



The Virtual Gardener—John Bartram

This month I want to take a break from my usual fare and write about “the father of American botany,” John Bartram—a man you have probably never heard of. Until recently I had not heard of him either. Yet despite his obscurity today, Bartram was once a well-known and important American scientist. The famous Swedish botanist, Carl Linnaeus, a friend and colleague of Bartram, described him as the greatest natural botanist in the world—quite a complement coming from the man who created the scientific system we use today for naming plants and is considered to be the father of modern botany.

So who was this man John Bartram, anyway? Why was he so well regarded by Linnaeus? What are his claims to fame?



Bartram [1699-1777] was a farmer who lived in colonial Pennsylvania, a third-generation Quaker. He had only an elementary school education but from boyhood was passionately interested in science, medicine, and medicinal plants and read every book on those subjects he could get his hands on. As might be expected of a farmer, he knew a lot about growing plants and reportedly produced more abundant crops on his land than his neighbors.

But Bartram’s interest in plants extended far beyond those he grew for food. He was curious about all types of native plants and early on devoted a small area of his farm to growing and propagating them. As his collection grew, he began corresponding with gardeners and botanists in Europe and

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started supplying them with native American plant seeds and cuttings. According to some accounts he was responsible for introducing some 200 species of native American plants into European cultivation. As his reputation grew, he was appointed the Royal Botanist in America to King George III and even supplied seeds and plants to the world-famous Kew Gardens.

In the tradition of many early American botanists he was an explorer as well as a scientist, always searching for new and unusual plants. His travels took him from New England to Florida and the Atlantic seaboard to the Great Lakes. He is credited with discovering many species of flowering trees and shrubs and introducing them to cultivation. He was the first to cultivate the Venus Flytrap (*Dionaea muscipula*) and discovered the, now all-but-extinct, Franklin Tree (*Franklinia alata*). He was not a taxonomist and many of the plants he first described and collected were classified and named by others.

Bartram was a close friend of Benjamin Franklin, another eminent scientist of colonial America, and was a member of Franklin's Library Company of Philadelphia, the first public library in America. Together with Franklin, he was a co-founder of the American Philosophical Society, an organization created to promote useful knowledge in the sciences and humanities. George Washington and Thomas Jefferson, both also farmers, visited Bartram's Gardens, and the Continental Congress even took a day off to go visit his farm.

Bartram purchased his 102-acre farm in 1728. It was located on

the banks of the Schuylkill River near Philadelphia in an area that had already been settled for nearly a century. The farm remained in the Bartram family until 1853 when it was sold to Andrew Eastwick, a retired industrialist and long-time admirer of Bartram. Since boyhood Eastwick had dreamed of owning the Bartram Gardens. In 1851 he built Bartram Hall as a residence. In 1891 after the death of Eastwick's widow, the city of Philadelphia bought the property and turned it into a park. Today the John Bartram Association, a non-profit organization, runs the Bartram Gardens for the city of Philadelphia. It is considered to be the first botanical garden in America and is a popular tourist destination, attracting about 25,000 visitors a year.

If you would like to learn more about John Bartram, check out some of the following websites:

https://en.wikipedia.org/wiki/John_Bartram
<http://www.ushistory.org/tour/bartrams-garden.htm>
<http://www.bartramsgarden.org/discover-our-roots/john-bartram/>

Until next time, happy surfing.

Gary Gruenhagen, Master Gardener
virtualgardener@cox.net



Ask a Master Gardener

Cochise County Master Gardeners are available to answer your gardening questions either by telephone call to the Cooperative Extension Office or on-line on our web site at:

<http://ag.arizona.edu/cochise/mg/question.htm>

Did You Know . . .

Did you know honey bees help pollinate some of our most nutritious foods, such as fruits, nuts, and the seeds of vegetables? Yet in recent years there's been growing concern that honey bee health is declining worldwide. Experts from bee keeper organizations, nonprofits, agricultural organizations, government agencies, and others are working together to find solutions. Because without honey bees, farmers can't grow the food needed for a growing population.

-Monsanto

High on the Desert

Learn more about bees at the 22nd High Desert Gardening & Landscaping Conference, March 12 & 13, when Dr. Mark Carroll, Research Entomologist at the Carl Hayden Bee Research Center will be presenting one of the many educational sessions, *The Status of Bees*.

