

NORTH
CAROLINA

wild flower

PRESERVATION
SOCIETY, INC.



Green-Head Coneflower
Rudbeckia laciniata

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**NORTH CAROLINA WILD FLOWER
PRESERVATION SOCIETY, INC.**

1994-96

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NEWSLETTER
of
North Carolina Wild Flower Preservation Society

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COVER DRAWING: Green-Head Coneflower (*Rudbeckia laciniata*)
by Dot S. Wilbur-Brooks

President's Message . . .

Well, I've learned a new term. Jay, my teenage son, and I have recently become full fledged Internet surfers. And, being the careful parent, I of course, checked out the kids talk group prior to letting him join it. The talk group was appropriate. (Not the kind of thing in which a parent would willingly participate.) But, back to the new term. The style of writing encouraged is, sort of, stream of consciousness. Except, as the answers to Frequently Asked Questions about the group states, members should "spew" their message. It goes on to say: "A 'spew' is a message that someone writes while in a state where they are at one with their keyboard - their mind is open, and the thoughts just stream out their fingers into the medium so that we can read and share in the experience. A spew is just a dump about basically anything" Well, I have several various and sundry items to write about that aren't all that connected, so this message may more properly be called the "President's Spew".

First, thanks to Nancy Julian, our treasurer, for keeping the bills paid and the accounts balanced. She has a tremendous chunk of the responsibilities for the NCWFPS and does an excellent job.

Second, I've been a member of the NCWFPS for about 13 years now. Why? What is it about this group that keeps me coming back? I've avoided most conservation groups, although I support their ideas. I'm no longer a member of the Virginia Native Plant Society. Why NCWFPS? I think it goes back to the time when I started looking at wildflowers seriously and wanting to learn more about them. I was introduced to this group when the Rockingham County Naturalist's Club hosted one of the NCWFPS weekend outings. I was a member of the Naturalist's Club at that time. It was a wonderful weekend. We had events from Friday night until Sunday afternoon. But, best of all I met the people. People that were all bubbling with enthusiasm about wildflowers and not just willing, but anxious, to share that knowledge with me. Also, everyone was more than happy to listen to what I knew about wildflowers and gently corrected me if I erred. So, it was the learning environment that attracted me. This same environment stills keeps me here and interested in the society.

As President, I've been wondering about the Society at a different level. I see all of the newsletters from other wildflower societies and see what they are doing as compared to what we are doing. They range from the large New England and California Societies, that cover large geographic areas and support a variety of educational and conservation efforts; to the smaller societies that seem to have only the minimal structure and few active members. So what? Well, the society still meets my needs at a personal level. But as president, one job is to continually reevaluate the society's position and redirect that position if necessary. What do you think? Are we just what you're looking for in a wildflower society? What would you like to see us do? And how can we achieve it? I'd like to hear everyone's ideas on that one. I brought this same topic up at the last board meeting. We got some interesting opinions there. One opinion was that all the movers and shakers in the Society were either dead or too old. Shouldn't have repeated that

one. Oh, well. Another idea was that we needed more local events, like hikes and rescues. Good ideas. (Getting a little preachy, Bob. Better move on.)

Next spew. I've already received one request from a member on what they would like to see from the Society. Now, I need some other members to help brainstorm to carry it out. Bill Braun has suggested that perhaps someone, or a group of someones, develop a pamphlet for the Society. This pamphlet would be a pronouncing guide to the Latin names of our common wildflowers. Some of the ideas were that this would: be very useful to members that wanted to use the correct plant names but were afraid to try and pronounce *ocraluechrachinensiswherrii* or whatever; follow Bell's *Wildflowers of North Carolina* as a guide to what to include; just be a listing of scientific name with pronunciation; and be donated to the Society to sell as an inexpensive pamphlet. If anyone has any ideas or would like to be involved in such a project let me know.

And another topic: I'm developing a list of e-Mail addresses of botanical resources and of people interested in the same. If you have an Internet address and would like to become part of this network let me know. You can e-Mail me at btuggle@hemisphere.neocomm.net or call or write. If you know about such things as home pages, I'm looking for someone to develop a home page for the Society. Let me know.

While I'm spewing about things electronic and computery, let me tell you about the "Flora of North America." The Flora of North America project is a cooperative program to produce a flora of the plants of North America north of Mexico. The final work will comprise many bound volumes, I've heard of at least eleven. I was very excited to find that the work "in progress" can be found on the internet. The World Wide Web address is <http://fna.wustl.edu/FNA>. Other places of interest on the "net": the Department of Botany at the Smithsonian Museum of Natural History; the Australian National Botanical Garden; the Missouri Botanical Garden; several herbariums, etc.

The high point of this spring was being introduced to *Trillium nivale* by Bob and Sallie Burns. Such a tiny, brazen flower. Hardly more than an inch tall, it looked like a miniature *Trillium grandiflorum*. And it occurred sometimes in clumps of up to 14 plants in a space less than a foot in diameter. All guarded by a young teenage West Virginian very wary of environmental types. The flowers are in good hands.

Please excuse the spew. I'll be more formal next time, maybe. Let me know your thoughts about the above and the Society in general. See ya.

Bob

Bob Tuggle

Calendar of Events

- February 17, 1996 NCWFPS Board Meeting, 1pm
at the NC Botanical Garden in Chapel Hill.
- April 27-28, 1996 NCWFPS Spring Meeting,
Big Laurel Creek Natural Area,
Madison Co., NC.
Society elections will be held at this meeting so
please make plans to attend. If you would like to
serve as an officer or have someone that you
would like to nominate please contact one of the
current officers. We look forward to seeing you
there.
- May 15, 1996 Deadline for receiving articles or other materials
for the Summer 1996 Newsletter.
(Contact Craig Moretz for more information).
- July 5-7, 1996 Eastern Native Plant Alliance (ENPA) Annual
Meeting, Toronto, Canada.
"Maintaining Global Biodiversity Starting In
Your Own Backyard."
(Contact Benson Kirkman for more information).

Due to the shift in issue dates to a Summer/Winter schedule and other
delays, we apologize for the postponement in publishing this issue of
our NEWSLETTER. Thank you for your patience and understanding.



Inside drawings by Eric Hawkins



A FALL JOURNEY TO CROWDER'S MOUNTAIN

Jeannie W. Kraus

Travel advertisements to North Carolina often promote majestic mountains and white, sandy beaches for the vacationer. However, the piedmont holds many nice surprises, such as Crowder's Mountain State Park. The park is composed of Kings Pinnacle and Crowder's Mountain, monadnocks that rise conspicuously above the piedmont plateau. Geologically, they represent isolated remnants of the ancient Kings Mountain Range, once towering thousands of feet above sea level. The rocks now exposed have resisted the forces of erosion over a long geologic time. Historically, the pinnacles represented landmarks to both native Indians and early settlers.

