



New Computer Garden at Palm Walk & Terrace clicks with students & faculty

Constructed with recycled materials, the newest Arboretum theme garden is designed to resemble a computer motherboard. Copper painted sprinkler pipes were drilled with holes for solar powered LED lights that will “connect” the CPU planter, Memory planter and the golden barrel cactus components.

Curious stares and interest from those passing by the new garden was so great that a sign had to be posted explaining what was under construction so that Arboretum workers could complete the various components of the “circuit board” undisturbed. Students would grab a friend and proceed to point out the CPU and argue about where the graphics card would go.

Gazing down from the second floor of the Computer Commons building, a computer instructor was so intrigued that he just had to come down to talk to garden designer Zoltan Tresz and express his delight at recognizing the new garden’s theme.

The flat, barren patch of gravel was used mainly for temporary ASU service vehicle parking, until eleven RAD and ASU Clean Energy student volunteers lead by Terra Ganem broke ground and moved 27 golden barrel cactus from 6th Street and Rural to the garden site on March 26 & 27th. Arboretum staff worked on the site in between their regular duties for over a month to complete the Computer Garden.



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Reflections on PLB 484 Edible Campus Internship

Spring 2008 was the inaugural semester for the Edible Campus internship, which grew out of requests by interested students. Prof. Randel Hanson is the faculty representative for the project, with Grounds Services/Arboretum providing direction for campus activities. Although we are creating this experience as we go along, Dr. Hanson set out a number of goals that include the following:

- 1) Gaining an overview of how the "organic machine" that is ASU works, understanding its bio-cycles and ongoing input/output..
- 2) Gaining a sense of the culture shift taking place at the level of Grounds Services in terms of working toward a lighter carbon footprint.
- 3) Tending your own organic garden.
- 4) Assisting in the harvesting of plants already existing on campus.
- 5) Assisting in production & marketing of products that may come from harvests.
- 6) Visiting and working on Ken Singh's farm, where ASU's green "waste" goes for composting.

Four intrepid students signed up and were required to write weekly reflections. The following are excerpts from each of the interns' essays.

Mike

Visiting the organic farm and compost site was a real eye opener. I didn't realize how much comes with growing organic, making compost, and having healthy soil. It was quite the experience to be able to see how compost was made and the effect it has on land that most people would assume isn't fit for farming. I was surprised that Ken had all sorts of information ready for us

to take in. Ken is a true organic savant and I greatly appreciate the fact that he shows interest in teaching us the ways of nature. I hope we can organize a trip there this week and get our hands dirty with experience.

Alissa

This week we worked the secret garden. The ground was nice and soft because of all the rain we had this weekend. The gas-powered tiller was somewhat ineffective for the initial breaking of the ground. After struggling with it for a while we turned to shovels.

The most difficult part about breaking the ground was trying not to hit the water pipes. Once the weeds were pulled up (there was few) and the ground was broken in we wheel barrowed in the compost and tilled it into the turned up dirt. The dirt was super clay-ey and not very diverse. However, the compost looked wonder-



ful; it was a fine dark brown and rich with organic matter. I know our vegetables will love it.

Next week we are planting. I hope that we will see some produce before the end of the year. I really want to plant a lot of peppers. They are fun to dry and give to people as spices. You can also

make chili oil, or... chili preserves... yum.

Anne

This week, I committed to a regular schedule of working in the garden on Wednesday mornings. I think this will work out perfectly. This morning, I finished tilling the area we'll be planting in along with Holly and Alissa. We also spread some of the mulch. It's looking good! We got a lot of funny looks on our way to and fro with the wheelbarrow, which I got a kick out of. It felt great to be working outside, in contrast to sitting at a desk all the time, studying.

It looks like we'll have the rest of the mulch out there by the end of the week, and some of the excess tree branches thinned out. The garden's moving right along, and it looks like we'll be able to start planting next week!

Lana

This month has been exciting but a lot different than last. I have spent most of the time observing my beautiful little seedlings grow and flourish! My summer squash, basil, carrots, and onions are extremely happy =) It is interesting to me to look and compare the difference between the way I planted things and others seeds. My are in little clusters, while others chose a more traditional agriculture approach, creating rows.

Either way they both are doing well. The beans that Alissa planted look really good- I cannot wait until I can eat some veggies off of the plants.

