound like a cry or a whine as they fly around at night.... An evaluator came to talk with us about our Yaqui bilingual program at Richey School.... She said, "Indians don't have adjectives. Only white people use a lot of adjectives. Indians get right to the point." The beauty of the tonua, final stanza, is how the adjectives pile up.

TOSALI VAESEVOLIM

Tosali vaesvolimtea
hepelamsum chasaka
Tosali vaesvolimtea
hepelamsum chasaka

Tosali vaesvolimte
hepelamsum chasaka
Tosali vaesvolimtea
hepelamsum chasaka

Tosali vaesvolimtea
hepelamsum chasaka
Tosali vaesvolimtea
hepelamsum chasaka

Tosali vaesvolimtea
hepelamsum chasaka
Tosali vaesvolimtea
hepelamsum chasaka

Ayaman ne seyewailo
taa'ata yeulu weyevetana
yeulu katekai
sime huya aniwachi
sea helpeamsum chasaka
Tosali vaesevolimtea
hepelamsum chasaka

WHITE BUTTERFLIES

White butterflies, they say,
in a row are flying,
White butterflies, they say,
in a row are flying.

White butterflies, they say,
in a row are flying,
White butterflies, they say,
in a row are flying.

White butterflies, they say,
in a row are flying,
White butterflies, they say,
in a row are flying.

White butterflies, they say,
in a row are flying,
White butterflies, they say,
in a row are flying.

Over there, I, where the flower-covered
sun comes out,
they are emerging,
all through the wilderness world,
in a row they are flying,
White butterflies, they say,
in a row are flying.

*That is the butterflies.... Whenever it is
going to rain, you will see them
coming... The pahkolam throw white
corn kernels or dry leaves...up into the
air. "Here they come," they will say.*

San Juan's Day Sunrise Ceremony and Planting Workshop Celebrate the Summer Rains

Join us June 24 in celebrating the beginning of the summer monsoon season and the traditional planting time for Sonoran desert farming peoples. They recognized the summer solstice as a time of renewal and a signal for planting tepary beans, squash, and corn. Dia de San Juan is still celebrated in rural Sonora with music, dancing, ritual bathing, and blessings with water.

We invite members and friends to gather at sunrise (about 5:30 a.m.) on Thursday, June 24, at the NS/S garden area at Tucson Botanical Gardens, 2150 N. Alvernon, for blessings, songs, dancing, and desert

foods. Bring a rhythmic instrument to help call the rain, and beware the water fight that is almost certain to break out at the end.

Learn how to take advantage of the rains and the desert-adapted seeds of traditional peoples at our Summer Planting Workshop, Saturday, June 26, from 7–9 a.m. Garden Manager Linda MacElwee will cover bed preparation, seeds, and easy water conservation techniques. Fee: NS/S members \$8; public \$10. Turn to page 9 for a registration form. For more information about the ceremony or workshop, call 327-9123.

Diabetes Coordinator Felipe Molina Brings Yaqui Insights to NS/S Staff

Yaqui deer singer, author, and educator Felipe Molina recently joined the Native Seeds/SEARCH staff to coordinate the Diabetes Project. Growing up in Yoem Pueblo, a small Yaqui village near Marana, AZ, Felipe saw firsthand the devastating effects of the disease. "I know about diabetes in a personal way," he says. "My mom, aunts, cousins, and neighbors all suffer from it."

Felipe plans to journey to his people's Sonora, Mexico, homeland to learn about foods traditionally served at ceremonies. He hopes they can replace some of the fatty foods and supermarket sweets now found on feast tables. At a recent ceremony, Felipe calculated that more than 60 percent of the foods served were high in fat or sugar.

In his family's household, Felipe learned many of the traditional ways. "My grandmother was the story teller in our family. She passed on the knowledge from her elders to us. She taught us about plants and how they are our brothers and sisters. The knowledge is still there, but with TV, cars, and more moving around, few are tapping into it."

Felipe is now assuming the role of teacher in his family and community—part of his obligation for the knowledge handed down to him. He teaches

courses in Yaqui culture and works with elementary school children. In addition, he performs and teaches the ancient Yaqui deer songs that "bring the traditions from the past to us."

