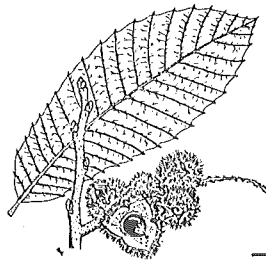


Chinquapin

The Newsletter of the
Southern Appalachian Botanical Society



Vol. 4, No. 2

Summer 1996

From The Editor's Desk.....

This issue offers readers an insight into the twining of vines, just in case you have not read up on the subject. Many of us have been taught that twinning of vines can be related to the Coriolis Force in which objects in the northern hemisphere move to the right or clockwise as the earth spins beneath the suspended object. If there are not such effects on plants, presumably there must be stronger counter effects that are induced by the plant's growth processes instead of the Coriolis Force effects. George Ellison brings us up to date on this theoretical concept.

Perhaps you will wish to observe the twining of vines, such as those Dick Smith describes in his "Look Again" column. But don't get frustrated if you come across an *Aristolochia*

macrophylla mass that is twisted and tangled as though it had spilled its "intestines" at the foot of a tree. Such an experience was one that intrigued my wife, Jean, this spring as we walked up Caney Fork cove east of our home. Perhaps it would be better to just observe the beans or peas in the garden to see what processes they seem to be following. If anyone does a bit of journalizing, let us know what you find in the nature of twisting this summer.

Peter White came through with a bit of thought for "Wild Ideas." In his musings, he presents two models for plant distributions. It seems that we often encounter both, but somehow I seem more intrigued with the second one, that plants do not occur where they would be expected. Many of you know I have a long-time interest in yellowwood, *Cladrastis kentukea*, and its distribution throughout the East. It can grow as far north as Boston

but is rarely found north of the extent of glaciation. It can grow far to the south and yet I do not know of any populations extending into the coastal plain. It does very well here at my house and yet there are no known native populations within the county. So what is its barrier to dispersal? Is it maybe restricted by competition? Surely we are making enough disturbances to give it ample chances to extend its range. Is it restricted by geology? But why is it found over both basic and acidic rocks? And one might ask, why is the supposed pollution-adapted *Ginkgo biloba*, a species that once occupied much of this continent, not popping up all over the place? If you have any thoughts or insights here, let us continue the discussion in the "Wild Ideas" column.

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Endowment Challenge By John Fairey of Clemson

At the April meeting of the SABS in Statesboro, Georgia, Dr. John E. Fairey, III, of Clemson University, presented a challenge to the SABS membership designed to encourage members who have not given in the past to contribute to the Castanea Endowment. The text of the challenge is as follows:

"If, prior to December 15, 1996, who are not on the 1996 Castanea Endowment Roster of Donors, give \$100 or more or pledge \$300 or more to the Endowment, I will give an additional \$1,000 to the Castanea Endowment." -- John E. Fairey III

This challenge comes at a good
Cont. on page 10

Book Corner

[If you know of books that might be of particular interest to the lay readers of our organization, please submit a brief paragraph of 3-8 lines for consideration in the newsletter. Longer reviews should be sent to Audrey Mellichamp for inclusion in Castanea.-Ed.]

Disjunct floras of the Southern Appalachians have always intrigued many of us. While the southeast Asia-southeast North American disjuncts have perhaps captivated more interest, the disjuncts with Mexico have intrigued plant biogeographers. Southwestern Mexico is not a place one expects to find many species in common with the southern Appalachians, and yet to be found there are *Prunus serotina*, *Ptelea trifoliata*, *Parthenocissus quinquefolia*, *Panicum virgatum* and the many weeds expected. The Flora de Manantlan by J. Antonio Vasquez G. et al. 1995 (Botanical Res. Inst. of Texas, Sida Bot. Misc. No. 13) describes the region (in both English and Spanish), contains 52 color photos of the region and flora and provides an annotated checklist of the 2,575 vascular species of the Reserva de la Biosfera Sierra de Manantlan in the diverse southern Jalisco Mountain range of southwestern Mexico. Many North American botanists, including Emeritus Professor Hugh Iltis of the University of Wisconsin, one of the authors, have visited this area over the past several decades and contributed to this effort. The book would make a good reference for anyone interested in tropical as well as disjunct floras. - J. Dan Pittillo

