



East is East and West is West?

As this article is being written, the 2006 Winter Olympic Games are taking place in the Italian Alps. Most of the top athletes come from countries in North America, Europe, and eastern Asia. These three parts of the world are linked botanically also, and in both cases cold temperatures and mountain ranges are factors. Some of the most intriguing relationships among these floras involve spring wildflowers in rich, moist, deciduous woodlands like those in Sewanee's Shakerag Hollow and Dick Cove.

In the Barberry Family, Berberidaceae, for example, there are several genera of these spring wildflowers with disjunct eastern North America-eastern Asia ranges. The familiar may-apple, *Podophyllum peltatum* L., is one of these. There are only three other species in that genus and they all occur in eastern Asia. *Diphylleia cymosa* Michx., umbrella-leaf, looks similar to may-apple but is less common and found only at higher elevations. The one other species of *Diphylleia* is found in Japan.

Another primarily mountain plant is blue cohosh, *Caulophyllum thalictroides* (L.) Michx., also with another species in eastern Asia. In moist, rich woods over limestone, one finds twinleaf, *Jeffersonia diphylla* (L.) Persoon. One other species of the genus occurs in Manchuria. These plants are not represented in other floras, not even within North America.

Another plant family, Araliaceae, the Ginseng Family, provides perhaps the most outstanding example, ginseng itself. When Europeans recognized in the New World species, *Panax quinquefolius* L., a plant very similar to the well-known

and widely-used Asian species, *Panax schin-seng*, they realized the great commercial possibilities. For centuries now, American ginseng has been heavily collected in the wild and shipped to Asia to supplement the native Chinese and Korean populations. Both continue to be very popular as a universal medicinal, stimulant, and aphrodisiac.

These relationships and others were observed by Asa Gray, original author of *Gray's Manual of Botany*, and commented upon in his 1889 article titled, "The Similarity Between the Flora of Japan and that of the United States, Especially the Atlantic Side". The then-recent expeditions to Japan by Commodore Perry in 1853 and Commodore Rodgers in 1855 had brought back plant collections which Gray was able to study.

Some examples noted by Gray among the woody plants are the tulip-poplar, *Liriodendron tulipifera* L., with the only other species in the genus being a Chinese tuliptree; sassafras, with three species, one in each of North America, China, and Taiwan; yellow-wood, *Cladrastis kentukea* (Dum.-Cours.) Rudd., with a very limited distribution in the southeast U.S. and two other related species in China, one in Japan; and, of all things, poison ivy, *Toxicodendron radicans* (L.) Kuntze.

In an interesting tidbit of botanical history, he wrote: "A specimen of a peculiar plant (*Shortia galacifolia*) was detected in the herbarium of the elder Michaux, who collected it (as his autograph ticket shows)

somewhere in the high Alleghany Mountains, more than eighty years ago. No one has seen the living plant since or knows where to find it, if haply it still flourishes in some secluded spot. At length it is found in Japan; and I had the satisfaction of making the identification. A relative is also known in Japan; and a less near one has just been detected in Tibet." The mystery of the disappearing *Shortia* has since been solved, but that is another story.

The examples mentioned thus far involve eastern North America and eastern Asia. There are also disjunctions that include Europe, but these are fewer. And this difference leads to the significance of the mountains and the cold temperatures. The generally accepted explanation for these plant distributions was proposed by Asa Gray (1851) and further refined by others, including Engler (1872), who named it the Arctic-Tertiary disjunction.

As stated by Wladyslaw Szafer (1975):

(continued on p. 4)



Sign of Spring

The young man strode to the blackboard, grabbed the chalk, wrote two Latin words, underlined them decisively, and sat back down.

Cardamine hirsuta

Audience members broke into a variety of appreciative responses: broad smiles, chuckles, downright laughter, and even a smattering of applause.

For the uninitiated, including me, the scene was puzzling. Although I am familiar with this spring-blooming lawn weed, also known as bittercress, I did not get the joke that most people who had gathered there to celebrate retiring Prof. George Ramseur's career obviously shared.