A GOOD DEED DESERVES A GOOD READ

Native Seeds/SEARCH is pleased to offer members who join at the \$30 Family Membership level your choice of either this fine book, *Yaqui Deer Songs*, the winner of the Chicago Folklore Prize, or *Mayor-domo: Chronicle of an Acequia in Northern New Mexico*, by Stanley Crawford, from the University of New Mexico Press.

Universally lauded, *Mayor-domo* tells the story of of a New Mexico irrigation ditch and the village community it binds together. To Edward Abbey, the book was "a vivid evocation of the life I was born into: wresting something to eat from dirt, rock, brush, wind and water."

Those who join as Sustaining, Patron, or Lifetime Members will receive both books. See page 11 for a Membership form.

Memories of the Hunt

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Sonora, in my old yellow Blazer. The autumn's heat was oppressive in the desert and thorn forest, but finally broke in the cool pines surrounding Rancho Quemado and the small town of El Trijo. We found some mules to rent, but after shrewdly negotiating a price for the Mexican owner's prized animals, we had to confess that we also needed a guide familiar with the local trails. The rancher said he was too busy to guide us himself, as were all the other adult men of the small village. But the rancher's 13-year-old son could act as our guide. After all, we were only traveling 65–70 miles across a 3,000-foot-deep canyon. An adult really was not necessary for such a simple trip.

We met our young guide early the next morning and rode rapidly from El Trijo past Rancho Quemado to the southern brink of "Arroyo El Limon"—the 3,000-foot-deep canyon we had to cross on our way to Rancho Pitaybo and the Guarijio village of Guaseremos. Our guide had decided to eschew trails and take the most direct route to the old Russo family hacienda of El Limon—a free-fall descent down a boulder-choked debouchment of a small perennial stream. The ride was so steep that my stirrups feet remained above my mule's head the entire way.

The three of us lurched back and forth and from side to side as our mules jumped and stretched from boulder to boulder. Every five or ten minutes, our guide stopped us to adjust the mules' tack, checking and tightening the belly cinches. Sheridan's stirrups had to be adjusted often, as he sank farther and farther into his saddle. Once or twice I looked over a topographic map I carried, just to confirm the rapidity of our fall. Tom constantly called out, "Mula! Mula!"—perhaps to reassure Gary and me, since we were both very nervous about the ride.

We finally made it to Rancho El Limon at the bottom of the canyon and just above a lovely, wide, and surprisingly deep stream. A break was called, and we all rested and ate lunch in the shade of a large mesquite tree. Our young guide had been most helpful to each of us during the descent. I sensed he was very curious about us. He had known the



Barney Burns and Bruce Huckell at work on a stone retaining wall for the Hopi terrace garden in the present NS/S demonstration garden.

American owners of Rancho Quemado, but he had never traveled with anyone remotely like the three young "scientists" he now guided.

After finishing his lunch, he could no longer contain his curiosity. He looked Gary directly in the eye and said, "You don't know much about mules, do you?"

"Well, no," Gary admitted, allowing as how he was sort of new to backcountry mule riding.

After a few minutes, the boy turned to Tom and said, "You don't know much about saddles and tack, do you?" Sheridan turned red and mumbled that some tack was a bit more complicated than other tack.

Before long our guide looked me over and said, "You really don't know where you are going, do you?" I blushed scarlet and let on that I, the expedition's "official" guide and map reader, really did not know exactly where we were headed or how we were supposed to get there.

The honest responses to his questions just seemed to puzzle our young guide more and more. He remained hunkered down, scratched his head, and finally politely but firmly asked us, "Well, just what *do* you know?"

The three of us were speechless at such a profound but simple question. None of us ever really gave the boy an answer. Over the last 15 years that question has haunted me. I still muse about it, trying to fashion some sort of reponse, usually when sitting around campfires in the backwoods of Sonora or Chihuahua. I am still not sure what answer any of the three of us might give, even after earning our PhDs at the University of Arizona.

