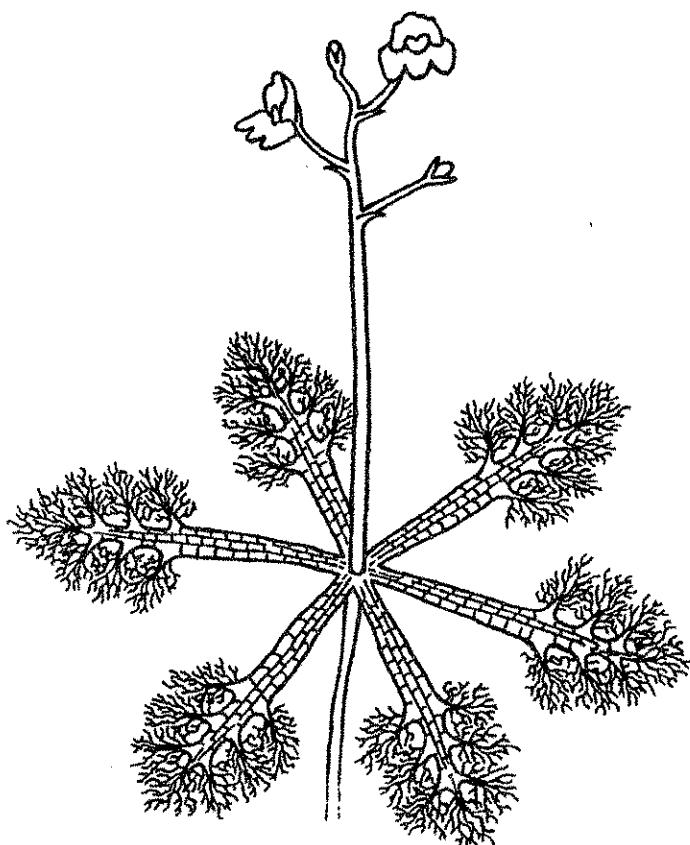


NORTH
CAROLINA

wild flower

PRESERVATION
SOCIETY, INC.



Bladder Wort
Utricularia inflata

WINTER 1998
Volume X, Number II

**NORTH CAROLINA WILD FLOWER
PRESERVATION SOCIETY, INC.
1998-2000**

President

Charlotte Patterson
7706 Tannery Road
Summerfield, NC 27358-9004
(336) 643-4656 (H)
(336) 370-8170 (W)

Immediate Past President

Bob Tuggle
40 Bay Drive
Bassett, VA 24055
(540) 629-7420 (H)
(540) 634-2502 (W)

Vice President/Meetings

Alice Zawadzki
1624 Park Drive
Raleigh, NC 27605
(919) 834-4172 (H)

Conservation/Preservation

Ed Swab
1400 Athlone Place
Raleigh, NC 27606
(919) 851-0006 (H)

Recording Secretary

Evelyn Caldwell
3609 Swift Drive
Raleigh, NC 27606
(919) 851-5780 (H)

Newsletter Editor

Craig Moretz
2342 US 70
Mebane, NC 27302
(919) 563-1795 (H)

Corresponding Secretary

Carla Oldham
P.O. Box 16022
Chapel Hill, NC 27516
(919) 932-3311 (H)

Consultant

Julie Moore
1918 Fuller Street
Hattiesburg, MS 39401
(601) 544-0770 (H)

Treasurer

Nancy Julian
1933 Gaston Street
Winston-Salem, NC 27103
(336) 722-8629 (H)

Shinn Grant Program

Eric Hawkins
2428 US 70
Mebane, NC 27302
(919) 563-1026 (H)
(336) 698-8755 (W)

2000 TRUSTEES

Ken Bridle, Ph.D.
Route 3, Box 68-C
Walnut Cove, NC 27052
(336) 591-5882 (H)

Alvera Henley
540 Jonas Ridge Rd., Hwy 181
Newland, NC 28657
(704) 733-4486 (H)

Harry Phillips, Ph.D.
7114 McWhorter Road
Waxhaw, NC 28173
(704) 843-1645 (H)
(704) 342-5012 (W)

2002 TRUSTEES

Marlene Alder
2701 Vestry Way
Raleigh, NC 27613
(919) 676-0540 (H)

Marlene Kinney
4900 Richland Drive
Raleigh, NC 27612-3522
(919) 787-5384 (H)

Peter Schubert
927 Bluestone Road
Durham, NC 27713-1903
(919) 544-4923 (H)
(919) 541-7526 (W)