Wildflower books are becoming increasingly popular with the expanding population of wildflower enthusiasts. For years the standard first-purchase book has been Great Smoky Mountains Wildflowers by Campbell et al. (1962 and 1964, enlarged ed.). Just published is Wildflowers of the Smokies by White et. al. with full color photos. While the latter deals

with the same area, it illustrates 200 vs. about 130 species found in Campbell et al., many of which are different. Additional features that will be greatly appreciated by users are the color tabs that group flower colors, plant and flower sizes and discussions of rare species of the Smokies. An introduction to the nature of the Great Smoky Mountains and environmental influences on plants are included in this 205-page, pocket-sized flexcover book. - J. Dan Pittillo

Life Processes of Plants by Arthur W. Galston Scientific American Library, 1994. This beautifully illustrated book by a renown plant physiologist presents the current understanding of the major physiological processes of plants with remarkable clarity. The prologue introduces the reader to the (dicot) plant body and general plant ecology. Each of the eight chapters covers a different topic: photosynthesis, photomorphogenesis, plant hormones, plant movements, stress physiology, asexual reproduction and tissue culture, mycorrhizal and nitrogen-fixing symbioses and genetic engineering of plants. Each chapter is illustrated with color photographs, color diagrams and a brief bibliography. The bibliographies provide a good balance of general books and articles from Scientific American and American Scientist, college-level texts and scientific review volumes, so the reader can pursue any special interest at a variety of levels. The book is delightful to read, clearly and elegantly written. Throughout the volume, Dr. Galston provides an historical perspective by discussing classical experiments, at the same time he presents up-to-date interpretations.—Alicia Lesnikowska, Georgia Southwestern College, Americus, GA

Endowment Challenge Cont.

time to help us maintain the momentum the Society has developed over the last four years. In effect, if the Society meets the challenge, John will be contributing an additional \$40 for every new \$100 contribution. If you are a member who has not given \$100 or more in the past, you are in a good position to help us meet the challenge. If you have given in the past, you can help by encouraging members you know, who are not on the Roster, to contribute. At this point, we have two of the twenty-five \$100-contributors we need to meet the John E. Fairey Challenge.

All contributions should be sent to Charles N. Horn, SABS Secretary - Treasurer, Newberry College, Biology Department, 2100 College Street, Newberry, SC 29108. Please mark your checks "For Castanea Endowment."

MAKE THE CASTANEA ENDOWMENT YOUR FAVORITE CHARITY!

Paxistima Study Underway

Ruth Douglas, on sabbatical at Virginia Tech this year, is studying *Paxistima canbyi* Gray, cliffgreen or mountain lover, specifically the bloom cycle of the flowers, insect visitors (pollinators?), nectar analysis and the fate of individual plants at a site near Blacksburg. During the summer, she will visit other sites in Virginia and in other states, primarily focusing on sites with plants that produce fruit. Please contact her through July at 606 Preston Ave., Blacksburg, Va. 24060; telephone (540) 953-0817 (h) or (540) 231-5746 (w); email: rdouglas@vt.edu. After 1 August, contact her at Piedmont Virginia Community College, Rt. 6, Box 1, Charlottesville, Va. 22902; call (804) 961-5432, email: rd2d@jade.pvcc.cc.va.us