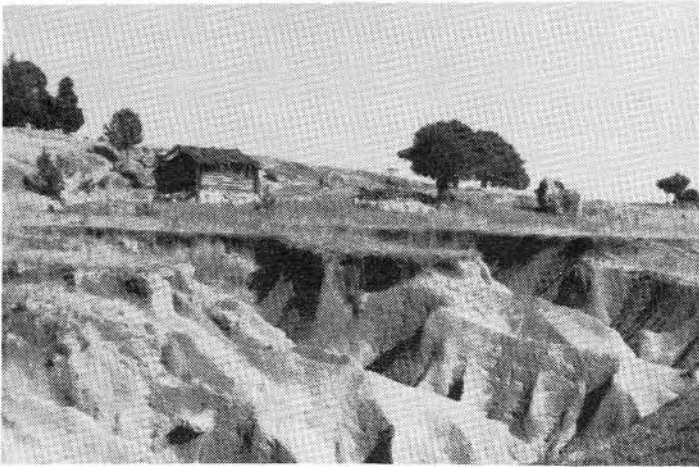
Put Your Dancin' Shoes On! The Waila Festival Rolls Into Town April 17

Two-step the night away at the 5th annual Waila Festival, Saturday, April 17, at the Arizona Historical Society, 949 E. 2nd St, Tucson. Four Tohono O'odham bands on two stages will regale music and dance lovers with polkas, schottisches, cumbias, and all the other infectious music the Tohono O'odham Nation has made its own. The celebration, from 5–11 p.m., honors the music, the musicmakers, and all who let their tapping feet lead them onto the dance floor.

Native Seeds/SEARCH is an official sponsor of this year's Festival, and several of the 10 food booths will be serving tepary beans or cholla buds from NS/S as healthy additions to other toothsome delights. O'odham artisans will also be on hand to demonstrate and sell their crafts.

Waila—derived from *baile*, the Spanish word for "dance"—music has been a part of Tohono O'odham culture since at least the 1880s, when musicians adapted popular European dance music. Some 100 Tohono O'odham elders will be present to be honored as special guests. Make plans to come and share in this lively, living expression of southern Arizona culture. Admission is free.

Concern Grows Over Sierra Madre Logging Plans



A recently cut road eats away the fields of a Tarahumara rancharia. The World Bank logging project's road "rehabilitation" and "maintenance" will hasten the erosion of farmlands and mountain ecosystems. Photo by Linda MacElwee

By Barney Burns

The World Bank's Sierra Madre Occidental Forestry Development loan to Mexico remained on hold as of early April. Two critical environmental studies were finally submitted in March for the World Bank's review. One is an evaluation of endangered and threatened plant and animal habitat by the Centro de Ecologia of UNAM, while the other, by the University of Chihuahua, locates areas of old-growth forests.

Native Seeds/SEARCH was told that the studies are likely to be publicly released in June, in conjunction with a workshop sponsored by the World Bank and Mexico's Secretary of Agriculture and Water Resources (SARH). The workshop's purpose is to identify sensitive biological areas within the forests of Chihuahua and Durango and determine how best to protect or buffer them from future logging, pulping, or general development. Dr. Augusta Molnar, the World Bank project director, says that concerned nongovernmental organizations, along with "forest producers" in Mexico's northern Sierra Madre, will be invited.

Indications are that the World Bank intends to begin disbursing the loan monies, probably soon after the work-

SPECIAL THANKS

Native Seeds/SEARCH would like to publicly express its heartfelt thanks to members of Great Britain's royal family for their concern with the issues raised by the rapid development of the northern Sierra Madre. We appreciate their involvement in calling attention to this area's unique resources and values and their work in alerting public officials of several governments to the true costs of such "development."

shop. However, SARH's budget does not include the \$46 million needed to match the World Bank's \$45 million loan. If this budgetary complication is resolved, the project could get under way this summer.

An ever-increasing number of individuals and organizations in both the U.S. and Mexico are joining NS/S in voicing concern that the World Bank and SARH make good their promises to protect the northern Sierra Madre's rich biodiversity and cultural heritage. The actual impacts of the loan, for good or evil, on the region will be determined by the still murky details of the project and the dedication of World Bank and SARH officials to their often-stated goals to protect the area's human, plant, and animal communities.

Historic Tucson Ranch House Soon to Be NS/S Office Annex



A Very Nice House—Native Seeds/SEARCH is set to purchase the three-quarter-acre Sylvester family property just south of Tucson Botanical Gardens. And, yes, there are two cats in the yard.

