



# H A V E R F O R D C O L L E G E A R B O R E T U M A S S O C I A T I O N

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## ARAUCARIA ARAUCANA, MONKEY PUZZLE TREE

by Martha Van Artsdalen, Plant Curator

The conifer *Araucaria araucana* is a novelty in our area. Only a few examples can be found growing above the Mason-Dixon Line. But with our warmer winters, this South American tree is appearing in specialty nurseries, and some gardeners are obviously experimenting. Our Arboretum staff also has taken up the challenge. Several years ago we planted a small specimen in a corner of the Marshall Fine Arts Center where it will be warmed by reflected heat, protected from the wind, and hopefully flourish.

By definition, an arboretum is not just a collection of trees, but a place of education. Haverford's campus includes not only mature oaks, maples, dogwoods and magnolias, but many more unusual trees from around the world, so we're open to pushing the growing limits beyond our Zone 6B climate.

This single-stemmed conifer is native to the Andes in Chile and Argentina where it will reach 50 to 80 feet high. What makes the tree so intriguing are the thick, triangular-shaped needles. They're densely packed in a spiral arrangement around the branches and persist on the tree for 10 to 15 years, much longer than on other conifers. The needles don't drop individually, but rather whole branches shed off the tree. And don't get too close to these stiff and sharp points! They're an excellent defense against browsing animals as they undoubtedly were when dinosaurs roamed. Fossil records show the tree has changed very little in the past 200 million years, though their range is greatly diminished.

The tree's overall silhouette is pyramidal, with the branches growing horizontally in a limited number of tiers from the trunk, then arching slightly upward at the tips. As the tree grows, the lower limbs drop, leaving a telephone pole-like trunk with a crown in the upper half to one-third of the tree.

The tree is dioecious, meaning male and female cones grow



Photo by Martha Van Artsdalen

*The thick needles of the monkey puzzle tree are densely packed around the branches.*



Photo by Martha Van Artsdalen

*Horticulturist Mike Startup planted a specimen in a corner of the Marshall Fine Arts building.*

on separate trees, though occasionally a tree will bear cones of both sexes. These large pineapple-shaped cones are wind pollinated. The resulting seeds are quite large as well, approximately 1½-inches long by ¾-inch wide. They've traditionally been an important food crop for native tribes in the Andes. Despite the increase popularity of similar pine nuts, it is illegal to export these seeds because the tree is considered endangered.

The Latin name *Araucaria araucana* honors the native Chilean tribe, the

Araucanians. The tree's common name has a much less scientific derivation. The English, always passionate plant collectors, first grew the tree in about 1850. The story goes that a Sir William Molesworth, proud owner of such a tree in his garden in Cornwall, was showing it to his friends. One gentleman's response was, "It would puzzle a monkey to climb that." And so the description stuck.

Of the 13 species of the genus *Araucaria* in the plant family *Araucariaceae*, only this one has adapted to a cool climate with frost. The others remain dependent on subtropical to tropical climates. We're most familiar with the species *Araucaria heterophylla*, the Norfolk Island pine from the South Pacific. For us it is a houseplant.

The monkey puzzle tree is the national tree of Chile. Sharp-eyed readers, however, will find it growing far north, "bristling" on the corners of Maycomb's town square, Harper Lee's fictitious setting in *To Kill a Mockingbird*. We have our fingers crossed that our young tree will be happy growing at Haverford.

## FROM THE DIRECTOR

*As summer comes to a close, we welcome the Class of 2020 to campus. During Customs Week, members planted an Okame cherry, Prunus 'Okame.' This tree joins the class trees of 2010, 2015, 2017, 2018, and 2019 in an alleé along the library walk by the playground. Originally the alleé was flowering dogwoods. These replacement cherry trees will provide a pink profusion of flowers in April. With the arrival of fall, the staff and I are reviewing all the specimens we have collected in the nursery to see what is ready to be planted on campus. There are some very interesting plants to look for in the coming year or so.*

*Looking back over this last year, I am seeing some sustained growth in our membership. Getting out and sharing with visitors and alumni the history of the campus sets a natural stage to recruit new interest and members. In addition, the use of electronic media is improving communications with our constituents as we spread the word of our activities. I am optimistic as new programs develop and many existing ones maintained; I expect this trend to continue. Doug Ross, Class of '69, will be joining the Executive Committee; he brings plenty of experience in community outreach programs. His familiarity with programs will add a nice depth to our existing committee. Welcome Doug!*

*After many years of hard work, it delights me to see the fruits of our labor that come together in this newsletter. This issue points out an uncommon tree that one would expect from an arboretum, a new program of collecting honey at the developing student-run Haverfarm, plus reports of the ongoing daily maintenance. Mike Startup points out how many things are written in stone, while Martha Van Artsdalen introduces the new digital technology that uses information gleaned by using satellites. Reading these articles provides some insight into the many hours of research, training and implementation that goes into making our Arboretum. Enjoy the insight!*

