

# CAMPUS ARBORETUM

arboretum.arizona.edu

Volume 6, Issue 1

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College of Agriculture and Life Sciences

## Spring 2010

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## UA GREENHOUSE GAS INVENTORY

*How big is the University of Arizona's Carbon footprint? The UA's Office of Sustainability is developing the first accounting of the University's greenhouse gas use.*



As part of the national effort of the American College and University Presidents' Climate Commitment (<http://www.presidentsclimatecommitment.org/>) UA staff and students have measured emissions from buildings, work vehicles, landscape operations, and more. These numbers can be reduced or mitigated by efforts with rainwater harvesting, solar power, composting, bicycle use, ride sharing/van transport, and other green activities, to arrive at a base-line figure for the year 2009.

All plants, including trees, remove Carbon from the air, through the process of photosynthesis. Trees and woody shrubs, however, store this Carbon in their woody tissues during their vigorous years (and slowly release it as they decline). A healthy tree can remove many tons of Carbon through its 50-100 year lifetime.

In 2008, as part of an ongoing tree inventory by the City of Tucson, the UA Campus Arboretum had calculated annual benefits derived from the 2100 street trees along the University's roadways. Consequently, it was a relatively quick mathematical process to estimate 166 metric Tons of Carbon removed from the air (sequestered) in the remaining 6000 UA trees during the year 2009.

A nationally-used and trusted software program from the US Forest Service and researchers at UC Davis predicts benefits for any size or age of tree. More information can be found on their web site: [http://www.itreetools.org/street\\_trees/introduction\\_step1.shtm](http://www.itreetools.org/street_trees/introduction_step1.shtm)

## DIRECTOR RETIRING



After 22 years at the University of Arizona, it is hard to say goodbye! I have loved working with so many loyal, good-hearted people: faculty all over campus,

staff in the College of Agriculture, Campus Planning Design and Construction, horticulturists in Facilities Management, and students of all ages. I have many fond memories of successful collaborations between folks who love the UA's campus and its heritage.

I thank all of you for your loyalty and advocacy during the early years of the Campus Arboretum's development. The first committee meetings would never have succeeded without the support of the College of Agriculture and Life Sciences. The neighbors and central Tucson citizens love the campus as their own urban forest. The UA community has been incredibly supportive. And all of us have

benefitted from the 8000 trees that are stewarded by the Campus Arboretum.

At press time, a "job description" has been created which specifies that the successful applicant will direct the Campus Arboretum, in addition to a variety of teaching and advising duties. I am confident that we will get the best person to continue enthusiastic guidance for the Campus Arboretum.

Once again, thanks to everyone!



Elizabeth Davison  
Founding Director

## ADVISORY BOARD PHOTOS



Thanks to the Advisory Board members and friends who joined us at Homecoming 2009!

## TREE CAMPUS USA

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The University of Arizona has been awarded the designation of **Tree Campus USA** for the year 2009. This award is a national honor, accorded to only a few campuses in the country.

The **Tree Campus USA** is a program of the National Arbor Day Foundation, an organization that sponsors tree plantings, recognizes cities and towns for urban forest care, and encourages education about trees and their long term benefits. Their web site is <http://www.arborday.org/programs/treecampususa/index.cfm>

The University of Arizona's application took over a year to process. The UA has met five standards developed to promote healthy trees and student involvement:

- Tree Advisory Committee with students, community members, tree professionals, faculty, and facilities personnel.
- Tree Care Plan with directives for managing/caring for the tree collection, including procedures for storm damage, new tree plantings, correct pruning, and more.
- A campus tree care program with dedicated annual expenditures.
- Arbor Day Observance
- Student outreach and service learning projects.

As the oldest continually-maintained public green space in Arizona, the UA campus has been managing and caring for trees for over a century. Ever since Robert Forbes planted rows of olives along the western edge of the campus, trees have been an important part of UA life. The **Tree Campus USA** designation celebrates the importance that Arizona's Land Grant Institution accords to its urban forest.

Elizabeth Davison and Mark Novak from UA Planning Design and Construction will be receiving the plaque and a banner from the National Arbor Day Foundation on Arbor Day, April 23 2010, at the Capitol Building in Phoenix.

## BENCH DONATIONS

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Benches are a great way to remember a loved one.

