



Two Species of Bamboo on the Domain?

When the description of a new species of bamboo was reported in the journal *Sida*, it sounded very much like the short bamboo that grows in various places on the Domain. We have sent a specimen to Alan Weakley at the University of North Carolina Herbarium for confirmation of the plant's identity. Meanwhile, associate curator Yolande Gottfried has done some sleuthing, as she reports below. —MPP

The recent recognition of a new species of North American bamboo has important implications for the Sewanee Herbarium and the Flora of the Domain project. Botanists at Iowa State University and the University of North Carolina published last fall a description of *Arundinaria appalachiana* Triplett, Weakley & L.G. Clark, commonly known as hill cane, in the scientific journal, *Sida, Contributions to Botany*. Hill cane occurs on the Domain, but until this publication, it had been identified as *Arundinaria gigantea* (Walter) Walter or river cane.

Hill cane has long been recognized locally as being different, but that difference wasn't officially recognized until Lynn G. Clark, professor of ecology, evolution and organismal biology at Iowa State University, and Ph.D. student there, Jimmy Triplett, began a field study in 2003 of North American bamboos, which only occur in the southeastern United States, to determine if there was more than one species. Alan S. Weakley, Administrative Curator of the Herbarium at the University of North Carolina at Chapel Hill, brought hill cane to their attention. When they saw it in the field, they realized immediately that it was not the same as river cane or the other species under study, switch cane (*Arundinaria tecta* Walter). It is smaller and more delicate, growing only to about six feet, while the others grow taller and thicker. Most noticeably, it loses its leaves in the fall, while the other two tend to stay green.

Further study of the vegetative characteristics of a number of specimens (see their photo at [livescience.com's imageoftheday](http://livescience.com's_imageoftheday) for March 27, 2007, looking at specimens just as the Sewanee Herbarium staff does!) plus genetic data confirmed that this was



indeed a separate species. Dr. Clark noted, "We tend to think that we . . . know our own biodiversity, and that there isn't much left to discover in a place like the United States. I think this demonstrates that that's not true."

Dr. Clark is an international bamboo expert with 74 other new species to her name, mostly in Central and South America. The closest relatives of this new species and the other two North American bamboos are in East Asia, where there are 500 bamboo species. This distribution pattern is found in a number of other species of eastern North America (see "East Is East and West Is West?" in the Spring, 2006, issue of *The Plant Press*). Hill cane is endemic to the southern Appalachians and upper Piedmont of northeastern Alabama, northern Georgia, southwestern North Carolina, and southeastern Tennessee. The type specimen for the species (the official herbarium specimen connected with the scientific name of the species) was collected by Triplett in Desoto State Park in DeKalb County, AL. Two of the Tennessee specimens mentioned in the paper were collected in Lookout Mt. National Military Park on June 29, 1957, by Pohl and at White Cliff Springs in Monroe County by Lamson-Scribner in July of 1890. This is an impressive example of the value of preserving herbarium specimens and good record keeping--collect a plant and achieve fame and immortality!

Hill cane occurs "in upland oak-hickory-pine forests on slopes, less typically in more mesic sites, seeps, or along small streams" (*SIDA* 22(1):91.2006). It is nearly always found away from perennial streams, which is the usual habitat for river cane. Switch cane is primarily a Southeastern Coastal Plain endemic. All three cane species flower and

(continued on p. 2)

