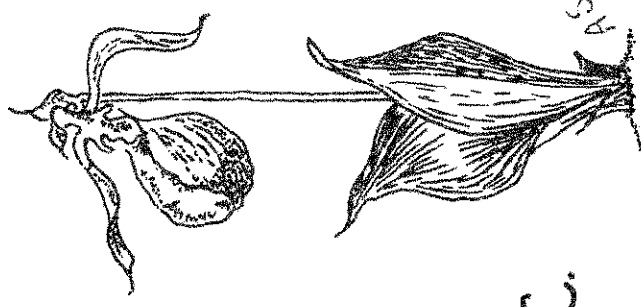


North Carolina
Wild Flower
Preservation Society, Inc.



Spring

1974

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Thomas Shinn, President
Mrs. Pearson Stewart, Vice-President
Newsletter Editors: Mrs. Charles Hubbard
Mrs. W. T. Lamm, Jr.
Mrs. George Stronach

+

Dr. B. W. Wells

To add a personal note: I have known Dr. Wells for about forty-five years, having been his student in the early thirties. Many days I plodded the woods and fields with his class, in search of the why and wherefore of plant life. Recently a host of us attended a reception at North Carolina State University in Raleigh to honor Dr. Wells on his ninetieth birthday and to view many of his fine paintings done over the years.

GORDON BUTLER.

PRESIDENT'S MESSAGE

The season for Nature's reawakening is with us again. The tree buds which have been dormant all winter are opening up to show both leaves and blossoms. Seeds planted last fall are germinating. The promise of renewed life is all around us, and we cannot witness this great revival without becoming more conscious of the necessity for preserving this natural beauty. This can best be implemented by displays of our native plants in both private gardens and city parks. A great many people are still not familiar with some of our rare and beautiful plants, and the more these are brought to their attention, the more they will come to realize how important it is to eliminate the needless destruction which has occurred too frequently in the march of so-called progress.

We can each do our part by learning how to propagate these plants and how to keep them alive and flourishing in areas where they will not be disturbed. At our meeting last fall, we were given an opportunity to see what can be done, as was demonstrated in the Botanical Garden at Chapel Hill. Few of us can carry on in such a grand scale, but even a small plot will do its part in promoting this form of education, which, I believe, is one of our greatest needs.

As the time for the election of new officers approaches, I would like to express my deep gratitude to the members of this Society for the privilege of serving as your President for the past two years. It has been a great experience for me, and one which will not be forgotten. To those officers who served with me go my heartfelt thanks. Without their advice and helpfulness, I could have in no way carried on.

In spite of the troublous times which now beset us, I feel confident that our Society will continue to stand out as a leader in the work to which we are all dedicated.

TOM SHINN

MINUTES OF THE SPRING EXECUTIVE BOARD MEETING - March 3, 1974

The Executive Board of the North Carolina Wild Flower Preservation Society, Inc. met at the Pittsboro home of Mr. and Mrs. Charles Hubbard at noon on Sunday, March 3rd 1974.

Mr. Shinn called the meeting to order and asked for a few moments of silence to show respect for members who have died within the past year. These members are: Mr. Charles Lindley, Mr. W. B. Carroll, Mr. Ray Nance, Mr. W. C. Jackson, Mr. Jack Moffitt, Dr. and Mrs. H. R. Totten, and Mr. Gregory Lewis.

Mrs. J. A. Warren read the minutes of the October 7th 1973 general meeting. Miss Bessie Pope, Treasurer, reported a balance of \$844.78 in the checking account and of \$130.00 in the memorials account.

Mr. Lionel Melvin reported for the committee working out details for a brochure on the Society, and Mrs. George Stronach showed possible designs (with a lady-slipper as a corner decoration and Society emblem). Mrs. J. A. Warren moved, and the board approved, that Mrs. Walter Braxton's name and address should go on the brochure as a permanent reference, since Mrs. Braxton acts as Secretary to the Board of Directors and this address is listed on the incorporation papers. Mrs. Warren also moved that the Board authorize the committee to go ahead with such preparations as necessary on the brochure between now and the next meeting, and the motion passed.

Mr. Gordon Butler moved to dedicate the next issue of the Newsletter to Dr. B. W. Wells. The motion was approved unanimously.

Upon Dr. Herbert Hechenbleikner's motion, Miss Elizabeth Lawrence was elected as consultant to fill Dr. H. R. Totten's place.

Mr. Shinn reported on progress of his brochure on the propagation of native plants and made another plea for members to send material.

The Board voted to hold the spring meeting at Morrow Mountain State Park, near Albemarle, in accordance with Mr. Gordon Butler's motion. Dr. Hechenbleikner will make the necessary arrangements. Mrs. Nell Lewis moved that the meeting be held on Sunday, April 21st, and that postcards be sent as soon as possible to notify members of date and place. The motion carried.

Mr. and Mrs. Herbert Smith donated some white *Mertensia virginica* to the N. C. Botanical Garden. The original plant had been collected by Mrs. Roland Totten in an area which is now at the bottom of Kerr Lake Reservoir. The plant is given in memory of Mrs. Totten.

Mrs. Carl Pegg, Historian-Librarian, has invited the Board to meet at her farm outside Chapel Hill in the fall.

Copies of the booklet "Country Doctor Museum Medicinal Herb Garden" with text by Mrs. Linda Lamm, were shown by Mrs. Gregory Lewis. The booklet lists plants in the garden and describes their medicinal uses. Mrs. Lamm made copies available to members of the Board.

A large clump of Oconee bells (*Shortia galacifolia*) was brought from their garden by Mr. and Mrs. Tom Shinn to be given to Dr. B. W. Wells in the name of the Society. There will be an exhibit of Dr. Wells' paintings in the Student Union of N. C. State University on Sunday, March 10th, and members of the Society are invited to attend.

After the business meeting adjourned at 2:30, members strolled down to the creek, where bloodroot, hepaticas and troutlilies were blooming in profusion. The herb garden, the vegetable garden and the greenhouse were also inspected and admired by all.

Acting as joint hostesses for the meeting were Mrs. Thomas Reeves, Mrs. Robert Lyon and Mrs. Lewis Swindell.

Jean B. Stewart, Acting Secretary.

GET READY FOR THE SPRING MEETING

The Spring Meeting of the North Carolina Wild Flower Preservation Society will be held at Morrow Mountain State Park at Twelve Noon on Sunday, April 21, 1974. Dr. Hechenbleikner has made arrangements for this meeting.

