

NORTH
CAROLINA

wild flower

PRESERVATION
SOCIETY, INC.



Mountain Laurel
Kalmia latifolia
'Shooting Star'

WINTER 1996
Volume VIII, Number II

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1996-98**

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ISSN # 1048-4582

NEWSLETTER
of
North Carolina Wild Flower Preservation Society

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COVER DRAWING: *Kalmia latifolia* var. Shooting Star
by Eric Hawkins

***SPECIAL ANNOUNCEMENT - We have reserved 20 rooms at the Mount Pisgah Inn on the Blue Ridge Parkway for the Fall 1997 Meeting. If you would like to reserve a room please submit request and deposit of \$77.00 to Nancy Julian (address on inside front cover), ASAP! (See page 30 for more details!)**

President's Message . . .

Those of you who attended the August meeting know that we saw a terrific variety of wildflowers! Craig, Eric, and Millie Blaha did a wonderful job of interpreting the flora. Please read Millie's colorful account of our trip to experience it vicariously if you were not able to attend. Millie's inclusion of mileposts will help those of you who would like to visit the area another time. Many thanks for a job well done.

We are pursuing the archiving and microfilming of our newsletters and archival material. Mary Ishaq, a librarian and volunteer at the NC Botanical Garden, is helping us by investigating costs of services on the UNC campus and cataloging the number of pages to be microfilmed. We hope to eventually make copies of our newsletters available to the botany libraries of universities that do not currently receive our newsletter. Interest has been expressed by a number of libraries and organizations. Mary has just informed me that the Historical Collections in Wilson Library on the UNC campus is very interested in having our archival material!

I attended the Native Plant Conference at Cullowhee in July where I learned about the Native Plant Conservation Initiative. The NPCI is a consortium of nine federal agencies and over 60 non-federal cooperators involved in working together to solve the problems of plant extinction and native habitat restoration. Native plant societies, garden clubs, botanical gardens, arboreta, landscape architects, and many conservation groups are involved in the project as cooperators. This public-private partnership provides a forum for the exchange of ideas, expertise, and information on a national level so that a more focused strategy of plant conservation can be accomplished without duplication of effort. A matching grant program, administered by the National Fish and Wildlife Foundation, awards thousands of dollars a year for on-the-ground conservation and restoration projects. As a cooperator, an organization agrees to bring people together to share resources and talents to conserve native plants. Education to the general public, encouraging the scientific community to conduct research, coordinating databases, and ensuring the conservation of native plants and their communities through conservation projects are a few of the responsibilities of a cooperator. A cooperating organization can apply for grant money to fund a conservation project that meets the approval of the Consortium. With the support of the membership in attendance at the August meeting, I have entered our Society's name as a candidate for cooperator status.

We want to develop a schedule of local hikes and need your input. These hikes would be short and would be for small groups. You may know of a nice site in the woods behind your house, or of a particularly nice walk or trail in a city park. A response form that will help us to set up a database from which to work will be included in the 1997 spring meeting announcement. Let us know your suggestions.

Craig Moretz is doing a great job with the newsletter! I want to thank him for the time he has put into soliciting articles, typing until 3:00 a.m., and logging numerous miles to get last-minute proofing or layout assistance. Craig is dedicating each issue to a particular species. This should help with planning and should help fellow members to contribute in areas where they have particular expertise. Your successes or failures in the garden would be of interest to other readers who are developing their own wild flower gardens. Let us know about special gardens you would recommend and write a piece about them. If you are a poet, we would be interested in printing some of your nature poetry.

One final note about preservation. . . . Habitat loss is one of the most serious threats to our native plants. Every day we lose acreage to another shopping center or apartment complex. Once the top soil has been removed for development, the land is infertile and would require years of rehabilitation to be restored. Land conservancies are emerging as a promising way to combat the sprawl. Land conservancies enter into conservation easements agreements with landowners. Landowners who need to sell fertile farmland or land that has habitat value can sell the land to their local conservancy at a reduced rate in return for substantial tax deductions. The tax deduction is often a life saver for children who inherit property from their parents. Inherited land is taxed at its commercial value. Children who want to keep the land often have to sell it to pay for the taxes. The easement allows the land to be held in trust for agricultural purposes in perpetuity. Landowners have lifetime rights to live and work on the land. At the death of the landowner, a new owner is found who will continue to maintain the land in its original state. If you know someone who has acreage that is valuable for wildlife habitat, endangered species habitat, or agriculture, tell them about land conservancies. We have several in North Carolina. Your membership in your local land conservancy supports their efforts.



Charlotte Patterson

WHAT'S IN A NAME?

by Charlotte Patterson & Benson Kirkman

"In the Fall of 1951 Mrs. C. A. Graham, Sr. of Ramseur, District Director of the N. C. State Garden Club, in Randolph County, met with Mrs. Herbert P. Smith at Smithwin Farm and called together the people whom they believed to be interested in preserving wild flowers. They felt that the time had come in defense of the road machines and fast going wood lands to act in some way."

This paragraph is an excerpt from Pattie Warren's 20th anniversary tribute to the NCWFPS published in the October 1971 Newsletter. Since that time we have grown in number and have tried to preserve the same spirit demonstrated in her statement. As we approach the end of the 46th year of our existence, we find ourselves asking some questions about how we might best continue to support the Society's mission in years to come. We want to continue to expand the grass roots efforts of our members regarding preservation of wild flowers and their habitats while at the same time attracting additional interest and involvement from professionals in the fields of plant ecology, horticulture, landscaping, plant propagation and other plant sciences. The help of these professionals is vital to our efforts to preserve wild stock, preserve habitat and promote the use of native plants in our increasingly urban landscape.

