

NORTH CAROLINA *wild flower* PRESERVATION SOCIETY, INC.



Fall
1978

NORTH CAROLINA WILD FLOWER PRESERVATION SOCIETY, INCORPORATED

Mrs. Emily Allen, President
1466 Oldtown Road
Winston-Salem, N.C. 27106

Mrs. Flora Ann Bynum
832 S. Main St.
Winston-Salem, N.C. 27101

Mrs. Clara Murray, Rec. Sec.
304 Delafield Ave.
Durham, N.C. 27704

Mrs. Gretchen Cozart, Treasurer
900 West Nash St.
Wilson, N.C. 27893

Mrs. Lucille Grassia, Corr. Sec.
1920 Buena Vista Road
Winston-Salem, N.C. 27104

Mrs. Eleanor Pegg, Historian
32 Mt. Bolus Road
Chapel Hill, N.C. 27514

Mrs. Nell Lewis, Publicity
907 Greenwood Drive
Greensboro, N.C. 27410

Mr. Lionel Melvin, Director '78
P.O. Box 313
Pleasant Garden, N.C. 27313

Ms. Julie H. Moore, Director '78
Rt. 1, Box 21
Pittsboro, N.C. 27312

Mrs. Bruce Shinn, Director '78
Rt. 1, Box 321-A
Leicester, N.C. 28748

Mr. Thomas H. Jones, Director '79
409 Midland Way
Laurinburg, N.C. 28382

Dr. T.L. Mellichamp, Director '79
Biology Department
UNC - Charlotte
Charlotte, N.C. 28223

Mr. Harry R. Phillips, Director '79
317A Pine St.
Carrboro, N.C. 27510

Mr. Gordon Butler, Consultant
Rt. 7, Butler's Nursery
Fayetteville, N.C. 28306

Dr. Herbert Macheubleikner, Consultant
1701 Wendley Drive
Charlotte, N.C. 28210

Mr. Tom Shinn, Consultant
Rt. 1, Box 321-A
Leicester, N.C. 28748

NEWSLETTER STAFF

Mrs. Linda Mitchell Lamm, Editor
903 Raleigh Road
Wilson, N.C. 27893

Mr. Harry R. Phillips, Editor
317A Pine St.
Carrboro, N.C. 27510

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Cover illustration by Virginia Graves of Wilson, N.C.
Furbish Lousewort by Jane Mellin. Remainder of
illustrations by Georgia Chapple of Wilson, N.C.

Typing courtesy of Sadie Greene of Wilson, N.C.

PRESIDENT'S MESSAGE

Last spring many of us were disappointed to have rained out the much anticipated field trip to Bluff Mountain. It was somewhat consoling to learn that in view of the late spring, very few things were in bloom and that later field trips would be offered. I was privileged to take one of these field trips in August with the Botanical Garden group. Bluff Mountain is indeed a treasure trove. The rare and endangered Geum radiatum was in bloom; however, only the seed pods and foliage of Gray's lily remained. Wandering through the elfin oak forest we were agog at the unbelievable masses of false foxglove (Aureolaria flava). Liatris, physostegia and burnet (Sanguisorba canadensis) were abundant in other habitats.

We were able to spot the rare and the not-so-rare orchids, Polygala curtissii, Sedum telephioides, fir clubmoss (Lycopodium selago) and the very rare miserable sedge (Carex miseri), not to mention numerous ferns. The bog and fen area is a marvel as well as the wondrous stand of Carolina hemlock on the cliffs, with the ravens making lazy circles beyond. What a rare sight!

Bluff Mountain has been identified by the North Carolina Natural Heritage Program and top botanists as the number one priority site to acquire in the entire state. These 710 acres in Ashe County contain 31 endangered and threatened plant species as well as a tremendous diversity of flora in a relatively small area. Aside from the outstanding plant

diversity, it is an exceptionally beautiful area. Historically, it was first visited by Asa Gray in 1841.

These are compelling reasons why this unique area should be saved for posterity. We hope all of you will help support the preservation of this mountain and encourage other individuals and groups to help also. All contributions should be mailed to Mrs. Sydnor Cozart, 900 West Nash Street, Wilson, N. C. 27893, and labelled as: Bluff Mountain Fund.

Enjoy the fall wild flowers and propagate them. Aren't they a show! See you at Merchant's Mill Pond. The weekend promises to be different and interesting.

Emily Allen
President

Pat on the back. In a recent publication, the Brooklyn Botanic Garden has chosen to use the *Shortia* illustration by Ann Stronach of Wilson, which appears on the cover of the Wild Flower Society's Propagation Handbook.

A NEED FOR A CONSERVATION ETHIC REGARDING OUR NATIVE PLANTS

by
Ken Moore

Increasing awareness of critical environmental issues has assisted in the heightened appreciation of our native plants. Popularity of native plants has moved beyond the sphere of the conventional "wild flower garden" enthusiast; native plants have achieved a prominence on the drawing boards of landscape architects and in the large-scale plans of state highway divisions. At last our native species, long ago valued in Europe and the British Isles, have achieved deserved recognition here on their native soil. However, this recognition has created a native plant demand which is far too great to be met by our present capabilities.

Consequently, while biologists and governmental legislators alike are struggling with multiple situations of threatened and endangered plant species, indiscriminant wholesale collecting of thousands of popular species are being made in order to fill popular demand. This situation is tragic because:

- 1) Some species which are commercially exploited by these mass collections are already recognized as having state or national status as threatened or endangered;

- 2) Some species are for practical purposes, unsuccessful as transplants and

therefore do not live once taken from their natural habitats;

3) Many species are being recommended for large scale use in unsuitable environments because adequate tests for adaptability have not been made.

Thus, while concerned biologists and conservationists work toward passing strict regulations to prohibit the commercial exploitation of threatened and endangered species, more and more native plants are pushed toward a threatened or endangered status through the commercial effort to supply the native plant demand.

Immediate voluntary conservation of our native plants lies within the realms of conscience and practice for both the buyer (landscapers, plant specialists and the home gardner) and the seller (nurseries and garden centers). Because much of the material collected from the wild cannot survive the multiple handlings of nurseries, garden centers and home gardeners, and because nursery-propagated material has a much greater chance of survival after the sale, the nurseryman should sell only what he has propagated. There are examples in nursery catalogues listing Pink Lady's Slipper, Cypripedium acaule, for sale by the thousands. This native species is virtually impossible to transplant successfully for long survival; it is candidly listed in another nursery catalogue as: "Will die out in one or two years." The buyer loses, and our natural heritage loses by such large-scale wild collecting.

Regional botanic gardens and the botany and horticulture departments of universities and community colleges should provide a resource list recommending species and forms of native plants suitable for landscaping, home gardening and nursery production. Nursery propagators will generally find botanic gardens and conservationists happy to assist in supplying material for nursery production of native plants. Nurseries are advised to begin slowly with the production of natives and gradually to work up a substantial stock of dependable (and well-displayed) species or forms. There is no justification for commercial or other large-scale collecting of plants which are rare or difficult to propagate because their, as yet unknown, potential for medical and other research is too valuable to be sacrificed to the selfish ends of unscrupulous gardeners and nurserymen.

Similarly, the home gardener or other purchaser of native plants can assist in the conservation by determining, before buying, that native plants being purchased are in fact nursery propagated rather than collected from the wild and merely held or grown-on in the nursery while awaiting sale and shipment.

It is unfortunate that many species of wild flowers are becoming increasingly scarce in portions of North Carolina and Tennessee, as well as other states, due to large-scale collecting of popular species to fill orders from throughout the eastern United States. All too often, one hears accounts from mountain residents describing the beauty of certain roadsides filled with fringed-

orchids, Habenaria spp. and mountain-laurel, Kalmia latifolia, in former times and the absence of such sights in present days because of the activities of the collectors for native plant nurseries. Particularly sad is the account of a retired Botany professor and his wife who returned to a certain wooded slope in a national forest to observe the summer bloom that was to follow the magnificent display of spring wild flowers observed earlier, only to find the entire area trampled, a rough wooden table erected against a tree, and the debris of a systematic collection of species including Turk's-cap Lily, Lilium superbum, the bulbs having been pulled from the ground with stems and foliage left in shreds, and cartons of ferns still sitting where they had been shoved behind rhododendron.

The individual gardener should also accept the challenge to attempt to propagate species of rare or unusual natives and to pass on to others, including interested nurserymen, the results of his work. It should be remembered that our cultivated plants introduced from foreign lands are not continually collected from the natural habitats to supply the demand of the markets, but they are nursery-propagated, so why should our own natural areas be denuded because of laziness and the desire for quick profit?

Now is also the time for a shift in the philosophy regarding native plant gardening. It is time to move "gardening with natives" out of the conventional "woodland wild flower garden" and into the home landscape and backyard flowerbeds. This means: leave the precious ephemeral spring wood-

land flowers in their natural haunts and begin utilizing the numerous common and often maligned weedy species, many of which hold amazing potential for color, form, texture and winter interest as well as easy maintenance in cultivation.