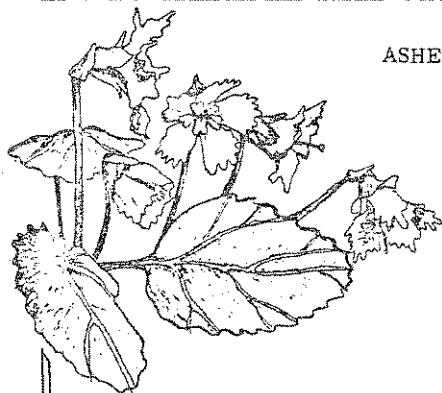
Morrow Mountain State Park is located in Stanly County, and it can be reached from NC - 27/73, between Troy and Albemarle, or from NC - 740, between Albemarle and Badin. If you are travelling NC - 27/73, look for a directional sign about three and a half miles west of the bridge across Pee Dee River. (It may be marked Yadkin River, but most likely it is called Pee Dee at that point.) Access from NC - 740 is about three miles north of Albemarle.

Morrow Mountain is an isolated elevation, and an excellent view can be had in just about all directions. It should be a fine place for our meeting. Field trips may be possible after the business meeting, so bring your walking shoes.

BRING A PICNIC LUNCH.

DO NOT FORGET YOUR NAMEPLATES.

Since reservations cannot be made in advance, TRY TO GET THERE EARLY, GET LUNCH BOXES ON THE TABLES, AND HAVE SOME VISITING BEFORE LUNCH.



ASHEVILLE WILDFLOWER PILGRIMAGE

The second annual Asheville Wildflower Pilgrimage will be held May 17-19 and the featured speaker Friday night will be Professor Maurice Brooks, author of *The Appalachians*. Plans for Saturday include a Birding Motorcade, a Birdwalk and Wildflower Motorcade, outings dealing with ecology, trees and shrubs of the Blue Ridge, mosses and lichens, a Nature Tour for Hikers, and a Bog Garden and Trillium Walk. On Sunday, a Birding Trip and a Walk through University Botanical Gardens at Asheville are scheduled.

Sponsored by:
University of North Carolina -
Asheville
University Botanical Gardens
at Asheville

MINUTES OF THE FALL MEETING -- October 7th 1973

The North Carolina Wild Flower Preservation Society, Inc. met at the North Carolina Botanical Garden in Chapel Hill on Sunday October 7th 1973. It was a beautiful fall day, and a group assembled for hikes and a woods walk, a pond walk, and a long hike to the rhodendron bluffs. An outdoor lunch was enjoyed. Mr. Shinn called the meeting to order, and the minutes were read. Mrs. Walter Braxton pointed out that the fall edition of the Newsletter was dedicated to Dr. and Mrs. H. R. Totten, and that only one other edition had been dedicated - to Mr. J. A. Warren after his death. She then proposed a gift of \$100.00 from the Society to the Botanical Garden in Chapel Hill in honor and appreciation of the Tottens. There were several seconds, and the motion passed unanimously. Mrs. Braxton then proposed a standing ovation for Dr. and Mrs. Totten, which the members gave gladly.

Mr. Shinn expressed appreciation to Ken and Julie Moore and Ritchie Bell for the arrangements.

Mr. Shinn then thanked Mercer Hubbard, Linda Lamm, Teeny Stronach, and Joe Rees for their fine edition of the current Newsletter.

Several announcements followed: (1) Mr. Shinn brought seeds to pass along. He would like a record of planting and germination. (2) Afternoon hikes like the morning ones will follow the meeting. (3) As members leave the garden, there is a table on the right with potted plants, free to all, courtesy of Ken Moore and his associates. (4) A copy of Justice and Bell's book was lost at Brevard, and the owner hopes for its return.

Mr. Shinn said that he was particularly pleased to have the meeting in the Botanical Garden at Chapel Hill, and he hopes that the other botanical gardens (at UNC-Asheville, UNC-Charlotte, UNC-Wilmington, and UNC-Boone) can host the Society.

Dr. Ritchie Bell thanked the Society for its gift to the Botanical Garden in the Tottens' honor. He credited his staff, Ken Moore and Frank Parker, for their fine work and for their success in maintaining a fine volunteer organization, headed by Bill McKerra and Jimmy Wadsworth. They are helped also by a group of work-study students. The Garden has some state support, but Dr. Bell feels that the best way to capitalize on further support is through publicity and grants from foundations. He passed out some material for examination.

Miss Bessie Pope, Treasurer, reported a current balance of \$799.78. She was pleased that many members paid their dues at this meeting.

When the business meeting had ended, many lingered to talk, walk, and enjoy fellowship.

Respectfully submitted,
Caroline Donnan, Secretary.

THE NORTH CAROLINA BOTANICAL GARDEN AT CHAPEL HILL

By Nell Lewis

Any day is a good day to visit the N. C. Botanical Garden at Chapel Hill. It might be a day when April has bathed the tender wildings with silver rain, or a hot summer day when the sun compels one to seek some shady glen among the ferns, or a winter day when a cold wind blows relentlessly down from the rhododendron bluffs, and October 7th was especially fine with its clear skies and whisper of coolness in the air.

It was on that date last year that some 125 members of the NCWFPS gathered there for the annual fall meeting. They came from the mountains, the coastal plains, and the areas in between -- people from all walks of life -- from those who have seen many autumns come and go to those who count their autumns in the teens -- yet all with a deep appreciation for the beauty and the preservation of our matchless native flora.

The events of the day, planned by Dr. Ritchie Bell, Director of the Garden, and Kenneth Moore, Garden Superintendent, included a choice of a trip to the pond area, a walk to the rhododendron bluffs, or a tour of the mini-habitat development. And the choice caused one to wish he might be at all places at once with the privilege of listening to the knowledgeable people conducting the tours.

The mini-habitat is indeed a delight for the wild flower enthusiast, because he can see in a short time what it might otherwise take days to see. Coastal plain bogs have been so expertly created that bog plants grow as normally as they do in their native setting, and a mountain cranberry bog nourishes plants that one expects to find only where dawn comes clad in heavy folds of fog and the night temperatures drop sharply.

In a wooded section of the habitat development, raised beds contain numerous wild flowers growing with native shrubs and ferns. Tended carefully by university work-study students, these plantings are lush and green and they provide a perfect classroom for school groups to study plant ecology.

The walk to the rhododendron bluffs required cresting a very bold hill, tamed by winding paths, and descending the other side to Morgan's Creek. That day the wide creek was low and sluggish from lack of rains, but it can rush and tumble through its many rocks and boulders with the best of any mountain stream! And looking up at the bluff filled with great rhododendron plants, one could easily be lulled into thinking he was viewing the majestic peaks of the state's high hill country.

Of special interest are the greenhouses, where many seedlings are being grown, among them tiny pitcher plants, sundews, and butterworts already wondrously beautiful. Nearby, a mist-propagation slat house is filled with thriving cuttings soon to take their place across the vast acreage of the garden.

Coupled with the beauty of the garden and the day was the warmth of friendships, some old and some new, and the realization that down-to-earth gardeners are people with character as faithful and unchanging as the flowers that have survived these countless ages in spite of man.

