



HAVERFORD COLLEGE ARBORETUM ASSOCIATION

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***PINUS ARMANDII*: CHINESE WHITE PINE**

by William Astifan, Arboretum Director

The Chinese white pine as the name suggests is native to the western interior of China. *Pinus armandii* belongs to the northern hemisphere family *Pinaceae*. This species was named in honor of Père Armand David by Adrien René Franchet (1834–1900), a botanist at the Paris Museum of Natural History who was noted for his work based on collections made by David (1826–1900), a French missionary to China and a naturalist. David also is honored for the commonly known dove tree, *Davidia involucrata*.

The Chinese white pine is the most widely distributed white pine in the subgenus *strobis* in China which is remarkable considering this tree's native range is mostly above 1500 feet and very mountainous. As the tree matures on the steep mountainsides it becomes distorted with wide-spreading irregular branches that give it a contorted or windswept look. In the valleys, a tree in a forest can grow to 110 feet with a trunk that exceeds 3 feet in diameter. Under these conditions the tree forms a cylindrical crown with widely spaced tiers of long, thin greenish-gray branches that bear foliage toward the ends of the branches. The bark in its early years is dark grayish-brown, ultimately flaking and breaking into blocks. Considered a slow to medium growth tree, it is an important tree in the Chinese forest. The tree supplies lumber for the general needs of carpentry as well as providing pulp and turpentine. The seeds encased in a fleshy shell are harvested and sold as pine nuts.

As a member of the white pine group, it has the typical bundles of five needles with a deciduous sheath. The 4 to 4½-inch long needles are dark green, triangular in cross-section, thin and flexible, and display themselves in clusters that appear whirled toward the ends of the branches. The needles persist two to three years before shedding, while the sheath sheds soon after the needles develop. The 4 to 8-inch long cones are elongated, egg-shaped, greenish-purple, and the 70 to 100 scales appear a little waxy. The cone turns reddish-brown when it matures in the second year. The cone is supported by a 1 to 2-inch stalk that supports the cone upright the first year and allows the cone to droop in the second, prior to seed release.

In the United States, when available, it is used as an ornamental tree in parks or large gardens. Our tree was acquired with funds donated as a gift from the family of Terry Cone, Class of 1952, in honor of his 80th birthday. This welcome addition to the Arboretum collection is located at the intersection of College Lane and Coursey Road by Barclay Hall. It is worth comparing it to the eastern white pine, *Pinus strobus*, on the opposite corner.



The branches of Pinus armandii, Chinese white pine, frame a view of Barclay Hall.

Photo by Mike Startup

A FEW WORDS FROM THE DIRECTOR

At the October 18 annual meeting, Tom Shotzbarger was nominated and elected to the Executive Committee. Tom is from the Class of 1977 and has spent his career in forestry work. He brings to the committee a wealth of knowledge about trees, and is an avid campus visitor. He and his family have long been associated with Haverford, both of his brothers also attended the college, and his daughter, Kathryn, is a Class of 2000 graduate. Help me welcome Tom to the committee.

Also at the meeting, Matt Simon's term was renewed for another three years. Matt, also from the Class of 1977, has been a strong supporter and contributor on the committee. I welcome Matt back for another term.

There were a number of changes this year on the committee. Anne Donnell served for many years as secretary for the committee and has been a member of the association for 34 years. Special thanks go to Anne for her many years of support and service. Tiffany Lewis also steps down from the committee as well. She and her husband have moved to New England. Thank you Tiffany for your work on the committee. Both Anne and Tiffany will be missed.

Three college staff positions have changed due to departures from the college. Violet Brown, Jill Miller and Ron Tola left this year. Jessie Lytle, the president's new chief of staff, and recently arrived Don Campbell, director of Facilities Management, have been appointed. We are still in the process of filling the last staff position.

*The Kim and Tritton resident halls are now complete and occupied; we await the approval that the landscape will become the responsibility of the college. This transfer of responsibility is being delayed because of the lateness of the installation. A plus from the project is help with restoration of the Orchard next to the building site along Coursey Road. The Arboretum received five trees from the project to continue with our efforts to plant trees in the vacant places. In addition to the trees the project purchased, we chose a *Prunus x yedoensis* as the freshman tree for the Class of 2016. This Yoshino cherry is planted just outside one of the study areas with large windows. Since the freshmen live in this building, it is appropriate that they enjoy the beauty of their tree in spring.*

All of the arduous hurdles have been crossed and finally the streambank restoration along the Nature Trail south of the Duck Pond will begin this winter. I will keep you updated as the work continues.