*After a long, very hot summer, I look forward to the cooler fall weather and all the bounties of the fall harvest. Enjoy our programs and the fall.*

Bill Astifan  
Arboretum Director

## ONE TREE AT A TIME

by Martha Van Artsdalen, Plant Curator

**One-hundred and seventy-nine down. Only 3,874 to go.**

**L**ate this summer, Mike Startup and I began mapping the Arboretum's tree collection with a handheld Trimble Geo 7X, a device that pulls in satellites to record a position on campus. This information is then downloaded via software that links our tree inventory database on BG-Base, translated by BG-Map software and finally positioned on an AutoCAD map. Click the right key and *voilà!* The tree name and number appear on the campus map.

Gone are the days of paper maps and colored pencils.

Several years ago, we completed inputting information on nearly 4,000 trees into the BG-Base database. This is updated regularly as trees are planted or removed on campus. The newly installed BG-Map software now translates all this information to the AutoCAD map and creates a visual record that can be used in many ways.

When completed, we will be able to provide maps of tree root regions for our maintenance staff when they're digging to repair steam lines or lay computer cables. Architects will be given a map of tree locations around a potential construction site. More immediately, we'll be able to focus on locations of individual tree species. We can pull a map, not just a list, of all the Eastern hemlocks, *Tsuga canadensis*, that need to be sprayed for wooly adelgid. Or a map of all the white ash, *Fraxinus americana*, trees to be monitored for signs of the emerald ash borer.

The Trimble is also equipped with a laser for faster and more accurate positioning. The laser can be used to measure tree heights and widths. Eventually any notes on tree condition — signs of disease, the need for pruning, measurement records — can be noted and directly changed in the tree database while out on campus.

One-hundred and eighty down. Only 3,873 to go.

## GOOSE PATROL



*The latest attempt to discourage the growing number of resident Canada geese on campus was devised by groundsman Dave Tierney. Early each morning his duck decoy mounted on a remote-control car has them scrambling on land, while a remote-control speed boat has them scurrying on the pond. We hope that this will help reduce the grazing and defecating on athletic fields and open lawns.*

Photo by Mike Startup

## HAVERFORD ROCKS *by Mike Startup, Horticulturist*

What will a pile of rocks become? It may be self-centric to always present to the reader stories or musings about the plant life on campus. Today, we'll drive a short distance from the trees to the buildings that make up Haverford's campus. Some trees planted as early as the first few buildings have witnessed the Quaker values of simplicity and equality grow from rock.

Construction of Founders Hall began in the summer of 1832 and concluded in October 1833. It is written that, "stone from the quarry on the farm and timber from the North woodlot were used." Presumably, the quarry mentioned is referring to the old quarry on college land later sold to the Merion Golf Club. This is the current site of Merion's infamous Quarry Holes nos. 16, 17 and 18. Founders Hall is iced with its iconic yellow stucco today as it was in 1833.

Barclay Hall opened in 1877 during the presidency of Thomas Chase. For the first time stone was not used from the college quarries as it was for Founders, Gest Hall and the 1863 Alumni Hall. (The latter forms the core of today's Magill Library.) Instead, the choice was Port Deposit granite, "with a bluish hue," and trimmed with Nova Scotia stone. The building material was brought to campus from the immense granite quarries of Cecil County, Maryland.

The largest number of buildings on campus are constructed with Wissahickon schist. Dating from the early to mid-20th century, Ryan, Sharpless, Hall, Roberts, Chase, Union, Morris and others through the years, ending with the Gardner Integrated Athletic Center completed in 2005, are of this locally quarried rock that was commonly used throughout the Philadelphia area. This schist dates to the Ordovician period, about 500 million years ago. A metamorphic rock, it was originally gravel on the sea floor, and underwent vast pressure when volcanic action moved it upward to form a mountain range.

Bricks crafted in Denmark came to campus in the fall of 2012 to face Tritton and Kim Halls, the newest residence halls at Haverford. The buildings, albeit questioned by some as to their conformity with the rest of the college's architecture, present for us today and for generations hereafter a talking point.

Presently, the Greenstone Slate Company from Vermont is providing the new slate roof on what was Ryan Gym, now VCAM (Visual Center for Arts and Media.) The exterior facelift and complete gutting of the interior will bring a new energy to the central core of campus.

On a final note, still other rocks are visible on campus, though not as part of buildings. A granite millstone from the country home of Francis J. Stokes, class of 1894, graces the entrance of Stokes Hall, erected in 1963. Its plaque reads, "Dedicated by his family in memory of his continuing interest in beautifying the Haverford campus." Another alum also is represented on campus by a rock. Peter Rockwell, class of 1958 and son of artist Norman Rockwell,

gifted his *Climbing Stone* to the college in 1990. It stands by the Osage orange, *Maclura pomifera*, the climbing tree, and is a favorite playground structure for children. The sculpture was made from Indiana limestone and was the culmination of Rockwell's semester as artist-in-residence that year.