A BOOK NATURE TRAIL

By Mary Howell Eliason

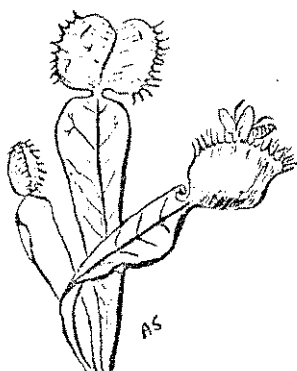
Edited by N. B. E.

Many people who go on Nature Trails are not botanists or medical people. They go because they like plants and woods. Those who are botanists or students of nature have already taken the Book Nature Trail. Most of the people on this nature trail of books that I took were men long dead; especially was this true of the botanists and the doctors.

Luckily, on the last nature trail I took with the Wild Flower Society, I occasionally trekked along with Dr. Totten, who would say this is this, and that is that. Luckily, I began my book nature trail in my own house among my sister's botany and garden books and my own *Encyclopaedia Britannica*. And here again were the Tottens to help and inspire me: Coker and Totten's *Trees of the Southeastern States* (c1945), and I read again Reginald Arkell's *Old Herbaceous* (1951) introduced to me by Mrs. Addie Totten. Old Herbaceous was a gardener. As a boy he won a prize for gathering the only wildflower he could gather, the forget-me-not. In the *Encyclopaedia Britannica* I came across the scrap of information that Governor Dobbs, for whom Fort Dobbs was named, found and became interested in the Venus Fly Trap, an insectivorous plant. I was interested in the insectivorous plant group because there were several in our yard and we had been on nature walks where the Venus Fly Trap grew.

My sister opened a botany book which gave all the genealogical ramifications of the insectivorous plants. A few minutes of reading in it (Gray's Manual) made me decide to read about insectivorous plants some other way. In my search for books about these plants, the ones I found that I enjoyed most were: Charles Darwin's *Insectivorous Plants* (1893), F. E. Lloyd's *The Carnivorous Plants* (1942); also, two articles in *Nature Magazine*, July 1936 and March 1937.

Governor Dobbs reported to Peter Collinson in a letter dated January 24, 1760, about this remarkable carnivorous plant. He called it "Fly Trap Sensitive." This letter did not become public until 1843 (*Hortus collinsonianus*). From some plants sent to England and introduced in Kew Gardens, John Ellis, a London merchant and botanist by avocation, drew description and figure. These were sent by him to Linnaeus in 1771. The latter re-wrote the description in Latin and published it in 1773. Though Dobbs had recognized the sensitivity of the leaves, this was also seen independently by Ellis, who drew



Linnaeus' attention to the phenomenon. Ellis so far appreciated the nature of the plant that he called it "miraculum naturae," a miracle of nature. Though Ellis thought that the plant caught insects (flies) and held them, Linnaeus was not of this opinion. F. M. Jones called the behavior of the leaves "inquisition apparatuses," while J. Burdon-Sanderson and H. Munk said it was the "most wonderful plant behavior in the world." If we followed this trail completely we would have no time for others we wish to find along the way.

As a child I became acquainted with foxglove in the garden of a neighbor and with the oleander; both plants had beauty. The glove part of this flower of the foxglove I had not associated with fingers. The flowers looked more like bells to me. Somewhere along the book trail I learned more about foxgloves and that oleander was poisonous. I read that "Folk's glove" may be the origin of the word, foxglove, in English. "Bloody paws" might be nearer it. In French one of its names is "gants de notre dame." I had been reading The Hunchback of Notre Dame and liked that. "Fingerhut" (meaning thimble) was a German name, and Fuchs (1582) had named the plant "digitalis," fingers.

In 1775, William Witherington of Birmingham, England, took an old woman's secret formula and found digitalis to be its curing ingredient. George Eliot had Silas Marner use foxglove as a folk remedy, "recalling the relief his mother had found from a simple preparation of foxglove, he promised Sally Oates to bring her something that would ease her, since the doctor did her no good."

Thinking of herbs and herb diggers and herb buyers I wondered where these men and women learned how to use them for the good of mankind. Where did the Wallace brothers learn about the herbs that built the largest herb house in the world? At this moment it was not possible for me to find out about them, but I knew that they had come from Charleston. In Statesville there were at least three men who collected books on nature, especially on plants. Among sources they searched were the old book stores of Savannah and Charleston. One was the Presbyterian minister, a Huguenot, Dr. Charles Raynal, friend of the retired minister-teacher at Mitchell College, Dr. Henry Middleton Parker of Middleton Gardens kin, and the third, Dr. Wallace Hoffman, kinsman of the Wallaces. They had tramped the woods and fields together but they had also taken the Nature Book Trail, both in botany books and wherever the essayists wrote and poets sang about nature.

I took a turn in the trail to learn more about herbs from books. The medical herb lore of the Greeks comes to us chiefly from Dioscorides, who mentions about 500 plants. Some of these are still in use, such as cinnamon, cloves, crocus, dill, liquorice and mustard. A storied "herb" or remarkable remedy known as theriac is often referred to in literature. In English literature, Chaucer and Milton took note of this remarkable remedy. It was supposed to include 60 ingredients, including the flesh of a viper. It was

prepared under ceremonial conditions in the presence of civic and medical dignitaries. In 1830 an apprentice to apothecaries was not to throw away anything he had spoiled for it could always be used in theriac. These mixtures of many drugs were also known as "blunderbuss" remedies.

In one of the drug books we found that Michaux, a botanist during the late 1700's, was the first to teach mountain folk of the Southern Appalachians how to recognize the drug plant, how to collect and dry it and where to find a market for it. In another, we found John Keats describing the "Venerable Priest" in *Endymion*:

And in his left he held a basket full
Of all sweet herbs that searching eye could dull:
Wild thyme, and Valley-lilies whiter still
Than Leda's love, and cresses from the rill
His aged head, crowned with beechen wreath

Physicians like the story of the foxglove and digitalis. I shall let them have that drug and take three that interest me: fennel, mandrake or mandragora, and willow. Fennel (*Foeniculum vulgare*) is of southern European origin, but is naturalized in the eastern United States. All parts of the plant have an aromatic taste and odor. The seeds (and extracted oil) are used for flavoring foods, candies, liqueurs and medicine, and for scenting soap and perfumes. Muenscher says that fennel was a symbol of victory to Greeks and Romans, that it also adds interest to omelets or to scrambled eggs, and I can say to an herb fruit cake also.

Georg Eichholz, in *Landscapes of the Bible* (1963), tells us that in the ancient city of Ugarit fennel is still growing; that the eastern point of Cyprus the Ros esh - Shama or fennel head, points to this excavated city on the coast of Palestine; that the Greek word "marathon" means fennel fields.