Shirts, Mugs and Totes

To order T-shirts, mugs and tote bags, please contact The Complete Naturalist, 2 Biltmore Plaza, Asheville, NC 28803, phone (704) 274-5430, FAX (704) 274-5408. The owners of this store, Laura and Hal Mahan, have agreed to receive orders and money, ship the shirts at cost and give SABS 100% of the receipts as a service to the Society. We are very pleased to accept their offer, as it will make shipping easier (they do it every day). Both Laura and Hal are active in teaching natural history and conservation. Be sure to note T-shirt size (M, L, XL) and whether you want it in white or natural (beige). T-shirts are \$10 each; totes are \$8 and mugs are \$5. Please include \$3 for first item and \$1 for each additional item for shipping

Castanea Back Issues

The special issue of the Barrens Symposium is available for \$10.00 and regular back issues are \$6.00 starting with 1995. This price reflects the current production, handling and shipping cost. Contact Secretary-Treasurer, Charlie Horn.

West Virginia University is disposing of all back issues in existence; some have been brought to Charlotte. Members can still get back issues before 1990 for a bargain \$1 per volume. This bargain price applies to availability (there are some missing numbers in many volumes).

"As early as 1420 Fra Thomas de Berlanga proposed that vegetation is simply animal life turned inside out. The leaves conduct respiration and correspond to the lungs. The roots are the unencased digestive tract which takes in and assimilates nutrients. Sunlight is the energizing heart, he concluded, without which the whole system would fail to operate." - Douglas B. Elliott, Roots: An Underground Botany and Forager's Guide. The Chatham Press, Old Greenwich, CN. P. 8.

Botanical Organization Spotlight

Editor's Note: In the upcoming issues we hope to feature various botanical groups with the region. Please send a summary of your organization for publication to the editor.

Indiana Native Plant and Wildflower Society

The Indiana Native Plant and Wildflower Society, organized in 1993, has a statewide membership of nearly 400 members. The membership is comprised of professionals and lay persons interested in education, environmental issues, gardening, art and botany. The mission is to promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the values, beauty, diversity and environmental importance of indigenous vegetation. A quarterly newsletter, written and

illustrated by members, is sent on request to libraries across the state. Monthly meetings and field trips educate members about diversity of native plant communities. Additional activities include plant rescue, developing education guidelines (such as wildflower project guidelines for the 4-H Clubs), a speakers bureau, spring and fall auctions, plant sales and seed exchanges. Information can be obtained from Carolyn Harstad, President, 5252 Lieber Road, Indianapolis, IN 46208-1319, phone (317)257-9452.

Welcome To Our New Members:

Jordan Avery, Columbia, SC; Stephen Brewer, University MS; Karen Carlson, Bryson City, NC; Alexander Cole, Belleville, NJ; Daniel Collins, Springfield, OH; Cox Arboretum, Dayton, OH; Virginia Curtis, Chapel Hill, NC; James Decker, Cincinnati, OH; Mark de Jong, Fairfax, VA; David Dister, Dayton, OH; Nicholas Drozda, Bowling Green, KY; Rhonda Edwards, Hillsville, VA; Todd Ewing, Newton, NC; Duane Ferris, Burton, OH; Dave Fiorucci, Alexandria, VA; George Folkerts, Auburn, AL; Robert Hamilton IV, Washington, DC; Tao He, Bowling Green, KY; Joseph Husband, Berea, KY; Jason Lynch, Durham, NC; Melissa McCanna, Suffolk, VA; Melissa McComas, Marion, OH; Landon McKinney,

Frankfort, KY; Rebecca Meyers, Normal, IL; Dana Milsted, Athens, GA; Angella Moorehouse, Havana, IL; Howard Neufeld, Boone, NC; Claire Newell, Chapel Hill, NC; Fred Olday, Charlottesville, VA; Camilla Orava, Helsinki, Finland; Rebecca Osborne, Knightdale, NC; Jos! eph Pollard, Greenville, SC; Steven Roberts, Candler, NC; LeRoy Rodgers, Ft. Walton Beach, FL; Theodore Scott, Jr., Orange, VA; Tracy Selvaag, Hampton, VA; Donald Shure, Atlanta, GA; Diane Tecic, Belleville, IL; Barbara Toth, Asheville, NC; Jim Wagner, Westville, OH; Margaret Weck, Pomaria, SC; George Wilder, Cleveland, OH; Jeff Wuilliez, Kill Devil Hills, NC; James Zarucchi, St. Louis, MO. Isn't this a fine bunch joining us!