When the Wild Flower Preservation Society gathered at the Comfort Inn near Gastonia for the fall meeting on September 24-25, 1994, these two pinnacles to be explored were in clear view. The temperature was perfect for an outing although there was a threat of rain. I personally attend these outings to learn (and re-learn) plants of other regions of the state, to visit new natural sites or return to special places, and renew contact with folks in the society. I wasn't disappointed.

The leaders, Joe Sox, Park Superintendent, B.W. Thornton, Benson Kirkman, Ed and Janice Swab, Emily Allen, and Eric Hawkins did an excellent job of keeping the group together and close to schedule, and pointing out the special features and plants of the park. A good strategy was to shuttle people by car to the beginning of the trails to shorten hiking times at each site and to see more of the park.

As the caravan of nearly 40 people drove to the park Saturday morning, torrential rains may have dampened our spirits, but it was short-lived. As soon as we got ready to hike, the rain stopped and spared most of our hiking times. The first stop was spent exploring the power line near Kings Pinnacle in search of remnant prairie plants. Before the arrival of European settlers, much of the land was natural prairie grazed by herds of woodland buffalo! It was a striking display of fall purples and yellows. Some of the plants in bloom included many composites - blazing star (*Liatris graminifolia*), round-leaved boneset (*Eupatorium rotundifolium*), hyssop-leaved thoroughwort (*E. hyssopifolium*), dog fennel (*E. capillifolium*), fragrant goldenrod (*Solidago odora*), rough-leaved goldenrod (*S. rugosa*), prairie dock (*Silphium terebinthinaceum*), wild quinine (*Parthenium integrifolium*), cone-flower (*Rudbeckia laciniata*), sunflowers (*Helianthus decapetalus* and others), beggar-ticks (*Bidens polylepis*), bushy aster (*Aster dumosus*), and golden aster (*Heterotheca graminifolia* = *Chrysopsis*). Additional flowers painting the landscape included purple milkwort (*Polygala cruciata*), fern-leaved foxglove (*Aureolaria pedicularia*), Gerardia (*Agalinis tenuifolia*), blue lobelia (*Lobelia puberula*), spurge (*Euphorbia* sp.), hedgerose (*Rosa multiflora*), the dried flowers of colic root (*Aletris farinosa*), and the ubiquitous beggar-lice (*Desmodium* spp.) and climbing clover (*Lespedeza* spp.) Ed Swab was especially helpful identifying the numerous grasses we encountered. Discussions about folk remedies highlighted the boneset signifying bones knitting by the connecting leaf blade and stem (the

doctrine of signatures), wild quinine and colic root used medicinally, and fragrant goldenrod smelling of anise used perhaps as a tea or flavoring. The hedgerose was brought by settlers to start similar hedgerows that are so common in England.

Then the group ambled along the Pinnacle Trail and Turnback Trail through oak-hickory and piedmont monadnock forest types. In the lower elevations, a mix of hickories and oaks were dominant, especially white, post, black-jack, and southern red oaks. In disturbed areas, Virginia (*Pinus virginiana*) and shortleaf pine (*P. echinata*) were common. The understory was composed of deerberry (*Vaccinium stamineum*), dryland blueberry (*V. pallidum*) and typical piedmont species such as persimmon, sassafras, black gum, and bracken fern, but fewer herbaceous species. Biltmore carrion-flower (*Smilax biltmoreana*) was spotted along the trail. Fungi and mushrooms of interest on the forest floor featured death angels and fly agarics (*Amanita* spp.), milk caps (*Lactarius*), brittlegills (*Russula*), web-caps (*Cortinarius*), and jelly and coral fungi. Once we neared the pinnacle along the ridge, chestnut oak (*Quercus montana* = *Q. prinus*) became more dominant. Chestnut (*Castanea dentata*) sprouts were still visible reminders of this once important tree. There was still evidence of Hurricane Hugo and other storms that toppled and weakened many pines along the ridge.

A highlight near the rocky outcrops was the sighting of dwarf juniper (*Juniperus communis* var. *depressa*) that occurs in only three counties in NC. Unfortunately, some of these small populations are being trampled by hikers. Rather than a group climb to the top of Kings Pinnacle, Eric Hawkins and Bob Tuggle went the day before and brought back two leaves of bear oak (*Quercus ilicifolia*) for everyone to see. This holly-like tiny leaved oak reaches its southernmost range at the park.

After lunch at the picnic shelter, we explored the Crowder's and Rocktop trails. Some of the roadside composites along the way to the top included field goldenrod (*Solidago altissima*), ten-petaled sunflower (*Helianthus decapetalus*), and smooth sunflower (*H. laevigatus*), listed as rare in a several-county radius. Trees were somewhat stunted at the pinnacle area due to harsher growing conditions. The vista over the piedmont, including Gastonia and the skyline of Charlotte, offered a feeling of a peaceful world and a moment to relax from our hectic daily schedules. We also watched rock climbers rappelling off the steep 100' cliff and swallows (cliff?) doing acrobatics in the air. A smaller visible monadnock, Henry's Knob in S.C., had been strip-mined in the 1970's with much of the top taken off. Crowder's Mountain may have met the same fate if the park had not been established soon after. Miners were interested in the kyanite, a mineral imbedded in the quartzite used as an insulator in ceramic products, such as in spark plugs. A botanical highlight was exploring along the rock ledges in search of ferns. While ebony spleenwort (*Asplenium platyneuron*) occurred on a rock near the tower, Bradley's spleenwort (*Asplenium bradleyi*) was located on a rock face near the cliff. Bradley's spleenwort is known from acidic rock outcrops and cliffs in several North Carolina counties. The "manual" states that cytological studies indicate this fern arose through hybridization between *A. montanum* and *A. platyneuron*, which are both present at Crowder's Mountain.

After a busy day, everyone was happy to relax and enjoy a deli-style supper at the picnic shelter. The botanical delights didn't end there as a nice population of the Biltmore carrion-flower (*Smilax biltmoreana*), complete with berries, was spotted nearby. Upon first glance, it appears somewhat like wild yam (*Dioscorea*) and very unlike most familiar catbrier species.

The evening program, held on the porch at the park office, featured B.W. Thornton, a past recipient of the Shinn Fund to study flora at Mt. Mitchell State Park. He compared the present flora with old records to document changes in wildflower species in forest openings after the loss of many frazier firs. He discussed the dying of the trees due to a combination of acid rain/clouds and the woolly aphid. Although a number of new species were found due to a more extensive survey and some new species have been introduced along roadsides, the species composition seems to be fairly stable despite the dramatic change in tree cover. It appears that few new species can adapt to the harsh climate at Mt. Mitchell. The evening ended with a brief business meeting. A plant and seed silent auction raised \$119.50 for the Shinn Fund - a good success!