Campus Harvest 2008

From: Reyna Nowaczyk

Subject: sour oranges

Hello,

I am a student attempting to write a final essay regarding the attempt to divert campus waste. I was hoping to highlight the "Pick Seville Oranges on Campus" event that was held early February. I am looking specifically for some numbers, for instance, how many volunteers helped, how many pounds of citrus were harvested, how many citrus trees are actually on campus, and what are some of the ways the citrus is being used (marmalade and monkeys :)). Any information or references of people who would have this information would be VERY helpful. Thank you in advance,

Reyna Nowaczyk

Hello Reyna,

Thank you for your interest in Grounds Services Arboretum's Campus Harvest. We have 265 Seville sour orange trees on campus and in the past it would take 20 Grounds Services workers picking for 4 hours per day for 10 days to pick all the citrus from campus. This is about 800 man hours at an estimated \$44 (this includes equipment, fuel, insurance etc.) per hour, plus ASU spent \$75 per ton for a vendor to haul these oranges to the dump. If every tree produced 100 lbs of fruit that would make 12 tons of sour oranges available for harvesting January through March.

To keep this fruit out of the landfill and save money as a bonus, Grounds Services Arboretum started a new volunteer program called Campus Harvest. We had 36 students help pick sour oranges from campus in Jan-Mar. One fun group was Dianna Lippincott's class from the American English and Culture Program. She was teaching them about community service and these international students turned out to be the hardest workers and striped the trees around the Student Services building. They had so much fun that they scheduled a second pick and striped the trees around the Noble library. We also had four students from our new PLB 484 Edible Campus Internship help with nearly every scheduled pick, and put in a total of 87 hours.

This year our crew took four truck loads to the Arcadia Citrus Program <http://www.roofrat.net/> (about 8000 lbs). This group of dedicated volunteers headed by Barry and Joan Paceley, sort & distribute local neighborhood picked citrus to various charities. They told us that our sour oranges would go to the Pima tribal reservation hog farms.

We took four loads of about 500lb each to the Primate Foundation of Arizona. Chimpanzees love any kind of citrus, and don't find the sour, bitter taste objectionable at all.

One of the biggest challenges is to change people's opinion about using sour or "ornamental" oranges in recipes. Very few people make their own marmalade or orangeade anymore. Sour Seville oranges are great in recipes, you use the juice and zest (peel) just like you would for sour lemons. Just like lemonade, you cut the juice with water and add sugar to make orangeade. But, picking citrus for human consumption is a bit trickier, and after much collaboration between several state agencies, ARAMARK and Grounds Services, the first food grade harvest of Seville oranges was held Mar. 6th, 2008. Kristen Rasmussen, ARAMARK's nutritionist help make this happen. She arranged for ARAMARK's participation and had ASU's Food Safety manager, Veronica Oros train our volunteer pickers and write food harvest guidelines. Kristen also recruited the student organization VegAware based at Irish Hall to pick sour oranges for ARAMARK's kitchens. They picked about 400lbs and this made about 18 gallons of concentrated juice. Kristen has encouraged ARAMARK chefs to use this juice for vinaigrettes, main dishes as a sauce or marinade and as "Devilade" orangeade drink. Kristen has a great website with Seville orange

recipes:

<http://www.campusdish.com/en->

US/CSMW/ArizonaState/FreshHealthy/

Recently I put together a small pamphlet "Campus Harvest" with the location of harvestable produce on campus, recipes for sour oranges and the food grade harvest guidelines. I gave this to the University Club chefs & kitchen staff and to Kristen for ARAMARK residence hall chefs & kitchen staff. We're trying to encourage them to pick herbs from the herb garden & sweet bay trees on campus as they need them for campus dishes.

For future harvest initiatives, Grounds Services Arboretum has about 120 young date palm trees at the Polytechnic campus.

These are rare varieties of dates that were moved from ASU's former Horticulture Center property on 8th St and Price (it was sold in 2002). They were our famous germplasm of rare cultivars, ASU has the largest collection of edible date varieties in the nation. Even larger than USDA's collection. These young palms are producing delicious dates and I find myself in the same situation as with the sour oranges, who eats dates anymore? So, I am hoping to tap into the campus Muslim student population for volunteer help to care for these palms and harvest the dates for a new "Adopt a Date Palm" harvest program.

One last important note, to make all this happen on campus, it truly takes vision from those in leadership positions. All of Grounds Services Arboretum's sustainable programs and initiatives are the vision of Ellen Newell, Assistant Director and Fernando Reyna, Manager, Arboretum/Grounds Services. I feel very fortunate to work with this dynamic leadership.

Hope this helps you to write an A paper, if you have any more questions or would like to volunteer for the Arboretum, just ask.—Deborah Thirkhill, Program Coordinator



“Devil’s Edge” a recycled garden tool by Fernando Reyna

The Devil’s Edge is a simple but effective weed extracting tool used by grounds crews at A.S.U. The Devil’s Edge is made from recycled edger blades and recycled pipe that were salvaged from trash bins.

The grounds crews at A.S.U. came up with the design after being challenged by budget restraints to make use of what is available in order to continue getting work accomplished. The metal edger blades can be sharpened on all four sides. The tool can be used to dig or chop unwanted weeds.