"The first summer devoted to full-time gathering and studying of herbs was spent in northern New England...I was like the proverbial grasshopper fiddling away those brief, blissful, northern summer days....When autumn approached, and the mountain of undone winter preparations loomed over me...I headed down the Appalachian Mountain chain to West Virginia...." - Douglas B. Elliott, Roots: An Underground Botany and Forager's Guide. The Chatham Press, Old Greenwich, CN. P. 7.

Herr, Cabe, Drozda, Moore and Noel Receive SABS Awards

Elizabeth Ann Bartholomew Award: This award is presented annually for professional and public service that advances the aims of this society and the scientific, cultural, or esthetic understanding of plants. Andy Ash and John Fairey presented the award to this year's recipient, Dr. John Herr from the University of South Carolina.

Richard and Minnie Windler Award: Bob Haynes presented this award to Paul R. Cabe, St. Olaf College, Minnesota, for The *Trillium pusillum* Michaux (Liliaceae) complex in Virginia: I, Morphological Investigations.

Student Research Grants: This is our first year to present three, \$300 student research grants. The recipients were: (1) Gary Moore, Vanderbilt University, Bob Krall, advisor; (2) Nicholas Drozda, Western Kentucky University, Zack Murrell, advisor; (3) William Noel, Clemson University, John Fairey, advisor.

Congratulations to this fine group!

"And Who Will Weigh the Mountains"

After months of work, the final version of the SABS slide show, "And Who Will Weigh the Mountains," was made ready for presentation as part of the banquet speech by past ASB President, Mike Baranski. Activities were coordinated by the then SABS President Larry Mellichamp at UNC-Charlotte. Larry arranged for Joan Gibson, who wrote the original script for the program on the history of SABC, and her friend, Truett Rogers, from West Virginia to meet in the UNCC Media Services audio studio in February to re-record the edited script under more ideal conditions. Mike Baranski joined the narrators as a third voice. The trio spent an evening practicing and about two hours making the final recording. Larry then worked with Media Services to edit the voices into a final version, then he had the tedious but enjoyable task of coordinating the music with the text. Portions of Aaron

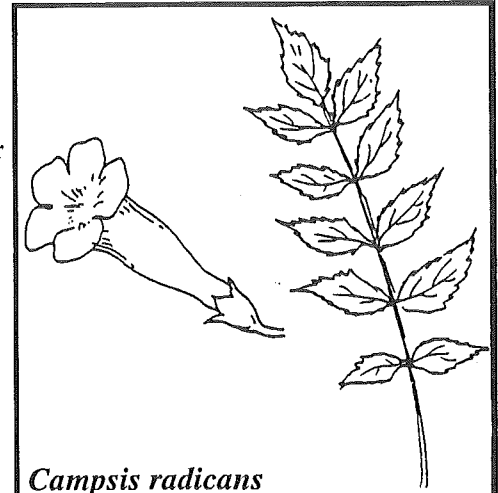
(Reprinted from: *Shortia* 16(2): Summer, 1994, Newsletter of the Western Carolina Botanical Club.)