The appearance of John Bartram (aka Kirk Brown) as our annual dinner speaker was a crowd pleaser. Not only was he entertaining, but Kirk was very well versed with facts about the life and times of this 18th-century colonial plantsman. It was a great way to wrap up last year and start this year. Stay warm this winter.

Bill Astifan
Arboretum Director

2704 AND COUNTING

It all started with a map.

by Martha Van Artsdalen, Plant Curator

Merely ink on paper, William Carvill's 1834 landscape plan named, in Latin, the plants forming the serpentine walk in front of Founders Hall, the circles of trees on the "Great Lawn" and conifers lining the walking paths.

In the following decades, trees were added along with campus buildings. By the 20th century, alumni and faculty efforts brought an organized plan for tree care and new plantings. Labels appeared — first in tin, then plastic and now laser-printed aluminum.

Computer technology in the 1980s saw the transfer of tree records from hand notations into a DOS-based inventory and a computer-aided design program in AutoCAD. Now the Internet offers even more ease in record-keeping, as well as the opportunity to share Haverford's tree collections with other arboreta.

Over the past year, Horticulturist Mike Startup and I have been converting all tree records into a PC-based application called BG-Base that will allow us to fully document and manage our tree collection. First, field work confirmed tree identification and condition. Next, we assigned each tree a number based on the year it was planted. We then culled all information from both the old inventory and paper files, and input everything into BG-Base. We expect to complete data input by the end of the year. As of late November, 2,704 individual trees have been recorded.

This information will help us chart the diversity of tree species and gauge the aging population of trees needing care or replacement. Perhaps most importantly, we will be able to better determine which trees face the threat of disease and how they react to any treatment: for example, bacterial leaf scorch in red oaks, woolly adelgid infestations in Eastern hemlocks or fungal disease in ash trees brought on by the emerald ash borer.

The Arnold Arboretum of Harvard University initiated



BG-Base in 1985; today it is used by 184 botanic gardens, arboreta, zoos, herbaria and universities in 28 countries. With the completion of record input, Haverford will be able to upload its collections information to the Internet and share in research and conservation work with these institutions around the world.

Photo by Mike Startup

Field work is the first step to inputting data into BG-Base. Horticulturist Mike Startup and plant curator Martha Van Artsdalen have spent a year confirming each tree's identification and location on the 216-acre campus with current paper records.

A SWEET COMMUNITY by Adriana Cvitkovic '16

"I ate a ton of sugar. It made me very sweet. It also made me very round — now I can't find my feet."

— Alice Gilbert

New experiences have abounded during my first month of work with the Haverford College Arboretum. Some I expected (with great anticipation), like the opportunity to use power tools and learn how to repot plants. Others, like maintaining a green roof and learning tidbits of the college's history, came as pleasant surprises.

By far the most stupendous experience I have had, while working the best college job, was harvesting sugar cane. During the warm summer months, along the right side of the Dining Center, a collection of sugar cane plants grow. They spurt out thick shoots wrapped in green leaves, the stems themselves a deep magenta. To the unknowing eye, they appear as a thick bamboo-like grass. However, they are far from hollow!

During my shift with Carol Wagner, I was shown how to get the most out of this plant. We lopped off the long stalks and removed their leaves. Carol cut a small piece, split it, and popped it into her mouth. I, naturally, did the same (I'm very obedient while on the job). The fibers within the stalk taste like sugar water, so subtle that my mouth, accustomed to sickly sweet candy, had to focus intently to detect the sucrose. Nonetheless, as with most sugary things, I loved it. More than the flavor, though, I loved the fact that I was enjoying a tropical plant on a 50-degree day on an East Coast college campus.

This sugar cane crop has an impact greater than simply campus beautification. After washing and chopping the cane into sticks, Carol and I put a filled crate in the Maintenance Office. From there, the sugar cane will be picked up by the appreciative hands of Haverford staff who know what the thin purple logs are, and how to use them.

Community appears to grow out of the strangest places sometimes. What I might call an out-of-place plant has

connected me to people who once lived in much warmer and "sweeter" climates. Of all the experiences I have gained through my work with the Arboretum, in my short time I have come to highly appreciate the group of people who maintain our campus. They enjoy hands-on teaching as much as I enjoy hands-on learning. I am convinced that in my many future months of work with the Haverford horticulturists, I will gain new skills and experiences that may even surpass the feats of harvesting sugar cane.