Thanks go to the Parfet Family Foundation and the Klingenberg family for donations honoring family and friends. Benches are a perfect way to honor a loved one. It's a wonderful gift that can add to the campus ambience, congratulate a new graduate, remember your former student or UA fan, provide pleasant seating, and support the Campus Arboretum at the same time.

Our hand-forged benches are created in Tucson by James Meador, iron-smith. For more information sponsoring a bench in your loved one's name, please see the information on our web site at <http://arboretum.arizona.edu/> and click on Membership.

## COLLABORATION with Tucson Cactus & Succulent Society

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The Tucson Cactus & Succulent Society is a 1000-member strong organization that promotes the love and use of these water-thrifty plants for landscapes and container display. Their activities include salvage and rescue of native species from desert lands that are about to be developed, the sale and re-adoption of the salvaged plants, and scholarships and grants to students of all ages. Access their web site at <http://www.tucsoncactus.org/>

Over the years, this group has donated dozens of native plants to the University of Arizona campus for use around Old Main, in the Krutch Garden, and now most recently, for a new Monocot Garden being installed south of Gould Simpson (see accompanying article, page 7).

Thanks to Cactus & Succulent Society members Bill Thornton and Chris Monrad (also on the Campus Arboretum's Advisory Board) for their help in adding native species to the UA campus.



## ARBORETUM VISIONARIES

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Quick Quiz on Campus Arboretum history:  
*Who were the people with the determination to beautify the UA campus as they increased botanical knowledge in the desert southwest?*

**Professor James W. Toumey** – Began original cactus/succulent collection in 1890s (more than 600 species on west side of Old Main).

**Dr. Robert Forbes** – Head of the Experiment Station at the turn of 20th century. Evaluated dates, figs and cotton in Arizona and planted existing olives along North Campus Drive

**Dr. Homer Leroy Shantz** – President of the University in 1920s-30s. Moved the Cactus Garden, supervised collecting trips, supported botanists, and installed large cacti and succulents.

**Dr. Steve Fazio** – Professor of Horticulture, 1940s–1980s. Consulted on tree care and introduced new tree species to campus. See related article, page 6.

**Dr. Phillip Upchurch** – Professor of Plant Sciences, 1970s-1990s. Chaired the first committee determined to create an arboretum on the UA Campus.

**Chuck Raetzman** – Directed Grounds Services, 1960s-1990s. Guided department through transition from a grass-covered oasis to installation of large palms and more use of arid-adapted landscape trees.

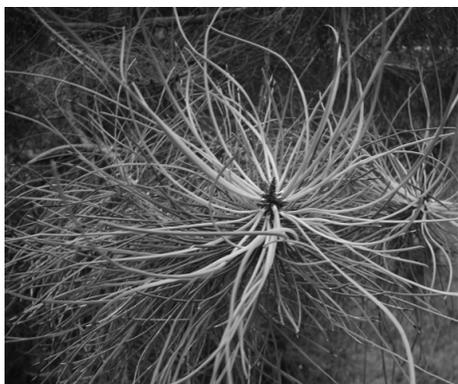
**Professor Warren Jones** – Landscape Architect, 1960s-80s. Installed hundreds of species from arid climates around the world, to determine their suitability for use in southern Arizona cities.

**Elizabeth Davison** – Founding Director, 1990s-2010. Chaired committee that brought UA Campus Arboretum to a reality in September, 2002



## UA TREE PHOTOS ON I-Phone APP

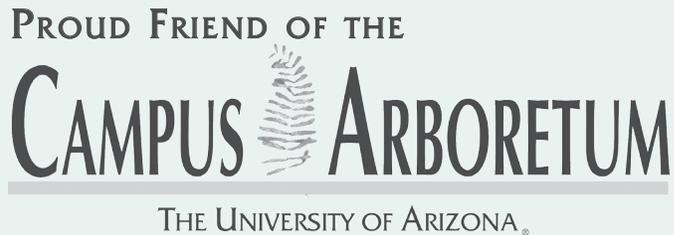
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When you're hiking or camping, you can use your I-Phone or I-Pod Touch for plant identification! An exciting new I-Pod application called Botany Buddy helps identify plants in the field. This software program can be used by botanists and hobbyists, as well as students and faculty. In its beginning stages, the program allows searchers to key in attributes of a plant to find the name. The original plant list focused mostly on temperate garden species. Future plans include expanding the database to desert and southwestern species, so we have allowed them to use the Campus Arboretum's photos. This arrangement will also give UA botany students unique access to the database for use in their classes. For more information on the I-Phone or I-Pod Touch application "Botany Buddy", please go to [www.Botanybuddy.com](http://www.Botanybuddy.com)