Newsletter
of
North Carolina Wild Flower Preservation Society

— CONTENTS —

President's Message.....	2
<i>Charlotte Patterson</i>	
Nature Trail Farm: Winner of the American Nature Landscape Award Summary of Project Concept and History of Nature Trail Farm.....	4
<i>Alvera S. Henley</i>	
The Paintings of B.W. Wells.....	7
What Can We Learn from Natural Heritage Inventories?	8
<i>Kenneth A. Bridle, Ph.D.</i>	
Who Is Mrs. William Starr Dana?.....	12
<i>Mary Finger</i>	
A Weekend at Carolina Beach.....	18
<i>Susan Moss</i>	
My Day with Moni and Mom: In Search of Schweinitz's Sunflower.....	20
<i>Alice Zawadzki</i>	
Calendar of Events.....	22
North Carolina Wild Flower Preservation Society, Inc.	
Aims and Objectives/Membership Application	23

Cover Drawing: *Utricularia inflata*, By Eric Hawkins



President's Message

It was good to see so many of you in Wilmington. Our weather was great and we had excellent guidance on our outings. Thanks to Jeannie Kraus for an excellent job of leading our groups and presenting the program on Saturday night. Eric Hawkins, Craig Moretz, Peter Schubert and Bob Tuggle are also to be commended for their help in scouting, organizing, and for the interesting bits of information that they provided along the way. Thanks to Alice Zawadzki for setting up our meeting accommodations and for taking care of all those important details. The social on Friday night was great fun and I hope it will be repeated at future meetings.

A topic that has come to my attention, as I've read some of the literature that comes my way as a perk of being president, is the subject of planting the right plant in the right place. We all know that in order for plants to thrive, they must be planted according to their needs in terms of moisture, drainage, sunlight, hardiness, soil pH, etc. These are some of the basic issues in placing plants in the right habitat. More specifically, plant choice must also be made based on appropriate species selection. Just any old native won't do. One reason our natives are such good choices for low maintenance gardening is the natural adaptation of the plants to the region. They have evolved genetically to thrive in the sunlight, rainfall, and overall climate where they are found.

The question of the right plant in the right place then becomes one of a more specific nature. Native plants that are propagated and grown in the Southwest or Midwest are not likely to be as hardy in our region. If we landscape with plants that are shipped to us from these areas, we are like-

ly to have more difficulty maintaining our landscapes due to inappropriate conditions. In some cases, native plants from other parts of the country can be more aggressive than the locally native plants, creating an invasive species problem. Native plants that are brought to our area from other parts of the country can hybridize with plants that are regionally native and alter their genetic makeup. We must try to protect the genetic integrity of plants that are native to our region. Changing the genetic codes could endanger the survival of these plants in their own habitat.

I am excited by the number of new cultivars of our native plants that are now available for the home garden. Propagating outstanding examples of our native plants is a great way to expand the use of natives, to educate people about natives, and to provide habitat for these plants in our own back yards. A danger lies in this practice as well. Too many of the same cultivars in our gardens also reduces the genetic diversity and creates the potential for epidemic loss of plants if that species becomes vulnerable to a disease or insect.

There don't seem to be any easy answers. We must continue to support efforts to preserve wild places and to promote the use of native plants in urban and suburban landscapes. We must also make efforts to purchase our native plants from local nurseries that will be more likely to have locally obtained species. Perhaps if we take care to purchase locally grown and propagated plants, we can help to preserve the genetic diversity that gives each region of our country its own sense of place.



Charlotte

Charlotte Patterson

Nature Trail Farm

Winner of the American Native Landscape Award

Summary of Project Concept and History of Nature Trail Farm

Location: Pineola, North Carolina, elevation 3,200 feet.

Owner and Designer: Alvera S. Henley, retired teacher and occupational therapist.

The one-and-half acre of mature, natural forest river front property that became the home of Paul and Alvera Henley in the summer of 1975 has evolved into an outdoor classroom. Here young and old alike are inspired to learn about native plants and to reflect on beauty in a natural setting. Initially, some of the mature trees and the densely shaded, understory of *Rhododendron Maximum* and *Kalmia Latifolia* were prudently pruned to allow better circulation, to establish sunny and shaded areas, and to enhance visual vistas from within and out of the rustic residence. The remaining shrubs provided a screen from the highway, privacy, windbreaks and a rich background of color and texture for all seasons.

Following Mrs. Henley's full retirement in 1985, she implemented specific designs to maintain the natural woods, which became known as Nature Trail Farm. As the farm already contained extensive examples of native flora of the region, she carefully designed the trails to allow better viewing, but left the natural ecology undisturbed. Today, trails wind through the sloping terrain from Highway 181 to the Linville River connecting the plant pockets and woodland gardens. Fallen trees and resting seats situated along the barrier-free trails allow senior citizens and physically restricted visitors to enjoy the areas at a leisurely pace.