Mandrake (*Mandragora officinarum*), like ginseng, is a storied plant. Pharmacopoeias recognized herbs as poison, as medicine, as narcotics. Mandrake today is a poison. Its many-seeded berries are tomato- or love apple-like and carry the poison. In Genesis 30:14-16, Leah, the wife of Jacob, has six children, Rachel has none. Reuben, Leah's little boy, brings mandrakes to his mother from the field. In comments on the mandrake, we learn that it was planted near the wheat to make it bear heavily. Rachel thinks it will help her conceive if she eats of the berries. She bargains with Leah. The Bible says that God gave Rachel the child Joseph, not the herb. One wonders how many women ate this magic herb and died young.

In *Gardens as Illustrated in Print* (1949) from the Metropolitan Museum of Art, is pictured a woodcut from the title page of an herbal (Antwerp, 1533) in which a doctor directs a woman gathering herbs. On each side of the engraving, along with a number of flowers and herbs, are the storied pictures of the male and female mandrakes. These figures are reproduced in *Nightshades; Paradoxical Plants* (1969) by Charles B. Heiser. We find the mandrake as it really looks pictured in *Harper's Bible Dictionary* (1959) by Miller and Miller.

Shakespeare enjoyed referring to the varied magical peoperties and behaviors of the mandrake. In Romeo and Juliet we find:

What with loathesome smells,
And shrieks like mandrakes torn out of the earth,
That living mortals, hearing them, run mad.

In Anthony and Cleopatra: "Give me to dring mandragora. "

In Othello:

Not poppy, nor mandragora
Nor all the drowsy syrups of the world
Shall ever medicine thee to that sweet sleed
Which thou ow'dst yesterday.

The Greek, Xenophon, in Symposium (1881), says "Wine puts our cares to sleep as the mandragora does man, but stimulates our gaities as does a fire. "

In books, I knew about the captive Israelites hanging their harps on willows which grew along the river and canals of Babylon. In Isaiah, we find, "They shall spring up among the grass, as willows by the water courses." Thoreau's favorite willow was the golden osier, "a colonial dame," a descendant from the white willow of Europe. It is the most common tree planted along streams.

In both prose and poetry, the authors seem to feel that the willow denotes sadness and loss. Listen to Shakespeare in Othello:

The poor soul sat sighing by a sycamore tree
Sing all a green willow;
Her hand on her bosom, her head on her knee,
Sing willow, willow, willow.

This quotation is good ecology, too; it shows habitat and another member of the stream community. Still another quotation from Othello is:

My mother had a maid call'd Barbara,
She was in love, and he she loved proved mad
And did foresake her: she had a song of 'willow';
An old thing 'twas, but it express'd her fortune,
And she died singing it.

Thackeray, in the Willow Tree sings:

Know of the willow-tree whose grey leaves quiver
Whispering gloomily to yon pale river!
Lady, at even-tide wander not near it,
They say its branches hide a sad lost spirit!

But Keats says in Endymion about the willows at early spring:

Now while the early budders are just new,
And run in mazes of youngest hue
About old forests while the willow trails
Its delicate amber.

I found in my reading that the willow, in addition to their use for timber and basket making, contained a large quantity of tannin in its bark. A medicinal glucoside named "Solicin" is also extracted from the bark.

This trail can bring one from books on the uses of herbs to men who entered the literary world through botany. We shall be satisfied mostly with two pairs of men. I had two articles on Bartram. I had read Bartram's Travels. I knew Bartram as a part of American literature. It took my sister to point out that I was dealing with two Bartrams, John and William, though their names were right before me. I am pleased to say both are in Thrall and Hibbard: A Handbook to Literature (1936), listing of names, dates and works. Such are the troubles of a Book Nature Trail! John is listed in the American column as "Bartram, Observations on American Plants, 1751."

John Bartram (1699-1771) had named for him Lantana bartramii, a plant I knew in one species or another. John Bartram himself took a Book Nature Trail. An uncle left him a farm. He stopped plowing one day to rest under a tree. He plucked a daisy mechanically and looked at it. He was not the first man to pluck a daisy and write a poem about it, or pull its petals for "She loves me, she loves me not." I am also reminded of Robert Burns, a plowman, and his poem "To a Mountain Daisy, on Turning One down with the Plow," in April 1786. But John Bartram thought of the structure of the plant, and the more he thought, the more he wanted to know about the plants on his farm. He hired someone to plow and he went to Philadelphia to a bookseller, who sold him "such as he thought best" and a Latin grammar. He went to a schoolmaster, who taught him to read Linnaeus in three months. Like all learning trails, Bartram had to follow a real nature trail as well as a Book Nature Trail, and he says "in a little time I became acquainted with every vegetable that grew in the neighborhood... By steady application in several years, I acquired a pretty general knowledge of every plant and tree to be found on our continent. In the process of time, I was applied to from the old countries, whither I every year sent many collections." He was America's earliest botanist and founder of her first botanical garden.

John Bartram had two wives and eleven children, one of whom was William Bartram. William Bartram published his Travels through North and South Carolina in 1791. All should read his travels if they have not already done so. In my possession was a pamphlet, William Bartram's Venture into the Cherokee Country, 1775 (Stephens, 1967). The booklet states: "On a May morning of 1775, William Bartram lifted up his eyes to the Cherokee Hills. He had come up the path from Charleston armed simply with letters from Indian agent, John Stewart, to the traders in the Middle Towns. He traveled alone except for a horse to bring back plant specimens ordered by London patrons. His keen Quaker mind ranged forward to Nature's new wonders rather than homeward to Philadelphia, where Independence Hall would soon hear plans for a new nation." The booklet is particularly interesting because we are taken along a modern path with Bartram. The scene described is, by happy chance, near the proposed Blue Ridge Parkway extension into Georgia. The spot is not far off the present highway from Highlands, N. C., to Dillard, Ga., and near the state line.

The second pair of men that English literature students learn about are Erasmus and Charles Darwin, who are entered in Thrall and Hibbard, A Handbook to Literature (1936) as: "1791, Erasmus Darwin, The Botanical Garden, Erasmus Darwin's Loves of the Plants had been parodied in the Loves of the Triangles. He had been made fun of by those who loved poetry more than they did botany." This sent me to a Literary History of England, where in 1797-98, in the anti-Jacobin vein, radical ideas were parodied. The author says of Erasmus: "fame as a pioneer in scientific speculation is secure." His theories are set forth in the medico-philosophical work Zoonomia (1794-96) and in the poem "The Temple of Nature" (1803).

Charles Darwin was born in 1809 and died in 1882. When most of us think of him, we think of his Origin of the Species (1859). Many books were written by Darwin, but most of us do not know about his books: Various Contrivances by which Orchids are Fertilized by Insects; Plants and Animals under Domestication; Insectivorous Plants; Movements and Habits of Climbing Plants; Effects of Cross and Self-Fertilization in the Vegetable Kingdom; Power of Movement in Plants. The works of Charles Darwin radically influenced the world of science and literature.