Richard Winslow — Sewanee's Domain Manager

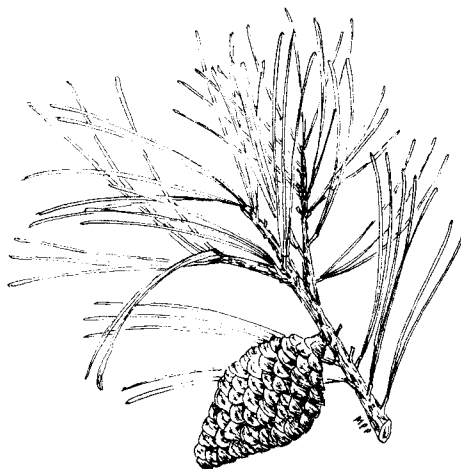
"I'll bet I'm the only person who's ever held graduate assistantships in both forestry and English at the University of Florida," quips Richard Winslow. Graduating from Sewanee with a double major in forestry and English, Richard headed to Florida for a master's degree in forestry and found himself — like many students — scrounging to make ends meet. "I walked into the English Department and uttered two golden words: 'Andrew Lytle.' They signed me up on the spot. Mr. Lytle had taught there before coming to Sewanee [to teach, write, and edit the *Sewanee Review*]. They were more than happy to hire one of his students!"

After graduate school Richard did forest consulting for a firm in Milwaukee. One of their clients was Tennessee Consolidated Coal, which owned 32,000 acres of forest land. Richard became their land manager. When TCC sold their land in the mid-1990s, Richard returned to consulting before coming to Sewanee three years ago.

As Domain Manager, Richard oversees the integrity of the Domain and the security of its natural resources. His main responsibility is to outline long-range management. "We ask ourselves, 'What will the forest look like in 50 years?' It's a balancing act between aesthetic/recreational use and ecology."

Richard has spent many hours walking the boundary and becoming better acquainted with the University's forest

(which is shown on the map on page 4). Covering more than 10,000 acres on the Cumberland Plateau, the forest can be sorted into four major categories: 43% is plateau-top hardwoods, dominated by oaks and hickories; 24% is the more diverse "cove" forest on the slopes of the plateau; 23% is urban, consisting of the campus,



village, and residential areas; and the remaining 10% is planted trees.

Most of the tree plantations are in non-native loblolly and white pine. A few are in yellow-poplar, and two small Austrian pine and Norway spruce plantations were established years ago. Richard would like to replace much of the white and loblolly pine with the native shortleaf pine, a tree that grows naturally in a couple of areas on the Domain, including along the trail to Piney Point. "I really want to see it come back, and it's got to be through our efforts."

Until a few years ago, there was an uninterrupted forest in the hands of a few major landowners all along the plateau from south of the Alabama state line, through the Domain, and on northward. In the past few years, with the sale of large timber tracts to developers who in turn are selling parcels for residential use, that swathe of forest has become fragmented. "A forested corridor is important for neotropical birds and other critters that require large habitats," Richard explains. "Breaking up the forest into multiple small tracts makes it more difficult to keep that corridor intact."

With an eye to minimizing the disturbance to the forest that this fragmentation brings, Richard has helped to form a Franklin County Forestry Association. Membership is open to all landowners in the county. The goal is to educate the members on the broad range of forest management options that are open to them, from timber harvesting to conservation easements, and the implications of each.

Richard's liberal arts background has proven useful when tackling problems associated with land management. "I have a better feel for the big picture. People who leave Sewanee with degrees in forestry or geology — or any of the sciences — are so much better off having received a liberal arts education."

—Mary P. Priestley

Bamboo, continued from page 1

fruit infrequently, but hill cane even more infrequently than the other two. This may be due to fire suppression, as flowering may be a response to fire. In addition to one non-flowering specimen collected this year on the Domain, the Sewanee Herbarium has a number of specimens of river cane found in fruit in 1965 and 1968 a few miles down the Sherwood Road and collected by Dr. George Ramseur and his students. However,

hill cane forms slow-growing clones that are decades old, likely even centuries old.

It is possible that both hill cane and river cane can be found on the Domain. As the Domain Flora project nears completion this year, the Herbarium staff will be out in the field and at the microscope, collecting and identifying "cane on the Domain."