On Sunday we awoke to rain again, but it cleared off in time to visit the Daniel Stowe Botanical Garden near Gastonia. Horticulturalist Mike Bush gave an informative talk on the garden, the plantings, water conservation, ground preparation, and insect control. The garden has only three years of plantings on an old farmsite beneath huge willow oaks that I'm sure could tell a tale or two. Daniel Stowe is a third generation textile industrialist with an interest in gardens and returning some of the land back to its original condition. Some of the showy fall flowers included Schweintz's sunflower (*Helianthus schweintzii*), a rare species native to the area, a display of Chrysanthemums, Japanese anemone, butterfly bush (*Buddleya*), goldenrods (*Solidago* spp.), verbenas, obedient plants, beggarticks (*Bidens*), chaste-tree (*Vitex*), oriental beauty berry, among various perennial grasses which are gaining popularity in gardens.

In addition to the expected plants in the kitchen garden, some unusual features were loofa sponge squashes, sesame shrubs, and cypress vine (*Ipomoea quamoclit*) with its beautiful scarlet flowers. The tour ended with a short hike on the trail leading through the forest to Catawba Creek, where once great cypress trees stood. Much gratitude is given to the organizers of this outing who made it a splendid time for all who attended.



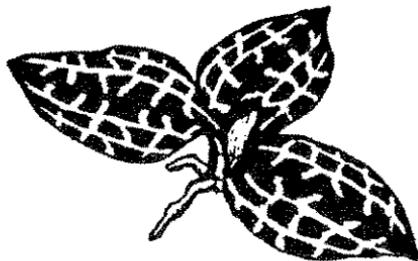
NCWFPS SPRING MEETING 1995 Fieldtrip Notes

Saturday morning found everyone eager to get an early start. After a short briefing in the motel parking lot, we carpoled toward our destination — Chimney Rock. Upon arriving our trail leaders, Elisabeth Feil, Millie Blaha, Travis, Ivan, and the young man whose name we can't remember!, split us into three separate groups after telling us about the park's plants and features. Millie led one group along the Forest Stroll Trail which took folks through a wonderful mesic deciduous forest. The trees provided much welcomed shade owing to an exceptionally warm day. The other two groups went up top and split up — one group taking the Cliff Trail while the other took the Skyline Trail, both providing excellent views due to the clear weather. Everyone met at the Falls for lunch and fellowship. After lunch we continued along the various trails eventually converging in the Lower Meadows Pavilion for dinner. Since no program was scheduled, members and guests spent the evening visiting with each other and talking wildflowers, etc... Late stragglers were entertained by a skunk that must have smelled the chicken bones!

A few plants of special note along the various trails included — *Calycanthus floida*, *Corydalis sempervirens*, *Dodecatheon media*, *Clematis viorna*, *Lonicera flava*, *Goodyera repens*; and for the tree lover's *Halesia carolina*, and *Magnolia acuminata*.

Sunday morning after meeting in the parking lot we were off to Bat Cave Nature Preserve. The biodiversity at Bat Cave provided excellent surroundings for all who were privileged to be present. Elisabeth, Millie, Travis, and Ivan were all wonderful leaders, providing interest as well as sharing their vast knowledge of the flora. Many thanks to them for making our 1995 Spring Meeting a Great Success!

Eric Hawkins and Craig Moretz



State of North Carolina

JAMES B. HUNT JR.
GOVERNOR

EXECUTIVE ORDER NO. 58 PUBLIC GREENWAYS ACROSS STATE LANDS

WHEREAS, greenways are linear open spaces that can provide many benefits to the State's environment and growing population; and

WHEREAS, North Carolina has earned a national reputation for greenways because approximately forty local governments have begun greenway programs under their own initiative; and

WHEREAS, the environmental and socioeconomic benefits of greenways are numerous, and have been set out in the North Carolina Greenways Advisory Panel Report to the Governor; and

WHEREAS, existing and potential greenways and their related benefits typically cross the jurisdictional boundaries of governments; and

WHEREAS, state support for locally initiated greenways is unfocused because responsibility for the various functions through which greenway benefits arise are distributed among separate departments; and

WHEREAS, there are opportunities to improve state government responsiveness to local governments in their efforts to develop greenway systems for the environmental, socioeconomic, and overall quality of life benefits of our citizens;

NOW, THEREFORE, by the power vested in me as Governor by the laws and Constitution of the State of North Carolina, IT IS ORDERED:

SECTION 1. Policy.

(a) It shall be the policy of the State to make every reasonable effort to anticipate and otherwise accommodate local government requests related to the development of greenway systems.

(b) In recognition of the broad and comprehensive character of greenway benefits and the narrow and specific focus of State government programs, it shall be the responsibility of every State agency to cooperate between and among themselves, to the maximum extent feasible, to address the multiple objectives of local greenway development.

(c) To the extent practicable, institutional solutions shall be implemented to enhance the development of greenway systems, rather than resolving issues on a case-by-case basis.

SECTION 2. Action.

The following actions shall be taken as initial steps toward realization of the "Public Greenways across State Lands" recommendation presented in the North Carolina Greenway Advisory Panel's report to the Governor:

(a) The State Property Office and the Department of Transportation shall work with local governments to integrate local greenways with State lands.

(b) Every reasonable effort shall be made to integrate greenways with State lands in a manner that is compatible with the function and management of the property.

(c) Severance of greenway corridors is to be avoided whenever possible, and identification of comparable alternative routes is preferred to the exclusion of greenways altogether.

(d) Appropriate easement conditions may be negotiated with the interested local governments to mitigate for the greenway corridor and assure adequate maintenance and management.

SECTION 3. Role of the Department of Environment, Health, and Natural resources.

(a) The Department of Environment, Health, and Natural Resources shall continue the leadership role it began with establishment of the North Carolina Greenways Advisory Panel (NCGAP).

(b) The Department shall encourage, coordinate and monitor progress toward fulfillment of the recommendations presented in the NCGAP Report to the Governor, and the provisions of this Order.

(c) The Department shall emphasize the development of educational information on greenways for use within State programs, and through them to local governments and individual citizens.

This Executive Order shall be effective immediately.

Done in the Capital City of Raleigh, North Carolina, this is the 14th day of July, 1994.

JAMES B. HUNT JR.
Governor

REPORT TO THE GOVERNOR

by the North Carolina Greenways Advisory Panel

The first objective of the panel was to determine a definition for greenway which would set the tone for future North Carolina Greenway development. The following definition was chosen:

A Greenway ...is linear open space established along either a natural corridor, such as a riverfront, stream valley or ridgeline, or manmade overland feature such as abandoned railroad rights-of-way, canal, scenic road or other route. They may be located within urban and rural areas, and provide public access to the unique, scenic, and natural lands and waters of North Carolina.