Three soil types clearly define natural habitats within the plot. From the property entrance to the river bed there is a gradual 31-foot decline. The highest elevation along the highway consists of a dry slope of loam covered with woodland litter. Midway an underground stream creates a poorly drained bog of black 93% organic humus. The seepage from the bog and several underground springs provide a natural water source for the excavated 35 x 50-foot trout pond. The cold, clear water in the pond is a perfect environment for stocked rainbow trout. Fresh trout are a source of pleasure and food for family and friends. A group of water loving plants have naturalized themselves around the pond creating a water gar-

den which is the focal point of the landscape. The lower one-third of the farm bordered by the riverfront contains sandy river silt and gravel. Prior to development, each of these habitats included a seasonal succession of rare, endangered, and common native plants, which are indigenous to the Grandfather and Linville Mountains.

To allow more diversified plantings raised beds were prepared with suitable soil. Recommendations of soil test reports from the North Carolina Department of Agriculture are used. New plant materials are systematically incorporated into the various habitats and perennial borders. This is accomplished through use of seed propagation, transplants from rescue digs, mutual plant sharing, specimens from conference exhibits, and research material provided by botanical groups. The University of North Carolina Botanical Gardens, Chapel Hill, N.C., North Carolina State University Arboretum, Raleigh, N.C., and Mayland Community College, Spruce Pine, N.C. provided new plant materials and advice. Recently plant material has become available from the expanding number of native suppliers of nursery-propagated stock.

During habitat development, existing plants were keyed out and inventoried. To date more than 550 native plants, shrubs and ferns have been catalogued. The fern habitat, which includes 31 native species, is the only group of plants classified as a hobby or collection project. The large variety of plants and shrubs in the garden are used for educational purposes, identification, research, folklore illustrations and medicinal history.

The sensory and herb garden is a recent, unique addition to the landscape design. The raised beds make it accessible to handicapped persons, including wheelchair occupants. The concept of a sensory garden was prompted by a desire to grow kitchen herbs within the natural setting. In addition to enjoying the visual stimulation of the landscape, all visitors are encouraged to appropriately touch, smell and taste the wild and cultivated herbs. Kitchen herbs, such as parsley, mints, onions, basil, horseradish, and wintergreen stimulate taste. Mints, tansy, bee-balm, wormwood, scented geraniums, old fashioned rose, phlox, lily of the valley, and pinks are for smelling. Dusty miller, mushrooms, comfrey, and mullein promote exploration through touch. The sound of the rushing waters of the nearby river adds additional sensory input for experiencing the garden.

By careful planting, a low maintenance natural landscape provides erosion control while it maximizes the flowering of plants during each season. A seasonal succession of wild flowers ranges from the blooming of skunk cabbage in the late winter, to witch hazel as the last flowering plant in the fall. A continuum of color and texture is supported by a background

of evergreen trees and plants such as: hemlock, pine, fir, galax, mosses, rhododendrons, and ferns. In addition to the numerous flowering plants in the design, feeding stations and brush piles create an environment which encourage birds and small critters to seek food and shelter throughout the year.

Many interested persons tour the nature farm during all seasons. The guest registry has been signed by many local, out-of-state as well as visitors from Great Britain, Europe and The Orient. Visitors who have toured the gardens include church groups, senior citizen, university research groups, horticulture classes, nature study groups, Boy Scouts, elementary and high school classes, garden clubs, Audubon Society groups, and individual plant lovers. Individuals and groups are offered short instructional tours or they may follow the trails on their own. The visitors may use the personal nature library as a source for plant research. Nature study workshops, lectures and demonstrations are given on request on a variety of nature-oriented subjects. The range of topics include uses of edible plants, medicinal uses of native plants, methods of gathering, cleaning and storage of seeds, history of plants, and the role of plants in folklore.

In summary, the goals for creating and maintaining this mini farm of native plants are:

- to provide a natural setting for identifying and studying native plants,
- to research the adaptation of plants into new habitats,
- to share plants with friends,
- to provide a peaceful setting for leisure walks and meditation,
- to provide a safe, exploratory environment where children of all ages to come see and learn,

and above all,

- to create and keep a natural ecological system free of the insults of the species, homosapien.

MOTTO: COME AND ENJOY

The Paintings of B.W. Wells

On Sunday, September 20th, 1998, the North Carolina Wild Flower Preservation Society together with the B.W. Wells Association hosted the opening of an art exhibit of B.W. Wells' paintings at the N.C. Botanical Garden. Dr. Wells' wonderful paintings filled the walls with scenes and landscapes of many of North Carolina's beautiful Natural Gardens. In attendance were Mrs. Maude Wells, wife of the late Dr. B.W. Wells, and many of his former students, fellow colleagues, and many friends. Several spoke of their association with Dr. Wells and shared fond memories. The experience will long be remembered by all those in attendance as a truly rare, unique and wonderful opportunity. Everyone had an excellent time as old friendships were reminisced and new friendships borne. Many thanks to the N.C. Botanical Garden, those who contributed Dr. Wells' paintings for public exhibition, and all others responsible for a terrific time!



What Can We Learn from Natural Heritage Inventories?

Kenneth A. Bridle, Ph.D.