## NEW ENDOWMENT LAUNCHED

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The Campus Arboretum's Advisory Board has established an endowment fund, both to honor retiring Founding Director Libby Davison and to build a strong base for future funding. Endowments are designed so that all donations build a principal that generates a steady stream of income for operations, new trees, student work, etc. By showing your support with a tax deductible gift, you will ensure continuation of a successful, sustainable University of Arizona Campus Arboretum. Please use the form on the back of this newsletter, and thank you in advance!

## VISITS TO THE CAMPUS ARBORETUM WEB SITE

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During the month of February 2010, 9025 unique visitors to the Campus Arboretum's web page were recorded. The most popular site is the Old Main Plant Walk. The searches originated from such diverse places as Mexico (second after the USA) to Moldova to Mauritania and Malta! Such is the power of the Internet!



## ETHNOBOTANICAL SIGNAGE IN THE KRUTCH GARDEN

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*"Although "eating local" is a new trend, it is a very old concept for Sonoran Desert native peoples."*

The large collection of cactus and native trees in the middle of the UA Mall was installed nearly 80 years ago, during the presidency of Homer Shantz. Many of these desert species were brought to the UA campus by researchers working with the Desert Laboratory on Tumamoc Hill. In 1980, under UA President John Schaefer, the collection of iconic Sonoran plants was named for Tucson naturalist and writer Joseph Wood Krutch.

The Krutch Garden was a controversial part of the 2002 Alumni Plaza construction project, after which it was expanded to the east. Today the collection contains mostly Sonoran Desert species (taken in the broad sense to include this desert's sites in Sonora and Baja California), with a few remnants of plant from other locales. One obvious feature of the Krutch Garden is its attraction to native birds and animals; another is its reminder that these plants are part of the southwest's "local agriculture".

Student Abbey Percival has been researching the ethnobotanical uses of the native plants found in the Krutch Garden. With support from a generous donor, she is working on interpretive signs that will explain cultural and ethnographic uses for the species. We invite you to get to know your local food plants!

### JOJOBA

Provides important forage for desert wildlife. Used medicinally to treat burns and rheumatism. Valuable oil derived from the fruit is used for cosmetics and treating hides. Roasted seeds are coffee substitute.



## IN MEMORIAM: *QUERCUS VIRGINIANA* – Legacy to Steve Fazio

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One of the largest Southern Live Oaks in town was planted on the UA campus around 1950 by recently-deceased Steve Fazio, former Head of the Department of Horticulture. Steve was a faculty member from the early 1950s until the late 1980s. His duties included teaching, horticulture research, writing and speaking on southwest horticulture for homeowner audiences, and hiring the first faculty in Horticulture (including the late Guy Green and Warren Jones). Generations of growers, designers, and plant lovers in Tucson and Phoenix remember Steve as an extraordinary teacher. We send condolences to his widow

Mary Ellen and to his family and friends.

When Steve came to the University, one of the primary duties he assumed was responsibility for pruning the trees and shrubs. In an interview recorded in 2003, he recalled that some of the workers were “too enthusiastic” with the shears, and he convinced their supervisor to let him control what got pruned and when. He also was instrumental in propagating (in campus greenhouses which have since been removed) many of the small shrubs and ground covers that still exist on the landscape today. He also planted the Eucalyptus trees that surround Bear Down gym.

Steve remembered planting several acorns in the Park Ave. Green Belt area, and this oak tree remains, just inside the lava rock wall, south of the Main Gate. Undoubtedly it is the largest southern live oak in Tucson. Although this species is common in the nursery trade, such was not the case in 1950. This UA Heritage Tree gives a dignified indication of the potential size of the species.

In 2002, this individual tree was named a Great Tree of Arizona by the Arizona Community Tree Council. This designation is awarded to large and stately trees (not necessarily natives) that contribute to the state’s urban forests and natural landscapes.

Many people would agree that Steve Fazio was a “great tree” of southern Arizona horticulture. His legacy lives on with hundreds of successful gardeners and growers. Family and friends are contributing in Steve’s name to the University of Arizona Campus Arboretum.