Look Again

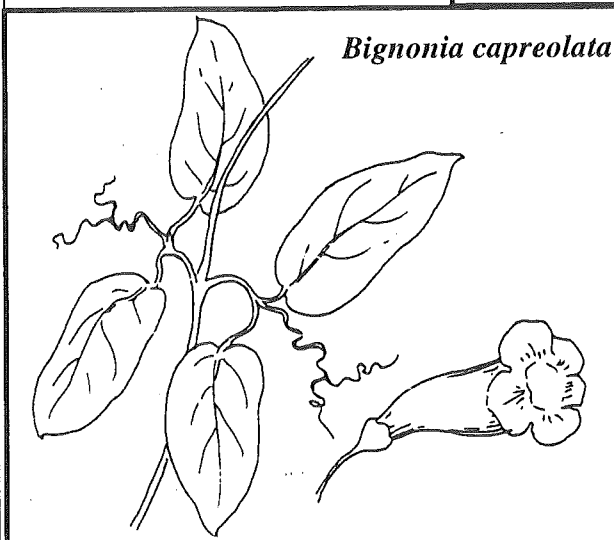
The Bignonia Family consists almost entirely of woody plants, mostly native to the tropics but often cultivated in Florida where specimens of African Tulip Tree, Jacaranda, Flame Vine and Cape Honeysuckle attract attention with their showy blossoms. In our more temperate climate, the most familiar representative is the so-called Cigar Tree or Indian Bean (*Catalpa* sp.), a native tree with large heart-shaped leaves and ruffled white flowers followed by slender bean-like pods more than a foot long.

Two of our woody vines - both indigenous - also claim membership in this family. The more common is *Campsis radicans*, Trum-

and has opposite, pinnately compound leaves with up to 15 toothed leaflets. The flowers are trumpet-



Campsis radicans



Bignonia capreolata

pet Creeper, prized by some as an ornamental but despised by others as an aggressive weed. It trails or climbs by means of aerial rootlets,

shaped, 2" to 3" long and orange-red, in terminal clusters.

The other is *Bignonia capreolata* (*Anisostichus capreolata*), known as Cross Vine because the pith is cruciform in cross-section. Its leaves also are paired and compound, but they consist of only two entire leaflets, one on either side of a tendril that clings by adhesive disks. The flower clusters grow out of the axils; each 2" corolla is dull red outside and paler or yellow within.

-Dick Smith

Copeland's "Appalachian Spring" were chosen, that luckily fit the various moods of the narration. Mike combined the final sound track with the final selection of slides that included many of the people involved with the production and likely to be present at the banquet. The coordination of excellent script, cast of voices, moving music and beautiful slides made the program an emotional and entertaining presentation. One zoologist said to me

that he was so impressed, he was going to join SABS. Anyone wishing to use the program for a presentation at a meeting or gathering will have the opportunity. We will soon have a set of slides to go permanently with the tape and they will be available through the Outreach Committee. Contact Jim Wallace, Department of Biology, Western Carolina University, Cullowhee, NC 28723, phone [704] 227-7244.

BOTANICAL EXCURSIONS

By George Ellison

Into the Light: Vine Strategies

I've always been fascinated by vines. The large woody climbers like grape vine and Dutchman's pipe lend a subtropical aspect to our mature temperate forests here in the Southern Blue Ridge Province. Twiners are vegetative puzzles that may wind clockwise or counterclockwise. Even kudzu - that unwelcome intruder - exerts a sinister fascination as it builds castles of suffocating vegetation along roadsides.

The climbing methods employed by various vines are complex and have been categorized in a variety of ways. I think of them as follows:

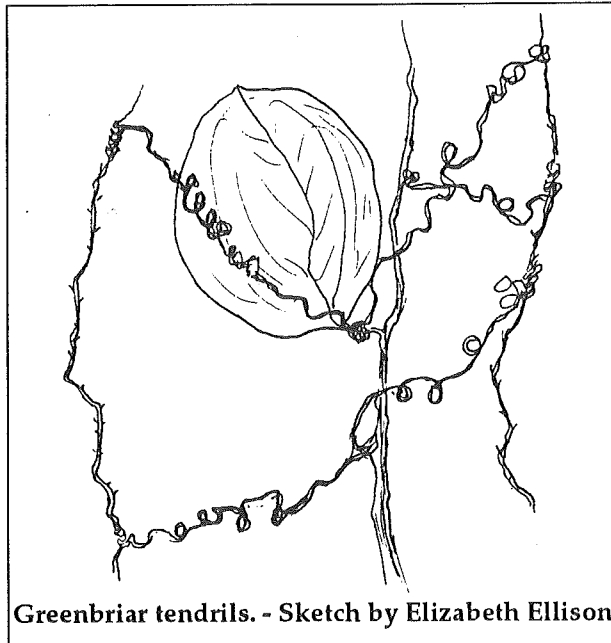
(1) "Hook-climbers" like certain roses and other ramblers attach themselves to a host via prickles, hooks and thorns. Unlike other climbers, vines that utilize this method are restricted in finding support in that they do not have the ability to make searching movements ("circumnutation"); however, hooks that do encounter a suitable host respond by becoming larger and stronger than those that remain free.