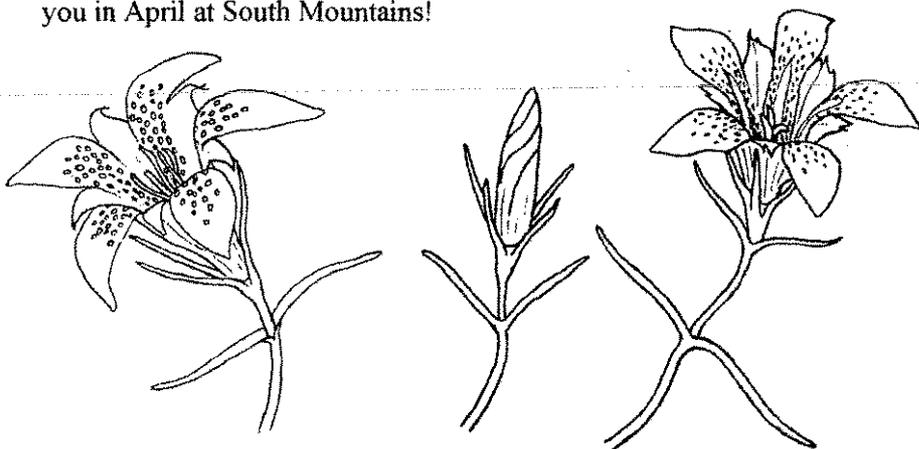
Most other wild flower societies in the United States have changed their names to include the term native plant. Native plant is an inclusive term that some people feel would more adequately describe our society and its goals. As an organization, we certainly are concerned about all native plants, including trees, shrubs, grasses, sedges, mushrooms, ferns, etc. With the focus of most groups today centering on all native plants and their habitat ecology, many feel that the term wild flower in our name limits us to only herbaceous flowering plants.

The term wild flower, as two words, is meant to convey native plant. Originally, most of the state societies included wild flower or wildflower in their name. "Wild flower" was intended to cover wild plants of all kinds, thus covering the flora currently included under native plant today.

At present, only two societies continue to use wild flower as two words in their name, The New England Wild Flower Society and our society. (The New England Wild Flower Society originally included preservation in their name as well.) The Virginia Native Plant Society includes two local chapters that continue to use wild flower as part of their name.

After our evening meal in Sanford, nature photographer Bob Burns presented a slide show - "A Rose by Any Other Name..." - where he discussed the etiological origins of many NC native plants. On Sunday morning we toured the elaborate Sandhills Horticultural Gardens. The tour was led by Pat Joseph, Curator of the Eberson Holly Garden, one of seven fully developed theme gardens. Other gardens here included the Rose, Conifer, Sir Walter Raleigh, Hillside, Fruit and Vegetable, and the Desmond Native Wetland Trail Garden. For those unable to attend this meeting, these gardens are well worth the trip.

As usual, this Fall's meeting was well designed, and we have Eric Hawkins, Craig, Bob, and President Charlotte Patterson to thank for it. See you in April at South Mountains!



CALENDAR OF EVENTS

- | | |
|-------------|---|
| April 6 | NCWFPS 1997 Spring Board of Trustees Meeting
North Carolina Botanical Garden, Chapel Hill |
| April 26-27 | NCWFPS 1997 Spring Meeting at South Mountains
State Park, Burke County, NC |
| August 2-3 | NCWPS 1997 Fall Meeting at Mount Pisgah,
Buncombe County, NC (Please see page 30) |
| May 23-24 | NCWFPS 1998 Spring Meeting at Merchant's
Millpond, Gates County, NC |

CALENDAR OF EVENTS

- April 23-25 Annual Spring Wildflower Pilgrimage Co-sponsored by the University of Tennessee Botany Dept. Call 1-423-436-1290 for more Information.
- April 26 NCWFPS 1998 Spring Board Meeting at Charlotte Patterson's house (1pm).
- May 16-17 PLEASE NOTE NEW DATES ! NCWFPS 1998 Spring Meeting** at Merchants Millpond, Gates County, NC.
- June 6 Craig Moretz is hosting a day in his garden. All persons and their guests are welcome. A map and further details will be included in your Spring Meeting Notice.
- June 20 NCWFPS First Annual Summer Picnic and Wildflower Auction.** Hagan-Stone Park, Greensboro, NC. (See enclosed details!)
- July 22-25 1998 Cullowhee Conference - Landscaping with Native Plants. Western Carolina Univ. Call 1-704-227-7397 for more Information.
- Oct. 24-25 NCWFPS 1998 Fall Meeting** at Bald Head Island and Carolina Beach State Park, Brunswick & New Hanover Counties, NC.
- April 24-25 NCWFPS 1999 Spring Meeting in the Great Smoky Mountain National Park.

Garden's Foundation Board. She had a keen continuing interest in the use of herbs as medicines and lamented at the loss of the rain forest and possible associated medicines.