Something had to be done! If you've stopped by our offices at Tucson Botanical Gardens lately, you know that Native Seeds/SEARCH is bursting at the seams. Several solutions to the space problem were considered, none ideal.

Then we learned that the original ranch house for the quarter-section of land on which TBG is located was on the market—just a half-block south of the Gardens. Two historic adobe buildings, a three-quarter-acre lot for sorely needed grow-out of endangered collections, and an ancient bird house held together with faith and baling wire—it seemed too good to pass up.

The Sylvester family recently accepted our offer. Now we are going through the process of obtaining a zoning variance from the City Council. Then the real work of fund raising and rehabilitation begins. We'll be scheduling clean-up and repair days as soon as we can. If you have time or expertise to offer, let us know.

Meanwhile, the six-year-long search for farm land continues. But that's another story; stay tuned for hopeful developments in the ongoing saga.

Your Garden Reports



Illustration by Bill Singleton

From Andy Ward, Sierra Vista, AZ

Last year I grew a garden using only rainwater which I diverted into my garden. I grew **Pima beige lima beans**, **Mayo Colima black-eyed peas**, **O'odham red beans**, and **Mojave flour corn**. Shortly after I planted, I had to go away for a couple of months, leaving my garden unattended. When I returned, many seeds had already matured. Some of the corn was moldy, so I left it. In the fall, I plowed all the dead plants under. I didn't have time for a summer garden, but when the summer rains came, several corn stalks volunteered from those moldy cobs I had tilled in the previous fall. Although not cultivated or protected in any way, they bore three ears. Now, that's hardy corn.

From Caroline Neabel, Battleford, Saskatchewan, Canada

Sonoran canario germinated very well. Healthy plants all summer. No insect problems. Late-maturing seed, but I did save some.

Tohono O'odham brown tepary bean: Germination 50%. Plants very weak. Pods formed in 90 days, impossible to mature.

In 1992, we had the coldest summer in 100 years; plus, a severe hail storm left 9 inches of hail on my garden for several hours. Summer nights never got above 43°F, although the spring was long and warm. A very unfair test for any seed variety!

From Cynthia Soller, Borrego Springs, CA

Okra has been great; **Papalote squash**, good. **Tepary beans**, **peas**, **Oñk I:waki** not good so far, but not the best conditions, either. I'm still getting the soil conditioned, and maybe I didn't plant at the right time? Our climate is very close to that of Phoenix, except we don't usually get the summer rains—only see the towering clouds on your side of the Colorado (and get muggy)!

From Joseph M. Perret, La Crescenta, CA

La Crescenta is a strange microclimate in the foothills of the San Gabriel mountains. Whatever the maps say about the area, it is almost certainly not true in La Crescenta. We tend to exaggerate weather trends: it is usually colder, wetter, hotter, or drier here than in LA. **Coban chile** started off okay, but reacted quickly to the first cold spells and never recovered. The wet winter did it in, and I never got any fruit. The **Pequin** and **Ordono chiles** reacted similarly, but I got a few peppers. **Hermosillo Select chiltepine** grew slowly, but proved very hardy. Of all the plants, this survived the winter with the

most vigor. The cold weather has kept the fruit from ripening.

Sinahuisa chile did pretty well until the rains stayed steady. I got a moderate amount of fruit.

Mirasol chile started strong, but then succumbed to some sort of blight. Fruit was damaged by the disease. The **Vallero chile** was also struck by the blight, and I got no usable pods.

Sinaloa chiltepine survived the winter, but has not flowered. Difficult to germinate and keep going. Only one plant of six survived, but it is very hardy. My experience with **Guarijio chiltepine** was much the same.

Negro chile started strong, but also succumbed to disease. However, it was somewhat resistant, and I got a number of excellent pods.

All the seeds you sent germinated. One reason that many of the seeds did not bear fruit is that I started them very late in the growing season, and this was exacerbated by the abnormally wet weather we've been having. I plan to start earlier this year.

From Muriel Oakes, Los Angeles, CA

I tried a number of seeds from your catalog. I'm about 1 1/2 miles from the beach, with poor, sandy soil.

White tepary beans grew two leaves—no more—then died.