During the past several years, I have been working with a group conducting natural heritage inventories of both Stokes and Forsyth Counties in the northwest Piedmont of North Carolina (Bridle, Oakley, Somers 1998 a+b). These inventories were jointly sponsored by the North Carolina Natural Heritage Program and the Piedmont Land Conservancy. Many interesting things are discovered during these inventories and comparing two neighboring counties, one urbanized and one rural, illustrates what happens when humanity transforms the landscape. I learned much from the other members of the team who contributed to the inventory effort. Ann Somers, a zoologist from UNCG, got me interested in wetlands, vernal pools, benthic macroinvertebrates, bog turtles, animal tracks, frog calls and amphibian eggs and all the various things one can learn about a habitat by listing the animal species present. Shawn Oakley, community ecologist with the Natural Heritage Program, taught me how to inventory a piece of land and identify the natural communities, look for disturbed areas, invasive species, rare species and how to map and report these in a standard format that will be useful to others who have not visited the site. The inventory process allowed me to contact many other experts for their help and insight with specific species or animal group questions or regarding special places and features worth investigating for the inventory.

One of the important tasks of a county inventory is to check the records of rare plant and animal occurrences and check to see if these occurrences still exist. In many cases records at the North Carolina State Museum of Natural Science, N.C. Natural Heritage Program or university collections or other locations, contain specimens or records which are vague or poorly documented and required some modern detective work on our part to substantiate or refute. In summary we found the following for the two counties: Forsyth animals; 3 listed rare, 1 rare confirmed and 1 N.C. watch list (not yet officially listed, but worth noting and watching). Forsyth rare plants; 12 listed rare, 1 rare confirmed, 23 N.C. watch list. Stokes rare animals; 9 listed, 8 confirmed, 10 N.C. watch list. Stokes rare plants; 23 listings, 14 confirmed, 26 N.C. watch list.

As these results indicate, in many cases we have lost species which had been historically documented from an area. In most cases we also have

fewer populations or occurrences of individual species due mainly to loss of natural habitats. There are some other stories, in which the inventory process found a new occurrence of a rare species or found new individuals of a rare species which has increased the known population. One such example of such an inventory success story involves Stokes County's rarest plant.

The rarest plant species known from Stokes County is Federally Endangered small-anthered bittercress (*Cardamine micranthera*). This species of the mustard family is related to several species of the genus *Cardamine* that are somewhat similar and which also occur in Stokes County. Of the similar species known to occur in Stokes County, small-anthered bittercress is most similar to mountain watercress (*Cardamine rotundifolia*), which is also rare. Detailed taxonomic descriptions of these are contained in Murdock and Weakley (1991), Radford, Ahles, and Bell (1968), and Weakley (in press). A wealth of information on the life history and habitat of small-anthered bittercress is contained in Boyer (1996). Small-anthered bittercress and its closely related relatives are plants of relatively cool, moist habitats such as those found along shaded streams and streamside seeps.

The extreme rarity of small-anthered bittercress is related to its very restricted range: it is known only from a small area in northern Stokes County, North Carolina and southern Patrick County Virginia. A population was formerly known from Forsyth County, North Carolina but was extirpated by conversion of its habitat to cattle pasture. With the exception of one location on a tributary of the Mayo River in Virginia, all of the occurrences are on tributaries of the Dan River drainage in North Carolina and Virginia.

Prior to this inventory, small-anthered bittercress was known to be extant at eight separate locations in Stokes County and three locations in Virginia. Seven additional locations for the species were discovered in the biological inventory of Stokes County, bringing its number of occurrences worldwide to 18, all of which are on private land. The new discoveries increase the prospect of long-term conservation of several viable populations of the species, a goal to be met before the species could be downlisted to Federally Threatened status or delisted by the U.S. Fish & Wildlife Service.

The habitat of small-anthered bittercress is along small intermittent and perennial streams. Plants typically occur in moist soil on slight stream terraces beside streams and on sand, silt, and gravel bars in streams. They are sometimes concentrated in seepage areas along streambanks or in streamhead areas. The bittercress can occur at lower densities on flood-

scoured bedrock and along larger streams. Frequently, however, streams supporting large numbers of plants may be only a few feet wide. Sheltered seep habitats are believed to be very important for long-term survival of individual populations of the species: they are a source of new plants to replace those dislodged from streambeds during floods.

Stream dynamics (i.e., flood intensity and frequency) appear to be important factors in the distribution of the bittercress: areas that experience energetic flooding and scouring generally support few if any plants. Concentrations of plants are usually along streams in forested watersheds along relatively small streams, where flood intensities are presumably lower. Microenvironment is also very important for this species. Small-anthered bittercress requires cool conditions and nearly constant moisture from spring through at least mid-summer. The extent and maturity of forests in the surrounding watershed are important in maintaining these conditions. Mature forests trap water and release it slowly and steadily to the bittercress habitat. They also moderate flooding and, when they shade the stream habitat and surrounding slopes, they also modify temperature. During the 1996 field surveys, the bittercress was almost always found in forested portions of watersheds and absent from cleared areas along the same watershed. It was also observed that the bittercress would often reappear along the same watershed where forest quality once again improved.