In 1971, Linda and Dr. Herbert Hechenbleikner (then president of the NCWFPS), with a design by Elizabeth Lawrence, and with help from others, planned the Medicinal Herb Garden at the Country Doctor Museum in Bailey, NC. Linda wrote the description for the museum's booklet with advice from Julie Moore on all the medicinal plants in the garden. She included a wonderful quote in the guide from Sarah Orne Jewett (The Country of the Pointed Firs): "There's some herb that's good for everybody, except them that thinks they're sick when they ain't."

William Lanier (Bill) Hunt of Chapel Hill, NC, was a friend of Linda Lamm for many years. He reminded me once that there was a time when the Research Triangle area of North Carolina had few public gardens or arboreta to visit and thus people with horticultural interests gravitated to each other and "cloned" lasting friendships to further their knowledge and interests. One of those he says was between Linda and Elizabeth Lawrence. He recalls they would often visit him together. True enough, the active correspondence between Elizabeth and Linda often reflected their visits to see Bill. On one occasion Elizabeth wrote to Linda, "I think the twig Laura (Linda Lamm's sister) brought me from Chapel Hill must be the English cherry laurel Prunus laurocerasus - a narrow leafed form of it. But I will take it with me to Chapel Hill when we go and ask Bill Hunt to find out for certain." In other correspondence she advised Linda that we must discuss this with Bill (Hunt) because, "he knows how to get things done."

Linda saved several scores of these letters from Elizabeth and it is clear from seeing Linda's half of the correspondence that her mind and interests were just as active and inquisitive and wide-ranging as Miss Lawrence's. Their correspondence ranged from crossword puzzle clues, articles with odd English and French grammatical construction, comments on Eudora Welty's writings, magazine articles, poetry, family matters - and, of course, shared horticultural interests. They both loved to read the 19th century diaries of Vicar Francis Kilvert on parishioners in England near the Welsh border.

Before my last visit with her a month before she died, I spoke briefly with her first on the telephone to arrange a visit. She responded with, "Yes, please come see me and tell me everything you are doing." That was a typical warm response from her. We spent an hour together with her asking me details of projects I was involved with, until she tired. As I was leaving she urged me to pick some hellebore seed that were ripening in her yard - plants that originally came from Elizabeth Lawrence's Charlotte garden.

Although in declining health throughout this past spring, her mind remained extremely active. Just a week before she died, I received a dictated note from her commenting on a book on Elizabeth Lawrence's writings that I am involved with UNC Press, for which Linda provided me copies of articles that Miss Lawrence had written for the North Carolina Wild Flower Preservation Society when Linda was editor.

Linda Lamm's absence from North Carolina horticultural circles will be sorely missed.

Bobby Ward is a member of the North Carolina Wild Flower Preservation Society who lives and gardens in Raleigh, NC

FALL 1997 GENERAL MEMBERSHIP MEETING REPORT

by Millie Blaha

The morning of Saturday, August 2, 1997 broke clear and cool as the sun touched the mountain slopes seen from the porches and balconies of the Pisgah Inn (elevation 4,925 ft.), which accommodated members who attended the Fall 1997 meeting of the North Carolina Wild Flower Preservation Society. Local day-trippers joined the group at 8:30 a.m. for a perfect weather-wise and beautiful floral-display day.

Nature, the master gardener, presented a magnificent display of wildflowers along the Blue Ridge Parkway, some common, some rare, and some only infrequently occurring in the mountains. This display put to shame the DOT's plantings along North Carolina's highways.

At least 75 species of plants were observed by those who stopped at overlooks and walked along the roadsides, by those who hiked the trail to Devil's Courthouse, the trail to Graveyard Fields, to John Rock, and the Buck Springs Trail.

Vistas such as one where the geologic formation of Looking Glass Rock, a massive granite slope which, when wet with water or ice, glistens like a mirror, or the gap in the mountains where Monarch butterflies pass through on their journey to their winter home in the mountains of Mexico, or other stops with breathtaking views of the many distant mountain ranges were seen all along our route.

The entire 469 miles of the Blue Ridge Parkway, despite being 62 years old, carries well its age and heavy load of over 25 million visitors each year. The road does not fight the mountains it traverses but rather follows every twist and turn. Every ascent and descent presents a floral display which varies with the height of the rocky slopes, their dryness or seeping wetness, elevation, and exposure.

In the approximately 32 miles of the Parkway traversed south and southwest of the Inn, Turk's cap lilies (*Lilium superbum*) were the attention-getters, sometimes growing singly and sometimes in patches, towering above all other vegetation. Members of the Mint family, from the white of Basil balm (*Monarda clinopodia*) to the pink of Wild bergamot (*M. fistulosa*), to the bright red of Bee-balm (*M. didyma*) stood out along the sunny slopes. Fiery, as the name implies, were grouping of Fire pink (*Silene virginica*).

plans, recommend research, monitor endangered species populations and cooperate with other public and private entities to conserve listed species. The goal is to ensure recovery to a point where the species no longer needs protection under the Act. An important and often overlooked provision of the Act requires the Secretary of Interior to consider economic and other costs in the protection plans for each species when designating critical habitat (areas essential to the survival and recovery of a species). This provision promotes a balance between costs and benefits of this regulatory action. This judgment was recently used to exclude from protection 3 million of 9 million acres of spotted owl critical habitat in an effort to lessen the impact on the logging industry.