To further define the full scope and function of greenways, the panel provided the following additional clarifications to the description:

"Greenways may protect the essential functions of natural ecosystems by preserving the land, water, and habitat of these systems. As an environmental land management and environmental education tool, greenways: conserve native trees and vegetation; allow critical floodplain land to remain open; provide areas for management of urban stormwater; protect sensitive wetlands; maintain natural filtering abilities of creeks and streams to improve water quality; provide secure nesting and breeding areas for wildlife; and filter pollutants from our air.

Continuous greenways can provide opportunities for alternative transportation that does not pollute. They also link people with natural and community resources such as schools, parks, retail and commercial areas, nature reserves, places of employment, cultural features, and historic sites. Greenways function as buffers between conflicting land uses for physical separation and noise abatement.

Greenways can provide opportunities for recreation, offering an essential link with outdoors. They do not discriminate and appeal to all groups, both sexes, and all nationalities. They improve the quality of life within communities and serve as a source of pride for all people who are associated with their development. Greenways maintain the ambiance and close-knit feeling of small town America—restoring 'main street'— by providing residents of local neighborhoods with places for strolling, social interaction, and family outings.

Greenways offer new generations of North Carolinians an opportunity to enjoy and learn from the resources that their parents and grandparents experienced—the stream, the forest, the open meadow. They are a place of peace and quiet—a place to explore, learn, renew, and enjoy the company of others. They are a natural landscape from which personal strength can be drawn."

Copies of the full report to the Governor are available — send a check for \$6.50 payable to DEHNR with a request for the North Carolina Greenways Report to: William L. Flournoy, PO Box 27687, Raleigh, NC 27611-7687.

NCWFPS Honors Outstanding Members

The Braxtons of Greensboro

Notes by Jean Stewart, April, 1995 - with thanks to former Society Historian, Eleanor Pegg

Viola Braxton, a founding member of the Society and life long lover of wildflowers and all native plants, and Walter Braxton, as advocate for the care and conservation of all and especially North Carolina's native flora, are a superb example of two with one attitude, one voice, one caring.

Viola organized, secured botanical articles, induced members to contribute pieces, and edited the Society's Newsletter for ten years. She made the Newsletter an active source of wildflower information for Society members.

Walter was the Society's President for the 1960-62 period. During his presidency, the society made substantial (for its treasury) contributions to the Daniel Boone Botanical Gardens.

The tenor of his presidency is well indicated by portions of the President's messages in the Newsletters. October, 1960: "In this, the tenth year of our society, ... we find it fitting that in these troubled times we take out a little time to learn about and admire the wonderful handiwork of nature." April, 1961: "We have come through another winter and it is a refreshing sight to see everything putting on new life and growth. The life and growth of our society depends on each of its members as they contribute of their time and talents." October, 1961: "Another summer has come and gone. All in all it has been a pleasant one. As autumn rapidly approaches, we hope it will bring to us more than curiosity as we watch nature put her plants to sleep for the winter. May we all get together this fall for the purpose of learning a bit more of the wonders of nature." May, 1962: "Since the needs of man are so many, we realize that some of them are (diverse and varied). Those of us who belong to the North Carolina Wild Flower Preservation Society realize that among all these and other needs we find another, and that is the preservation of all our natural plants and flowers that nature has given us."

Pattie Warren of Chapel Hill

Notes by Caroline Donnan, April, 1995

The North Carolina Wild Flower Preservation Society is pleased to recognize Pattie Warren, a Life Member of the Society and a gardener for most of her 103 years. Her husband, J. A. "Ben" Warren, was the second president of the Society.

At their home at 301 Hillsborough Street in Chapel Hill, Ben raised fruits and vegetables and developed the Warren spring and hillside into a wild flower and azalea garden. Pattie, a charter member and past president of the Chapel Hill Garden Club, canned and preserved vegetables and fruits and enjoyed growing flowers. She enjoyed the NCWFPS greatly and was able to travel with its members "from the mountains to the sea". Her interest in the NCWFPS led her to membership in the Eno River Association, the Triangle Land Conservancy and life membership in the Nature Conservancy.

One of her pleasures was riding around Chapel Hill and Orange County and enjoying the plantings of other gardeners. Thank you, Pattie, for sharing your enthusiasm, plants and hospitality with our group. *(Since receiving this article, we have learned of Pattie's passing. She will be sorely missed by all of those who knew her.)*

Linda Mitchell Lamm **Her Contributions to NCWFPS**

by Julie Moore

The style and editorial standards of the society's NEWSLETTER as we know it today are due to the editorial talents of Linda Mitchell Lamm, editor emeritus. When Linda began her long tenure as co-editor then editor, the NEWSLETTER was just that, a mimeographed sheet or two announcing upcoming trips, with an essay or report, news from someone's garden and the recipe for the scrumptious apple cake brought to the spring field trip.

Recognizing that the quality of information contributed by members on propagating native plants and the details of how to distinguish similar species, as well as accounts of field trips and unique natural areas, had long lasting value, Linda solicited and selected articles that would not go out of date. As an avid plantswoman and successful propagator who has developed a captivating garden, she knows the value of first hand knowledge and featured articles on private and public gardens and accounts of various plant genera such as goldenrods, bee balms, and stewartias.

In the early 1970's there were many fewer books on native plant gardening than are available today. (It is hard to believe how many publications are now in print on gardening with native plants!) The NEWSLETTER was one of the best places to find information on growing plants native to the Carolinas. Much of the information that was compiled in the Society's PROPAGATION HANDBOOK came from member's notes included in the NEWSLETTER. Linda also reviewed or asked other members to review new books that might be of particular interest and help. And as a good editor with an eye for posterity should, she eliminated recipes, notes on the health status of various members, and other quickly out of

date or unrelated information.

I always dreaded a call or note from Linda requesting an article after I exhibited a little too much enthusiasm for a particular plant or place. Most potential contributors were more gracious than I was, I'm sure. They probably turned their articles in on time too, if not early. Certainly many, including Elizabeth Lawrence, William Lanier Hunt, and Dr. Edgar Wherry, have been more knowledgeable.

The standards Linda set for articles were high, and her searches for good illustrations and willing illustrators untiring. Particular NEWSLETTER covers stick in my mind. Just this week as I was examining an oak-leaved hydrangea planted in January, in my mind's eye I could see quite clearly the flowering head of my favorite southern shrub drawn by Linda's good friend Jo Brown.

I have saved all of my NCWFPS NEWSLETTERS; they help me remember many wonderful field trips and are invaluable sources of information on growing and knowing native plants. I think that is exactly the vision that Linda had for the NEWSLETTER!

Linda has made numerous kinds of contributions over the years to the Society and its members. Many have become members due to her interest and enthusiasm. Me for instance. She has gladly shared plants and seeds and Parker's Bar Barbecue. And through a generous and farseeing contribution, she became the Society's first Lifetime Member.