Habitat alteration is the greatest threat to this species. Degradative alterations would include heavy logging, introduction of livestock to stream areas, formation of impoundments, stream channelization, and accidental herbicide drift/runoff from adjacent agricultural areas. Secondary threats include increases in flooding intensity and frequency from logging and from agricultural runoff; alteration of microenvironment from clearing near streams; and increases in non-native, competitive plants such as Japanese honeysuckle in response to clearing.

From late May to mid-June mature plants produce copious numbers of viable seeds which drop near the parent, often in water. Boyer (1996) found seeds germinate in as little as four days, with a germination rate as high as 80%, in either soil or water. In suitable locations, establishment of plants after germination can be high; large numbers of young plants were observed on several occasions during the 1996 inventory (K. Bridle and S. Oakley, pers. obs.). However, it is not yet known whether, or for how long, seeds can remain viable in a soil seed bank. If this species does not maintain a viable seed bank, a population may not be able to recolonize suitable habitat after severe disturbances. An inability to maintain a seed bank might explain the curious absence of the species from apparently suitable habitats within its Stokes County-Patrick County range.

While the rarity of this species is in part related to restricted habitat requirements and limited range, it is also clear that human disturbance also effects this species. As a result of this inventory we know much more about the species and can hope to continue to monitor these populations. The N.C. Natural Heritage Program maintains records on all the rare species in the state and also helps keep track of these populations. With the aid of the Piedmont Land Conservancy we hope to work with the landowners to design management plans that will help to preserve this small bit of the local biodiversity, along with the other rare species, natural communities and significant sites. It has been rewarding on my part to be involved with this project both from the point of what has been learned but also the challenges of what can yet be accomplished.

I would like to thank Shawn C. Oakley of the N.C. Natural Heritage Program for his research and writing talents which generated the rare plant descriptions used in the Forsyth and Stokes County Natural Heritage Inventories, from which the above *Cardamine* section was abstracted.

References

- Boyer, M. 1996. Study of small-anthered bittercress (*Cardamine micranthera*): life history, management, and protection. Report to North Carolina Plant Conservation Program, Plant Industry Division, North Carolina Department of Agriculture and U.S. Department of Interior, Fish and Wildlife Service. 63 pp.
- Bridle, K.A., S.C. Oakley and A.B. Somers. 1998a. *Inventory of Natural Areas of Forsyth County, North Carolina*. Published by NC Natural Heritage Program and Piedmont Land Conservancy.
- Bridle, K.A., S.C. Oakley and A.B. Somers. 1998b. *Inventory of Natural Areas of Stokes County, North Carolina*. Published by NC Natural Heritage Program and Piedmont Land Conservancy.
- Murdock, N. and A. Weakley, 1991. Recovery plan for small-anthered bittercress (*Cardamine micranthera* Rollins). U.S. Department of the Interior, Fish & Wildlife Service.
- Radford A.E., H.E. Ahles, and C.R. Bell. 1968. *Manual of the Vascular Flora of the Carolinas*. University of North Carolina Press, Chapel Hill. 1183 pp.
- Weakley, A.S. (in press). *Guide to the flora of the Carolinas and Virginia*. The Nature Conservancy, Southeast Regional Office, Southern Conservation Science Department, Chapel Hill, North Carolina, 27514.

Who Is Mrs. William Starr Dana?

Mary Finger

Wild flower lovers recognize Mrs. William Starr Dana as the author of *How to Know the Wild Flowers*, an old-fashioned, but still used and treasured field guide. Rhode Island Wildflower Preservation Society (RIWPS) members often see illustrations from her book, line drawings of wild flowers that are reprinted in the newsletter.

My own copy of *How to Know the Wild Flowers*, ink stained and worn on the spine and edges, was given to me by my grandmother when I was ten years old, and it had belonged to my great-grandmother before that. It was printed in 1894, the year after its original publication, and was already in its fifth edition, which says something for its early popularity.

Mrs. Dana tells you things you don't find in more up-to-date field guides. She may begin by explaining reasons for a plant's common or botanical name, where and when to find it, and perhaps something of its interesting characteristics. She often brings a poet to her aid in describing a flower and frequently provides a reference to what a writer or scientist has had to say about it. Her knowledge ranges from the ancient Greeks to Shakespeare and on up through the years to her contemporaries. In each case the narrative is prefaced by a botanically accurate description of the plant, neatly printed in small type.

Off and on over the years, I have wondered about its author. Who was this woman who not only knew her wild flowers but wrote so engagingly about them? This woman, who in proper Victorian style, used her husband's name instead of her own. Was she a trained botanist? A dedicated amateur? The wife of a botanist who accompanied him on his field trips?