It did not take long for people to explain, however, that this diminutive annual plant was a perennial favorite with Dr. Ramseur and his plant taxonomy classes. Absolutely everybody who had taken taxonomy under Dr. Ramseur remembered *Cardamine hirsuta*, whether or not they could still recall the names of fancier plants like *Trillium grandiflorum*

(great white trillium), *Cypripedium acaule* (pink lady's-slipper), or *Podophyllum peltatum* (May-apple).

Cardamine hirsuta is as much a sign of spring on the Sewanee campus as its relatives the toothworts (other *Cardamine*



species) are in the forest. And, because it liberally peppers the lawns and hugs the sidewalks, it is quite handy to grab for a quick botany lesson on the mustard family, of which it is a member.

The mustard family (Brassicaceae, from the Latin word for cabbage), contains some of our most important vegetables,

such as broccoli, spinach, and Brussels sprouts. A truly egalitarian clan, it includes the more exotic arugula, and bok choy as well as down-home collards and turnip greens.

Mustards and their relatives are the famed cruciferous vegetables, so named because their four-petaled flowers are in the shape of a cross, and so "famed" because they are rich in vitamins A and C and contain chemicals that can help decrease the risk of some forms of cancer.

The name *Cardamine* is from the Greek word kardum, which refers to a spice, and yes, bittercress is edible. I can gather the leaves from my lawn, along with young dandelion and violet leaves, for a spring salad.

Whether or not I am feeling that industrious, as a good Southerner I will at least give *Cardamine hirsuta* a smile and nod of recognition. You see, I am a friend of the family, and of the teacher who introduced it to so many Sewanee students.

—Mary Priestley



Mark your calendar for the third annual Trails and Trilliums celebration of native plants at St. Andrew's-Sewanee School. Saturday, April 22, is the date, and the campus of St. Andrew's-Sewanee is the place. Tennessee State Naturalist Mack Prichard's keynote address "Every Day is Earth Day in the Cumberland" heads up an array of talks and workshops on native plants and wildflower gardening.

The event runs 8:30 a.m.-3:30 p.m. central time. A native plant sale, including

Trails and Trilliums

more than 2000 wildflowers, ferns, trees, and shrubs (all nursery-propagated), will go on all day. The Toadshade Tent will house a great array of gifts for gardeners and wildflower enthusiasts, including books, T-shirts, note cards, hiking guides, planters, and more.

Hikes in Shakerag Hollow and the Abbott Cotten Martin Ravine Garden and workshops on nature journaling, invasive plants, container gardening, and landscape painting are also on the docket. Paintings by renowned Chattanooga botanical artist, the late William Crutchfield, will be exhibited, and prints will be available for sale.

Plan to lunch on great grilled food, with music provided by local musicians (including the Bazzania Girls Band, many of whom are staff and Friends of

the Herbarium!). Family activities include hayride hikes, a petting zoo, "Snakes Alive! & Other Critters" with a licensed TWRA wildlife rehabilitator, and a self-guided hike with stops for hands-on nature activities. (Children must be accompanied by an adult.)

Join the fun and take home some beautiful native plants for your garden. A \$5 registration fee covers admission to all hikes, workshops, and talks. St. Andrew's-Sewanee is located on hwy. 41-A just east of Sewanee. For more information see <http://trails.sasweb.org>, phone 931-598-5651, or contact Margaret Matens at mmatens@sasweb.org.

—Mary Priestley

Spring Calendar of Events

Bluebell Island—Sat., March 25, 10 AM

Join the South Cumberland Regional Land Trust for their annual Bluebell Island Ramble to see an outstanding display of bluebells with trout lilies and other early bloomers. Meet at the Tyson Food Co. plant on Highway 50 in Decherd. Easy except for crossing the Elk River on a log, but ropes or something else will be set up to make it accessible.

Shakerag Hollow—

Sat., April 1, 1:30 PM George Ramseur

Sat., April 8, 1 PM Jon Evans

Sat., April 15, 1 PM Mary Priestley

This is Sewanee's "Mecca" for wildflower lovers and these leaders are the experts. Meet at Green's View parking lot (past the golf course). 2 miles, moderate, with one fairly steep incline.