* * *

Ken Moore is a past president of the Wild Flower Society and an impassioned gardener whose insatiable appetite for the natives is an inspiration to us all. His wise counsel concerning the use and protection of our native flora is a vital resource of the Society. Ken is superintendent of the North Carolina Botanical Garden in Chapel Hill.

NORTH CAROLINA NATURAL
HERITAGE PROGRAM

by
Charles Roe

The success of the Natural Heritage Program's efforts to identify and protect the state's outstanding natural areas is dependent upon public assistance. Our success requires the cooperative actions of citizens, private organizations, colleges and universities, and government agencies. The Natural Heritage Program has established a state-wide network of local representatives. The following directory provides their names and locations. These local contacts are natural scientists or conservationists who help the Natural Heritage Program identify noteworthy natural habitats, provide guidance to volunteers, and advise us on protection strategies for local sites.

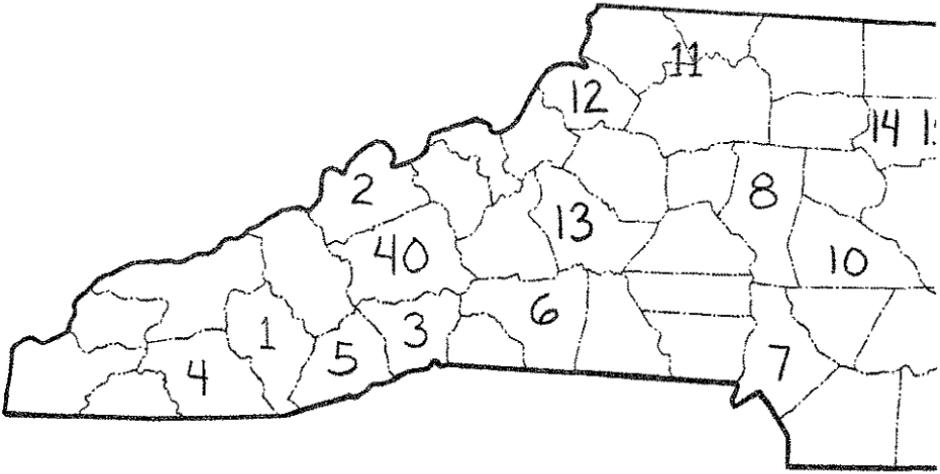
There is a wealth of natural areas in your local area that have not been researched or even identified. If you know of a noteworthy or unusual natural habitat, please notify either the Natural Heritage Program or its local contact. You can help "build the Ark", for in order to preserve our state's remaining natural diversity we must be modern-day "Noahs."

N. C. Natural Heritage Program
P. O. Box 27687, NC DNRCD
Raleigh, North Carolina 27611

Chuck Roe is Director of the N. C. Natural Heritage Program and an adventurous outdoorsman. He is perennially in the thick of things while trying to save our natural areas.

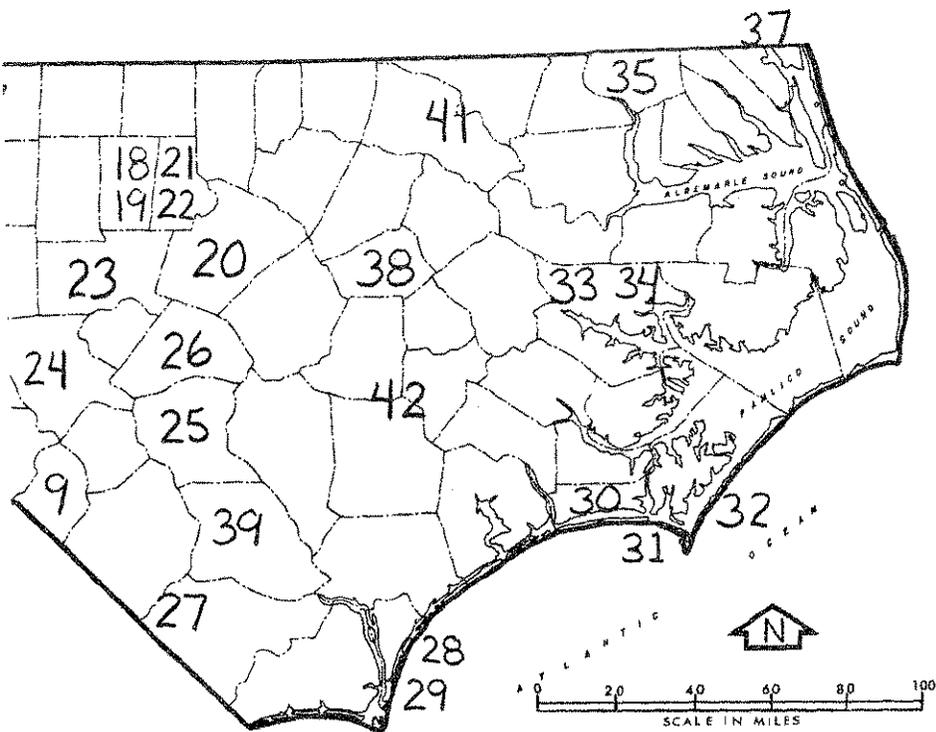
NETWORK OF LOCAL CONTACTS

1. Dr. Dan Pittillo
Biology Dept.
Western Carolina Univ.
Collowhee, N. C. 28723
2. Don McCleod
Biology Dept.
Mars Hill College
Mars Hill, N. C. 27854
3. Harvey Krouse
Western Carolina Botanical Club
3128 Florida Drive - Grimesdale
Hendersonville, N. C. 28739
4. Dr. Dick Bruce
Director
Highlands Biological Station
Highlands, N. C. 28742
5. Charles Moore
114 Maple Street
Brevard, N. C. 28712
6. Wayne Hutchins
Isothermal Community College
P. O. Box 804
Spindale, N. C. 28160
7. Dr. Jim Matthews
Biology Dept.
UNC at Charlotte
Charlotte, N. C. 28213
8. Mrs. Allein Stanley
Route 3, Box 86
Statesville, N. C. 28677
9. Tom Jones
Biology Department
St. Andrews College
Laurinburg, N. C. 28352
10. Mike Baranski
Biology Dept.
Catawba College
Salisbury, N. C. 29144
11. Hollis Wild
% Stone Mountain State Park
Star Route 1, Box 17
Roaring Gap, N. C. 28668
12. Drs. Marie Hicks/Ray Derrick
Biology Dept.
Appalachian State Univ.
Boone, N. C. 28607
13. Ruby Harbison
Biology Dept.
Western Piedmont Community
College
Morganton, N. C. 28655
14. Dr. Thomas Mowbray
Biology Dept.
Salem College
Winston-Salem, N. C. 27108
15. Joe Matthews
Northwest Environmental
Pres. Assn.
Government Center, 3rd floor
Winston-Salem, N. C. 27101
16. Dr. Art Hicks
Biology Dept.
North Carolina A&T
Greensboro, N. C. 27411
17. Bob Futrell
Rockingham Community College
Wentworth, N. C. 27375
18. Dr. Al Radford
Dept. of Botany
Coker Hall UNC
Chapel Hill, N. C. 27514
19. Dr. Ritchie Bell
Botany Dept.
Coker Hall UNC
Chapel Hill, N. C. 27514



NORTH CAROLINA





NORTH CAROLINA OUTDOOR RECREATION PLAN
DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
COUNTIES SHOWING:

20. Dr. Jim Hardin
Botany Dept.
N. C. State Univ.
Raleigh, N. C. 27607
21. Margaret Nygard
4015 Cole Mill Road
Durham, N. C. 27705
22. Fred White
School of Forestry & Envir. Mgt.
Duke University
Durham, N.C. 27706
23. Ken Moore
Route 1, Box 21
Pittsboro, N. C. 27312
24. Mac Goodwin/Tom Howard
Weymouth Woods-Sandhills
Preserve
P. O. Box 1386
Southern Pines, N. C. 28387
25. Phil Crutchfield
901 Montclair Road
Fayetteville, N. C. 28304
26. Janet Hatley
Campbell College
Biology Dept.
Buies Creek, N. C. 27506
27. Donna Scott
P. O. Box 97
Fair Bluff, N. C. 28439
28. Randy Riley
N. C. Marine Resources
Center
Kure Beach, N. C. 28449
29. Dr. James Farnell
Biology Dept.
UNC at Wilmington
P. O. Box 3725
Wilmington, N. C. 28401
30. Bob Simpson
P. O. Box 643
Morehead City, N. C. 28557
31. Charles Johnson, President
Carteret Wildlife Club
Bogue Banks Marine Resources Center
Route 1, Pine Knoll Shores
Morehead City, N. C. 28557
32. JoAnn Powell
Hampton Mariner Museum
Turner Street
Beaufort, N. C. 28516
33. Dr. Vince Bellis
Biology Dept.
East Carolina University
Greenville, N. C. 27834
34. Steve Benton
Environmental Education Program
Div. of Continuing Education
East Carolina University
Greenville, N. C. 27834
35. Cecil Frost
Merchants Millpond State Park
P. O. Box 147
Gatesville, N. C. 27938
36. Henrietta List
Route 1, Box 631
Manteo, N. C. 27954
37. Dr. Lytton Musselman
Dept. of Biological Science
Old Dominion University
Norfolk, Va. 23508
38. Doug Graham
Biology Dept., Atlantic Christian College
110 South Rountree Street
Wilson, N. C. 27893
39. Aubry Shaw
Lakewood High School
Roseboro, N. C. 28382
40. Vacant
41. J. Merrill Lynch
539 Henry Street
Roanoke Rapids, N. C. 27870
42. Vacant