The low conference rate of \$100 has been extended. To take advantage of this low rate, go to the registration website: For a complete agenda and registration for the conference, click [here](#).

Registration includes a full breakfast and lunch both days. Parking is free and ample. There are over fifteen sessions covering many gardening and landscaping related topics. Some examples are: Growing with hydroponics; using hardscape; preserving your harvest; planting native grasses and shrubs.

**There is still time
to register!!!**

This Month In the High Desert Garden Some Resources To Help You Garden

(Editor's note: This article written by Bill Schulze was adapted from a March 2012 article published in the *Sierra Vista Herald*.)

Whew! It's already March. Figuratively, anyway, that means a few more blinks of an eye and we'll be enjoying fresh-off-the-vine tomatoes and real BLTs. Far out! (Does that phrase date me?) Speaking of tomatoes, if you plan on starting your tomatoes or peppers from seed, you can begin doing that in the next few weeks so you can transplant them outdoors in mid-to-late May. Ideally, night time temperatures should be in the mid-fifties Fahrenheit, the minimum for tomatoes and peppers to thrive.

For now, though, continue to plant cool-season veggies and annuals. It's not too late to plant trees, shrubs, roses and other perennials. Just realize that "last call," also known as hot weather, is coming soon, so get moving. For landscape color this summer, consider some of the many native and desert adapted varieties that Angel Rutherford has mentioned in these pages over the years. Prime candidates include Trailing Indigo Bush (*Dalea greggii*), Arizona Blue Eyes (*Evolvulus arizonicus*), Apache Plume (*Fellugia paradoxa*), Mexican Hat (*Ratiba columnaris*), and Sundrops (*Calylophus hartwegii*). You can read more about these and other good choices in Angel's articles, available online at:

<http://ag.arizona.edu/cochise/mg/newsletter.htm>.

Lantanas are excellent choices for long blooming, colorful plants. Still more appropriate flowering plants include *Agastache*, *Penstemon*, *Salvia*, and *Gaillardia* spe-

cies. Plants like the preceding varieties are great for many reasons. They're colorful, hardy, well adapted to our climate and soils, and, once established, they require minimal water.

In addition to the Master Gardeners, there are at least three other active gardening organizations in the area. The Sierra Vista Area Gardeners Club has been around since 1991. They meet on the third Thursday of each month from 1 PM to 4 PM in the Cochise County Constable Office Annex at 4001 Foothills Drive, which is on the northeast corner of Highway 92 and Foothills Drive. Their website is

<http://www.svgardenclub.org>

Cochise County is lucky to have a chapter of the Native Plant Society. These folks also meet in the Constable Office on the third Thursday of each month from 7 PM to 8:30 PM. Their website is: <http://aznps.com/chapters/cochise.html> and their Facebook page is: <http://facebook.com/AZNPS Cochise>

Finally, don't forget about the Sierra Vista Community Garden group. They can be reached at:

www.svcommunitygardens.com

Don't try to design your landscape alone. Instead, walk around your neighborhood or drive around town to get landscaping and gardening ideas from your fellow high desert denizens. Better yet, visit a botanical garden. Take a trip to Tucson to see the big-time horticultural gardens there. The Tucson Botanical Gardens

(www.tucsonbotanical.org

(520-326-9686) near the intersection of Grant and Alvernon is a wonderful place to enjoy the beautiful selection and arrangement of plants. Tohono Chul Park

(www.tohonochulpark.org

520-383-2702) on Paseo del Norte right off Ina Road and just west of Oracle Road, has a fabulous display of desert adapted plants located on a spacious campus.

Further afield, consider seeing the Boyce Thompson Arboretum (www.ag.arizona.edu/bta/ 520-689-5858) near Superior, which is located in a truly spectacular setting and features many desert natives from around the world. Visit the Desert Botanical Gardens (www.dbg.org 480-941-1225) in Phoenix. It's right next to the Phoenix Zoo so you can see plants and animals in one trip, and please yourselves and the kids. All of the gardens described above have gift shops, some with many plant offerings, and all but the Boyce Thompson Arboretum have restaurants. Stroll the grounds of these botanical wonders, enjoy and educate yourself, then relax with a nice meal. When visiting Boyce Thompson, eat in the historic mining town of Superior, which is just a couple of miles away.