Fava beans grew huge and healthy; heavy crop of beans. **O'odham onions** were extravagant in their growth—so much so that they have been shared all over California and Washington.

The peppers grew well. I was amazed that **chile peppers**, **cayenne**, and **chiltepinos** are still producing heavily as of Nov. 29, despite being covered at night because of frost. January 21 update: **Chile pepper** bushes still healthy and producing in a protected area. Some **cayennes** and **chiltepinos** are still producing. I am interested to see if these peppers wintering over will continue to produce this year. I have a **jalepeno** in its third year of production; it's not covered but is near other bushes.

From Jeff Myers, Yucaipa, CA

Yucaipa is about 20 miles east of Riverside in a coastal valley, elevation about 1,700 feet, 10 miles from the San Bernardino mountain foothills. On July 2, I planted **Tarahumara Flor de Mayo beans** in freshly turned and mulched clay. Germination was near 95%. Growth was slow during the July and August heat, but sped up in September as the days shortened. Flower buds began to form a week

Garden Reports (cont'd)

after the autumn equinox. Blooming and pod set were somewhat slow and protracted. By mid-October, several bean pods had formed and were near maturity. We had an early frost in the third week of October. Although the weather warmed up, all my remaining summer crops, including the Flor de Mayo beans, were killed. Conclusion: This bean cannot grow in my area without overhead frost protection, a different planting method, or a long-term effort to select out for a more temperate-adapted strain.

From T. Bergey, Golden Trowel Herb Farm, Newalla, OK

A note on germinating the seeds of the tiny **devil's claw**—*Aguaro Martynia annua*. The seeds must be freed from the claw to germinate them in a reasonable amount of time. This is both a test of endurance and a lesson in nature appreciation. The claws are extremely hard, and care must be taken to avoid damaging the white seeds that are hidden in a black papery husk. I use a pair of needle-nose pliers to tear the claws apart. You should find 2–3 seeds in each claw. Likewise, if you will remove the outer shell of the larger seeds of *Proboscidea*, you can get some to germinate within a week. To start seeds indoors, keep them in a dark, fairly warm (about 85°F) place. The soil medium should be moist, but not soggy. Good luck.

Summer Planting Workshop

Guarantee your place at the Summer Planting Workshop on Saturday, June 26, by mailing in the form below. By learning about low-desert crop selection, planting techniques and simple water conservation methods, you can enjoy a fall harvest of corn, squash, beans, amaranth, melons, and other short-season crops. The workshop will be led by Garden Manager Linda MacElwee from 7–9 a.m. at the NS/S demonstration garden. The cost is \$8 for NS/S members and \$10 for the general public.

NS/S Summer Planting Workshop Saturday, June 26, 7–9 a.m.

Name: _____

Address: _____

City, State, Zip: _____

Phone Number: _____

Please make check payable to Native Seeds/SEARCH (\$8 members; \$10 nonmembers). Mail this form to Planting Workshop, Native Seeds/SEARCH, 2509 N. Campbell Ave. #325, Tucson, AZ 85719.

From Herman Blumel, Eden, UT

We had a very early frost, even for our area, the last week in August, instead of mid-September. We live in a mountain valley at 5,000 feet, with a 90-day growing season.

Brown Speckled tepary beans did well considering the August frost, which killed the younger top leaves, blossoms, and top beans. The yield was good, and I will plant the biggest seeds I saved this year.

Orach: Only two seeds came up. One plant survived and was allowed to go to seed.

Pequin chile: The early frost reduced the crop considerably. The plants and crop were doing well until the frost.



Seed Exchange Forum

To exchange seeds with another reader, send your seeds directly to the people who requested them. In return they will send you the seeds you want from among those they listed.

Keiko Imaoka, 4545 N. Old Ranch Rd., Tucson, AZ 85743

Thanks for printing my suggestion to start a seed exchange column. Here are the seeds I have or need:

HAS: Assorted *Tepary beans* (mixture of P82, P4, P86, P74), *cilantro*, *Tohono O'odham P'itot's onion*, *Guarijio Nescafe okra*, *Las Capomas Mayo watermelon*, *Chihuahua wild devil's claw*, *Tarahumara Mostaza greens*, *O'odham Oñk I:waki goosefoot*, *Apache Red sugarcane sorghum*, *Arivaca garlic*.