The librarians are wise to her. They know that she is Frances Theodora Dana Parsons, 1862-1952, and they catalog her that way, sometimes including Smith, her maiden name. For a long time that was about all I could find out. Neither I nor several helpful reference librarians could find her in the places one would expect. It was hard to believe that so little information was available about an author whose book had seldom, if ever, been out of print in the last hundred years. But recently my luck began to change when a friend in women's studies sent me some information she had unearthed, and I had the good fortune to locate Frances Parsons' privately printed autobiography, *Perchance Some Day*.

I learned from the autobiography that one day in the early 1890's Mrs. Dana walked boldly into the office of Charles Scribner and asked him to

publish her book. Although Mr. Scribner didn't know it, not one word of the book had yet been written. She says, "riding up Broadway in a trolley car I noticed the always fascinating window of Scribner's bookshop. Before I quite realized what I was doing I had signalled the conductor to stop and, walking into Scribner's, asked to see the head of the firm ... My heart was in my boots," she writes. "I was entirely unprepared for this interview. No notion of such an escapade had previously entered my head." When she explained what she had in mind, Mr. Scribner replied that the subject was one in which probably not more than six people in the country would be interested. Mrs. Dana patiently insisted that he would find he was mistaken. Next the publisher pointed out that the book she proposed would require illustrations and asked if she had an illustrator in mind. She promptly responded with the name of Marion Satterlee, a friend of hers. "I answered quite truthfully," she writes, "for at that moment and at that moment only I decided that regardless of the fact that I knew little of her ability along such a line and that I more than suspected the incredulous scorn with which she would greet the whole idea, Marion Satterlee should illustrate my already imminent book."

Perhaps impressed by the fact that Marion Satterlee was related to the artist George Satterlee, Mr. Scribner agreed to look at the book. Since the manuscript was at that point nonexistent, it was up to Frances Dana to produce it, or at least enough of it to show to the publisher, and to enlist Marion Satterlee's help. She got back on the trolley and went directly from Scribner's to the Satterlee apartment.

Frances Dana had anticipated her friend's reaction accurately. When asked to illustrate a wild flower book, Marion Satterlee protested that she didn't know how and delicately implied that perhaps Fanny, as her friends called her, didn't know how to write one either.

But Frances Dana persisted. Although the foray into Scribner's had been unplanned, the idea for such a book had been in her mind for a long time. Her interest in wild flowers had begun when, as a child, she spent summers in Newburgh, New York. She searched her grandfather's extensive library for something about wild plants and found nothing. To remedy this, her mother bought her a copy of Asa Gray's *How Plants Grow*. It proved to be a frustrating book, too complicated for a child. "I remember an early resolution to write such a book myself as soon as I had achieved sufficient knowledge," she tells us near the beginning of her autobiography.

Shortly before her visit to Scribner's she had read an article by the naturalist John Burroughs in which he said: "One of these days some one will give us a handbook of our wild flowers, by 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 all our flowers arranged according to color, as white flowers, blue flowers, yellow flowers, pink flowers, etc. with place of growth and time of blooming."

When Frances Dana read this, she was at a crossroads in her life, and Burroughs' words helped her to see the path before her. A happy marriage of only a few years had ended recently when her husband, a naval officer much older than she, died in an influenza epidemic in Paris. Grief stricken, still in her twenties, and bound by the Victorian convention of a long period of mourning and retirement from society, she turned to work on the book as a distraction from sorrow.

From childhood Frances Dana had been a lively and vivacious person who liked being among people. She had grown up as a privileged member of New York City society in the midst of an active circle of family and friends, both in the city and in the places where they summered and traveled. One of her closest friends was Corrine Roosevelt, the sister of Theodore Roosevelt. Over the years, the energetic Roosevelt clan was very much a part of Fanny Dana's life and she of theirs. The years of her marriage had been spent in travel and social activities in South America and Europe as she accompanied William Starr Dana on his various naval assignments. With her husband's death, her world was suddenly constricted.

Among the friends who provided solace and distraction was Marion Satterlee. She encouraged Fanny to renew her interest in the outdoors, which had begun in her childhood during summer holidays at Newburgh and Lake Mohonk in New York, and Narragansett Pier in Rhode Island. Upon Marion's advice, Fanny enrolled in some courses at Barnard College. One of these was botany, which she described as a "constant source of refreshment."

When she began to work on *How to Know the Wild Flowers*, Frances Dana found it difficult to get people to take her seriously. In describing the role of a woman in her circle, she said, "she was supposed to be at the beck and call of her family and friends, not only in cases of sickness or real need but for a friendly visit or a social occasion ... To secure even a few uninterrupted hours for serious work was almost impossible largely because of a lack of conviction that serious work was involved." At the outset of the project Corrine Roosevelt Robinson, who understood her friend's determination, gave her a quiet room in the Robinsons' country home and guarded her from interruption.