With regard to listed animals the Act states it is illegal to:

Engage in interstate or foreign trade without a permit
"Take" any listed species (Take = harass, harm, pursue, hunt, kill, trap...)

Possess illegally taken endangered or threatened species

With regard to plants the law says that it is illegal to:

Engage in interstate or foreign trade without a permit

Remove and reduce to possession such plants from federal lands

Maliciously damage or destroy any such species on federal lands

Remove, cut, dig up, damage or destroy an endangered plant on land other than your own in knowing violation of the law, including trespass

The maximum penalty: \$50,000 and/or 1 year in prison.

In addition, the Act requires federal agencies to develop programs to conserve listed species and prohibits them from carrying out any action that would jeopardize the continued existence of listed species or adversely modify critical habitat. The Act also protects species from the potentially harmful actions of private landowners. However, the Act offers several flexible tools for resolving conflicts between private landowners and endangered species. For example, private landowners can lawfully "take" listed species if it's "incidental to and not the purpose of carrying out otherwise lawful activities" and the landowner implements a conservation plan for those species. Implementation of the Act is designed to "foster creative partnerships between the private sector and government agencies in the interest of endangered species conservation".

From 1979-1992 there were 120,000 Federal projects reviewed for impact on endangered species, of these, less than 1% were found to

John's-wort, there were 4 other Hypericums growing in this area - Canada (*H. canadense*), Dense-flowered (*H. densiflorum*), Shrubby (*H. prolificum*), and Large-flowered (*H. graveolens*).

Other attention-getters growing in the wet ditches and in the crevices of the rocky slopes were the bright yellow, dandelion-like flowers of Mountain cynthia (*Krigia montana*), the lacy panicles of Michaux's saxifrage (*Saxifraga michauxii*) arising from a basal rosette of red and green leaves, the Small green wood-orchid (*Habenaria clavellata*) on 4 to 6-inch tall stems. Almost going unnoticed were the tiny flowers of the Thread-leaf gerardia (*Gerardia setacea*). In bud were the rare Grass-of-Parnassus (*Parnassia asarifolia*) and the closed gentian (*Gentiana decora*).

On the grassy, opposite side of the road there were patches of Long-leaf Houstonia (*Houstonia longifolia*) which occur INFREQUENTLY in the mountains.

The other stop which was botanically rewarding was the View of Waynesville (milepost 440.9, elevation 4,110 ft.). Marching up the slope from the roadside to the rich wooded slopes above was a spectacular display of American bellflower (*Campanula americana*) with inch-sized, lavender-blue flowers on towering stalks. Masses of purple-flowering raspberries (*Rubus odoratus*) with large raspberry-colored flowers arched over shorter vegetation. There were nice stands of Ox-eyes (*Heliopsis helianthoides*) with large, yellow, sunflower-like blooms, bright red Bee-balm (*Monarda didyma*), Yellow jewelweed (*Impatiens pallida*), the pure white flowers of Virgin's bower (*Clematis virginiana*), towering Black cohosh (*Cimicifuga racemosa*), and the RARE Stinging nettle (*Urtica dioica*). More than two dozen other species of plants could be seen in this area the length of less than a city block.

Other plants worthy of mention seen on this day were Fringed loosestrife (*Lysimachia ciliata*) in a moist ditch, and Featherbells (*Stenanthium gramineum*) with its narrow panicle of racemes of small, starry, white flowers growing in a thin woods.

In places along the sides of the road where the mountains sloped steeply downward toward the valleys below were Forked catchfly (*Silene dichotoma*) with a hairy-ribbed calyx tube, Nodding onion (*Allium cernuum*) characterized by flat leaves, the INFREQUENTLY occurring in the mountains Horehound (*Marrubium vulgare*) with tiers of tiny white flowers encircling the stem above pairs of green leaves, and the tall Figwort (*Scrophularia marilandica*) with its panicle of tiny green-maroon flowers.

On Sunday, August 3, the plant on the Buck Spring Trail beyond the Lodge which excited everyone was the Purple fringed-orchid (*Habenaria psycodes*).

Federally Endangered or Threatened Animals in piedmont North Carolina:

Eastern Cougar	<i>Felis concolor cougar</i> (probably no longer in this region)
Kirtland's Warbler	<i>Dendroica kirtlandii</i> (occasional migrant through this area)
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Red-cockaded Woodpecker	<i>Picoides borealis</i>
Bachman's warbler	<i>Vermivora bachmanii</i> (last seen in the early 1960's, possibly extinct)
Cape Fear Shiner	<i>Notropis mekistocholas</i>
Peregrine Falcon	<i>Falco peregrinus</i> (occasional migrant through this area)

Summary of North Carolina Endangered Species Laws

After the establishment of the ESA, many states developed their own endangered species laws to deal with cases of local or regional rarity that are not regulated by the national law. North Carolina has a rich diversity of biology in habitats ranging from the mountains to the sea. This state is home to organisms that occur nowhere else and other organisms where our state is only part of a larger range. It is these special cases of rarity that are covered by the North Carolina endangered species laws.