—Yolande Gottfried

References:

<cryptomundo.com/cryptozoo-news>
<herbarium.unc.edu/flora>
<livescience.com>
<sciencedaily.com>, March 13, 2007
SIDA 22(1):79-95.2006

Autumn Calendar of Events

Bird Walk

Sat., Sept. 22, 7:30 AM, David Haskell

Start the autumn season with a birdwalk! Get up with the birds and join an ornithology professor at one of Sewanee's best bird-watching spots for fall migrants. Meet at Morgan's Steep for this easy walk. Cancelled in the event of rain.

Fall Wildflowers

Sun., Sept. 23, 2 PM, Yolande Gottfried

Or . . . start the autumn season with a wildflower walk! The paved Mountain Goat RR Biking/Walking Trail is a good spot to see a variety of asters, goldenrods, thoroughworts, and other fall-bloomers. Meet in the gravel parking area used for the Gardeners' Market (near the intersection of University Ave. and Hwy. 41-A) for this easy 2-hour walk.

Fruits v. Seeds: Learn To Tell the Difference — An Elementary Botanical Exercise

Sat., Sept. 29, 2 PM, George Ramseur

Meet botany professor *emeritus* George Ramseur at the gazebo in Abbo's Alley for a hands-on experience with the fruits and seeds of fall. Is an acorn a seed? Is corn a fruit? This is your chance to find out everything you ever wanted to know on this subject.

Shakerag Hollow One Hundred Years Ago

Sun., Oct. 7, 2:30 PM, Herbarium Staff

Herbarium staff members will join University students in leading a hike to an old homesite

in Shakerag Hollow to observe the changes since folks lived there around 100 years ago. This event is part a series of "Sesqui Sundays" tours exploring the history of The University of the South as part of Sewanee's 150th anniversary celebration this year. It is a reprise of a hike led by Bran Potter on September 9. Meet at the Sewanee Heritage House on University Avenue (the blue frame house next to Hunter Dormitory).

Abbo's Alley

Sat., Oct. 13, 8:00 AM, Mary Priestley

The Abbott Martin Ravine Garden is a lovely mix of native and cultivated flowers, and the ravine is steeped in Sewanee history. Meet on the campus Quadrangle (beside All Saints' Chapel) at 7:45 a.m. for this easy one-hour walk.

Sewanee Garden Club — Botanical Drawing

Monday, Oct. 22, 1:30 PM, Mary Priestley

The program for the October meeting of the Sewanee Garden Club will be a workshop on drawing plants. Come try your hand at this most enjoyable activity. The meeting will be held at the home of Flournoy Rogers at 226 Highland Trace in Sewanee. The Sewanee Garden Club meets monthly during the school year. All persons interested in gardening are welcome to attend any meeting.

All times are CST or CDT.

Wear appropriate shoes on all of these walks. Risks involved in hiking include physical exertion, rough

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Drawings by Mary Priestley are of shortleaf pine (Pinus echinata P. Mill.), hill cane (Arundinaria appalachiana Triplett, Weakley & L.G. Clark), and purplehead sneezeweed (Helenium flexuosum Raf.).

terrain, forces of nature, and other hazards not present in everyday life. Picking flowers and digging plants are prohibited in all of the above-mentioned natural areas.

For more information on these events contact Yolande Gottfried at the Herbarium (931.598.3346) during regular business hours or by e-mail at ygottfri@

Membership Application/Renewal

The Friends of the Sewanee Herbarium support the work of the Herbarium: education, research, and conservation. A \$10.00 annual contribution would be very much appreciated. The date of your most recent contribution is printed on your address label.

Name and Address (if different from that on the mailing label on the back):

Amount Enclosed: \$10.00 Other: \$ _____

Please make check payable to The University of the South. Gifts are fully tax deductible.

Send to:

Sewanee Herbarium
c/o Mary Priestley
735 University Avenue
Sewanee, TN 37383

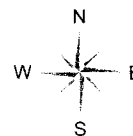
Others who might like to receive *The Sewanee Plant Press*: _____





Forest Types of the Domain

Cove forest
Planted forest
Plateau forest
Urban forest



Map provided by the Office of Domain Management

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