Bill Schulze, Master Gardener

March Reminders

- ◆ Prune roses
- ◆ Start seeds indoors
- ◆ Check cactus for fungus
- ◆ Plant cool-season veggies
- ◆ Reconsider your water usage
- ◆ (Call Water Wise for a free audit—520-458-8278, Ext 2139)
- ◆ Remove and replace winter mulches

Cuttings 'N' Clippings

✿ No public meeting of CCMGA is currently scheduled.

✿ The 22nd Annual **High Desert Gardening & Landscaping Conference** will be held at Cochise College, Sierra Vista. Mark your calendars for **March 12 & 13** for a rewarding experience! Conference Agenda and Registration are now available on the Master Gardener web site.

✿ The next free Water Wise presentation will be **Saturday, March 14 - Pruning Techniques Clinic from 9 to 11:00 AM.**



Learn how to assess plant health and prune appropriately with plant expert Bill Cook, UA Greenlee County Cooperative Extension. **This is an outside demonstration, dress for the weather.**

Location: UA Sierra Vista, 1140 N. Colombo Ave, Sierra Vista, AZ, Groth Hall Public Meeting Room. Check the Water Wise 2015 schedule on their web site:

waterwise.arizona.edu

For more information: (520) 458-8278, Ext 2141, or contact Valerie at:

valeriedavidson@email.arizona.edu

✿ The Cochise County Chapter of the Arizona Native Plant Society's meeting on Friday, March 20 at 5:00 PM in the Cochise County Community Development Office conference room, 4001 Foothills

Drive (corner of Highway 92 and Foothills Dr.), Sierra Vista will feature Dr. Richard Felger, University of Arizona Herbarium and Sky Island Alliance speaking on: *Baja Arizona: 'New' Food Crops for a Dry Future*. Dr. Richard Felger is a researcher with the University of Arizona Herbarium and the Sky Island Alliance in Tucson. He will discuss dry crops, food security, and conservation for a dry and crowded future. With no need to look elsewhere, the winning crops are right here and now in Baja Arizona and suitable for backyards, front yards, and small and big farms. Their potential can translate to mega-conservation for the Sonoran Region and the world beyond.

For information contact Doug Ripley, President, Cochise Chapter, Arizona Native Plant Society, 520-909-3132 or

<http://www.aznps.com/>

Welcome Joshua!



Joshua Sherman will be joining us as the Area Assistant Agent, Commercial Horticulture for Cochise, Santa Cruz and Graham counties. This position will provide leadership for Extension programs in the areas of Commercial Fruit, Nut,

Vine, and Vegetable Production and Small-Scale Horticulture/Value Added & Specialty Crop Production.

Joshua recently completed his Master's of Science in Horticulture at New Mexico State University. For the past 4 years he has been a Graduate Research Assistant for NMSU's Extension Pecan & Pistachio Specialist. During that time he worked on dozens of research projects, mostly pertaining to pecans. One interesting study is on soil-applied zinc fertilizer in pecans that is being conducted in San Simon. He also managed the NMSU pecan website. Joshua owned and operated his own business for 4 years where he designed, planned and implemented landscapes for aesthetic and functional appeal.

When Joshua was not at the university or in the orchard he managed a private community garden that he created in collaboration with several neighbors. He said, "Working in the garden with community members has been a fun way for me to teach adults about horticultural science." Additionally, he sold surplus produce from the garden at a local farmer's market. Thus, he has experienced the harvesting and marketing side of small-scale horticultural operations.

Joshua will start on March 9th --- just in time for our High Desert Gardening & Landscaping Conference. Nothing like jumping in with both feet. We are pleased that Jan Groth will be continuing in her role as the Master Gardener Program Coordinator. I think Jan and Joshua's expertise will complement each other very well and strengthen all of our horticulture programming.

Joshua is a great addition to our Extension team and we look forward to working with him.

Susan Pater

Cochise County Extension Director

Is it or Isn't it— A Native?

Is it or isn't it? Are the plants popping up in our yards right now Cochise County natives? If your yard looks like mine, then no, most of those vigorous herbaceous growers are not from here. They are not even from the United States.