Jane Mellin

the Furbish Lousewort weeps

WHAT IS THIS FURBISH LOUSEWORT?

by
Julie Moore

The Furbish Lousewort - what a ghastly sounding name! It is a name that you do not easily forget. Though it makes an impression, it is not a particularly positive one. The controversy surrounding the construction of the Dickey - Lincoln Dam on the St. John River in north Maine has received ample press coverage in the past year. But other than the fact that a plant recognized as a rare and endangered species is holding up construction of a \$700 million dam and lake project, little else has been said about the Furbish Lousewort.

Why does it have such a strange name? What does it look like? Where does it grow?

Until the December issue of Horticulture carried a very informative article entitled "The Woman Behind the Wildflower that Stopped A Dam," by John Cole, I thought that "furbish" meant "to renovate or to polish." However, that is not the case here at all, as John Cole's article explains. The plant is named for its discoverer, Miss Katherine Furbish, who found the plant in 1882 on the banks of the St. John River in Maine.

Miss Kate, as she was known in the town of Brunswick, Maine, where she spent all but one of her ninety-seven years, was a prim and proper Victorian maiden lady, except for one thing - her botanical fervor.

"I have been called 'crazy' and 'a fool' by some . . . but this is the way my work must be done." Alone, she relentlessly waded the streams barefoot, crept along rocky ledges, and crawled through bogs to find unusual plants. She believed that ". . .we see what we look for. An observing person surely sees many things which are not laid down in the manuals." Kate Furbish kept observing until the day she died.

The plant specimens she collected and pressed were sent to the Gray Herbarium at Harvard University, the Portland Society of Natural History, and Bowdoin College. In addition to her large collection of pressed specimens she also painted the plants. A collection of her illustrations, exact in botanical detail, was presented to Bowdoin College in 1909. Through the next two decades she continued to add to the original thousand illustrations, a collection of folios known as the "Flora of Maine."

Among the many delicate drawings is one of the lousewort which was later named for her - Pedicularis furbishae. In this she was one of the first of the feminine sex to have a plant named after her for her discovery.

The lousewort genus (Pedicularis) is composed of species which are partially parasitic on the roots of other plants. The louseworts have chlorophyll and can manufacture their own food. They do no apparent damage to their host plants, but they cannot survive without having root contact with other types of plants which take up water and nutrients for them. This distinctive characteristic makes transplanting louseworts difficult, if not impossible.

The name "lousewort" conjures up an image of what must be a most unattractive crawling bumpy botanical specimen, in the minds of the uninitiated. On the contrary, the name describes its use, rather than its appearance. The "wort" part simple means "plant", in German. And a lousewort is a plant which is - or has been - used for the purpose of removing lice.

The plant itself? A delicate little yellow snapdragon, shown here weeping its anguish over its future.

If Miss Kate but knew what a controversy is now revolving around the plant named for her and considered extinct until the summer of 1976 she would be pleased, I think. Of her life's work she said, "No one can tell, when beginning, how even the humblest of labors, conscientiously worked out, may contribute to the completeness of the whole."

The significance of today's controversy is that time and effort have been spent by the Corps of Engineers to determine the status of a little-known, little understood plant before it is destroyed.

"Extinction is forever," as the title of the recent New York Botanical Garden book on rare and endangered species states.

EPILOGUE

From the
FROM THE ENDANGERED SPECIES TECHNICAL BULLETIN
(Article edited by Julie Moore)

After 18 months of studies sponsored by the Corps of Engineers and the Endangered Species Program of the U. S. Fish and Wildlife Service, a plan has been devised, that if followed, would allow for the construction of the proposed Dickey-Lincoln Dam complex without jeopardizing the existence of the Fur-bish lousewort.

During the study, a total of 879 plants were located at 21 sites along the St. John River in Maine and Canada. If the series of dams proposed are built, 353 plants would be eliminated. At 5 sites down stream of the dams, 162 plants are threatened by various construction activities and dumping.

The majority of the plants discovered were growing in a narrow zone just above the river, frequently on north facing slopes. The study concluded that establishment of new lousewort colonies may depend upon prior disturbance of riverbanks due to either flooding or landslides.

The conservation program outlines a series of recommendations including continued study and experimentation to better understand the habitat requirements and propagation methods of this rare species. Also recommended are acquisition and protection of existing and potential habitats beyond the dam project lands. The final aspect of the plan

is the implementation of a monitoring program designed to detect changes in the populations due to habitat alterations, microclimate changes, and inherent biological variation in the populations.

The Fish and Wildlife Service believes that if the conservation program is implemented, greater numbers of plants could be established and there would be protection of both old and new habitats. The Corps of Engineers would be delighted if this was the case!

* * *

Julie Moore is a superb botanist, birder, and nature lover. Her skill as a botanist is helping to preserve some of our natural areas. Presently, Julie is staff botanist for the Natural Heritage Program.

PLANT CAN'T BE MOVED
SO ROAD MAY HAVE TO BE

SUFFOLK, VA. (AP)-Because a tiny plant can't be moved, a proposed giant highway through the Dismal Swamp may have to be.

Standing in the way of a \$10 million southeastern leg of the U. S. 58 Bypass is the dwarf trillium, a plant that usually reaches a height of three inches and which is being considered for the endangered species list.

While William C. Ashe, deputy director of the U. S. Fish and Wildlife Service, hopes the road can be built, it's up to his agency to determine whether plans for the highway project are environmentally acceptable.

A sizable dwarf trillium population thrives in the drier, northwestern part of the swamp - the path of the proposed highway.

"We are making no attempt to stop the highway department's plans. We'll work with them. But we have a responsibility to protect the wildlife refuge" of the Dismal Swamp, says Ashe.

Don Schwab, the swamp refuge wildlife biologist, says about 200 of the more than 1,000 dwarf trilliums in the swamp are in the path of the proposed highway.

The marker guarding the dwarf trillium site in the Dismal Swamp National Wildlife Refuge reads, "AREA BEYOND THIS SITE CLOSED." Schwab pointed out several tiny green plants beyond the marker, the largest about the height of a coffee cup.

"This is a good sized plant. I'd say it's about 18 years old," he said.

Schwab said he feels the bypass "isn't that important" in relation to the plant.

"If this plant is as rare as it's believed to be, it should be protected to the point even of moving the route of the bypass," he added.

The problem is that studies have shown the dwarf trillium cannot be transplanted, he said.

But Schwab said he doesn't think the highway, aimed at providing quicker access to Tidewater from North Carolina, should be scrapped. Since it is only in the planning stage, he said the route could be moved so the dwarf trillium could be spared.

No shade, no shine, no butterflies,

no bees,

No fruits, no flowers, no leaves,

no birds,

November!

Thomas Hood
(1798 - 1845)

THE EXPLOITATION OF A
NATURAL AREA

by
Mary and Ben Smith

There is a rich hardwood cove on N. C. 197 just below and west of Cane River Gap. It is part of the Pisgah National Forest, Toecane Ranger District. On May 18, 1978, masses and masses of wildflowers were blooming there, as fine an array as we had ever seen. We planned to come back again and again to enjoy it.

Three months later, August 19, 1978, we returned and were appalled. There was evidence of digging everywhere and a systematic attempt to collect every plant of the showy species of wildflowers--not a sign of a showy orchis leaf and only one overlooked fruiting Trillium. The despoilers had even broken off many tall plants of Turk's-cap lily just past blooming, leaving the green stems lying by the holes where the bulbs had been. Several boxes of ferns were hidden behind a rhododendron bush.

A rough plank table built between the trees and two crude benches stood close to the highway. There was a small pile of duff on the table which stood in the middle of a large, heavily trampled area. Here people must have been packing plants in full view of any passing car.

Someone had been flagrant while stealing wholesale numbers of flowering plants from National Forest land, taking all the beauty that should have been there for future visitors.