WANTS: *Wild desert cotton*, *wild luffa gourds*, *peyote ceremonial gourds*, *O'odham lentil*, *Ordone chile*, *Orach greens*, *Mayo indigo*, *O'odham Ke:li Ba:so melon*, *Mano de Obispo*, *Mayo Kama squash*, *San Ildefonso fava beans*, *White Sonoran wheat*.

Maureen Lemay, 8216-133 "A" Ave., Edmonton, Alberta, Canada T5E 1E9

HAS: *Tarahumara White sunflower*—I had great success with them and had one sunflower 10 feet tall against my south garage. *Quinoa*—grows great at high elevations in a cool mountain environment. It is called Mother Grain to the Incas and has been cultivated for at least 5,000 years. It will germinate in cooler soil than amaranth and looks like lambs quarters or pigweed when young, with nutritious, flavorful greens. *Fava beans*—grow 4–5 feet tall. Plant in early spring; harvest end of July or sooner in the hotter zones.

WANTS: Any kind of beans or gourd seeds.

Book Review

A Full Life in a Small Place, and Other Essays From a Desert Garden, by Janice Emily Bowers. 1993: University of Arizona Press, Tucson. 166 pp. \$13.95, paper.

Reviewed by Kevin Dahl

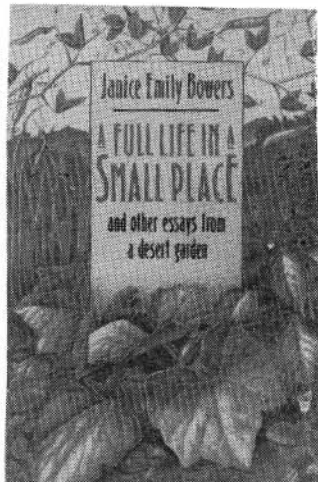
The combination of poetry, biology, and sharp, clear observations of the natural world in this book is reminiscent of the work of Gary Nabhan, whose praise graces the cover: "Janice Emily Bower's natural history of her own desert garden is as finely honed and flawless as biological literature ever gets. I've respected her work as a field biologist..., but now she's brought the field back home and greets wonder at her doorstep."

This irresistible collection of 16 essays explores the frustrations and pleasures of gardening in the Sonoran desert. It holds observations on organic gardening, garden wildlife ("a variety of creatures whose common lives may provoke uncommon perceptions"), and how gardens both complicate and enrich our lives.

Bower's garden is a personal, kitchen garden, full of flowers, tomatoes, basil, and other plants, with successes and failures much like any of our gardens. Its ordinary magic is transformed, however, through the eyes of a botanist and naturalist who "expected to watch biological principles at work" and was surprised to find her garden "would touch human knowledge at every possible point. History, philosophy, psychology, art, chemistry, anthropology, physics, horticulture, literature—volumes are there for the learning, and I'm frustrated at times by a mind too small to encompass it all."

The reader becomes an eager fellow student. The food chain becomes less abstract when we learn that "Cabbage white caterpillars feed on the broccoli leaves, warblers feed on the cabbage white caterpillars, and Katie the cat, unfortunately, feeds on the warblers." We learn the many reasons for keeping a garden journal and are thankful that Bowers has harvested some of the better thoughts from hers to share. We cheer on the battles against bermuda grass and squash vine borers, reading carefully for any useful techniques we've yet to try.

Finally, the inspiration to be out in the garden is overwhelming, and the book must be set down to be returned to later. Again and again.



Letters

A Vision Shared

Dear Brett and *Seedhead News*,

I'm unable to express the great impact your essay had on me and friends with whom I've shared it ("*Reflections on a Native Harvest of Seeds*," SN 38). You managed in a few hundred words to convey my vision developed over 55 years of gardening, agricultural research, and "organic" philosophy. I've started a seed savers group and lead efforts to do grow-out trials, seed conservation, and organic gardening classes here in Santa Barbara and Ventura counties. Keep up the good work!