The passing of 183 years has tastefully assembled a college campus loved and respected by all her inhabitants.



*An arch of Wissahickon schist forms the entrance to Chase Hall, built in 1887.*

Photo by Mike Startup

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## A SWEET TASK

*by Claudia Kent, Assistant Director of Facilities Management*

As the saying goes, it was like a hot knife through butter. Well, not quite.

The students of Haverfarm just harvested their first batch of honey from the beehives. We were a little surprised by this as we lost all of our bees last winter. This is not unusual, especially with new colonies. We started fresh this spring with two new nucs and decided to go for it and added four more nucs for a total of six. A nuc is a small bee colony complete with a queen. The queen bees are necessary to start a new hive.

In early August we got the word from our apiarist, Eli St. Amour, that there was enough honey in the hives to harvest. One afternoon we met in Bryn Mawr where the historic Harriton House allows us to use their extraction equipment.

Eli had spent the morning at Haverford picking up the boxes, or supers, with the honeycomb. Each honeycomb has a wax cap that needs to be cut off with a hot knife. They are then loaded into an extractor. An extractor is a drum or container that uses centrifugal force to fling the honey out of the honeycomb. The honey then trickles down the inside of the extractor to a honey gate or gate valve where it is strained into a 5-gallon bucket. Another valve at the bottom of the bucket allows the honey to be poured into jars.

Haverford's beehives provide educational opportunities to students and supports the Environmental Studies Program.

## UPCOMING EVENTS

### Fall Lecture

Sunday, October 9 • 2 p.m.

*Sharpless Auditorium*

**“Native Wildflower Meadows: Let’s Get Real”  
by Larry Weaner, landscape designer**

Meadows, a popular alternative to growing open lawn areas, are misunderstood, according to Larry Weaner, founder of Larry Weaner Landscape Associates. Failures often result from inadequate planning and the use of poorly adapted plants. Better results can be achieved when the design reflects the ecological character of naturally occurring meadows. More than one-year wonders, meadow plantings modeled on actual meadow communities provide long-term, easily managed landscapes that harbor a myriad of birds and butterflies, and provide color and texture throughout the year.

Cosponsored with Hardy Plant Society/Mid-Atlantic Chapter Arboretum and The Henry Foundation for Botanical Research. The lecture and following reception are free to the public.

### Annual Dinner Meeting

Thursday, October 20 • 6 to 9 p.m.

*Founders Great Hall*

**“The Roughwood Seed Collection:  
84 Years of Quaker Commitment to Biodiversity”  
by William Woys Weaver, food historian and author**

William Woys Weaver has seen the gardening world come to embrace the heirloom food plants that he grew up with as a child. The beginnings of the Roughwood Seed Collection, now numbering about 4,000 varieties of heirloom seed plants, was begun by his Quaker grandfather in 1932. H. Ralph Weaver started with a one-acre kitchen garden to feed his family, collected seeds from relatives and found his passion snowball by the 1940s. Today, his grandson is author of 16 books, consultant on a variety of culinary projects, a visiting professor, and a life member of Seed Savers Exchange. His organic garden features varieties of heirloom vegetables, flowers and herbs.

There will be a book signing during the reception by William Woys Weaver with a selection of his books, and by Plant Curator Martha Van Artsdalen for her book, *Images of America: Haverford College Arboretum*.

All members will be mailed an invitation to this dinner program. Cost is \$38 per person.

### *A Closer Look . . .*



Photo by Martha Van Artsdalen

*It may look like a new variety of cauliflower, but this fungal growth at the base of a willow oak, *Quercus phellos*, is a bad sign for the health of the tree bordering Featherbed Lane and the athletic fields on campus.*

*“The beautiful grounds which surround the College are not only very attractive to visitors, but, I believe, they exert a wholesome influence on the minds and hearts of the members of our little community.”*

President Thomas Chase, 1880



HVERFORD COLLEGE  
**ARBORETUM**  
ASSOCIATION

#### EXECUTIVE COMMITTEE

##### Members at Large

Ann Ashmead	Laura Patterson
Agnes Moncy	Matt Simon '77
Nancy Pasquier	Alan Wood

##### Staff Representatives:

Bill Astifan, *Arboretum Director*  
Don Campbell, *Director, Facilities Management*  
Claudia Kent, *Assistant Director, Facilities Management*  
Jesse Lytle, *Chief of Staff, President’s Office*

##### Student Representatives:

Austin Huber '19, Annika Ulrich '18

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