Concerned members can voice their protest
by writing:

George A. Olson
Forest Supervisor
P. O. Box 2750
Asheville, N. C. 28802



* * *

Mary and Ben Smith, ardent nature lovers,
have developed a fine wildflower garden at their
Raleigh home. They share, with all members of our
society, an abiding concern for the welfare of North
Carolina's natural beauty.

AND THE RAVEN SAID: "FOREVERMORE"

by
Tom Howard

Situated in the northwestern portion of North Carolina, at the headwaters of the North Fork of the New River, are 710 acres of Mother Earth, berobed with verdant growth of unparalleled excellence. Virtually unknown to most people, majestic Bluff Mountain supports a flora and fauna of such quality as to accord her the status of a unique natural area.

As admirers are wont to do, the North Carolina Wild Flower Preservation Society organized a spring pilgrimage to this area to pay homage to the Queen. In May, a vanguard of emissaries journeyed many miles over demanding terrain to prepare the way for the main body of pilgrims. Their leader was Sir Kenneth Moore, Bishop of the North Carolina Botanical Gardens, who has the uncanny ability to arrive at a chosen destination by the most circuitous route, thereby increasing in geometric progression the store of knowledge of his followers. Benefitting from Sir Moore's direction were the missionaries-in-training: Nancy Dubrava (Keeper of the Road-sides), Tom Howard (a birder who thinks he can identify plants), Bob Hyland (a horticulturist with potential to be a botanist), Julie Moore (Sir Moore's navigator), Harry Phillips (a New England waif that has taken root), and Jim Ward (custodian of the biggest sandbox in Orange County).

The entourage arrived at a cemetery, which is the beginning and potential ending for any Bluff Mountain trip, just as a light drizzle began to fall. Since this was a group gripped with a religious fervor, the clothing was dampened, but not the spirit.

The party wound slowly up a flank of the Queen's green cape of oak, hickory, tulip poplar and dogwood. Some had made the trip before; most had not; and for all, this was their first trip with the mountain wrapped in thick blankets of clouds. The silence was noticeable; the sight was wonderful.

Here were carpets of Trillium grandiflorum, Viola canadensis (Canadian violet), and Stellaria pubera (giant chickweed). The latter-- a flower and not a weed. Other elements in the tapestry were: Trillium erectum (wake robin), Arisaema triphyllum (Jack-in-the-pulpit), Sanguinaria canadensis (bloodroot), Aquilegia canadensis (columbine), Iris cristata (crested iris), the bellworts (Uvularia grandiflora and U. pudica) and Anemone quinquefolia (windflower). All were in peak bloom and each received its due attention on the trek to the top.

The Queen's coronation was before recorded history; but the crown is still present. It is the fen-bog perched near the summit. Embedded in a matrix of sedge (Carex spp.) and Canada burnet (Sanguisorba canadensis) are natural jewels of many colors--Castilleja coccinea (Indian paint brush) and Utricularia cornuta (bladderwort) among

others. While impressive, the crown is but one of many natural adornments.

The upper shoulders of the mountain take the brunt of winter storms and are almost blasted bare except for the tenacious windleaf cinquefoil (Potentilla tridentata), fir clubmoss (Lycopodium selago), the interestingly named wretched sage (Carex misera) and other stoics.

It is also here on these windswept prominences that the assemblage of mosses and lichens has been termed by one authority to be the most tundra-like of any in the state.

The caravan next visited the Northern Red Oak Forest, still locked in the fastness of winter. As they moved among the dwarfed trees shrouded in a cocoon of greyness, they were imbued



Potentilla tridentata

with a sense of enchantment. The old gnarled trees were black silhouettes and resembled a natural forest of bonzai, where poor, thin soils and harsh weather substitute for the shears and wire. A person's perception of size is altered and one feels a giant striding amid a Lilliputian forest. Here and there natural trails beckon to penetrate the mist, but the temptation was resisted. Even minimal disturbance of the ground cover at this altitude requires many years to recover.

The naked branches of the oaks gave way to the black-green of the Carolina hemlock forest and its pungent aroma of decaying leaf litter. Naturally drooping branches bent slightly further under the burden of raindrops and dew. With trepidation, the band of pilgrims moved out of the deep damp darkness of the hemlock forest onto a ledge of ancient rock. Eyes strained in a vain effort to penetrate the fog. The world appeared to end here at the sheer cliffs, which had taken at least one life. At the edge, the lichen-clothed stone ended abruptly and was not replaced with anything more substantial than water droplets suspended in the air. There was no up or down, no right or left; all was a soft blur of grey. One knew there were forests, fields, and valleys below and sky above; but that was knowledge from other times and places, for Bluff Mountain at this moment refused any vistas. She was intent on forcing attention on herself and her wonders.

Then, out of the greyness, a black shape appeared and moved towards the ledge. It moved silently to a perch in a hemlock. In the subdued

light, the raven was so black it resembled a hole in the sky more than an animate object. After preening the feathers of its wedge-shaped tail, the bird sat with an unchanging posture and scrutinized the visitors. What was this bird thinking as raindrops rolled off its sleek blackness? Was it alarmed at the presence of humanity, or did it silently mock the two-legged creatures firmly attached to a rocky precipice and unable to soar the heights?

The visitors were thinking too. They saw the raven as a symbol of Bluff Mountain's "wildness." Their hope was that this home of the bird immortalized by Edgar Allen Poe would always remain as majestic as it was on this day. Slowly the party turned to leave the mountain, and as they did so, one member reportedly heard the raven say "FOREVERMORE." Let us all endeavor to make it true!

* * *

Tom Howard is the Interpretive Naturalist at Weymouth Woods Nature Preserve in Southern Pines. Tom is an avid birder and, despite his modesty, a qualified plantsman as well.

BLOOM WHERE YOU ARE PLANTED!



ASTER
novae-angliae



Like many of us, Mary Ellen holds our native Goldenrods in high regard. We hope that her poetry will appear again in our newsletter.

GOLDENROD
by
Mary Ellen Ward

Goldenrod

Dusty flower

standing straight beside the highway.

Undaunted by the speeding car,

the burning day,

crumbling asphalt.

Goldenrod

Yellow sun

stand for me where I cannot,

And keep my nightly vigil.

WILDFLOWERS: WHY and HOW?

by
Tom Shinn

What is a wildflower? What is its value? Why should we spend time in the study of wildflowers? These are some of the questions which come to mind when they are mentioned. The first answer would be that they are a part of our national heritage which for a long time was not given the proper consideration. Soon after this country was settled the British and European botanists were quick to recognize the value of our wonderfully diverse flora. It has been said that this State of ours has more species of native plants than the entire continent of Europe. Even before the Revolutionary War botanists were sent here from overseas to collect plants, seeds, or fruits, all of which were so different from those with which they were acquainted. Those who could not make the trip carried on correspondence with friends in this country, begging for help in getting these new plants started in their own gardens.

These plants were cultivated, not only for their natural beauty, but also for the purpose of hybridizing with species of other countries so as to bring out the better characteristics of each. For example, let us visit the home of a friend who cultivates hybrid Rhododendrons. Among his collection of plants there are more than apt to be some gorgeous reds. If we could trace the parentage of these, we would find that most of them had been developed through the use of our purple blossoming plant which is found in the mountains at elevations

of four to five thousand feet, still known in the mountains as 'Pink Laurel'. This plant was selected because of its rich color and also because of its hardiness and ability to thrive in very cold climates.

The name Wildflower may bring different visions to different people. Some might see only a field of goldenrod, and that with some distaste, since this flower is almost universally looked on as the cause of hay fever. In this we do the plant a great injustice. The real culprit is ragweed, a rather insignificant plant which likes a situation similar to goldenrod, and blooms about the same time. Hay fever is an irritation of the passages of the nose and throat due to inhalation of pollen from flowers. In areas where there are oak or pine trees, pollen is very noticeable when these trees are in bloom in the form of yellow dust which collects on our car tops, our porches, and even inside our houses. We see it only as a yellow dust which is easily blown or swept away. The size and shape of the individual particles can be observed only under high magnification. Under a microscope the pollen grain of the goldenrod is comparatively round and smooth, while that of ragweed reminds one of a tiny sweet gum ball. The sharp projections all over the surface of the pollen grains account for the irritation which causes us to sneeze.

During the growing season there are wildflowers of one kind or another in all parts of the State. As we whiz by on super highways, we marvel at the blaze of color of a hillside, field, or

meadow. We see it as a splash of color and nothing more. We cannot see and appreciate the real beauty and intricate construction of the flower without much closer examination. Everyone is familiar with the small white clover which is found on lawns and fields all over the State. Most of us have searched diligently for a stalk which bears four leaflets instead of the usual three. We see the blossom as a small white ball. Did you ever examine one of the individual florets? Try it sometime and you may be surprised to find that it is a perfect miniature of the sweet peas which add so much color to our flower gardens.