## MAY 7, 2010 IS NATIONAL PUBLIC GARDENS DAY

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This country-wide event is becoming one of the most successful means by which local gardens, arboreta, and botanical collections engage the public. Special programs and beautiful horticulture displays will greet visitors all across the nation, in gardens big and small. The public gardens of Tucson will welcome you with spring blooms, water-smart educational displays, and something for everyone.

Because the University will be winding up the Spring semester (and students will be taking finals), the campus should be relatively quiet. Director

Elizabeth Davison and members of the Advisory Board are pleased to provide guided tours of the historic shady section of campus on this special day.

Free tours will start at 9 am, and again at 1 pm. Everyone is invited. Meet at the appointed time at the Fountain on the west side of Old Main. Allow time for parking in the off campus garages. Wear walking shoes and hats, and bring water.

See you there – at the oldest continually-maintained public garden in Arizona!

## MONOCOT GARDEN – ANOTHER INSPIRED STUDENT PROJECT

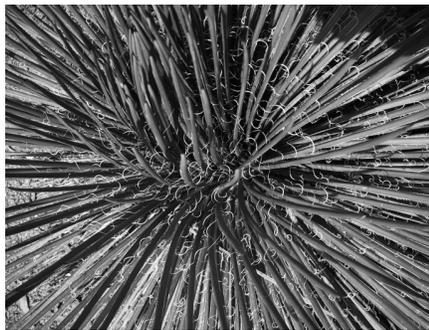
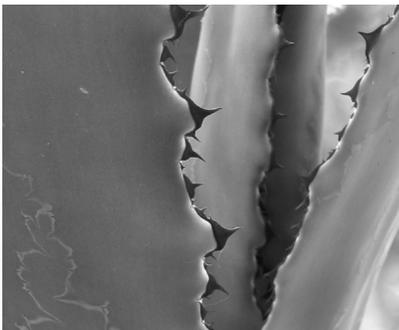
What do palms, grasses, agaves, yuccas, and aloes all have in common? They are all related botanically, because they have just one cotyledon or “seed leaf”, flower parts that occur in multiples of three (3, 6, 9 etc), parallel veins in the leaves, and fibrous roots.

To showcase the broad range of species and forms in this botanical group, Landscape Architecture grad students Chris Kiefer and Ken Mills have designed an intriguing landscape space for the southwest side of the Gould Simpson building. This site is a challenge because of the brutal sun in summer.

In the first stage, next to the building, plans call for an interesting mix of monocots like statuesque heat-loving palms, strong-formed desert agaves and yuccas, wispy

native grasses, and colorful interest in all seasons. Local growers have produced many of the plants; thanks to Greg Corman for the original idea, to Merve Larson for plant donations, and the Tucson Cactus & Succulent Society for donating salvaged yuccas.

Facilities Management assisted with irrigation and soil contouring, and helped transplant one large palm. Steel elements (edges and planter boxes) are being constructed from recycled/scrap steel. Thanks to Chris Monrad for assisting with steel procurement. Undergraduate Plant Science major Chelsea Cox is acting as the “landscape contractor”, arranging for delivery of plants, recruiting the students for assistance, and overseeing the installation.





College of Agriculture and Life Sciences

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### THE UA CAMPUS ARBORETUM DEPENDS ON YOUR FINANCIAL SUPPORT.

Please detach this form and mail your donation to -

Campus Arboretum; PO Box 210036; University of Arizona; Tucson, AZ 85721

Make checks payable to UA Foundation / Campus Arboretum.

Your donation is tax deductible (less fair value for any goods received) to the fullest extent allowed by law.

- \$500/year Corporation or Business
- \$250/year Garden Club or Non-Profit Group
- \$100/year Family
- \$50/year Couple
- \$25/year Individual
- New Member
- Renewing Member

This gift is for the Friends Endowment Fund, honoring Libby Davison.

This gift is unrestricted, and can be used right away.

Name: \_\_\_\_\_

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City/State/Zip: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Work Phone: \_\_\_\_\_

OR Business/Firm: \_\_\_\_\_

Business Address: \_\_\_\_\_

We also have special naming opportunities that include gardens, groves, benches and other landscaped areas on campus. You can sponsor a shady site while you honor a loved one.

Please call me - I want to discuss donating a bench (\$3000)

[arboretum.arizona.edu](http://arboretum.arizona.edu)