Animals: Using the federal Endangered Species Act as a model, North Carolina enacted General Statutes 113-331 to 113-337, effective 1987 which authorizes the Wildlife Resources Commission to develop a system to monitor and protect rare animal species in the state. The Commission was mandated to undertake rare animal species listing and designation of critical habitats upon recommendation of the Nongame Wildlife Advisory Committee. The Commission then coordinates the development and implementation of management plans for listed species. Chapter 392 (H832), 1995 of North Carolina Legislation amended the Commission's mandate to take into consideration a wider range of conservation, protection and management measures that may be applied to the species and habitats. Costs of protection, economic impact, and reasonably available options for minimizing costs and adverse impacts must be considered in each plan. Most importantly to landowners "*no rule may be adopted that restricts use or development of private property*".

The protection of endangered animals in this state is essentially similar to the federal ESA in that it is targeted at illegal trafficking in rare

NCDOT WILDFLOWER PROGRAM -

Let Your Opinions Be Heard!

The NCWFPS Board of Trustees has adopted an official position on the NCDOT's Wildflower Program. The following letter to the editor was sent in response to the article in the News and Observer that appeared in July. Copies of the letter were also sent to The Asheville Citizen-Times, The Chapel Hill Herald, The Charlotte Observer, The Fayetteville Observer-Times, The Greensboro News and Record, The Daily Reflector (Greenville, NC), and The Wilmington Star. When you see this letter in your regional paper, please respond by writing your own opinions in a letter to the editor. Plenty of letters are written to NCDOT and to newspapers praising the current display of mostly non-native plants. You can help to provide more balance to the issue by sending in your letters, whether you totally endorse our official position or not.

Letters to the Editor
The News and Observer
215 S. McDowell Street
PO Box 191
Raleigh, NC 27601

January 30, 1998

Dear Editor,

The North Carolina Wild Flower Preservation Society (NCWFPS) read with interest the News and Observer's July 20, 1997 article on the North Carolina Department of Transportation's Wildflower Program. The article discussed the pros and cons of NCDOT's approach to wildflower plantings. The positive attributes of the Wildflower Program could be summarized as including the bursts of color that are appreciated by residents and tourists alike, the variety of having native and non-native species planted, and the economics of using cheaper, non-native seed. The drawbacks included, in part, the concerns that the natural beauty of NC flora is not represented, that harmful chemicals are used in the process, and that non-native species displace the less competitive native species, producing less suitable wildlife habitat.

The object of the NCWFPS is to bring together people interested in conserving the native flora of North Carolina through education, protection, and propagation. Since our Society was referenced in the margins of this article, we felt it necessary to state our position on the issues discussed in the article. The NCWFPS appreciates the work of the NCDOT Roadway Environmental Unit, which has been a delight to so

Know Your Native Kalmias

by Craig Moretz

There are four species of *Kalmia* that occur in the southeastern US. The most widely grown and best known species of *Kalmia* is our mountain laurel (*Kalmia latifolia*). This is sometimes confusing since local mountain people sometimes refer to *Kalmia latifolia* as ivy and call *Rhododendron maximum* as mountain laurel.

Thanks to hybridization and tissue culture several beautiful cultivars are now available in the nursery trade. *Kalmia latifolia* is a beautiful native evergreen shrub. Under good growing conditions in nature it can sometimes eventually reach upwards to 20-25 feet high, although, in cultivation it usually grows to around 10 feet in height. In N.C. it occurs from the mountains to the sea, usually growing on hillsides and steep rocky bluffs along rivers. *Kalmia latifolia* flowers in early June in central N.C. and can be seen flowering into late July at higher elevations in the mountains. Flowers range in color from pure white to dark pink and all variations between. The unopened flower buds resemble sugar swirl cake decorations and yet despite their delectable look are deadly poisonous if eaten. One of the most desirable qualities of *Kalmia latifolia* is its ability to flower when only a few years old. Plants can flower when only a foot tall, given the proper growing conditions. Older specimens acquire grace with age, and the twisted and knarled trunks, with their rough furrowed bark, might have inspired the ancient Bonsai Masters of the Orient. Whether grown as a specimen plant, used as a screening hedge, or otherwise incorporated into the landscape, *Kalmia latifolia* deserves a place in everyone's garden.

Kalmia angustifolia is another native *Kalmia* that grows along the coastal plain of NC. Known locally as sheepkill or wicky, *Kalmia angustifolia* too has poisonous qualities and as its common name suggests, has been known to kill livestock, which unknowingly grazed upon its deadly leaves and flowers. Like its cousin, Mountain Laurel, *Kalmia angustifolia*, sports showy flowers ranging in color from rare, pure white to more common pink shades. Its smaller pale grey-green leaves are evergreen and contrast wonderfully with the abundant pink flowers in spring. The habit of growth is more compact and upright, probably owing to its natural habitat, which is pocosin ecotones. These areas burn frequently and shrubs must be able to withstand being burned to the ground and then regenerate quickly due to intense competition. This is a point that is useful to know because in cultivation *Kalmia angustifolia* can benefit from being pruned back severely every few years. This activity results in a profuse growth and bloom the

Loblolly Bay, A Spectacular Native Shrub

By Dot Wilbur-Brooks
NC Botanical Garden

From late August well into September, one of our most spectacular native shrubs, loblolly bay, or *Gordonia lasianthus*, is in bloom.

This member of the tea family, to which camellias and tea plants also belong, has five beautiful cupped white petals surrounding many yellow stamens that present one of the prettiest of our late summer blooms.

Late summer humidity and heat enhance the flower's fragrance, similar to that of bullbay magnolia flowers. The oval to elliptic leaves are a dark luscious green, evergreen throughout the year. This shrub, or small tree, which grows in the plant families collection here at the N.C. Botanical Garden, has been spectacular this year.