Photo by Mike Startup

Adriana Cvitkovic '16 holds the leaf vacuum for fellow student Arboretum worker Zeek Barnett '13. Scooping up tons of leaves is a fall ritual on campus and everyone pitches in.

NEW HOME AT HAVERFORD by Martha Van Artsdalen, Plant Curator

Incoming freshmen and upperclassmen moved into new student residences at the start of the fall semester — the first built since Jones, Comfort and Lunt opened in 1968. The two-level Tritton and Kim dormitories each house 80 students in single rooms with lounges, study areas, laundry facilities and an open central atrium. Construction took place over 22 months next to the Orchard on what was a parking lot and, before that, the rugby field. The landscape, developed by Matthew Nielsen Landscape Architects under the direction of Tod Williams and Billie Tsien Architects, utilizes a central berm design for building access. This winter, the Arboretum will assume care of the trees, shrubs and perennials planted by Moon Landscaping. The buildings were funded by gifts from Steven Jaharis '82, who requested the first residence be named for College President Tom Tritton (1997–2007), and Michael B. Kim '85.



Photos by Mike Startup

AN AUTUMNAL FAVORITE by Mike Startup, Horticulturist

How would Cinderella have gotten to the ball without a pumpkin? Or poor Linus, after being ridiculed by Charlie Brown, Snoopy and the gang, sit in his pumpkin patch through the night waiting for the Great Pumpkin to arrive and proclaim his patch the most “sincere”? In another masterpiece of American literature, *The Legend of Sleepy Hollow*, why did Brom Van Brunt laugh when people talked about the broken orange pumpkin found near Ichabod’s old dusty hat? Who knew that the little jack-o-lantern would ever be raised to such cultural prominence?

Now, just to clear the record, the pumpkin is not a vegetable, botanically speaking, it is a fruit! *Cucurbita pepo* is the Latin name that catches a large representation of the grocery produce aisle: acorn squash, cucumber, summer squash, cantaloupe, honeydew, watermelon, gourds and the pumpkin. In the record books, Ron Wallace from Greene, Rhode Island, has grown the world’s largest pumpkin. His behemoth tipped the scale on September 28, 2012, at a mind-blowing 2009 pounds! Pumpkins of that stature come from good genes. Two of the favorite seed names are Goliath Giant and Atlantic Giant.

Following is a list of important tips for growing the big ones from www.pumpkinnook.com. Seeds should be started indoors since these giants take 140 days or more to size up before harvest. Start with great soil and lots of organic material. The vine is a heavy drinker, so pour on the water. There is an art to the fertilization regime and here is a stripped down sketch. Fertilize with high nitrogen in spring. Switch to a high phosphorus mix in advance of blooming and fruit set. Once the fruit is getting some size, change to a high potassium formula. Finally, an important micronutrient not to be forgotten is calcium.

Pumpkins must first be field sown 85 to 110 days before one can begin to create all the wonderful tricks and treats this seasonal favorite has to offer. Give them room — they grow on a sprawling vine. Their flowers are edible; the plant bears separate male and female flowers, so insect pollination is critical for fruit to be produced. Nutritionally, pumpkins are loaded with the antioxidant beta carotene.

If you venture to the World Championship Punkin’ Chunkin’ in Bridgeville, Delaware, be sure to have nourishment for the ride with a pumpkin bagel from Panera Bread Company and a pumpkin-spiced latte from Starbucks!



Cucurbita pepo, pumpkins — a sign of the season, figure prominently in American literature, from Ichabod Crane to Charlie Brown.

Photo by Mike Startup

WELCOME CLASS OF 2016



Photo by Mike Startup

*Each year, the Arboretum staff welcomes incoming freshmen during Customs Week with the invitation to plant a class tree. On August 30 students grabbed shovels and added soil to a *Prunus x yedoensis*, Yoshino cherry, outside the newly opened Tritton Hall.*



EXECUTIVE COMMITTEE

Members at Large

Ann Ashmead	Nancy Pasquier
Fritzi Franks	Laura Patterson
Agnes Moncy	Tom Shotzbarger '77
Lathrop B. Nelson, Jr.	Matt Simon '77
Pat Turner	

Arboretum Director: Bill Astifan

Student Representatives:

Abi Moeller '15 & Jeanne Quinn '16

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