As we learn to know and enjoy these natural beauties, the next impulse is to have them growing in our own gardens so they may be enjoyed without having to spend Sunday afternoons driving all over the countryside, but this presents problems which must be considered. The person who has tended a vegetable or a flower garden is off to a good start. The general knowledge of how things grow and what care must be given them is an absolute necessity. If you have not had this basic experience, do not try to start with wildflowers. Their requirements are most precise. Some thrive in soil which consists almost entirely of a humus of decayed leaves or other vegetation. Some can tolerate extremely dry conditions, while others must have a boggy or marshy situation where there is plenty of moisture at all times. If one does not have this basic knowledge of how plants grow, it is best to start with some of the more easily grown flowers obtainable at most garden stores. After that the more difficult ones may be grown, and wildflowers are the most difficult.

Suppose, as we drive along a country road, we see a luxuriant patch of trailing arbutus growing at the top of a clay bank. Erosion has washed the dirt away from the under side of the plant and it seems to be hanging there, just about ready to fall. We pull off a good sized clump, take it home, and plant it in a similar dry situation. We see a plant growing on a seemingly dry rock, possibly a fern. That is pulled up and planted on the surface of a rock at the side of our yard. The result is the same in either case. Within a week or two the plant has withered and died. In one case the tiny feeder roots, upon which the plant depends for survival, were left deep in the clay bank. In the other they were left in minute crevices of the rock where there is a constant supply of moisture.

There are other factors to be considered if one is to be successful with wildflowers. One of the most important of these is the acidity of the soil. This quality is measured in terms of pH value. This may sound a little too technical, but it is really not that bad. It is very important, however, because a plant which requires acid conditions will not live in a soil where there is any amount of lime. Azaleas and rhododendrons planted along the side of a house which has a masonry foundation will not give satisfactory results because of the scraps of mortar left in the soil during the course of construction. On the other hand, plants which are found in an area where the soil is predominantly limestone will not thrive in a flower bed containing large amounts of peat or leaf mold. The State Department of Agriculture will test samples of your soil free of charge, giving you a complete analysis including value of pH. Consult your

County Agent for details. Reference to almost any garden encyclopedia will tell you what to add and how much will be needed to give your soil the correct pH value. One of the simplest ways to increase the acidity is by the addition of sulphur. To decrease the acidity you should add agricultural limestone. Be careful, though, to follow directions closely, since too much of either substance could do more harm than good. Neutral soil is pH 7. Values above this are alkaline. Those below that figure are acid. The normal range for practically all plants is between pH 4 and pH 8.

You can, of course, test the soil yourself. Most garden magazines carry advertisements of soil testing kits which are not expensive, and which will enable you to keep a check on your soil from time to time to make sure the correct conditions are being maintained.

We are frequently asked about our favorite plants, and that is a question without a definite answer. I usually associate outstanding plants with the different sections of the State. In the mountain area, I think first of the bloodroot, with its pure white petals and small yellow center. Its name comes from the orange-red sap contained in the roots. It is said that this sap was used as a war paint by the Indians. I do not know about this, but I do know that once the stain of the sap gets on fingers it is rather difficult to wash away.

The Piedmont part of our State has a wide variety of plants, some of which could be called its own, but some have strayed from the higher

elevations, and there are some that are more common in the eastern part of the State. When the Piedmont is mentioned, I usually think of late summer when the various asters and the goldenrod are at their peak.

The Coastal Plain comes into its glory in the late fall. As in other sections, there is something of interest all through the growing season, but in late fall the intense blue of the pinebarren gentian paints a picture which is not to be forgotten.

Growing wildflowers can be very fascinating, aside from the satisfaction of having contributed to the conservation of one of our natural resources. It also presents a challenge, because of the precise requirements of the various species. The greater the challenge, however, the greater will be the feeling of satisfaction when success is achieved.

* * *

For additional information on wildflower cultivation, refer to the North Carolina Native Plant Propagation Handbook, compiled by the members of the North Carolina Wild Flower Preservation Society, available through the Botanical Garden. Price: \$3.50 postpaid. Make checks payable to the N. C. Wild Flower Preservation Society and mail to the Garden. Inquire about discounts for large orders.

A past president and an original founder of the Wild Flower Society, Tom Shinn and his wife Bruce maintain a magnificent wild flower garden at their Leicester, N. C. home. Tom's work with native plants over the years, especially in the area of seed propagation, has yielded a wealth of information useful to wildflower gardeners.

The following books are recommended for reading:

Flowering Earth, Donald Culross Peattie
A Sand County Almanac, Aldo Leopold
The Pine Barrens, John McPhee
Sifted and Collected Writings, Jens Jensen

The first three are available in paperbacks.

The Cover - Monarda punctata L. (horse-mint). Not a bad perennial for the wild flower garden is this relative of the well-known bee balm (Monarda didyma L.). Flowering in middle and late August with yellow, purple dotted, small corolla clusters, resting in several large leaf-like bracts of pink, lavender or white, the white sometimes rivals the snow-on-mountain (Euphorbia marginata Pursh). The horsemint seems to thrive best in high, dry, sandy soil with a sunny exposure, but it is sometimes found in the wild growing in thin shade. Its range in North Carolina extends from the coast to the foothills. The wasps are strongly attracted to this plant. Sometimes several species of this insect may be seen frantically working its flowers at the same time. Since Monarda didyma is known as bee balm, perhaps Monarda punctata should be called something like waspwort.

Lionel Melvin

* * *

Lionel Melvin, a nurseryman from Pleasant Garden, has done much significant work with native plants over the years. A past president of the Society, Lionel has been a regular contributor to the newsletter, and the seed exchange.

HORSEMINTS: BIG SPLASH OF COLOR

by

William Lanier Hunt

Nothing makes a bigger splash of color in mid-summer than the various species and varieties of horsemint. These native mints are some of our most pleasant plants to crush and smell. They are also some of the very easiest perennials to grow in gardens or in rough places. In fields and along streams, they color the landscape for several weeks during the summer.

There are several different species of horse-mints, or monardas. The wild bergamot comes in many shades of lavender to white, while Oswego tea or bee balm or fragrant balm runs the whole gamut of colors from deep violet to white, including the popular red one. In the woods and fields where these plants grow wild, a gardener can pick up many beautiful shades and bring them home. Since the plants are shallow-rooted and will transplant easily, they will always live, and, since the South is full of horse-mints, there is little danger of destroying them.

Monardas overlap with the daylily season in gardens. Masses of lavender monarda are especially fine in contrast to the mid-season-to-late lilies. When crepe myrtles begin to flower, a real show can be created by planting large masses of monardas where the two will be seen together. Big plantings of monardas can easily be maintained for several years by scattering some complete fertilizer over the beds once a year in the spring. Since the plants thatch together in a tight mass, nothing else has a chance amongst them.

In Europe, where American perennials are greatly appreciated and grown, catalogues list any

number of monardas. "Cambridge Scarlet" is one of the oldest selections. Other kinds are listed as rosea, salmonea, violacea superba, "Sunset", "Perfield Crimson", "Perfield Glory", rubra and on and on. We can find these same plants in our meadows and fields by looking for them if we wish. The color range is unbelievable.

Monardas were named for the Spanish physician, Nicholas Monardes of Seville who wrote a series of reports on the plants of the New World from 1565 to 1571. The book was translated into English later by John Frampton, a London merchant as "Joyful newes out of the newe founde world".

Monardes described the tobacco plant in great detail. His account greatly excited Europe, where the interest in plants was at fever pitch. Any possible new medicine was of the greatest importance. The accounts of the medicines and food plants of the Indians stirred the Europeans as much as the lust for gold. In the end, the plants were more important.

* * *

Bill Hunt is generally considered by many to be the "grandfather of horticulture" in the South. For many years he has written a syndicated weekly column on plant related topics. Bill has been working steadily at developing the Hunt Arboretum, featuring plants from throughout the world, on a beautiful tract of land in Chapel Hill.

Excerpts from a study of
STEWARTIA MALACODENDRON,
THE SILKY CAMELLIA

by

Benson Kirkman and Donna Fabric

The genus Stewartia, of the Tea family, is endemic to eastern North America and eastern Asia. Two deciduous species are native to North Carolina and the southeastern United States. These two native species, Stewartia malacodendron, or the Silky Camellia, and S. ovata, the Mountain Camellia, have been subject to misidentification and lack of public recognition since their discoveries in the late 17th and early 18th centuries. They can be distinguished readily from each other by the novice plantsman as well as by the experts. Stewartia malacodendron has numerous purple staminal filaments with blue anthers and five white petals, while S. ovata has creamy to yellow filaments. Stewartia ovata forma grandiflora also has purple filaments but differs from S. malacodendron in possessing five to eight white petals and in the arrangement of the styles. While S. malacodendron has five styles fused into a compound style, S. ovata f. grandiflora and S. ovata have five separate styles.