Since Frances Parsons seldom gives any dates in her autobiography, it is hard to tell how long she spent writing *How to Know the Wild Flowers*,

but it appears to have been no more than a year. She says that most of the work was done during a summer spent with an aunt in Fairfield, Connecticut. And a busy summer it must have been! "It was not a case of merely sitting down and writing a book," she tells us. "I first had to find my flower, then to make absolutely sure as to its genus and species, its scientific and also its popular name, and then to describe its appearance, color, its haunts, and time of blooming and fruiting as simply and vividly as possible. Usually I began writing in the freshness of the early morning, resisting even the lure of a swim in the nearby Sound. For the first time I learned to 'shun delights and live laborious days.'"

The days were laborious, but the results were gratifying. Look, for a random example, at the entry for Wood Sorrel. In small print under its common name we learn its Latin name and its family, and are given a description of its scape, leaves, flower, calyx, stamens, and pistil. The identifying characteristics are followed by the observations that make Mrs. Dana's book a delight.

She tells us to look for it in the northern woods in June and gives us a picture of its daintiness and a glimpse of a mossy nook with the sunlight filtering through the trees and resting briefly on its red-veined blossoms. She quotes Ruskin on Fra Angelico's use of Wood Sorrel in his paintings, and tells us that in Europe it is called the Hallelujah plant "on account of its flowering between Easter and Whitsuntide, the season when psalms sung in the churches resound in that word." We learn that many consider it the shamrock of ancient Ireland and that St. Patrick is said to have used its triply-divided leaves to prove the possibility of trinity in unity. She goes on to say that the English call Wood Sorrel "Cuckoo Bread" because it blooms when the cry of the cuckoo is first heard. The final paragraph tells us that sorrel comes from the Greek word for sour and that the leaflets "sleep" at night by closing against one another. All of this information is imparted on one page and faces a drawing by Marion Satterlee.

During the same summer that Fanny Dana was laboring on the text of the book, Marion Satterlee was preparing the pen and ink sketches to accompany it. Bowing to Fanny's insistence that she was to be the illustrator, Marion had taken some courses in plant illustration and set to work.

The first printing of *How to Know the Wild Flowers* sold out in five days, and the author began to receive letters of praise from all over the country. A note from Theodore Roosevelt declared, "Your book has really scored the hit of the season; I see and hear about it everywhere." Another from Rudyard Kipling, then residing in Vermont, told her that the book was exactly what he needed to learn more about the wild flowers around his

home. Letters from less well-known readers made it clear that Mrs. Dana's innovative book was welcomed by those who wanted to learn about wild flowers, but did not have the time to study botany.

There were also reviews, invitations to speak or to write something, even cartoons and newspaper jokes about the book's popularity. "Marion and I were really too dazed fully to savor it," Fanny writes. "It was pleasant but bewildering."

How to Know the Wild Flowers continued to sell steadily as Scribner's brought out one edition after another. It was followed the next year by *According to Season*, subtitled *Talks about the Flowers in the Order of Their Appearance in the Woods and Fields. Flowers and Their Children*, a botany book for young people appeared in 1896.

When the prescribed period of mourning for her husband was over, Fanny Dana returned to the world she loved, the world of people. Eventually she remarried. Her second husband was James Russell Parsons, a New York State politician and later a diplomat. This, too, was a happy marriage. James and Fanny Parsons' active minds stimulated one another, and his career provided a comfortable outlet for her enjoyment of society.

And, with the birth of her son, Russell, she had the child she had always wanted. Earlier she had lost two children, one during each marriage, either by late-term miscarriage or shortly after birth (Victorian reticence in speaking about childbirth makes it impossible to tell from her autobiography).

The only book Frances Parsons wrote during her second marriage was *How to Know the Ferns*, published in 1899. On summer vacations she had become fascinated with ferns and was unable to find a satisfactory field guide. With this in mind and chafing at the difficulty she and James Parsons were having in getting along on his salary, she informed Scribner's that she would like to do a fern book if the publishers would make a large enough advance payment to put an end to what she found an intolerable financial situation. The book, she writes, "was in no sense 'for the joy of working' but in order to make a definite sum of money for a definite purpose." She goes on from this somewhat grim beginning to explain that joy came unsought as she began the research. Like her first field guide *How to Know the Ferns* is still used and valued by nature lovers today.