(2) "Root-climbers" like English ivy, poison ivy and trumpet vine that produce a profusion of bristly side growths ("adventitious roots") which penetrate cracks and crevices of a host tree or building to hold the vine in place. How do these vines locate their hosts? Seedlings of some root-climbers have been shown to grow toward dark surfaces.

(3) "Tendrill-climbers" like grapevines, greenbriar and everlasting pea that send out sensitized vegetative organs from their main stems that "circumnutate"; that is, they sweep

back and forth through the air in arcs as they elongate, their motion caused by unequal growth rates on the two sides. These tendrils are distinguished by their "irritability," whereby tactile stimulation at their apexes promote a coiling response so that the tips grow around the support. This response can be stimulated by contact with something as fine as spider's silk.

In some species the middle of



Greenbriar tendrils. - Sketch by Elizabeth Ellison

the tendrils also twists, forging an even tighter, more lasting bond. This tactic, which Charles Darwin (1867) called "spiral contraction," can easily be observed by examining greenbriar or grapevine tendrils. Once these tendrils have finished twisting, they become incredibly tough. Those that do not find support wither and hang off the parent vine like delicate threads.

A variation within the "tendrill-climber" group is provided by vines like Virginia creeper and Boston ivy that produce branching tendrils which form adhesive disks at their tips upon

contact with the host surface. Only about an eighth of an inch in diameter, these disks hold fast at the point of attachment. Donald Stokes (1981) estimated that a single Virginia creeper tendril "with just five disk-bearing branches could support up to ten pounds."

(4) "Twining-climbers" like honeysuckle, kudzu, wisteria, bitter-sweet, morning glory, bindweed and Dutchman's pipe that wind their main stems about their hosts and spiral upward - or outward along branches - into the light. A variation on this theme is the "leaf-twiner" type like virgin's bower that curls only its leaf-stems around the host plant.

Edwin A. Menninger (1970) observed that "A silly argument often arises over vines in this twining group, whether they twist to the right north of the equator and to the left 'down under.' The equator is not involved; neither is the earth's rotation."

Frances E. Putz and N. Michele Holbrook (1991) cited the "tragic" ballad of the woodbine that fell in love with a morning glory ("but she twines to the left and he to the right") to illustrate the ancient general interest in the mechanics of twining. According to this ballad, the offspring of this "unnatural" union grew straight up and fell over.

Elwyn E. Hegarty (1991) found that "about 95-percent of the twining-climbers invariably coil to the right (clockwise), and the direction is usually maintained throughout genera and families. *Dioscorea* is a major exception in that some of its many species twine to the right and some

Cont. on page 14

Excursions cont.

to the left (counterclockwise). At least 20 species have been reported to twine unreliably in either direction." K.J. Dormer (1972) has suggested that coiling counterclockwise is inherently less efficient than the other way around.

A vine represents a growth strategy that enables certain plants to use other plants or objects as support. The term "structural parasite" sometimes appears in the literature on vines. This strategy enables vines to produce energy more efficiently via direct sunlight, expose their flowers more readily to potential pollinators and disperse their seeds more effectively from a high vantage point.

Sources:

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- Hegarty, E.E. Vine-host interactions. In F.E. Putz and H.A. Mooney, eds. *The Biology of Vines*. Pp. 357-375. Cambridge University Press, Cambridge.
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- Stokes, D. 1981. *The Natural History of Shrubs and Vines*. The Globe Pequot Press, Chester, CN.