After a description like this, you are sure to ask why everyone doesn't have a gordonia. I often see a wonderful plant in someone's yard and immediately make plans to acquire one of my own. But as a precaution, we need to research plants to find out as much as possible before putting money into their purchase. In this case, the gordonia does have limitations.

Piedmont North Carolina is the northern edge of the loblolly bay's range. Farther south and east you could expect a gordonia to thrive. It will perform best in moist fertile soil in full sun, but will not do well in a drought or with too much fertilizer.

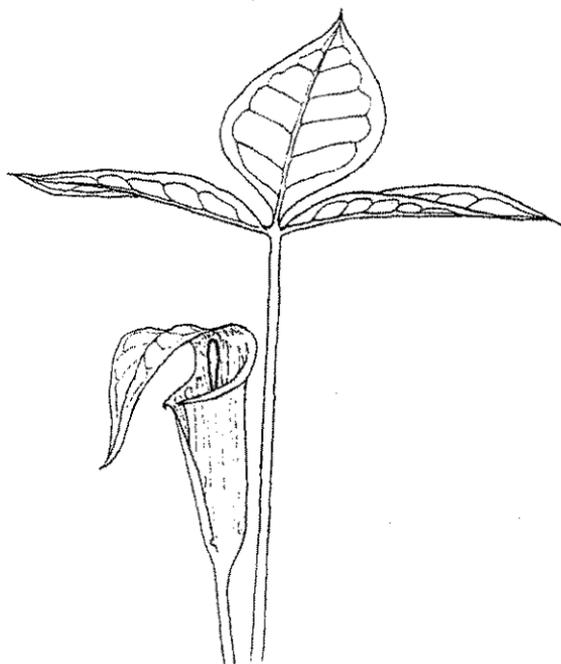
Probably the most important condition to meet is moist but not soggy soil. It is unusual, but while gordonias are found naturally in moist, acidic soils, they need a well-drained site when cultivated. This peculiarity is explained by seasonal water level fluctuations, which assure that the plant is never constantly in high water. The roots cannot deal with a perpetually damp site. To maximize flower production, gordonias need to be planted in full sun; otherwise, you will have a nice evergreen shrub.

I have looked in several catalogs to see how available *Gordonia lasianthus* plants are from local sources, but my search was not exhaustive. Our library resources list several mail-order sources. If you can't locate a plant, call me at 962-0522 and I'll get these sources to you.

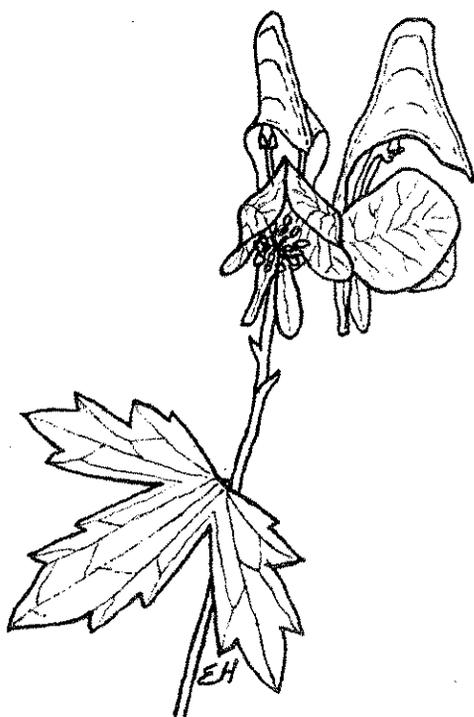
Dot Wilbur-Brooks is program coordinator of the N.C. Botanical Garden. This article first appeared in the September 17, 1997 edition of The Chapel Hill Herald.

white flowers that are faintly marked inside with red. *Kalmia cuneata* has the common name white wicky, owing mainly to the fact that it grows along side it's cousin *Kalmia angustifolia* in several areas in the wild and the usual pink flowers of the latter versus the white flowers of the former gave rise to "white" wicky as the common name. *Kalmia cuneata* grows to a height of 3-4 feet, and is practically impossible to locate in the wild unless in flower. The wonderous beauty at the end of a fruitful search, however, makes all the effort worth the while.

To sum up, the four species of *Kalmia* that grace the woodlands of our southeastern states, all are worthy of cultivation in our gardens and preservation in the wild. Please take a moment the next time you encounter a *Kalmia* to immerse yourself into the mystical magic of a true miracle of nature, the *Kalmia* flower.



NOTES



The one and only original 'Shooting star' is now estimated to be some fifty years old and is doing well, thank you, on the same public land where it originated.

Hybrid reproductions with the 'Shooting star' flower type are available from Dr. Jaynes at Broken Arrow Nursery, 13 Broken Arrow road, Hamden CT. 06518. Phone (203)-288-1026.

Editor's Note: In November 1996, Doc and Marje generously donated a flowering size specimen of 'Shooting Star' to the native laurel beds near the new visitors center at Hanging Rock State Park.





THE SECRETS TO SUCCESS WITH MOUNTAIN LAUREL

by Richard E. Bir

There is an explosion of natural beauty near my Blue Ridge Mountain home every May and June. New leaves are out on the trees, but the nights are still cool and days are just beginning to be pleasantly warm. This is the time of wild mountain laurels (*Kalmia latifolia*), which are still called mountain ively in some coves. They grow everywhere from full sun along ridges to streamside sites where they seem to stretch for sunlight over granite boulders and rippling waters. To view these natural gardens is worth a pilgrimage.