The Silky Camellia occurs in scattered populations along the Coastal Plain, in association with Fagus grandifolia on moist mesic slopes. Populations vary from a few scattered isolated plants to several hundred plants in large continuous populations. The Mountain Camellia occurs

in the mountains and Piedmont with one isolated disjunct in the Coastal Plain of southeastern Virginia (where Stewartia was first discovered).

The Silky Camellia is an attractive shrub or small tree which occasionally reaches 7 m in height,



having a graceful upright habit and medium textured leaves. The leaves, vaguely resembling dogwood leaves in color, texture and size, are finely ciliate and variably serrated on the margins and turn a deep purple in the fall.

The species blooms in mid May in eastern North

Carolina with showy flowers up to nearly 12.5 cm across and is sometimes referred to as the Summer Dogwood. Other common names for Stewartia malacodendron are: Virginia Stewartia, Round-fruited Stewartia and Common Stewartia.

Stewartia malacodendron reproduces in its natural habitat by crown and root suckering, natural

layering and seed. Seeds maturing in the fall of 1978 will normally germinate in the spring of 1980. Rapid dessication and loss of viability in just a few days are major problems in handling seeds, but storage is possible if the seed moisture level can be maintained in cool moist conditions. A maximum of about 20% germination was obtained after three to four months of warm stratification followed by two to three months of cold stratification, the commonly recommended germination procedure. A 24-hour soak in 1000 ppm GA₄₊₇ (Pro-Gibb) of seeds from six weeks cold storage (stratification) gave about 40% germination. Further studies are planned for the 1978 crop and will be reported later.

The most successful means of propagating S. malacodendron is by softwood stem cuttings in mid June after the spring-flush of growth is partially matured. Over 90% rooting was obtained with cuttings stuck in a mist bed in a 1:1 sand:peat medium, with or without the use of rooting compounds. If a mist bed is not available, rooting (with a somewhat lower success rate) is possible in a rooting box in shade, covered with clear plastic or glass to maintain an adequate level around the cuttings. Successful rooting is largely dependent on taking cuttings at the proper time and maintaining the proper balance between moisture and drainage (or aeration) in the rooting medium. Hardwood and semi-hardwood stem cuttings were generally unsatisfactory, giving variable results in rooting experiments. If large plants are available, layering is very successful, starting in the fall and removing the following fall. Tubering, an old and generally forgotten method of propagation utilizing hardwood

stems in a manner similar to tubers, was also successful and will be discussed in a later article.

Rooted cuttings should be potted in a medium of 2:1:1 pine bark:peat:sand, with pH adjusted to 5.0-5.5. An application of a fertilizer with the ratio 18-6-12 (Osmocote or similar slow release) and an adequate and steadily available moisture will produce healthy, vigorous plants, some showing 100% new growth in one season. Annual application of a trace element mixture, such as Peters' STEM, will be beneficial. Container plants should be given protection if temperatures reach much below freezing.

Transplanting from the wild, even of very young plants, is not recommended because of the difficulty in keeping root systems intact. Despite the locally large populations, S. malacodendron is an uncommon and potentially endangered species as its restricted habitat is increasingly threatened by the encroachment of man.

Stewartia malacodendron is best suited for use as a specimen plant for the eastern half of North Carolina, although Lionel Melvin has grown the plant at Pleasant Garden. Plants are available from Butler's Nursery (Gordon Butler) at Fayetteville. In heavy clay soils, S. malacodendron plants should be treated much like Rhododendrons, planting high and incorporating pine bark.

* * *

Benson and Donna are graduate students in Horticulture and Botany at North Carolina State University in Raleigh. Their research concerning *Stewartia* contributes valuable and much-needed information about our native flora.

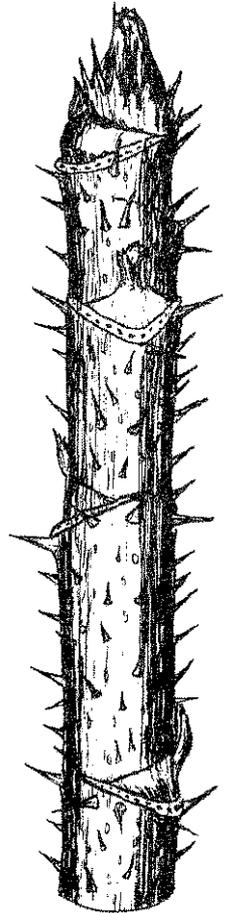
DEVIL'S WALKINGSTICK (Aralia spinosa L.)

by

Linda M. Lamm

One of the most arresting sights in the woods and along the roadside between June and August is the large terminal, pyramidal cluster of flowers that appears on the large shrub or small tree called Devil's Walkingstick. Although the individual white flowers with a tinge of green are small, the huge masses of flowers are very striking. The corolla falls the day after opening, but for a long time afterward the plant seems to be still in flower, for the clusters keep the same general appearance, largely because of the persistence of the flowers which do not open.

There is hardly a feature of the Devil's Walkingstick that does not appear unusual among the plants of our eastern flora. The trunk of the shrub or tree never branches much, though it may reach a height of over thirty feet; young trees are often not branched at all. It is beset with short sharp



spines which cause it to be known by some as Hercules's Club.

In our Coastal area where the inner bark is used medicinally to relieve toothaches, it is known as the Toothache Tree. It is probably known by this name in other localities where its medicinal qualities are known.

During the spring and summer, the huge bipinnate leaves, which may be up to three feet long and $1\frac{1}{2}$ to $2\frac{1}{2}$ feet wide, make it look like an escape from the tropics. The leaves have a silky-bronze sheen in the spring and turn red and golden in the fall. The flowers are followed in the fall by great pyramids of black berries which many species of wild birds enjoy. The seeds pass unharmed through the birds' digestive tracts, and in this manner the Devil's Walkingstick is distributed over the countryside. In some areas the stout twigs, in spite of their formidable array of prickles, are often browsed by the white-tail deer.

The Aralia spinosa has a range extending from southern New York to Missouri southward to Florida and Texas. In years past, it was considered a desirable ornamental plant, but tastes have changed and it is now seldom used. If space allowed, it would be an interesting plant to add to our wild flower gardens.

* * *

Linda M. Lamm is an enthusiastic wild flower and herb gardener from Wilson. One of her special interests is researching the history of a plant, such as the Aralia spinosa,

BUTTERFLY WEED

by

Arden Miller

One summer day I admired a clump of orange flowers which contrasted handsomely against a bed of vinca minor opposite Watts Hill's front door. "It's butterfly weed," said Watts. "It blooms along country roads." That was my introduction to Asclepias tuberosa.

Being at that time untutored in the wise ways of conservation, I declared intention to find a clump and dig it up for my own sparse garden. Watts advised against it. A deep tap root makes transplanting nearly impossible. Butterfly weed must be grown from seed.

This exchange was later shared with Frances Beach, friend and neighbor. My purpose was not so much a quest for seeds as a sharing of wonder over the breadth of wisdom available along Greenwood Road. Frances is quick to kind deeds, and on a fall day some weeks later, she arrived at the door with an envelope of seeds. She had gathered them from the mature pods on the butterfly weeds by the Hills' front door.

The seeds stayed in their envelope on a shelf above the kitchen table until the next February. (Harry Phillips advises that they would be better kept in a bottle in the refrigerator.) In February, I gathered up all the stray packets of seeds and gave them the treatment I use for all seeds.

Simpler procedures may work well for other gardeners, but my luck has been disappointing scattering seeds on the ground. Under grow lights in the basement, I keep a wooden flat about four feet long, eighteen inches wide and two inches deep. Many years ago it was hastily nailed together, then waterproofed with a lining of fiberglass from the marina down the road. A heating cable is taped to the inside bottom, and the box is filled with a mixture of sand and peat moss. For reasons of sanitation the mixture probably should be renewed every year, but that is not reliably a part of my procedure. Peat discs are placed in water, allowed to swell, and planted, each with three or four seeds. The inoculated peat pellets are then pressed into the moistened peat-sand mixture in the flat, and the heating cable is connected. When germination takes place, the grow lights, which are connected to an automatic timer, are set to illuminate for about sixteen hours a day.

The Asclepias tuberosa germinated promptly. When true leaves appear, I fertilize with half strength liquid plant food and move the little plants into potting soil and strong sunlight. The grow lights will sustain life, but do not promote vigor. During the early spring the seedlings were kept under a plastic covering in an unused sandbox--not quite a cold frame, but almost. Nearly all the seeds produced plants, which were shared with friends and planted in front of daylilies in the back border--when oak leaves were as long as mice's ears. (Somewhere I read that no more frosts will then occur.)

The plants were unimpressive the first year. Fortunately, they had been labeled or they would have been weeded out. The second year the plants were sturdy and showed a few small blossoms. The third year, the large, showy blooms began in June and continued until mid-September.