Address: George Ellison, POB 1262, Bryson City, N.C. 28713 (704-488-8782).

Annual SABS Meeting

The election results were announced during the Annual SABS breakfast, held at the ASB meeting in Statesboro, Georgia. The new president is Don Windler, who was unfortunately ill, so the chestnut gavel was passed on to him in absentia. Zack Murrell of Western Kentucky University was elected new member-at-large for the council, and Claudia Jolls of East Carolina University was elected new editor for *Castanea*.

The membership present voted overwhelmingly to raise dues to \$25 for regular membership effective next year. This will help offset the fact that it actually costs \$26.00 per member to print and distribute *Castanea* and *Chinquapin*, while we are currently receiving only \$20 per person. Library subscriptions and student rates will remain unchanged presently. Overall we are in good shape financially, except for the deficit in publication costs. Don Windler announced that we had gone over the \$60,000 mark in the Endowment Challenge and a new challenge was made by John Fairey (see front page). It would be great for more loyal members of SABS to pledge to support the Endowment so we can reach the goal of \$100,000 soon. The endowment fund, of course, is meant to provide security for the future financial strength of SABS and to ensure that *Castanea* will be published well into the future. John Herr indicated we have membership representatives in all eastern states, even Maine, and new 1996 memberships thus far have surpassed the total new members during 1995.

Wild Ideas

Ideas are born by inquisitive minds. Perhaps some of us have had some speculative thoughts that have turned out to be basically correct when the facts were properly evaluated. Researchers often are driven by hunches and due to discipline must work for years to come to publishable conclusions. Many of us do not feel that these wild ideas should be left unexplored but will not have an opportunity to probe them further. This is the basis of this column. The wild idea needs to have some factual basis, though it does not necessarily need to be fully supported as in a reviewed publication.

Nature's predictability and nature's surprises

by Peter S. White

Let me begin by stating the little known and heretofore unpublished axiom known to a very small circle as White's First Law of Graduate School:

There is enough pattern in nature to draw you into graduate school, but not enough pattern that you'll ever get out again.

That's enough to send chills down the average graduate student's back, but it does have corollaries that are more hopeful:

You must phrase questions clearly, and then design your methods of data collection and analysis.

You will have as much to learn from exploring the variance, as you get from describing the mean values; as much from the unpredictable elements, as the predictable patterns you have described.

The variance is actually more fun and interesting than the mean anyway; it tells us about the complexity of nature, including unmeasured and even unknown variables and about the role of history and chance events. I for one am delighted; thank God that nature is not 100% predictable. That kind of monotony would make for a boring world! Nature is full of surprises!

I was reminded of these thoughts last year when I encountered *Trillium discolor* near Whitewater Falls at the border of North Carolina and South Carolina. The little yellow trillium was abundant there, but I soon learned that it was restricted only to one river valley and it is unknown in the mountains I have explored the most, Great Smoky Mountains National Park (which itself has a plant, *Rugelia nudicaulis*, which is abundant there but unknown elsewhere in the southern Appalachians for reasons that

Cont. on page 15

Wild Ideas cont.

do not seem to be related to habitat). The reasons for these enigmatic restrictions are probably not environmental. Gardeners have planted these plants elsewhere and they do fine, but we need more rigorous experiments to prove this since gardeners water, fertilize and perform such tasks as weed control (competition control) and pest control.