—Marshall Chrostowski, Santa Barbara, CA

Chiltepinos on Acid

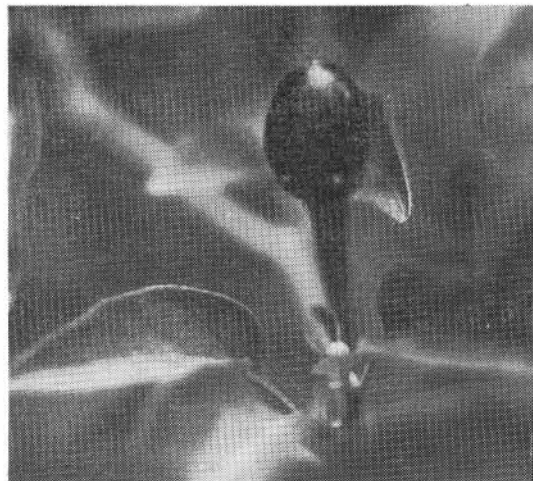
In the 1993 Seedlisiting, we asked for your experiences in germinating chiltepine seeds. We publish the following for readers' information and enjoyment. Please do not try this harsh treatment yourself—Ed.

With the bottom heating pad and fluorescent light setup that my husband built, I can normally germinate seeds very quickly. Not so chiltepinos!!! After six weeks and no luck, I called NS/S, and you counseled "Patience." You said that in the wild the seeds go through birds' stomachs, and the stomach acid breaks down the hard seed coat.

So my husband tried an experiment. He put a few seeds in a stainless steel tablespoon and gave them a couple of drops of car battery acid. He soaked the seeds for about 3 minutes, then rinsed them with water, and planted them. They germinated in about 6 days. We were amazed that such drastic treatment worked. Meanwhile, about 4 more seeds finally germinated in my heater/light set-up.

Our son works for Magma Mining Corp, San Manuel, AZ. The chiltepinos outside his office window are 5–6-foot-tall shrubs. The workers there harvest them on lunch hour.

—Nancy Johnston, Rockbridge Baths, VA



News & Notes

Project support—We are grateful to the Ruth Mott Fund for its continuing commitment to the Traditional Native American Farmers Association, to the Wallace Genetic Foundation for its support of our New Mexico office and grow-out, and to the Environmental Support Center for funding a staff retreat for long-term planning. In addition, Native Seeds/SEARCH and the Sonoran Institute have received a joint grant from the World Wildlife Fund to study the effect of proposed logging developments on the Sierra Madre's ecosystem and indigenous people.

Saturday hours—Through April, the office will continue to be open on Saturdays from 10 a.m.–1 p.m. Stop by to purchase items from our catalog or visit the museum. Call for Saturday hours after May 1. We will be open as always Tuesdays and Thursdays from 10 a.m.–4 p.m.

Chile Fiesta—It's not too early to mark your calendar for the 7th annual Fiesta de los Chiles— scheduled for Saturday and Sunday, October 23 and 24. Planning is already well under way for this joint event of NS/S and Tucson Botanical Gardens. Jan Waterman is coordinating the event for NS/S; her name was listed incorrectly in *SN* 39. Apologies, Jan.

What's Up in the NS/S Garden

By Linda MacElwee

The winter's work is already paying off. With the new drip irrigation system in and the soil well amended with composted manure, everything is coming up green. Stop by to take a look at the promising young Havasupai sunflowers, Golandrin beans from northern Mexico, and Tohono O'odham H:al squash and dipper gourds. The herb bed is filled with Mt. Pima oregano, Chia Roja, Yaqui/Mayo basil, Mt. Pima anis, and epazote, which will soon fill the air with their scents. In the floodwater field, the Gila River sweet corn is beginning to fill in nicely. We planted Ciudad Victoria tomatoes for their pretty foliage and sweet clusters of cherry tomatoes. Chilis, melons, watermelons, and lima beans will be planted through April as the soil warms. Meanwhile, the garlic, Tohono O'odham I'toi's, Sonoran wheat, and Mayo quelite are maturing for harvest in May/June.

It feels good to see the reemergence of living things in our garden after it sat mostly barren and under construction through the winter. As the temperature rises and the clouds and rains cease, we will witness lots of fast growth and a return to a full, lush garden.