The guides I used to point up my trail were the Encyclopaedia Britannica and Thrall and Hibbard's A Handbook to Literature (1936), Holman, Thrall and Hibbard, A Handbook to Literature (Odyssey, 1960). As road maps give many main roads and by-ways, these books pointed out many trails one might take, all interesting, all stimulating, all beckoning. The trail I took was long and wide. I cannot say it was "in depth." I read as I came to the plants and trail pointers I had selected in whatever library I was studying. The libraries were Campbell College, Buies Creek, N. C.; Neva Lomason Memorial Library and West Georgia College Library, both at Carrollton, Ga.; and Emory University Library, Atlanta, Georgia. A book trail never ends; if you take the trail to the left, you will always wonder what you might have found along the right-hand trail!

(Printed posthumously)



NEGLECTED NATIVES

By Elizabeth Lawrence

Dr. Edgar Wherry is still looking for ways to rescue neglected natives. "As you are my only friend in the North Carolina Piedmont country," he wrote last fall, "I am writing to ask you if you can see any way to bring into the rock-gardening field the lovely little *tradescantia* which should bear the name of *Cuthbertia rosea*, or variety *graminea*. My recollections of trips of many years ago are that it is fairly common in grassy meadows. I transplanted it into my wild flower garden in Washington, D. C., where it always attracted the attention of visitors -- but I gave up that garden 43 years ago!"

Dr. Wells has been urging rock gardeners to grow *Cuthbertia* since I was his student at State College. He calls it the Sand Hills spiderwort, and says it grows in sunny places in the most sterile and dry sands. I got plants from the Clements, at Niknar, but they did not prosper under the white oaks in our Raleigh garden. They were planted in the fall, and died before spring. After we came to Charlotte, I found it in bloom at Mr. Crayton's place in Biltmore, and brought it home in bloom. That lasted for two seasons. It bloomed the first year at the end of June, and the next year from May to August. The little triangular flowers were Ridgway's Light Phlox Purple, and the narrow grassy leaves are eight inches long.

I told Mr. Shinn about Dr. Wherry's rescue work, and he wrote, "Our experience with *Cuthbertia* has been much the same as yours. It is a sand hill plant, and does not seem to be happy in any other location. I believe one of our troubles was poor drainage. We are trying it now in a somewhat drier spot in a bed of almost pure sand.

"Gathering seed from *Cuthbertia* is a rather exacting job. Since the blooms appear singly, the seed mature in a somewhat similar schedule. You have to be there at the right time to find them ripe. I managed to find a few this year, and I am happy to divide with you. Perhaps Ken Moore has done better than I have."

Under *Tradescantia*, our Manual lists: 1. *T. rosea*; 1. a var. *rosea* (*Cuthbertia rosea*); 1. b var. *graminea* (*Cuthbertia graminea*). We saw one of these when we met at Hope Mills, on the eighth of October, 1972, and went to the Evergreen Shrub Bog, but it was out of bloom, of course, so no one knew which one it was.

It seems a shame to give *Cuthbertia* to the *Tradescants*, who have enough honor already; when it was named for A. Cuthbert of Augusta, Georgia. The only source I know at present is Mrs. Eugene Polsfuss, of Macon.

Dr. Wherry wrote that he thinks our Newsletter a good place to "call attention to the desirability of bringing this plant into garden use," and, he said, "there is an entirely different plant which I am also anxious to obtain. This is

Senecio millefolium, the lovely Laceleaf Ragwort. It grows on all the bare peaks along the border of North and South Carolina." He says he can find no commercial source, and hopes the Newsletter can help with this also.

Last fall Dr. Mayer taught me a much needed lesson about jumping to conclusions. He brought me a dried stalk with perfoliate leaves which looked like a eucalyptus, which he said it could not be, as it had the seed pod of a legume. He took it to Julie Moore, who identified it as *Baptisia perfoliata*. I said it can't be, their leaves are trifoliate and alternate. But this species is an exception: the large found leaves are simple and are joined at the base. It differs in another way: the flowers are solitary instead of in spikes. If I had looked at the key of the bean family, I would have seen that it couldn't be anything else. *B. perfoliata* grows in sandhills and open woods, from the Carolinas to Florida. In Small's Flora there is another exception: *B. simplicifolia*, endemic to Florida.



IN PRAISE OF MRS. DANA By Linda M. Lamm

Mrs. William Starr Dana wrote in the preface to the first edition (1893) of *How to Know the Wild Flowers*, "We venture to hope that our readers will find that even a bowing acquaintance with the flowers repays one generously for the effort expended in its achievement." Since that time, generations of readers have delighted in the pages of her book. She and her friend Marion Satterlee, who did the finely delineated drawings, explored the woods and countryside around them and set out to write a handbook according to John Burrough's wishes toward the end of the 19th century that "One of these days some one will give us a handbook of our wild flowers, by the aid of which we shall be able to name those we gather in our walks without the trouble of analyzing them. In this book we shall have a list of our flowers arranged according to color... with the place of growth and time of blooming."

And this is exactly what Mrs. Dana did in the most interesting and charming manner. The reader not only learns the botanical description of the wild flower but is given an insight to its beauty and importance by classical references and quotations from the poets and writers of the day. No wonder it became America's first popular book about wild flowers.

Dover Publications, Inc., 180 Varick Street, New York, N. Y. 10014, has published a revised, enlarged version, which is on sale at local book stores or by mail from the publisher.

WEEDS IN YOUR GARDEN

By Andrew J. Warren, M.D.

All weeds and wild flowers alike have flowers and many other similarities. The problem is when and why does the transition take place. We asked a few knowledgeable people to distinguish between weeds and wild flowers. The more cogent and terse reply was "A wild flower becomes a weed when you don't want it." Solomon's Seal seems to be favored by wild flower gardeners. Its flowers are colorless, are not showy and one has to assume a praying position to see them as they are well hidden by the foliage and their blooming period is short, but wild flower gardeners want them. By contrast, thoroughwort has a conspicuous, silvery white coromb (flat top composed of many small flowers) and is showy from mid-summer to early fall, but it is not listed in the popular "Wild Flowers of North Carolina".

Most weeds become wild flowers when you become acquainted with them. To become acquainted, you need a ten-power magnifying lens (we use a Coddington field lens), and to know a few words that identify the parts of the flower: calyx, sepal, petal, corolla, anther, filament, pistil, style, stigma, and ovul-ary. These ten words describe the structure of flowers, and most wild flower books have a diagram showing these parts and also a glossary. These words are also found in most dictionaries.

If you have never seen a flower with the aid of a magnifying lens, you will be astonished at the beauty you never knew existed in the weeds in your garden. We bought our first wild flower book in the spring of 1928 and our lens the following year. The book shows heavy usage, and it has long been out of print. The lens is good for another 40 years. With this simple equipment you are outfitted for a lifetime avocation of rewarding education and pleasure, in town or country and wherever you happen to be, at home or abroad.