Another show that is becoming an annual event is the dramatic display of superior selections and hybrids of mountain laurel in the rare spots where they can be found. There are hybrids with hot pink blooms, red buds that open pink, flowers with purple bands or polka dots and even compact forms. However, both these gorgeous hybrids and natives rarely find their way into Southeast gardens, even in the mountains.

Why? I think there are a couple of reasons. First, mountain laurels are mistakenly thought of as somehow limited to the mountains, and, second, many gardeners throughout the Southeast and elsewhere don't realize that mountain laurels can be grown in their gardens. In fact, a few years ago, I visited kin further north, and they told me it was against the law to have mountain laurels in their Pennsylvania garden. This, by the way, is not true. However, it is against the law to dig mountain laurels from the wild in many states where they are not abundant. Still though, where these beauties are bountiful, buying locally grown plants is a far better idea than digging them from the wild.

A nursery grown plant has been raised under the best of conditions. Therefore, you will be purchasing a plant with an excellent chance for survival because it has been properly fed and watered, and more likely, has developed a good root system. You will also not be bringing unwanted guests in the form of insects, disease or weeds to the garden as you might with a wild collected specimen. Another reason for not collecting wild plants is that unless you have permission from the property owner to dig, you are poaching (another word for stealing), which is against the law.

Mountain laurels are native to the Southeast. For the Carolinas in particular, the Manual of the Vascular Flora of the Carolinas indicates they are native to nearly every county in the mountains and piedmont as well as

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NCWFPS NEWSLETTER

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tree...and I have. The wood on large plants is strong and dense...being used locally for rustic furniture. In fact, burls from mountain laurels were once used to make pipes for smoking.

Thanks to research by Dr. Jim Shelton and a number of other colleagues at NC State, we have found some "secrets" to soil chemistry and physics that help to assure success with mountain laurel. However, most of these secrets are just ways to confirm what good gardeners already suspected.

To begin with, observe where wild mountain laurels are growing near you. In the lower, hotter regions, mountain laurels grow in deeper and deeper shade but never in bogs or swamps (other, rarer *Kalmia* species grow there). Therefore, you should mimic the local growing conditions in order to be successful.

I generally suggest that gardeners in the mountains provide mountain laurels with at least a half day of full sunshine, preferably in the morning. However, as elevations get lower and southern temperatures get hotter, we recommend planting in more shade. Mountain laurels in the Deep South should be grown in the dappled, high pine shade under which azaleas seem to thrive. Balancing sunshine and shade is a challenge, but if you have too much sunshine at lower elevations, these plants will struggle to survive and may die. Conversely, too much shade will severely limit the number of flowers you receive.

Avoid constantly wet roots when growing mountain laurels. Ideally, they should be planted in well-drained soil where a hole at least five times as wide as the root ball has been prepared. I have found well-drained soils are about as common as a hole five times as wide as the root ball in most Southeast gardens. However, loosening all that soil makes it easy for roots to penetrate, and plants become established more rapidly. You really should do it!

A few years ago, I saw some beautiful mountain laurels flowering at the NC State University Arboretum at Raleigh. They were growing under fifty percent lath shade. Tony Avent, the curator of the area at the time, told me he amended the soil so heavily that the plants were growing in almost pure pine bark, and he removed nearly all media from the root balls before planting them! Fortunately, Avent is a terrific horticulturist, and the garden had irrigation. However, it does prove that mountain laurels can even be grown in poorly drained soils such as is typical in the Raleigh area...if you go to some extra effort.

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 _____

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Please send this and all address corrections to:

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

It will soon be mandatory.

New

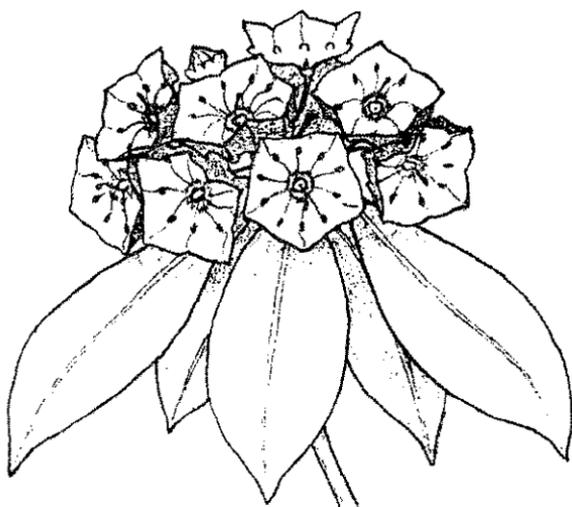
Renewal

Don't plant any deeper than the plant was growing when you got it from the nursery and, if you have clay soils, plant a lot shallower. Mulch to keep roots cool. In the mountains, a planting site that gets afternoon shade would help, but in the piedmont and coastal plains, shade is a must. And during the first couple of years, irrigate if it gets real dry.

That's about it. Prune if you want to, but it isn't absolutely necessary. However, there is usually some dead wood that needs to be removed every year, and plants look better with a little grooming. A few pests may show up, but there isn't much practical you can do if they choose your garden. Mountain laurels usually outlive problems anyway if you keep the roots cool. The key is to properly establish them at planting time--and then enjoy them for years to come.