By happy accident, a strong and vigorous native plant was incorporated into a border of traditional perennials.

It is a practice which good gardeners have long advocated. Elizabeth Lawrence, in her pioneering book on Southern gardens (U.N.C. Press 1942, revised 1967) describes daylilies blooming with spurge, white phlox, veronica, and butterfly weed—with a tall mullein in the back. Careful reading of her book with an eye for identifying imaginative use of native plants will reward with many suggestions that are waiting for re-discovery.



Arden Miller has a green thumb! An insatiable fascination with the plant kingdom coupled with an eye for arrangement make his Chapel Hill garden an enlivening experience.



Butterfly Weed

MORE ON MOTH MULLEIN

by
Rob Gardner

In the Spring 1978 issue of this Newsletter I prepared a short article on Moth Mullein (Verbascum blattaria) and promised to report on the cultivation requirements of this plant growing at The North Carolina Botanical Garden in Chapel Hill.

Seeds were sown in February, 1978, transplanted to styrofoam cups as soon as they were large enough to handle, grown until their foliage overlapped the edge of the cup and finally transplanted to prepared beds at various locations in the Garden.

Moth Mullein is a biennial and thus we all expected vegetative growth this summer and flowering during the next growing season. Needless to say, it was a surprise when approximately 10 per cent of all plants, regardless of location (sun or shade, well-drained humus or soggy clay) rose to a height of from 3 to 4 feet bearing flowering stems. Other Society members report a small percentage of plants going to seed.

I suspect that this small but noticeable number of first season Verbascums flowering (in one bed, 10 of 60 plants) could be due to several factors. The small percentage of plants that flowered the first season could be within the natural growth possibilities of this species; that is, a small

percentage of this biennial will mature and flower the first year under favorable field conditions. It is also possible that some of the plants flowered because they were transplanted outside very early in the spring (late February). An early start may have put them far enough ahead of their normal active growing period to account for early flowering.

Although seeds were sown in the greenhouse in early February (germination occurring in nine days) it was only after they were stored in the refrigerator for several months, which presumably was equivalent to winter stratification, that germination began.

Our own Propagation Handbook says that some seeds of Mullein may germinate as soon as mature seed is sown outside and before closing out the growing season, but most germination takes place the following spring.

The point of all this early sowing versus late sowing discussion is this: the prostrate basal foliage is every bit as attractive (if not more!) than the flowers, suggesting that one should plan to prolong this unique prostrate stage as long as possible by either sowing seed outside in late fall or store fresh seed in the refrigerator for the winter months and sow directly into prepared beds of seed flats the following spring when the weather warms.

One last interesting, if not disappointing,

development concerning our Verbascum blattaria beds was the browning and rapid death of several



plants. The mysterious cause of these deaths spread to other nearby Moth Mullein plants. Samples sent to the North Carolina State University Plant Disease and Insect Clinic (P. O. Box 5397, NC State University, Raleigh, N. C. 27607) revealed the problem to be Southern Blight (*Sclerotium rolfsii*) a soil-borne fungus. Recommended treatment is two teaspoons Benlate per gallon of water or one teaspoon of Terraclor per gallon of water. Apply two or three times at 10 to 14 day intervals. Treating your seed flats and all transplanted seedlings

with either of these fungicides should be considered standard treatment.

So much for this issue on the cultivation of Moth Mullein. Good Growing!

* * *

As well as being the Society's resident buff concerning the Moth Mullein, Rob Gardner is curator of the carnivorous, and cacti and succulent plant collections at the Botanical Garden in Chapel Hill.

SPORE CULTURE OF MINIATURE FERNS

by
Jane Welshmer

Collecting of miniature ferns is seldom recommended. Their survival is unlikely unless one is willing to spend time and energy to control their culture. If, however, they are in a location where their destruction is inevitable, it may be possible to save them.

My first spore culture arrived spontaneously in a terrarium where I had planted three small plants of maidenhair spleenwort, Asplenium adiantum, rescued from a strip mine. It is fortunate they were planted in a very large terrarium because, within six months, the soil surface was covered with fine green prothallia. As leaves appeared, I started separating the tiny sporophytes. Within a year, in addition to plants which I had already given to friends, there were over sixty more ready to be distributed at an Alabama Wildflower Society meeting.

In response to the distribution, gifts of lobed spleenwort, A. pinnatifidum, and Scott's spleenwort, A. ebenoides (a hybrid walking fern, Camptosorus rhizophyllus and ebony spleenwort, A. platyneuron), came to me. These name plants, too, are multiplying and being distributed.

Culture is as follows: Cover the bottom of terrarium with an inch of Vermiculite, sprinkle generously with aquarium charcoal, then add an

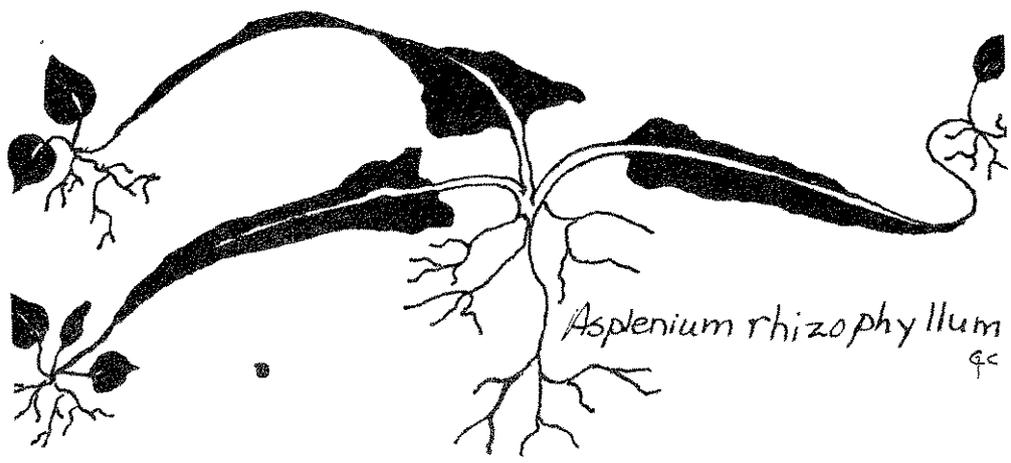
inch or more of commercial potting soil. If one is able to obtain soil from a natural habitat it is even better but should be sterilized by baking an hour at 300 degrees. Moisten the medium and set plants at a shallow level. If only spores are planted they can be collected either by placing a fertile leaf in an envelope and tapping or by scraping the leaf within the envelope. Tap the inverted envelope over soil surface.

In order to continue producing these ferns in large numbers, I am now sowing spores in clear shoe and sweater cases of plastic, prepared as above. Most of the cases have been kept on a table under east facing basement windows. Except for the divisions which have to be made once every three or four months, the cases require little care. They must be checked occasionally for moisture which should be constant. It is best to add water as needed with a fine sprayer. If a terrarium is too wet, moisture can be taken up by inserting a rolled up corner of paper towel into soil and removing when saturated. Temperature is less critical than moisture to outdoor-hardy native ferns. Mine have done well on their own for a month at a time in winter when heat was turned very low.

If ferns are to be transferred to the garden, it is best to do it in mid-spring after a site has been prepared for them. Make a small stone wall with plenty of humus between and around the stones. Make it nearly vertical so that no leaves can collect on the plants which, because of their size, are



Asplenium platyneuron G.C.



Asplenium rhizophyllum G.C.

easily smothered. The lobed spleenwort prefers sandstone; the other two, limestone. They will need light shade and constant moisture their first summer. After that they should become independent.

Warning! Always keep in mind that once started, this is a pursuit which is hard to terminate. The writer has been hooked for nearly five years and proved it this summer by moving fifty-four containers of various shapes and sizes from Birmingham to Chapel Hill.

* * *

Jane Welshmer, formerly active in the Alabama Wild Flower Society and a real whiz at growing native plants, is a new member of the Society. She resides in Chapel Hill.

One way in which botanists may do honor to their friends is to name plants after them. Thus the scientific name of the Virginia Bluebell is Mertensia Virginica, the second part of which does honor to Virginia, where presumably the species was first found and the first part is in memory of Franz Karl Mertens, a German botanist who lived from 1746 to 1831 and will never be forgotten as long as the Mertensia comes into bloom.

MINUTES OF THE
SPRING GENERAL MEETING
of the
NORTH CAROLINA WILD FLOWER
PRESERVATION SOCIETY
May 13, 1978

The meeting, held in the Conference Center for Continuing Education at Appalachian State University, was called to order by the president, Ken Moore. The reading of the minutes was dispensed with.

Julia Moore reported that members who had underwritten the Propagation Booklet had been paid, leaving some surplus of funds.

Charles Roe gave a brief message about the North Carolina Natural Heritage Society and the North Carolina Nature Conservancy.