Color Variants in *Viola pedata*

This is an inquiry concerning ecotypes and/or color variants of the bird's foot violet. Mr. William Petrecca of Pennsylvania is interested in obtaining seeds of any such variants in sufficient quantity to grow them in the south New Jersey acid sand. He also mentioned the possibility of using leaves from specimens in tissue culture procedures for recovering rare specimens, though he states that he needs some "practice" with the techniques. He would like any information concerning such color types (*forma rosea* in particular) or any other identifiable ecotypes. Mr. Petrecca's address and telephone number are:

Mr. William H. Petrecca
Box 2137 Mid City Station
Philadelphia, Pennsylvania 19103
Telephone (mornings) 215 235 2109

Wiregrass = Firegrass?

by Larry Earley

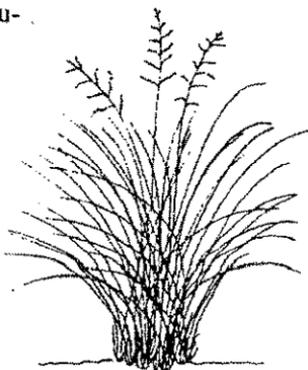
Could a plant evolve characteristics that would not only help it survive fires, but actually encourage them? This intriguing and controversial hypothesis was proposed by a U.S. Forest Service forester/biologist [ask Wentworth] named Robert Mutch in 1970, and not surprisingly it has entered the botanical literature under his name. The Mutch Hypothesis has especial relevance to many plants growing in the fire-maintained longleaf pine communities of the southeastern United States, and one plant in particular – wiregrass (*Aristida stricta*).

Mutch suggested that because fire was essential in maintaining certain ecosystems, among them longleaf pine forests, the plants might have a vested interest, so to speak in encouraging these fires, not just resisting them. Thus natural selection might favor plants with volatile oils and resins in their leaves and stems, as well as plants with low moisture content. Plant communities with these characteristics would burn more readily not just because the climate was favorable to fires but because they would be loaded with flammable fuels. Burning more readily, they would discourage other plants that had fewer resistances to fire and improve their own chances for successful reproduction and longterm survival.

One of these pyrophytic plants, wiregrass, is a bunch that grows in dense tussocks several feet high in longleaf pine forests from Virginia to western Mississippi where it is replaced by bluestem grass. Longleaf pine communities are rich in many different types of grasses, but wiregrass is most bountiful and in fact ecologists often refer to the ecosystem as the longleaf pine-wiregrass association in recognition of its importance.

B.W. Wells was amazed by wiregrass, calling it a “botanical believe it or not” in *The Natural Gardens of North Carolina*. He noted that each clump of grass consisted of hundreds of individual leaves, most of which were actually dead. And the live leaves had very few green cells that needed to be kept alive, the rest being mostly woody, fibrous cells. The entire plant was nothing but tinder waiting to burn. Wiregrass, wrote Wells, was just “a pile of the finest slivered kindling wood.”

The importance of fire to longleaf pine communities has long been recognized. Ecologists believe that before European settlement, many longleaf pine forests would have burned on an average of every two or three years, depending on the moisture content of the soil and other factors. Wiregrass was certainly a major fuel for these fires, perhaps *the* major fuel, although fallen pine needles have carried the fires that burned for days at a time, over as much as 92 million acres throughout the Southeast? Probably not. Fuel from below was needed just as



much as fuel from above.

Mutch's hypothesis suggests that the pyrogenic characteristics of wiregrass – and, indeed, other plants, including longleaf pine itself – are no accident. For without fire, the pioneering loblolly pines and resident scrub oaks would have grown up and shaded out the shade-sensitive grasses, herbaceous plants and pines. Natural selection has favored wiregrass's tinderlike characteristics because they serve a purpose – to make sure that the forest burned.

Although many ecologists of southeastern Coastal Plain ecosystems have been attracted by the Mutch Hypothesis, not all of them accept it. Because a plant has flammable leaves or oily compounds that cause it to burn readily doesn't mean that it must have evolved these characteristics for that purpose. In a lively exchange with Australian Ralf Buckley in *Oikos* about 10 years ago, James R. Snyder complained that the hypothesis was "Mutch ado about nothing." Many of the characteristics that increase a species' flammability may only be secondary or incidental to other traits that have been selected to increase the plant's fitness in other ways, he wrote. In the case of wiregrass, for example, the fibrousness of the leaves and its few green cells may have been adaptations fitting the plant to survive frequent droughts, and only secondarily frequent fires. Wells himself recognizes this achievement in many Sandhills plants including wiregrass: ". . . in a state of nature only those plants can survive in deep coarse sand which check the outgo of water above ground, and therefore need very little of that most important life-giving substance."

Does wiregrass grow to burn, as the Mutch Hypothesis suggests, or is it mainly out there checking its rate of transpiration? Certainly it does both. The low water content of the plant encourages it to burn in the frequent lightning-ignited fires of the region. But like the chicken and the egg, it's difficult to know which came first.

Wildflowers and Butterflies

While in the field enjoying our wildflowers we often spot an additional source of color, some of the many butterflies that also visit our wildflowers. There has been a connection between the two groups as long as they have been around. Many in our group have asked about the butterflies we see and now there will be an organization which can help us to identify these beautiful insects, a butterfly society for the Carolinas.

For more information on the new club contact:

Dennis Burnette, 4209 Bramlet Place, Greensboro, NC 27407,
or send a fax to his 24-hour fax line: 910 294 9697.

Is It Wiregrass?

by David W. Hall

University of Florida

209 Rolfs Hall • Gainesville, Florida 32611

To properly appreciate wiregrass (*Aristida stricta* Michx.) and its importance to the environment, some understanding of the grass family is in order. The grass family (Gramineae or Poaceae) is comprised of 700 genera and 10,000 species. It is the fourth largest family of vascular plants. Grasses grow on all continents and are found in marine, freshwater, and arid habitats at all but the highest elevations. Grasses dominate some natural communities: African veld, Asian steppe, North American prairies and plains, and South American campos and pampas. These communities comprise 24 percent of the vegetation of the world. Seventy percent of the world's crops are grasses, and 50 percent of the human population's calories come from grasses. Cereals have been cultivated for 10,000 years and have enabled the rise of civilizations. The four most important crops are grasses: sugar cane, wheat, rice, and corn. Grasses feed livestock, control erosion, make turf, and provide a sugar source for alcohol (Soderstrom et. al. 1986).

The economic and ecological importance of grasses has promoted extensive research on all aspects of their systematics, biology, genetics, evolution, and chemistry. Yet how much do we know about one particular member of this family—wiregrass—which seems to play such an important role in a principal community of the southeastern United States? Continued research on the biology and ecology of *Aristida stricta*, and conferences that gather and disseminate information on such work, is necessary to stimulate new ideas and renew efforts.