The Devil’s Edge is a hand tool that has significant esthetic campus value. Its use has helped in the reduction of herbicides on campus and has helped promote sustainability at A.S.U.



Devil’s Edge tool was featured at the Home Show

ASU ARBORETUM teams up with GIOS for the Maricopa County Home & Landscape Show

In April Grounds Services Arboretum and the Global Institute of Sustainability participated in the 2008 Maricopa County Home and Landscape Show at the State Fairgrounds. All exhibitors at the show were challenged to promote their corporate green practices as well as all products and services that are created from recycled and renewable materials, conserve energy or promote environmental awareness.

The GIOS/Arboretum booth featured fun, interactive displays to illustrate grounds keeping sustainability and green initiatives. In one day Arboretum staff, Ellen Newell, Deborah Thirkhill and Holly Vollkommer built the butterfly display garden, and a miniature version of the campus Zen Garden and Herb Garden. Mountain States Wholesale Nursery loan us over 160 plants for this event. Many visitors to the booth wanted our plant list so that they could build their own butterfly garden. Some wanted to buy the entire herb garden as they mistakenly thought it was being sold as a raised planter kit.

After strolling through the garden and sustainability exhibits, visitors sampled cookies and juice made from the 265 Seville sour orange trees found on campus. Several visitors impressed by the display and interested in gardening signed up to volunteer at the Arboretum at ASU.



Rare Date Palms at Polytechnic cared for by expert volunteers

After driving all the way from his home in Peoria to the Polytechnic campus in Mesa, ASU Arboretum volunteer date palm expert, Scott Frische carefully tends the last known daughter offshoots of the Badraya variety of date palm in the United States. He hopes to successfully remove the daughter palm from the mother so that it can be accessioned into the USDA date palm collection in California for safekeeping of this rare variety.

Frische, along with a small group of dedicated date palm enthusiasts have been volunteering their time at the Arboretum's young date palm collection at the Polytechnic campus. This group has been performing all seasonal date palm grove tasks; trimming, pollinating, bagging and harvesting the 120 or so date palms.

The Arboretum staff work crew headed by Mike Schantel and Dana Pomploon have been spending many hours working on trimming and repairing the palm

grove in hopes of expanding the volunteer date palm program.

ASU's date palm collection comprises more than 50 varieties, including more common varieties such as Medjool, Black Sphinx, Khadrawy, Zahidi, Honey and Halaway, and a number of rare varieties such as Peggy Ann, Deglet Beida, Bentamoda and Taj. ASU has the largest date palm collection of any public garden in the country. To keep many of these varieties alive, the former ASU Horticultural Resource Center (HRC) was active in developing a "germplasm" collection of young palms, to preserve propagation material.

When the ASU Horticultural Resource Center property was sold in 2002 most of its germplasm date palms were moved to the new Polytechnic campus. These younger palms are now available for the ASU Arboretum Date Palm Stewardship. The ASU Arboretum



Ali Salih finds caring for ASU's Date Palm Grove at the Polytechnic campus relaxing and enjoys harvesting his favorite varieties of dates.

date palm volunteers are willing to share their extensive knowledge with you and are glad to have many more interested volunteers helping to maintain this rare palm collection and share in the harvest.

The Arboretum Date Palm Grove is located at ASU Polytechnic Campus on the South Campus Loop and Upton Ave.



Holding the male date palm spathe in his hand, Ron Palmer gets ready to pollinate female date palms. He recommends the new book about date palms pictured on the right for anyone who would like to join the Polytechnic Date Palm volunteers.

Adopt and care for delicious varieties of date palms at ASU Polytechnic Campus. Pollinate in the spring, bag in the summer and harvest your own share of dates in the fall. Call 480-268-4165 to sign up.

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**NEWSLETTER FOR ASU GROUNDS
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ASU ARBORETUM



Dave Aniuk, horticulturist, transports plants on campus

Calendar

All positions open for Arboretum Volunteers.
Call (480)268-4165 for more information.

11/5/08	Devil Date Packing Party
11/8/08	Devil Date Packing Party
11/12/08	Devil Date Packing Party
11/19/08	Devil Date Packing Party

Delta Gamma helps out at the Arboretum

Delta Gamma president Chelsea White, had sixteen members of her group up early on Saturday one April morning. This sorority requires that each member volunteer 15 hours per semester to a worthwhile cause. On this particular Saturday they chose the Arboretum at ASU. Chelsea quickly divided her sisters up into three groups, one group would plant a new tree in the Zen Garden, another would weed the xeriscape garden planter at Forest and Lemon and another would paint signage rocks for the Herb Garden. The students had fun as they completed their assignments and look forward to spending more time next semester helping the Arboretum to grow.