The Seedhead News

published quarterly by
Native Seeds/SEARCH
contents ©1993



Native Seeds/SEARCH

2509 N. Campbell #325
Tucson, AZ 85719
(602) 327-9123
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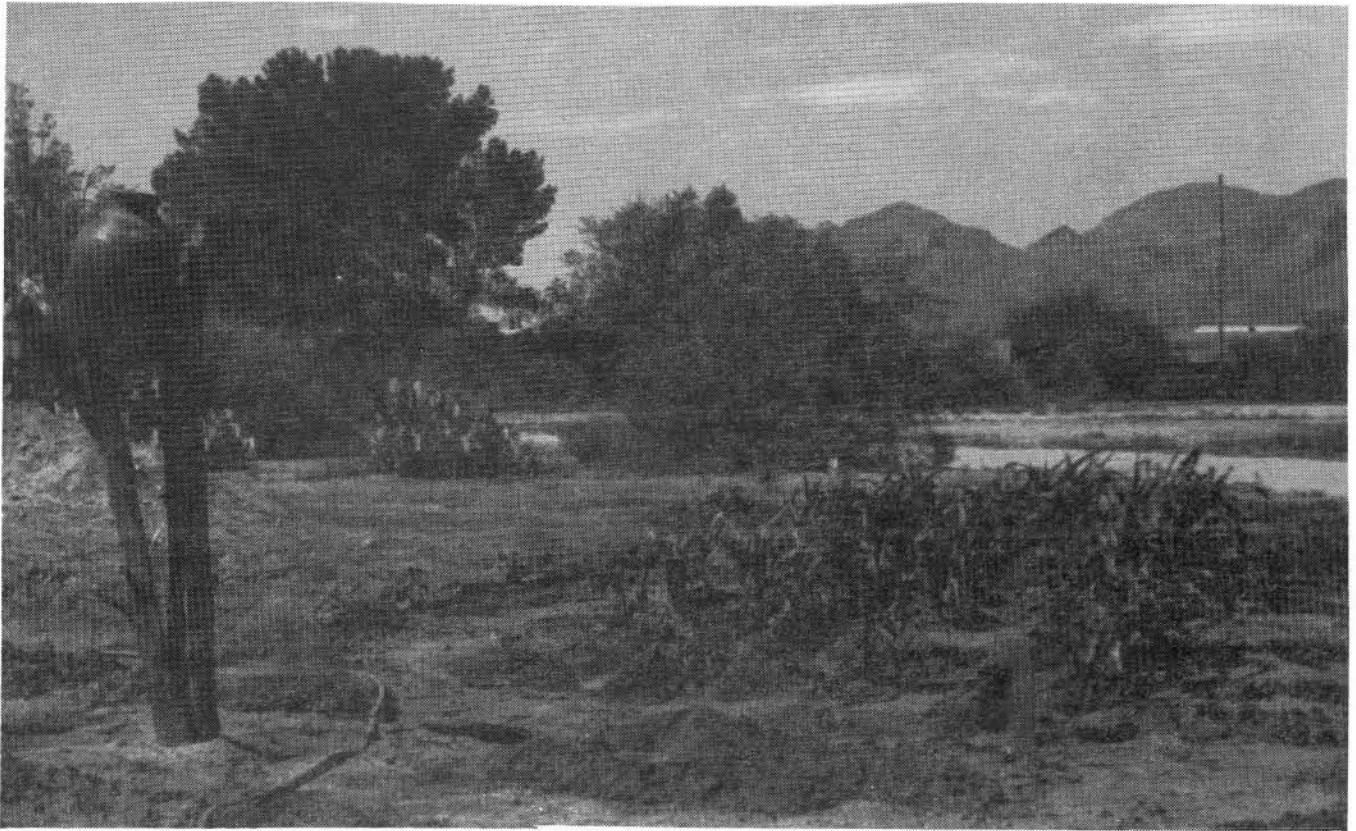
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The Meals for Millions traditional crop garden at Tucson Botanical Gardens in 1980–81, shortly before Native Seeds/SEARCH spun off as an independent organization. This view looks north toward the Santa Catalina mountains. Sharp-eyed readers familiar with Tucson will notice that the strip shopping mall on the north side of Grant Road is built, but the south side is still vacant land.

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