The genus *Aristida* was named by Carolus Linnaeus in 1754. It contains 330 species and is found in temperate and subtropical climates. There are 38 species in the United States (Hitchcock 1950, Allred 1986); 20 of these species occur in the southeastern United States (Allred 1986). They are annuals or perennials with round or flat leaves. The *Aristida* spikelet (the flowering structure of grasses) has only one floret (a single flower). A part of the floret called a lemma encloses the seed (grain). The tip of the lemma usually forms a column leading to three awns at the tip. The three awns probably represent three veins on the lemma that have become extended and thickened. These awns are perhaps the most prominent feature of the genus. There are many variations. For example, two of the three awns can be shortened or completely repressed. When completely repressed there



FIGURE 1. *Aristida stricta*. A = Habit. B = Plant. C = Inflorescence. D = Floret, showing awns. E = Base of upper surface of leaf blade, showing rolled blade and hairs.

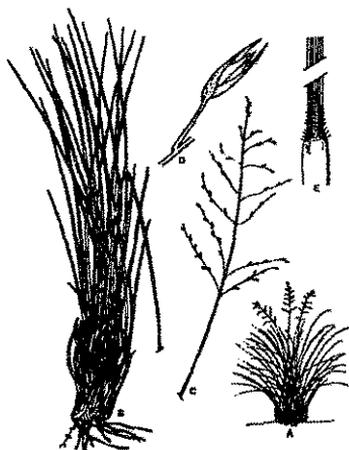


FIGURE 2. *Sporobolus curtissii*.
 A = Habit. B = Plant. C =
 Inflorescence. D = Floret, showing
 awns. E = Base of upper surface of
 leaf blade, showing flat blade and
 hairs.

and other low moist to wet areas.

The genus name, *Aristida*, is from the Latin word *arista*, which means awn or bristle. This, of course, refers to the awns on the fruit. *Stricta* is also from a Latin word, *strictus*, meaning upright or straight, which alludes to the species' upright habit. The species was named by Andre Michaux in 1803.

How can you really be sure you have wiregrass? Two grasses with similar growth habits and foliage grow in the same habitat with wiregrass. The other two species are in the genus *Sporobolus* (dropseed). All three have basal clumps of narrow or rounded leaves that can be burned by fires, leaving an outer fringe of shortened leaf bases with burned apexes. When in flower, wiregrass, which occurs from North Carolina to Mississippi, is easily distinguished from the dropseeds by the three awns of each flower. Also, the inflorescence (seedhead) of *Aristida stricta* is a narrow, compact panicle (Figure 1). The inflorescence of the other two species, Curtiss dropseed (*Sporobolus curtissii* [Vasey] Small ex. Schibn.) and pineywoods dropseed (*Sporobolus junceus* [Michx.] Kunth), has spreading branches with small scattered spikelets. Curtiss dropseed, occurring from North Carolina to north Florida, has spikelets 2.6 to 3.9 mm long (Figure 2). Pineywoods dropseed, found from Virginia to Texas, has spikelets 4.1 to 7.3 mm long (Figure 3). This difference in length of the spikelets can be used to separate the two dropseeds when they are in flower (Table 1).

Vegetative plants present more of a challenge. The leaves of wiregrass are so strongly infolded that they appear round. On their upper surface, where the leaf blade meets the leaf sheath, a tuft of white hairs can be seen. Pineywoods

appears to be one awn. Also, two awns can be slightly smaller both in diameter and length. The central, usually the largest, awn can be bent outwards in various ways. It can be straight and bent downward or twisted. All three awns can be bent downward or twisted in various manners. There also can be a column between the tip of the lemma and the base of the awns. The many species of *Aristida* can be separated on these patterns of variation (Small 1933, Fernald 1950, Radford et al. 1968, Correll and Johnston 1970, Gould 1975, Hall 1978, Allen 1981).

All but one of the species in the southeastern United States occurs in the sandy soils of old fields, sandhills, scrub, and high to low pinelands. The one exception—*Aristida palustris* (Chapm.) Vasey, longleaf three-awn—grows in low pine flatwoods, marshes,

dropseed also has inrolled leaves but no tuft of hairs on the upper side where the leaf blade meets the leaf sheath. Curtiss dropseed also has this tuft of hairs, but it is not as dense as the tuft found on wiregrass. The crucial vegetative character that separates Curtiss dropseed from wiregrass and pineywoods dropseed is that the fresh leaves of Curtiss dropseed are very narrow, but flat. However, when dry the leaves tend to roll, making identification somewhat more difficult.

Experience has shown that these three grasses are frequently found together in the dry communities where they occur. Most common are mixtures of wiregrass and pineywoods dropseed. The grasses are so similar vegetatively that only a close inspection can separate them. Next time make sure that you know which grass or grasses you have!



FIGURE 3. *Sporobolus junceus*. A = Habit. B = Plant. C = Inflorescence. D = Floret, showing awns. E = Base of upper surface of leaf blade, showing rolled blade and absence of hairs.

ACKNOWLEDGMENTS

I thank Rebecca Pilkington for the illustrations. This paper is Florida Agricultural Experiment Station Journal Series Number R-00096.

TABLE 1. Distinguishing characteristics of wiregrass, pineywoods dropseed, and Curtiss dropseed				
	<u>Flowers</u>	<u>Branches</u>	<u>Basal Clump</u>	<u>Leaves</u>
Wiregrass	3 awns	appressed to stem	yes	round, visible tuft of hairs at base of blade on upper surface
Pineywoods Dropseed	no awns, 4.1-7.3mm long	spreading	yes	round, no hairs at base of blade on upper surface
Curtiss Dropseed	no awns, 2.6-3.9mm long	spreading	yes	flat, visible hairs at base of blade on upper surface

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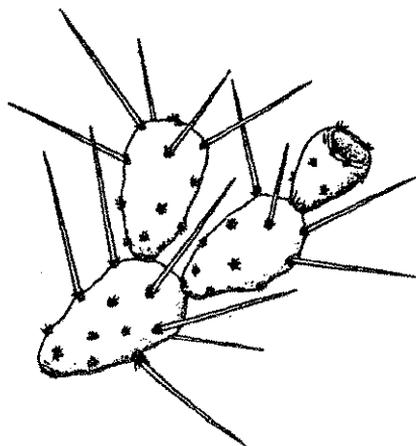
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Green-Head Coneflower

Rudbeckia laciniata

Green-Head Coneflower is a late summer or early fall bloomer which is closely related to Black-eyed Susan. It can grow as tall as six to seven feet and bear dozens of two- to three-inch clear yellow flowers. Graceful pendulous petals radiate from a greenish-yellow central disk shaped like a gumdrop. The large, smooth, deeply cut leaves are arranged in an alternate fashion on the upright stems. They usually have three to seven lobes and are reduced in size as they progress upwards. In the wild, Green-Head Coneflower is commonly found growing in groups along streams, rivers, lakes and other low areas. It is very adaptable, however, and is perfectly happy when planted in average garden conditions.