Conceptual models for plant distribution fall in two groups: (1) the niche-environment-disturbance model: species have different physiological abilities and tolerances and different responses to disturbances; at some level their distribution can be predicted from knowing the environment and the history of disturbance and (2) the spatial-temporal constraint model: species are not always present where we would predict them to be from the type environment or disturbance; rather, they can be absent from places you would otherwise expect them to be. The reason being they cannot or did not disperse there or they disperse there sometimes, but become extirpated at

such a rate that they are absent much of time. Whittaker's model that describes tree distributions in the Smokies is an example of the use of the former model. If we know the elevation and site moisture class, we should know what species to expect. To make this model more complete we would have to add a dimension for disturbances like fire, insect outbreak, debris avalanche, flood scour, catastrophic drought and wind. Island biogeography is an example of a model in which spatial configuration and history become important. A small habitat patch may hold only some of the species that should be able to live in that environment, because either the patch is very isolated and surrounded by some other habitat condition that the species cannot cross (hence, the species is limited by dispersal) or the patch is very small and cannot hold all the species that disperse there (hence, particular species are absent because of a relatively rapid extirpation rate). The model of spatial-temporal constraint does not depend on island biogeography per se. It applies to any situation in which a distribution is not entirely the

result of interaction of species with each other and the environment, but in which a distribution is the result of limits to dispersal or persistence that are not inherently environmental or physiological.

Different plant and animal groups respond differently to the same spatial configuration and history. For example, freshwater fish, river mussels and land snails may show higher rates of geographic restriction because some members of these groups have low dispersal, or in the case of fish, habitat isolation. (The fish can't invade the next river valley without swimming out into the ocean and back into the next river mouth). Birds, on the other hand, may be able to seek out the appropriate habitats over large areas. They may also be migratory and reinvade the habitats each year. They are good dispersers and may be more predictable when all factors are considered and when we have accounted for scale dependence — the predicableness of species presences is also a function of the scale of observation. Plants may be somewhere in the

Cont. on page 16

**SOUTHERN APPALACHIAN BOTANICAL SOCIETY
Application for Membership**

Name: _____ Date: _____

(name and address should be four lines as given)

Address: _____

City: _____ State _____ Zip: _____

(9 digit if avail.)

AFFILIATION (Check one): College or university _____ Other educational or research institution _____ Non-institutional _____

PRIMARY AREA OF INTEREST: _____ Floristics and distribution _____ Vascular plant systematic _____ Community ecology
_____ Non-vascular plant systematics _____ Physiological ecology _____ Other (specify) _____

MEMBERSHIP CATEGORY:

- | | |
|------------------------------------|---------------------------------------|
| Regular membership()\$20.00 | Sustaining membership()\$50.00 |
| Family membership()\$30.00 | Emeritus()\$15.00 |
| Student()\$10.00 | Life membership()\$400.00 |

Send To: Charles N. Horn, Secretary-Treasurer
Newberry College
2100 College Street
Newberry, SC 29108

Calendar of Events

(For announcements of special organizational events, please send your dates as soon as possible)

Cullowhee (Native Plant)
Conference
Cullowhee, NC
July 24-27
(704) 227-7397

Native Plants in the Landscape
Conference
Continuing Education, Millersville
University
Millersville, PA 17551-0302
June 13-15
(717) 872-3742

Annual Meeting
Oklahoma Native Plant Society
Osage Hills State Park and Tallgrass
Prairie Preserve
Contact: Connie Taylor (405) 924-
5163

Wild Ideas cont.

middle. Some are good dispersers and others are not. Some are found in isolated habitats and others not. Some have broad physiological tolerances and others have narrow tolerances. Although the Southeast was not glaciated, climate change did cause distributions to change, and some species may have become restricted to particular river valleys or mountain ranges from which they never rebounded or are rebounding very slowly.

Of course, there may also be subtle and unmeasured environmental factors involved in such restricted distributions. The topic is fascinating and researchable. But it is the overlay of spatial-temporal constraints on niche-environment interactions that makes for nature's surprises and the list of such surprises is long in the southern mountains. The most obvious ones are species that are locally abundant in a seemingly common habitat, but restricted to small areas. I rejoice in these local endemics; they tell us about the complexities of history and the spatial configuration of habitat and suggest that nature is not entirely predictable from the physical environment alone.



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Complimentary addressed issues: Please share with your interested friends who might wish to become members of SABS. Thank you--Ed.

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