Birdwatching at Morgan Steep—

Sat., April 8, 15, 22, 29, 8 AM Bert Harris

Weather permitting, Bert, a Sewanee senior and ornithologist, will be looking for spring migrants at this usually auspicious location each Saturday in April beginning April 8. For more information, call 931.598.2082.

Collins Gulf—Sun., April 9, 10 AM Mary Priestley

This section of the South Cumberland State Recreation Area is the only other local spot that rivals Shakerag Hollow for numbers and diversity of spring wildflowers. Meet at the Collins West trailhead, just beyond the Swiss-Memorial School in Gruetli-Laager. Bring lunch and extra water. 5 miles, strenuous.

Trails and Trilliums—Sat., April 22

St. Andrew's—Sewanee School is sponsoring a day of wildflower sales, walks, talks, and workshops. Among the events will be walks led by Herbarium staff and others, as follows:

9:15-11:15 AM—Shakerag Hollow

11:30 PM—SAS Nature Loop

2-4 PM—Shakerag Hollow

2-4 PM—Abbott Cotten Martin Ravine

Garden (Abbo's Alley) and Sewanee

Shakespeare Garden

For more information, see the article, p. 2.

April 24-April 30 is the week of the Spring Wildflower Pilgrimage in the Great Smoky Mountains National Park. Members of the Herbarium staff will be participating as walk leaders. For more information and registration visit the website at www.springwildflowerpilgrimage.org.

All times are CST or CDT.

Members of the Sewanee Natural History Society are helping lead hikes this year, which means we will be able to take advantage of their bird identification skills, in addition to their knowledge of plant identification and lore.

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

THE SEWANEE PLANT PRESS

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CALENDAR

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Drawings, by Mary Priestley, are of two May-apples, North American (Podophyllum peltatum L.) and Himalayan (P. hexandrum Royle); and two common spring "weeds," bittercress (Cardamine hirsuta L.) and lyre-leaved sage (Salvia lyrata L.).

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@sewanee.edu. For directions to Collins Gulf contact the South Cumberland State Park Visitors' Center (931.924.2980).

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*: _____

Research, continued from page 2

“ . . . today there is no room for doubt that the intercontinental disjunction came about as the result of migration from a centre of forest flora in a moderately warm climate which thrived in the zone surrounding the North Pole at a considerable distance during the Miocene.

“In the Pliocene, as the climate of the far north gradually became cooler, the forest flora moved far to the south, the favourable (meridional) direction of the mountain ranges greatly facilitated the migration from north to south in eastern regions of Asia and the Atlantic areas of America where the greatest numbers of living representatives of the Tertiary flora are still found . . .

“In Europe and western Asia, where mountain ranges ran with the parallels of latitude (in an east-west direction), it was hard for the Pliocene forest, forced southwards by a deteriorating climate, to cross the mountain barrier of the

Pyrenees, Alps, Carpathians, Caucasus and Himalayas; so during the glacial epoch in Europe, forest flora became partly extinct and almost completely so in western Asia.” Arid conditions in the central and western parts of North America disrupted the migration in those regions.

As one walks the woods this spring, perhaps reflecting on the history of these members of the flora will further enhance the enjoyment of them.

—Yolande Gottfried

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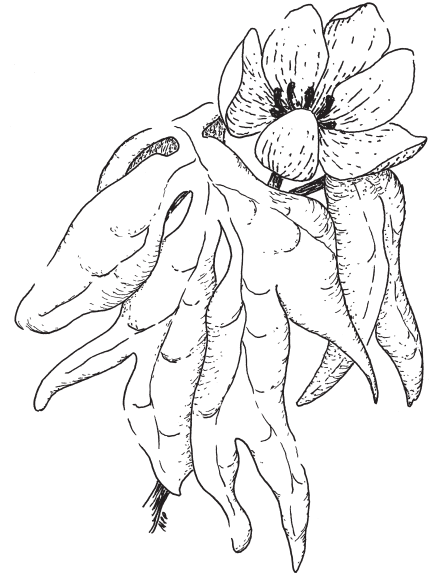
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