Dr. Kletzien presented the slate of new officers as follows:

Emily Allen	President
Flora Ann Bynum	Vice President

Members Board of Directors:

Tom Jones	Laurinburg
Larry Mellichamp	Charlotte
Harry Phillips	Chapel Hill

Upon motion of Tom Shinn, seconded by Mr. Osborn, these officers and directors were elected; and Ken Moore presented the gavel to Emily Allen with his best wishes.

A fall field trip was planned to Merchants Mill Pond for October 21-22, 1978.

Pat Henry was recognized as recording secretary; and appreciation was expressed to Gretchen Cozart for her service as treasurer. The staff members, Linda Lamm and Harry Phillips, were recognized for their splendid work in issuing the newsletter.

Ken Moore introduced Laverne Smith of the Natural Heritage Society, who gave a slide presentation on Bluff Mountain. The Bluff Mountain hike had to be cancelled because of heavy rains.

Ken Moore gave a revised schedule of activities for Sunday, May 14, to Julian Price Memorial Park and the Moses Cone Memorial Park on the Blue Ridge Parkway. He offered the option of joining Ray Derrick, a biology professor, in his own wild flower garden.

An interesting presentation of the use of how "weeds" can be used to advantage in landscaping was given by Jim Ward, Nancy Doubrava, Bob Hyland, and Julia Moore.

There being no further business, the meeting was adjourned.

Respectfully submitted,
Clara Murray
Secretary

MINUTES
FALL BOARD MEETING
NORTH CAROLINA WILD FLOWER
PRESERVATION SOCIETY

August 27, 1968

The meeting was held at the home of Mr. and Mrs. O. G. Allen in Winston-Salem. Emily Allen, president, welcomed new directors, Tom Jones and Harry Phillips, and Flora Ann Bynum, vice president. She also announced that Lucille Grassia would replace as corresponding secretary Pat Henry, who had resigned.

Gretchen Cozart, treasurer, reported:

Balance on hand	\$2,188.82
Scholarship fund	463.55

Harry Phillips, reporting on the Seed Exchange Program, stated that he had no response from the questionnaire published in the spring newsletter. In response to questions, it was concluded that he would conduct a workshop session on collecting and the preservation of seeds at the Fall General Meeting.

There was no report from the Scholarship Fund Committee.

Ken Moore reported on the Propagation Booklet. All loans have been paid, and the propagation fund is between \$200 and \$300.

Emily brought to the group's attention an

article in the August issue of Southern Living about creeping cedar as a ground cover which led to a discussion about misinformation, not only in this article but in others appearing from time to time. Ken Moore agreed to write to Senior Horticulturist, John Floyd, and Landscape Editor, Glenn Morris, and suggest that they clear such information with the Botanical Garden before publication. The members were also encouraged to write about this.

There was some discussion concerning nurseries selling native plants which have been dug from the wild. We were urged to encourage propagation.

There was no report from the Symposium Committee.

A motion was made to use bulk mailing as a cheaper method of sending out newsletters and correspondence. After some discussion, it was referred to the Board of Directors. Harry Phillips called for an immediate vote of those directors present, and it was agreed to make application for such mailings at the Chapel Hill postoffice.

The Tennessee Wild Flower Preservation Society has expressed a desire to have a joint meeting with our Society; and the Alabama Society has expressed a similar desire. We were asked to think about this, for action at some future meeting.

Gretchen Cozart pointed up the need for more membership brochures, which will be looked into.

Nell Lewis informed us that the Society is no

longer a member of the National Garden Clubs, inasmuch as we are not a garden club and therefore are not eligible.

The president called for suggestions regarding a suitable location for the Fall General Meeting. Ken Moore suggested Merchants Mill Pond near Ahoskie. Cecil Frost, ranger at the park, would work with Ken in making arrangements. Plans for a meeting there November 4 - 5 were accepted. Letters including complete information as to time, place, and program will be sent to all members as soon as final arrangements are completed.

There being no further business, the meeting was adjourned.

Respectfully submitted,
Clara Murray, Secretary

After the meeting, the group walked through the beautiful hillside garden of the Allens containing many wild flowers and unusual species of ferns.

WE WELCOME THE FOLLOWING NEW MEMBERS
September 1978

Abbott, Rev. S. F. James P. O. Box 72 Reidsville, N. C. 27320	Goldberger, Ms. Ann P. O. Box 27 Brevard, N. C. 28712
Alder, Mrs. Mavis M. 1746 Beaumont Road Greenville, N. C. 27834	Green, Mrs. Perry 305 Farthing St. Boone, N. C. 28607
Baer, R. Adm. Donald G. 5944 Oakdale Road McLean, Va. 22101	Harrington, Mrs. Ruth 7208 Parkview Ave. Falls Church, Va. 22042
Chaney, Mr. Stephen G. 1023 Burning Tree Dr. Chapel Hill, N. C. 27514	Higbie, Mr/Mrs. Robt. Rt. 2, Box 119 Vilas, N. C. 28692
Cherry, Mrs. W. E. 275 Piney Lane Southern Pines, N. C. 28387	Hodgson, Mrs. Margaret 5521 Edington Lane Raleigh, N. C.
Mrs. Mary Domville Colony Apt. N. I. Chapel Hill, N. C. 27514	Holt, Mr. W. Clary 509 Country Club Dr. Burlington, N. C. 27215
Evans, Ms. Tish B. 301 Club Pines Rd. Greenville, N. C. 27834	Horner, Mr. W. Elliott 1008 Michael Dr. New Bern, N. C. 28560
Foresman, Mrs. K. R. 67 Gosling Circle Beechwood Lakes Hendersonville, N. C. 28739	Jones, Ms. Elisa 502 Bayberry Dr. Chapel Hill, N. C. 27514

Kiser, Mrs. Beulah R. Box 312 West Jefferson, N. C. 28694	New England Wild Flower Society 180 Hemingway Road Framington, Mass. 01701
Levitt, Ms. Janice Ovelmen 724 Chester Rd. Winston-Salem, N. C. 27104	Oelschlager, Mrs. Beverley E. 8812 Katharina Ct. Raleigh, N. C. 27612
Lilly, Mrs. Ashton W. 1134 Offshore Dr. Fayetteville, N. C. 28305	Orr, Mrs. Oliver H. 73 Forest Hills Brevard, N. C. 28712
Lyon, Capt. Gaylord B. Sherwood Forest Cedar Mountain, N. C. 28718	Rankin, Claude W. 2833 Skye Dr. Fayetteville, N. C. 28303
Mackintosh, Mrs. Robert 1128 Colleton Ave. Aiken, S. C. 29801	Ray, Mrs. R. C. West Jefferson North Carolina 28694
MacDougall, Ms. Lynn D. Route 7, Box 206 Durham, N. C. 27707	Roundy, Ms. Ruth P. O. Box 71 New Hill, N. C. 27562
McGrigor, Mrs. Jane Vann 102 Badger Court Clinton, N. C. 28328	Smithson, Mrs. Maria S. 1827 Fairview Blvd. Winston-Salem, N. C. 27107
Moe, Mrs. Elizabeth Box 172 Cedar Mountain, N. C. 28717	Sugar Mt. Property Owners Assn. Att: W. Allen Traver, Jr. Route 1, Box 63A Banner Elk, N. C. 28604
Moorefield, Dr. W.G., Jr. 4452 Darventry Ct. Charlotte, N. C. 28211	

Tyer, Mr. & Mrs. Ruel
Rt. 1, Box 116
Fountain, N. C. 27829

Tyson, Mrs. Francis
224 Churchill Dr.
Greenville, N. C. 27834

Vanderheyden, Ms. Val-
erie A.
117 Park Ave.
Brevard, N. C. 28712

Watson, Miss Frances
Route 1, Box 376
Salisbury, N. C. 28144

Wilson, Mrs. Betsy G.
305 Monticello Dr.
Wilson, N. C. 27893

Zucchini, Mrs. E. J.
2109 Woodbine Ave.
Fayetteville, N. C. 28303

Derrick, Mr. F. Ray
114 Woodland Drive
Boone, N. C. 28607

Change of address:

Leonard, Steve W.
4505 Franklin Ave.
Wilmington, N. C. 28401

NORTH CAROLINA
WILD FLOWER
PRESERVATION
SOCIETY, INC.



900 WEST NASH STREET
WILSON, NORTH CAROLINA 27893

NORTH CAROLINA WILD FLOWER PRESERVATION SOCIETY, INC.
Mrs. S.M. Cozart, Treasurer
900 West Nash Street
Wilson, North Carolina 27893

MEMBERSHIP APPLICATION

Regular:	\$5.00	New	[]
Sustaining:	\$25.00		
Life:	\$100.00	Renewal	[]

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____



North Carolina Wild Flower Preservation Society, Inc.
Totten Garden Center, 457-A, UNC
North Carolina Botanical Garden
Chapel Hill, North Carolina 27514