On our place in Chapel Hill there is an area about 50 feet wide and 150 feet long that probably has never been touched by plow or hoe. The ecology varies



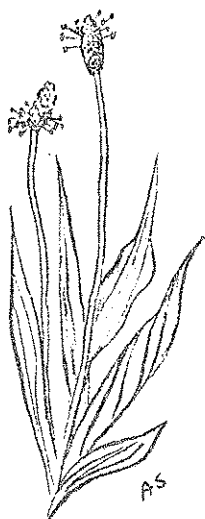
from hardwoods to open pines, to a bare bank that slopes to a moist ditch below. The soil is heavy clay with two or three inches of top-soil. Wild flowers and weeds grow in all of these areas, and we were astonished to see some of them growing out of their natural habitat: Pipissiwa growing and blooming in an open area the yard boy neglected to cut and Monkey Flower (*Mimulus ringens*) on the dry bank as well as in the moist ditch below.

We grew up in Piedmont North Carolina but lived most of our active career in more northern latitudes and we were delighted to find a few Bluets (*Houstonia caerulea*) in bloom in March. This pleasant surprise caused us to wonder what we might find growing on the place during the coming summer, and we began recording our findings. From that day through October we recorded 77 species covering 29 families and 55 genera.

Although we have been interested in weeds and wild flowers for some time, our interest has been mostly in the flowering stage. By patrolling the area almost daily and watching things grow from the time they first appeared through the blooming period and on to seed production, we learned much. In June we discovered an interesting looking plant we thought might be one of the ruees but when it flowered the blossom was pea-like, so that ruled out the rue family. We then thought it might be one of the clovers. We made our final classification when it seeded and the seed clung to our trouser legs: Beggar Lice. We found another weed trailing along the ground with thick round velvet-like leaves and we were really astonished when its seed turned out to be beggar lice (*Desmodium rotundifolium*), Dollar Leaf. In September we found a single spike of Blazing Star (*Liatris graminifolia*) in the open pines area with two or three flowers at the tip of the spike and wondered how we could have missed it previously as we were under the impression that plants whose flowers were in long spikes, the lower ones bloomed first and progressed towards the tip. As we watched it from day to day, it kept blooming progressively from the tip to the bottom. This reversal, we learned, is characteristic of the *Liatris*.

Our greatest thrill was finding a Variegated Milkweed, a species we had not seen before and which is listed as uncommon. Unfortunately, we did not protect it from the ants and birds, and no seed were recovered. We also found a Stagger-Bush, which was new to us.

The weed that was of continuous interest from April through September was Flowering Spurge (*Euphorbia corollata*), commonly called a milkweed because of its milky sap. In our poor soil it grew about a foot tall in the open pines area and it was in flower throughout the summer. The dainty white flowers are unisexual. The staminate flowers have a single stamen and the pistillate ones a single pistil. For each pistillate flower there are several staminate ones. The ovary of most flowers is at the base of the pistil and is contained mostly within the flower but in the euphorbia the three-lobed gland containing three seed protrudes and droops. The many interesting ways that plants grow, flower and reproduce is as interesting as their colorful blossoms.



Some of the more common weeds and flowers we listed were: pink and yellow Oxalis, Blue-eyed Grass, Cinquefoil, three different Buttercups, Green and Gold, Sun Drops, Rattlesnake Weed, Solomon's Seal, tall Bluets, Wild Ginger, Spotted Wintergreen, Saint Andrew's Cross, Lyre Leaf Sage, Elephant's Foot, Butterfly Pea, New Jersey Tea, Blazing Star, Wild Lettuce, Lion's Foot, Pasture Rose, Pokeweed, Ground Cherry, Shepherd's Purse, Horse Nettle (*Solanum carolinense*), Sensitive Plant, Monkey Flower, Rabbit Tobacco, Golden Rods, Asters, and several clovers.

When we take a walk and see a wild flower in bloom and admire its beauty, that is a pleasant experience. But consider how much more meaningful the experience would be if we were more knowledgeable about them. Becoming acquainted with your weeds and wild flowers can be a rewarding mental and outdoor physical exercise and a profitable variation in the use of one's leisure time. If you are a detective story buff or like to solve puzzles, you will find classifying your weeds a worthy challenge.

Weeds can be beautiful and getting to know them can be fun. Why not enjoy them?

Recipe Printed by Request: POTATO SALAD

Eight medium potatoes; boil with skins on, cool, peel and slice cross-wise.

Mix one cup sour cream, one cup mayonnaise, and one medium onion chopped fine. Put layer of potatoes (about half of them) in casserole dish, salt and pepper to taste.

Spread half of the sour cream mixture over potatoes. Sprinkle with chopped parsley. Add remaining potatoes. Salt and pepper to taste.

Cover with remaining sour cream mixture. Sprinkle with parsley and refrigerate. This potato salad can be made a day ahead, since it keeps well.

Mrs. Louis Swindell.

MY FAVORITE WILD FLOWER AND THE GARDEN WHERE IT GROWS

By Marjorie P. Newell

Of course, it is not really a garden -- it's more like a "yard"; and it's not really a wildflower yard, either -- it's more like a "people yard". Every flower and shrub brings out the sentimentalist in me because practically every plant in the yard was given to me by those who eagerly share their love in growing native plants. Consequently, every wildflower in my garden is my favorite the moment it blooms -- a wondrous, recurring, annual joy.

For example, it's like this: Emily Allen gave me my first trillium, and when the trillium blooms it's as though Emily were greeting me; when the pachysandra blooms, the Braxtons are with me; when the cardinal flower is resplendent, I am with the Perrymans -- and so it goes. Each lovely plant is a friend -- a part of a wonderful on-going experience that is constantly enriched by those who conserve the wildflowers.

Mrs. James Plaster first introduced me to the splendor of growing the native flora of North Carolina, and when the Clethra (*C. acuminata* Michaux) blooms, we are again wandering her rampantly verdant hillside in Winston-Salem and she is sharing with me her enthusiasm, her expertise, and her plants. So, I suppose, my truly favorite wildflower is not a flower at all but a flowering shrub, Clethra, the mountain sweet pepperbush that I first saw in full bloom in May Reed Plaster's garden.

It's an erect little tree, 4-12 feet in height, a native of the rocky woodlands of the Southern Appalachians, and is usually found at high elevations. Its blossoms are white and are borne in densely clustered, terminal racemes, 3-5 inches long, marvelously fragrant, and much loved by bees. The flowering season is long -- from July to September. The leaves are alternate, simple, elliptic. The Manual of the Vascular Flora of the Carolinas, authored by Radford, Ahles, and Bell, says the family Clethraceae has one genus only, Clethra. Two species are known: *C. acuminata* Michaux and *C. alnifolia* L. which has two varieties, primarily shrubs of the Coastal Plain.

The mountain sweet pepperbush is easily transplanted in its youth and appears to grow well in the red clay of the Piedmont. Clethra was the first native shrub I ever transplanted and it began for me my "people yard" -- my wild, but oh, so friendly garden.