Especially versatile, Green-Head Coneflower can be grown in either shade or sun. It is beautiful when planted in groups at the edge of woods or in light shade where a burst of color would be appreciated in the late summer. Locate them in a site where their tall, bright yellow flowers are shown off against a green background of trees and shrubs. Also valuable for sunny perennial plantings, Green-Head Coneflower can be positioned in the middle or back of perennial borders and looks attractive when paired with New England Aster (*Aster novae-angliae*), Seashore Mallow (*Kosteletskya virginica*), Boltonia (*Boltonia asteroides*), or Great Blue Lobelia (*Lobelia siphilitica*).

Green-Head Coneflower was selected as the North Carolina Wildflower of the Year for 1995. If you are interested in obtaining seed of Green-Head Coneflower, please send your request with a self-addressed, business-size, stamped envelope to:

1995 North Carolina Wildflower of the Year
North Carolina Botanical Garden
University of North Carolina-Chapel Hill
CB# 3375, Totten Center
Chapel Hill, NC 27599-3375
Phone 919-962-0522

Remembering Our Margarets: "Two of North Carolina's "First Ladies"

by Benson Kirkman

Margaret Baker Reid

MARGARET BAKER REID, Lifetime Member of the NCWFPS and creator/donor of the Reid Wildflower Garden in Raleigh, died at her home on April 29, 1995. Those of us who knew Margaret personally miss her charm, wit, and graciousness. Even those who never got the opportunity to meet her as well as future generations will benefit from her work, because of her fifty-plus years of tireless efforts rescuing native plants and creating the Reid Garden.

Margaret Reid was a positive influence motivating many of us to go beyond our own ambitions and a devoted disciple of B. W. Wells, one of the society's founding members. She practiced the true art of rescuing our native plants, often times literally from the front of the bulldozer. She learned much of her craft at the shoulder of Dr. Wells on numerous field trips and outings and in his classes.

Margaret freely shared her plants and her knowledge, again emulating Dr. Wells. In her later years, she donated a conservation easement on her garden to the Triangle Land Conservancy and started an endowment to fund a year-round internship attached to the garden with possible ties to the NC Botanical Garden, the NCSU Arboretum, and Duke Gardens. The Willis Alton Reid and Margaret Baker Reid Endowment Fund has now reached \$20,000 with a goal of \$100,000.

Society members are invited to help reach the goals of the Reid Endowment, thereby honoring the memory of Margaret and Dr. Wells as well as Margaret's late husband, Dr. Alton Reid, longtime friend of Wells, consummate teacher, and former head of the NCSU Chemistry Department, by contributing to the endowment.

Make checks payable to the Triangle Land Conservancy (or TLC) with a notation of "Reid Memorial." Mail to TLC, P.O. Box 13031, Research Triangle Park, NC 27709- 3031. Please note that another donor has matched one-for-one all contributions so far. For more information on tours at the garden or how you can help otherwise, contact Benson Kirkman at (919)859-1187.

Margaret Jacqueline Cruden Rodger Nygard

MARGARET JACQUELINE CRUDEN RODGER NYGARD died at her home on November 5, 1995, while preparing to go to the annual meeting of the Eno River Association. While not a member of our society, she was a staunch supporter of our goals and worked diligently with the leadership of our society to accomplish many common goals.

After moving to North Carolina, Margaret fell in love with Eno River and began a crusade that has culminated in the ongoing preservation of the river and the creation of the Eno River State Park. Margaret was the “godmother” of the river and her legacy will forever flow with the river. Like Margaret Reid, Margaret Nygard also freely shared her home, her knowledge, her strength, and her love with all who wanted to preserve our natural heritage.

Those of us who worked with and loved Margaret will always be indebted for her counsel and her support on numerous environmental issues — her scope went far beyond the banks of the Eno, encompassing issues on a statewide basis. She fought in the trenches with the rest of us for the State Parks Fund and summoned every resource to protect any park or natural area that was threatened. Margaret was a scholar in the university classroom, but more importantly, she was a visionary in the everyday world.

Donations in Margaret Nygard’s memory may be made to the Eno River Association for land acquisition for the Eno River State Park and mailed to: Eno River Association, 4015 Cole Mill Road, Durham, NC 27712.

For those who would like to contribute through our society, both Margarets were very proud of the Wild Flower Society’s Shinn Research Grant Fund, and would welcome contributions to that effort supporting the students and leaders of tomorrow.

Each in her own way, the two Margarets left a positive legacy for us all. The following quotation from Virgil (used for Margaret Nygard’s memorial service) could be applied to either of them.

*So long as rivers run down to the sea, as long as shadows
touch the mountain slopes, as long as stars graze in the
vault of heaven, so long shall your honor, your name and
your praises endure.*

Memories of Lucy Melvin . . .

A Quiet Voice of Kindness

by Benson Kirkman

On August 14, 1995, the society lost a trusted friend – Lucy Melvin of Pleasant Garden. Many in the society knew Lucy only as the wife of Lionel Melvin, one of our founding members and former president, but Lucy was far more than a loving wife and mother.

I first met Lucy while working on my master's project on the Silky Camellia (*Stewartia malacodendron*). Russell Southall, my advisor, had sent me to Lionel, recommending him as one of the "true plantsmen of the southeastern United States." Lionel was truly an enthusiastic wealth of knowledge, but Lucy was the one who welcomed me into their home like a prodigal son. Lucy quietly chided Lionel for not inviting me in for refreshment, offering to share whatever they had. She quickly produced a pot of fresh tea and a delicious treat to share while Lionel shared his personal experiences and knowledge about my quest. My memories of Lucy and Lionel will always be of those treasured moments, exchanging thoughts and learning with Lionel, enjoying the nurturing care of Lucy and the beautiful vase of fresh cut flowers that Lucy had gathered.

Later, Jim Ballington and I renewed that friendship while working on my Ph.D. project and other native plants. Lucy welcomed us into their home, fed us hearty meals, and treated us like sons, refusing anything more than our heartfelt thanks. I remember Jim commenting as we left after our first visit there that we had just visited with our "surrogate mother."

Yes, Lionel can be described as the ultimate plantsman, learning from the literature and in the natural habitats of our native flora, growing his treasures in his nursery, and freely sharing his knowledge. Lucy, on the other hand, was also a true lover of the gifts of nature, but she was also the epitome of the gentle, soft (but firm), "southern lady." She cared for her family and friends, sharing her warmth, hospitality, and kindness freely. For most of her adult life she was a teacher, teaching piano lessons and sharing her love of music with children.