The flourishing of four introduced European plants this month is drawing attention so I thought to write about them instead of a Cochise County native. Other than the Manzanita bushes (*Arctostaphylos pungens*) that are in glorious full bloom right now, I haven't seen a common local native plant in abundance blooming as of this writing on Feb 17. But that may have changed by the time you read this article!



London Rocket

The most abundant and bright green of the four plants is the annual London Rocket (*Sisymbrium irio*), a weed native to Europe. It is in the mustard and cabbage family

(*Brassicaceae* – formerly *Cruciferae*). This family also includes the familiar cole crops of kale, cabbage (“coleslaw”), broccoli, radish, and arugula. The flowers in the *Brassicaceae* family are characterized by four petals arranged in a cross (“Crucifer” means “cross bearing”). If you have ever let a cole crop go to seed, you will see another characteristic feature of the *Brassicaceae* family—the seedpods are arranged in an ascending radial pattern along the stalk.

London Rocket is distinctive with lush and deeply divided green leaves that look like miniature versions of the garden plant arugula. The approximately 1-foot tall flower stalk has ½ to 1/8 inch yellow flowers that quickly mature into slender ½ to 2-inch long seedpods. The pods are edible and some wild food connoisseurs spice up their salads with the hot mustard pods before the pods release abundant seeds ready for next year's crop.



Tansymustard

The second introduced plant in my yard is another annual mustard, Tansymustard (*Descurainia pinnata*). The very finely divided, lacey leaves are grey-green, and the dull white to light yellow flowers are smaller than the London Rocket at about 1/12” long. The seeds are arranged up the 6 to 10 inch flower stalk but are smaller and shorter than the London Rocket.



Henbit

If you have a ground cover that resembles a mint plant with small purple flowers, you may have a Henbit (*Lamium amplexicaule*), which is a member of the mint family, *Lamiaceae* (formerly *Labiatae*). It, too, is an introduced annual from Europe. Characteristic of the mint family (with some exceptions) are its square stems. If you roll a non-woody stem of a mint family plant between your fingers, you will easily feel the square ridges. Try this with new stem of a salvia plant as they too are in the mint family.

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(Is it or Isn't it? continued from page 5)



Cheeseweed

The fourth herbaceous plant popping up in my yard is the Little Mallow or Cheeseweed (*Malva parviflora*) in the *Malvaceae* or Mallow family. This family includes the native plants used in landscaping—the butterfly favorite globe mallow, and the beautiful wild cotton. Hibiscus and hollyhocks are also in the Mallow family. The European introduced annual or biennial Cheeseweed gets its common name from the shape of the fruit it produces—

half round green disks with divisions that make the disk look like a cheese wheel. The flower is also small (1/4 inch) and slightly pink. The two to five-inch, round leaves of the Cheeseweed are broad, and gently lobed. Like the London Rocket, the Cheeseweed has quite a stout root and is best pulled when the ground is soft.

With many “weeds” I think twice about eradicating them because they may have a value I have yet to learn about, but for those that are a little too enthusiastic and are introduced, I usually reach for the digger, especially before the plant goes to seed.

Although a bit outdated, a favorite reference book for weeds is Kittie F. Parker’s, *An Illustrated Guide to Arizona Weeds*, University of Arizona Press, fourth printing 1990.

Cado Daily, M.A.
Water Resources Coordinator



Cochise County Master Gardeners Association in conjunction with
The University of Arizona Cooperative Extension presents . . .



The 22nd Annual
High Desert Gardening & Landscaping Conference

High on the Desert



March 12 & 13, 2015
Cochise College
Sierra Vista, Arizona

An educational experience for everyone with an interest in gardening. For information contact U of A Cooperative Extension 1140 N. Colombo, Sierra Vista, AZ (520) 458-8278, Ext. 2141. www.ag.arizona.edu/cochise/mg/events.htm A registration fee is required. The fee is \$65.00 for one day or \$100.00 for two days (\$125.00 after February 15), which includes a hot breakfast and lunch both days. Scholarships are available. Registration begins early January and ends March 6.

High on the Desert
Register now for the 22nd
Annual High Desert
Gardening & Landscaping
Conference [here:](#)
Hurry!

Cochise County Master
Gardener Newsletter Editor
Carolyn Gruenhagen