PEPPERBUSH (*Clethra alnifolia*)... This plant prefers the drier portion of the bog areas. In walking through the shrub complex one will note the clumps of pepperbush on the little knolls which extend just a few inches above the highest water table. The erect pointed racemes of relatively large flowers, with their dark anthers giving them a peppery aspect, are very characteristic. This low shrub is genuinely attractive when seen en masse with its numerous spire-like inflorescences pointed at all parts of the sky. In addition the flowers possess a very pleasing fragrance. It is an exception to the bog type in that the leaves are deciduous.

The pepperbush is readily transplantable and in moist places should make a good growth without any shade whatsoever.

(From The Natural Gardens of North Carolina, by B. W. Wells, with permission of the author)

YESTERYEARS

By Walter B. Braxton

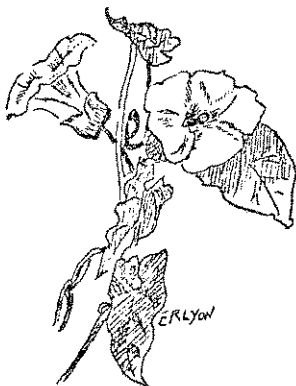
Is the American frontier gone? We date ourselves when we speak of the good old days of the past. It was a time when a good part of the country was rural. We knew not what the word "pollution" was, our streams had fish in them, the woodlands and fields abounded in wild game such as rabbit, squirrel, o'possum, quail and other game.

Our social life, aside from the churches where we gathered on Sunday to listen to the circuit rider which our preacher was called at that time took care of the spiritual needs of our community, were wood choppings, a way of clearing land for cultivation in the springtime. Neighbors would help one another at these times with no thought of pay other than a good meal of chicken pie with all the trimmings.

Then later on in early summer the wheat threshers came along and everyone pitched in to save each other's wheat crop. The women folk would again come in with a lot of good food. Corn shuckings in the fall were another part of social life in the community; when held in the afternoon, they were followed by another big feed when all of the corn was shucked. If it was a night affair, then when all was done everyone gathered inside where only pies of all kinds were served, with plenty of home made cake and coffee. Then sometimes string music to top it off with providing the night was not too far spent. Barn raisings were done very much the same way as all the other rural projects that took combined labor and effort.

The women folks had their quilting parties as a form of outside activity, and lots of quilts that are in use today are some handed down from mother to daughter on through the years.

What has all this to do with conservation and/or preservation? It has gone the way of the old buffalo, the bald eagle and many other things. Too much of our pretty rural sections have been laid to waste by bulldozers and road machines where once wild flowers, plants and trees and small streams were here for everyone to enjoy. And now the energy crisis which is a direct result of our overuse and wastefulness of what nature once had plenty of.



FROM SEED TO PLANTS

By Tom Shinn

The prime object in the process of Nature is that of the preservation of the species. In plants this objective is usually reached through the production of seed, and this method is the easiest and most successful one to be followed in plant propagation. There is no substitute for the natural processes, but these can be augmented by attention to improvements which may be made in situation, time of planting, soil condition, and other factors which control seed germination and plant growth.

With regard to methods to be followed in planting seed, the plant kingdom may be divided into four main categories: (1) Annuals, (2) Biennials, (3) Perennials, and (4) Shrubs and Trees.

Each of these has its own habits and peculiarities, and these must be taken into account in order to carry out a successful program of propagation. A brief review of these four types might be in order.

(1) Annuals. These are one-season plants. The seeds germinate in the spring. The plants grow, blossom, and produce seed during the warm weather of the summer season. Their roots do not usually go very deep in the ground, and they may be planted over and between the early blooming perennials. Their wide variety of form and color will add attractiveness to the garden throughout the summer season. Some of these will reseed themselves readily, but it is best to collect the seed when ripe, store it through the winter, and plant it in the spring. Over-winter storage is best done in a paper envelope rather than one made of plastic.

(2) Biennials. These plants usually re-seed themselves soon after they bloom in order for germination to take place and for a few leaves to be formed before the onset of cold weather. Top growth of these small plants will be negligible during the winter, but the root system will continue to grow through this season, and when spring comes these roots are ready to supply the food to promote the rapid growth necessary for the production of flowers and seed. After seed is produced the plant dies.

(3) Perennials. In moving from one of these plant groups to another it is found that more attention must be paid to the demands and peculiarities of the individual plants. This becomes very noticeable in the perennials. Those which bloom early in the season produce seed which is viable for only a short period of time. The seed must be planted as soon as it matures. A delay of only a few weeks will reduce the percentage of germination very materially. This is particularly true in the case of Shortia, Bloodroot, Twin-leaf, and some of the others which bloom very early in the spring.

Those like Jack-in-the-Pulpit and Solomon's Seal, which have a fleshy covering, require special attention. They must not be allowed to dry. Germination may be accomplished in either of two ways. The seeds may be planted immediately where they are to grow, or they may be stratified for planting the following spring. This is done by soaking the seed in water for

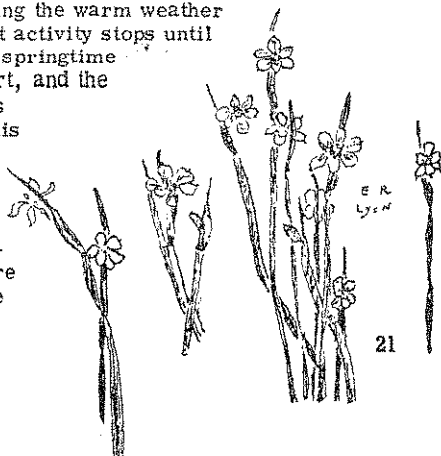
a few days to soften the seed covering, clean the seed by removing this soft covering, seal them in plastic bags in damp peat moss or vermiculite (about four or five times the bulk of the seed), then place them in the refrigerator-NOT the freezer - and leave them until the following spring. Beginning in March, these packages should be checked about once a week and at the first sign of germination the seed should be planted outside either in beds or flats in a soil mix rich in humus. If planted in flats, they may be transplanted to permanent locations as soon as the first two true leaves have formed.

Seed which mature dry may usually be kept over winter without any great loss in the quality of germination. Examples are Columbine, Turtlehead and similar ones, including most of the composites.

(4) Trees and Shrubs. These seed may be handled in a similar manner as with perennials, except in special cases. Dry seed may be planted immediately or, if more convenient, stored in a dry place for spring planting. Those which have a soft covering (Dogwood, Magnolia, and Holly, for example) should be cleaned and stratified in the same way as similar perennial seed.