Lionel, we share your loss, but cherish the wonderful memory of your caring partner. We also cherish the moments we shared with you and Lucy when the society honored you in 1991.

BOOK REVIEW

by Charlotte Patterson

GARDENING WITH NATIVE PLANTS OF THE SOUTH, by Sally and Andy Wasowski (Taylor Publishing Company, Dallas TX, \$29.95, hardback), is a welcome addition to the library of any gardener who, like me, is interested in increasing the number of native plants in their garden. The book is dedicated specifically to natives and is conveniently organized into chapters featuring trees and shrubs according to height, groundcovers, vines, ferns, woodland plants, ornamental grasses, water plants and garden cultivars. The 228 plants are accompanied by beautiful color photographs, latin and common names, as well as information on cultivation and propagation. Wasowski traveled across the South gathering information for her book, consulting with expert gardeners and visiting gardens and nurseries. Local experts were acknowledged for their contributions, including Edith Eddleman, Kim Hawkes, Nell Lewis, and Margaret Reid.

Wasowski approaches the use of native plants from a habitat aspect. The various habitats are described and tips are provided on how to convert your own garden or landscape into a more natural garden. Much of this procedure, of course, involves allowing nature to get the upper hand. The benefits are reduced watering, less work, and fewer chemicals in the garden.

Once you have assessed what type of landscaping conditions you have in your garden, Sally Wasowski offers a basic landscaping plan and nine detailed plans based on different gardening conditions or themes. The plans provide suggestions on how to landscape a shady spring garden, a woodland spring garden, a sunny meadow, two gardens for fall color, and an herb garden. One can maximize flower color throughout three seasons by following her three-season sunny flower garden plan. For those who want the cooling accents of white in the garden during the warmth of May and June, she offers the June wedding garden.

I found this book to have information that could be useful to me in a practical sense. The biggest dilemma is where to find many of these plants. Luckily the use of native plants is increasing and nurseries are obliging by offering more of them. We can help by requesting these plants when we visit our local nurseries and by patronizing nurseries that specialize in native plants.



BOOK REVIEW

by Janice Swab, Ph.D.

Zomlefer, Wendy B. 1994 (though it was not available until spring, 1995!). Guide to Flowering Plant Families. The University of North Carolina Press, Chapel Hill, 430pp. Available from UNC Press, P.O. Box 2288, Chapel Hill, NC 27515-2288 (telephone: 800/848-6224; fax: 800/272-6817) may also be available in bookstores; \$55 cloth ISBN 0-8078-2160-8; \$27.50 paper ISBN 0-8078-4470-5 + postage & handling + N.C. state sales tax

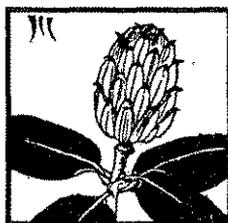
Although many who love wildflowers know little botany, it enhances appreciation tremendously to understand what we're seeing. The reason that many fail to learn botany is the perception that it's "difficult" and "boring." Standard textbooks do little to dispel these notions. There is hope, though, and this book is one example. Let me convince you to sample it!

Ms. Zomlefer is both a botanist and an illustrator; this shows in her work. She has illustrated botanical works for 15 years and this book is the result of those years of "practice" and study of the plants she illustrates. Although this book can be used as a supplementary text for courses in botany and plant systematics, it is certainly not limited to these uses.

What will you find if you decide to give this book a try? The major portion, *Plant Families*, is a discussion of 130 of our most common temperate and tropical flowering plant families, illustrated to near-perfection in 158 plates. (You will see why drawings are better than photographs to explain plant parts when you study her work.) Overall family characteristics are given, along with distribution, number of genera and species, economic uses, and a discussion of the more difficult or interesting or important aspects of family members. In order to get the most out of the illustrations, the third section, *Observing, Dissecting, and Drawing Flowering Plants*, must be read. This will help the user understand and appreciate the drawings in a way that will make them far more useful. An illustrated *Glossary* keeps the reader from getting lost along the way, as do the *Symbols* pages. After reading the third section, and perusing the illustrations, put one of the plates to the test. Take a flower that is illustrated, one you know "well" and study the illustration. I guarantee that you will know more about that flower after this exercise than you knew before. Careful...this exercise can be addictive! Many readers may not be interested in the "hard science" presented in Part Two, "*Dicotyledons*" and *Monocotyledons*, or even in the *Introduction*—they can be ignored until these readers are ready for them—and if that time never comes, so what? All of us will learn much about those plants that interest us; our appreciation for flowering plants will be enhanced; our pleasures in plant observations will be heightened; we will be happier people—(well, maybe not, but we won't be less happy!).

There are other features such as the 23 charts that give quick comparisons of confusing groups, the References Cited sections, and the Family Summary Chart (Appendix B) that make this an extremely convenient work for professionals.

If you want to learn more about the plants you love, this is a book for you!



NORTH CAROLINA WILD FLOWER PRESERVATION SOCIETY, INC. Aims & Objectives

The North Carolina Wild Flower Preservation Society was formed in 1951 by a group of individuals appreciative of native plants throughout the state and region. The purpose of the Society is to promote enjoyment and conservation of native plants and their habitats through education, protection, and propagation.

Spring and fall meetings are held at "natural gardens" across the state. Members exchange seeds and propagated plants at these meetings. Other excursions are organized on a local basis throughout the year.

The Society Newsletter is issued twice a year with articles and illustrations by professional and amateur contributors.

The Society publishes the "N.C. Native Plant Propagation Handbook;" new edition available in Fall, 1996.

The Shinn Scholarship/Grant Fund sponsors research on native plants by undergraduate and graduate students. The fund is supported by member contributions and by gifts and memorials. Applications are made to the Scholarship/Grant Fund Committee for awards in May of each year.

The Society is a nonprofit organization under North Carolina and Internal Revenue Service regulations. Donations are tax deductible.

Correspondence concerning the Society and its programs should be addressed to: North Carolina Wild Flower Preservation Society, Inc., c/o North Carolina Botanical Garden, Totten Center 3375, UNC-CH, Chapel Hill, NC 27599-3375.

MEMBERSHIP APPLICATION

ANNUAL DUES:

Individual or Family:	\$15.00
Sustaining:	\$25.00
Lifetime Membership:	\$180.00

Scholarship Fund Donation: _____

Name _____

Address _____

City _____

State _____ Zip _____

New Renewal

*Please send this and all address
corrections to:*

*North Carolina Wild Flower
Preservation Society, Inc.*

*Ms. Nancy C. Julian
1933 Gaston Street*

Winston-Salem, NC 27103-3733

*Please include your added four digit
zip number for your address in your
dues payment.*

It will soon be mandatory.

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