(Dick Bir is the Ornamental Plant Specialist at the Mountain Horticultural Crops Research Station in Fletcher, NC, and author of *Growing and Propagating Showy Native Woody Plants*, published by UNC Press.)

This article appeared in the December, 1995 issue of *Carolina Gardener* and is reprinted with permission from the author and publisher.



6-Jane Srail is working on a new NCWPS brochure, larger size, photographs are a possibility and the addition of some information on the Shinn Fund.

7- Some discussion and confusion about the Fall Hike, (which has been resolved by the time you read this). Also some discussion of the benefits of having a joint outing with the Carolina Butterfly Society and the Rhode Island wildflower group. Crossnore conference center was mentioned as a good location for meeting/outing weekend. South Mountain for spring of 1997.

8-Charlotte initiated a discussion of special conservation project which might be used to increase NCWFPS visibility and membership and provide some members with an outlet for conservation fervor that benefits the NCWFPS and its goals. Some discussion of ways to increase society visibility included networking with garden clubs, land conservancies, state parks and other non-profits who publish newsletters. A specific target might be the annual Environmental Educators of North Carolina meeting. Ken Bridle will be presenting at this meeting (Sept 14-15, 1996) and will be happy to represent NCWFPS in any way possible.

9-Harry mentioned that NCWFPS board meetings might/should be held before each weekend outing, possibly the Friday night preceding. This comment was greeted with lots of affirmative nods.

10-Name tags for board and members at trips, more permanent than the glue on ones we have been using. Laminated cards with Name and Location information and a clip might be better than a button with a pin.

11-A brief mention of renewing our tax status and membership in ENPA (which is moving to NCBG). A motion to continue our ENPA membership was made by Harry , 2nd by Eric.

12-The meeting business ended with some political action updates on important topics provided by Benson; the environmental caucus, the no highway bonds committee, the Umstead festival (Sept 21-22), and HR 1296 the Dominici grazing bill.

Ghostpipes . . .

Indianpipes . . .

Monotropa uniflora

by Craig Moretz

Suddenly, as if by magic, the leaf littered forest floor, gives way to an eerie pale white creature, that silently rises above the dry leaves of autumn past. Resembling ghoulish spectres, all with heads bowed, gathering for council, *Monotropa uniflora* comes into flower.

Appropriately named Ghostpipes, or Indianpipes, *Monotropa uniflora* is one of our most unique wildflowers. It is a saprophyte on soil fungi and therefore does not need to produce chlorophyll, which give other plants their green color and allows them to produce energy from the sun. Lack of chlorophyll causes *Monotropa uniflora* to appear ghostly white. Ghostpipes get their specific epithet, *uniflora*, from the fact that each stem bears only one solitary flower. The stem and flower resemble a pipe, thus, "ghostpipes." Perhaps the name Indianpipes derives from the spiritual world of the native americans, whose use of a pipe in spiritual ceremonies, was well known to early settlers. Ghostpipes belong to the same plant family as Kalmias, the Ericaceae. This family also includes such things as blueberries (*Vaccinium*) and azaleas (*Rhododendrons*). After flowering and pollination, the Ghostpipes nodding flowers turn upright and eventually turn black and disappear without a trace until conditions are right for a "return from the dead."

Drs. Buchmann and Nabhan provide extensive documentation of the value of pollinators to the human food supply. Fully a third of the food we eat depends at least in part on insect pollination. In the U.S. alone seven crops worth an estimated \$1.25 Billion annually are pollinated by wild insects, 18 other crops rely on wild insect pollinators to some extent, and seed production for another 19 crops depends on cross pollination by wild insects. In all, 150 food crops world wide depend on wild pollination. Yet despite the critical economic importance of pollinators, the authors demonstrate that through ignorance and destructive habits, humans are seriously threatening the productive pollination services provided to plants for millennia.

Massive agricultural, forestry, mining, industrial and residential development of formerly wild lands has broken up pollinator habitats into isolated patches, forcing them to abandon areas that no longer offer sufficient sustenance. This habitat fragmentation has a predictable ripple effect: "once pollinators and seed dispersers abandon a site," the authors say, "the plant species that they formally serviced decline as well". This is the significant part of the story that effects wildflowers. Often very little may be known about the pollination biology of our wildflowers and now we have evidence that the local populations of wild pollinators may be declining before we can get an accurate determination of their impact.

The hopeful part of the book outlines a new "Forgotten Pollinators Campaign" which is targeted toward education and research related to this very real problem. What can the average gardener do? The authors outline a number of steps individuals, communities, farmers and governments can do to protect their remaining wild pollinator populations. Some are as simple as planting "pollinator gardens", and providing all the familiar wildlife habitat additions to our gardens that we have always heard about. As Buchmann and Nabhan state: "There's not a single cause or a single enemy, but there is a single challenge." As a society we need to recognize the debt we owe to these wild pollinators and stop viewing pollination as a free service that requires no effort on our part to sustain or protect.

This is a very engaging and thought provoking book that I enjoyed reading. The implications for all of the plants we use and enjoy are very disturbing. It is a good illustration of how the life around us is tied together in complex and wonderful ways, a lesson worth repeating to whoever will listen, for their benefit and ours.