Some tree seed is formed within a particularly hard woody covering. Silver Bell is one of these, also Kentucky Coffee Tree. This covering tends to spread the germination process over a considerable period of time. Moisture is one of the prerequisites for germination, and in order for the moisture to reach the vital part of the seed it must first disintegrate the hard woody covering. The time required for this will vary with the varying thickness of the shell, the amount of moisture available and (to some extent) the temperature. The germinating process may be speeded up by making a small opening through the shell, which will allow moisture to enter more readily. This may be done by cutting off the end of the shell opposite to that of its attachment to the parent tree, by drilling a small hole in the shell or by cracking the shell. Any of these, however, must be done very carefully, in order to prevent damage to the embryo.

Seeds like those of the Oaks, Buckeyes, and Chestnuts have their own peculiarities. Germination begins with root growth which starts soon after the seed matures and continues during the warm weather of late summer and fall. Then most activity stops until after a season of cold weather. By springtime the roots will have made a good start, and the top growth begins. Transplanting is sometimes difficult with plants of this group because of the nature of the root system. Where feasible, the seed should be planted where the trees are to grow. If the seed are planted in pots they should be transplanted to permanent locations before the roots have grown out through the drainage holes in the containers.



DR. HENRY ROLAND TOTTEN

The death of Henry Roland Totten deprives us of a presence that can hardly be replaced; but the personality and work of the great pioneer of modern botany will help generations to come.

Except for active duty in two world wars, Chapel Hill was Roland Totten's lifelong home. He entered the University of North Carolina as a freshman, began his teaching career in 1914, and retired as a distinguished professor in 1963. There, he initiated a course in pharmaceutical botany and assisted in the development of the campus Arboretum. Perhaps his greatest contribution to knowledge was a great book he shared with W. C. Coker. Trees of the Southeastern United States has gone through several revised editions. Highly respected as a scientific leader, Roland Totten served as president of the Elisha Mitchell Society, the North Carolina Academy of Science, and the Association of Southeastern Botanists.

However, most of us remember Roland Totten as a man of deep, simple faith, a warm and sharing friend, and the loving husband of Addie Williams Totten. This husband and wife team lived before us a marriage of gentle, supportive love and together they taught many of us to love and conserve the natural beauty of our world. The contribution they made to the North Carolina Wild Flower Preservation Society cannot be overstated.

We will remember Roland Totten as a great botanist, but we will remember him more as a great man. He was one of the best.

Charles Spence Hubbard, Minister
(Abbreviated form of the tribute at Dr. Totten's Memorial Service in Chapel Hill)

MRS. CHARLES HUBBARD SHARES CORRESPONDENCE

Chapel Hill

October 14, 1973

Dear Mercer:

I was very pleased with the attendance at the Fall Meeting of the N. C. Wild Flower Preservation Society and seeing so many of our old friends again. What I am writing now I should have said at the meeting. Addie and I were very much surprised and honored at having the fall number of the News Letter dedicated to us and at the gift to the Garden in our names. When I spoke I was so anxious to see that Julie Moore was recognized for the work that she has been doing that I forgot to say my "Thank Yous".

I think that Addie is improving a little; but she does not have appetite enough to regain the strength that she needs.

Again thanking you and your staff for the excellent work you are doing with the News Letter.

Do stop by whenever you can - and give our regards to Charlie.

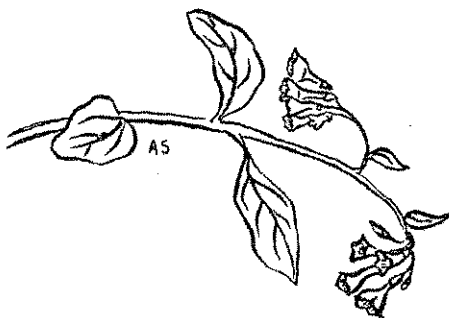
IN MEMORY OF MRS. H. R. TOTTEN

A white form of Virginia bluebell (*Mertensia virginica alba*) was found by Mrs. H. R. Totten on the bank of a creek that is now the bottom of Kerr Lake. Mrs. Totten carefully dug this plant and planted it in their flower garden at their home on Laurel Hill Road, Chapel Hill. As time passed, this plant grew and, in her usual generous way, she began to divide the plant and give some of it to others in the Society. After a few years, her plant of this rare flower had failed to come back at its usual time in the spring. Since we were fortunate enough to have received a gift of this plant from Mrs. Totten, we immediately replaced her plant by a division from the one we had received, so within a year or so she was rewarded by having a large clump of this unusual flower.

We have grown a number of plants from seed of this white form of *Mertensia*, and some were white and some were blue. We have continued to divide our white plant with others across the state, and now we feel sure there is enough of the plant in our state to last indefinitely.

We feel that everyone in our Society owes a debt of gratitude to Mrs. H. R. Totten for conserving this plant from destruction when Kerr Lake was built and for the generous way she helped in the distribution of this plant across our state. With this in mind, we are placing a plant of *Mertensia virginica alba* in the N. C. Botanical Garden, Chapel Hill, in memory of Mrs. Totten.

Mr. and Mrs. Herbert P. Smith.



Mertensia virginica

OPERATION WILDFLOWER: BEAUTY ON THE ROADS

(From THE NEWS AND OBSERVER of Raleigh, Sunday, March 17, 1974)

WASHINGTON (AP) - The Federal Highway Administration has announced a program to promote the planting and growing of wildflowers along highways built with federal funds.

Wildflowers are defined as the flowers of uncultivated plants.

The Transportation Department agency said the program is the result of an agreement between it, state highway departments and the National Council of State Garden Clubs Inc.

Under "Operation Wildflower," a state department would select the areas to be planted, with the advice and counsel of its State Federation of Garden Clubs, which could pay for or supply wildflower seeds, bulbs "or other propagative material."

Federal and state highway funds would pay for the plantings by state crews, a news release said.

The agency gave no estimate of the cost of the project and did not mention whether self-propagating wildflowers would be allowed on the selected sites.

"Factors involved in the selection of species would include their appropriateness to the area, whether they are indigenous to the locale and their ability to adapt to the climate and environment," the announcement said.

The agency said that Operation Wildflower was an addition to its program "for highway beautification and environmental enhancement."

...AN AREA OF VAST NATURAL RESOURCES IN A WILD CONDITION...

North Carolina is unique among the eastern states for possessing within her borders the best examples of the most diverse vegetations as these two criteria are judged in combination. Whoever the men were who designed the geographical biscuit cutter which sliced out the Old North State, they succeeded so well botanically that one might think of them as possessed with less political sense than vegetational acumen. . . . John Brickell, early North Carolina naturalist, was correct when he wrote in 1737, "Of the plants growing in this Country, I have given as Account not the hundredth Part of what remains; a Catalog of which would be a work of many years. . . ."

* * *

North Carolina is still an area of vast natural resources in a wild condition, and we use this phrase "natural resources" not only in the sense of monetary value, but in that of educational and aesthetic resources as well.

(From the Introduction to The Natural Gardens of North Carolina, by B. W. Wells, with permission of the author)

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