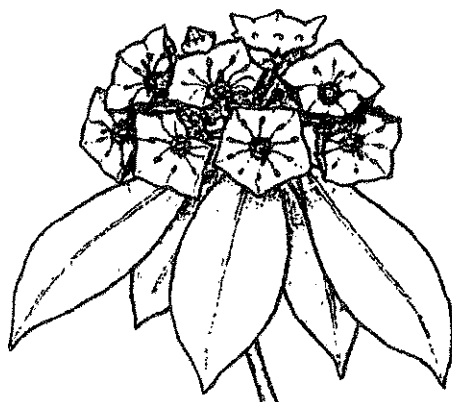
After the publication of *How to Know the Ferns* in 1899, there were no more books until her autobiography, *Perchance Some Day*, was printed privately in 1951, a year before her death at the age of ninety. The autobiog-

raphy is a frustrating book for wild flower lovers. Only about twenty of its 360 pages deal with her books. Those who long for her thoughts about the natural world and her books find instead memories of her travels, her social set, and her political activity. She reminisces about the Roosevelt family throughout her life, and sprinkles in references to just about everyone who was significant in American politics in the first half of the twentieth century.

Frances Parsons was a tireless worker for the Republican party and spoke eloquently throughout the Northeast for Republican candidates and programs, except for the period when she, of course, supported Theodore Roosevelt and the Progressive Party. She was also a brave advocate of equal suffrage for women. Most of Frances Parsons' political activity was graciously combined with dinner parties, teas, receptions, and summer sojourns. Reading between the lines in *Perchance Some Day* one sees her, always the lady, gently but firmly moving people toward her political agenda.

When Frances Parsons could participate fully in the life of her social set, she apparently felt no need for writing. Had she not been widowed and constrained by Victorian mourning customs and had she not had a need for money during her second marriage, her intelligent and lively observations of the plant world would have been shared with only a few friends. It is our good fortune that the events of her life conspired to allow us to enjoy her knowledge, wit, and enthusiasm.

Note: *How to Know the Wildflowers* is currently available. Mrs. Dana's other books are out of print.



A Weekend at Carolina Beach

Susan Moss

The 1998 NCWPS fall meeting at Carolina Beach State Park could not have fallen on a more beautiful weekend. The sky was a cloudless deep blue. The air was crisp and salty, and the October sun caught the surfaces of shifting trees and grasses, revealing their colors and elusive textures. It was the perfect weekend to explore the native vegetation of the Coastal Plain.

Our first field trip on Saturday took us to Sugarloaf Trail at Carolina Beach State Park. We literally stepped off of the road and into a longleaf pine community. This is a community whose survival depends on naturally occurring fires (now controlled burns overseen by park rangers) to keep woody species in check and stimulate growth of other herbaceous species. Craig Moretz explained that the longleaf pine (*Pinus palustris*) has several natural defenses against fire. Buds have protective white scales and the trunk is covered with thick, fire-resistant bark.

While longleaf pine appeared to be the dominant species, turkey oak (*Quercus laevis*) was a close second. The most xeric of all oaks, turkey oak is able to rotate its leaves in order to avoid the hottest sun. Live oak (*Quercus virginiana*), another "dry" oak, was also prevalent. Jeannie Kraus explained that the presence of live oak was evidence of maritime invasion within the community. A little farther along the trail we encountered the epiphyte Spanish moss (*Tillandsia usneoides*) hanging from a live oak limb.

As we threaded through the longleaf pines, we observed a variety of understory and herbaceous species typical of sandy, open woods including evergreen and deciduous fetterbush (*Lyonia lucida* and *L. mariana*), little bluestem (*Andropogon scoparius*), and the ubiquitous wire grass (*Aristida stricta*). Jeannie Kraus's sharp eyes spied out small patches of creeping blueberry (*Vaccinium crassifolium*), deer's-tongue (*Trilisa paniculata*), and cushion moss, and pioneer species. And no one could miss the bright purple spikes of blazing star (*Liatris spicata* and *L. graminifolia*) that we occasionally passed.

As we progressed more fully into the white, xeric sandhills we discovered pink-petaled false foxglove (*Agalinis setacea*), in bloom, and patches of reindeer moss (*Cladonia evansii*) — not technically a moss, Jeannie explained, but a lichen.

Habitat and vegetation changed somewhat dramatically as we came upon a depression pond. Moisture-loving natives were everywhere:

cassena holly (*Ilex cassine*) with bright red berries, titi (*Cyrilla racemiflora*), inkberry (*Ilex glabra*), wax myrtle (*Myrica cerifera*), and rush (*Juncus abortivus*). And at the water's edge, we bent down to observe the gleaming tentacles of sundews (*Drosera intermedia*).

The Cypress Pond contained more sundews, but also bladderwort (*Utricularia inflata*), an aquatic carnivorous plant. Delicate yellow blooms on slender stems floated several inches above the water's dark surface.

The afternoon found us hiking Sugarloaf Trail from the other direction which, for the most part, paralleled the Cape Fear River. Our proximity to water meant the presence of marsh and maritime native plants. A sampling of the species we saw includes yaupon holly (*Ilex vomitoria*), black needle rush (*Juncus roemerianus*), seaside pernywort (*Hydrocotyle bonariensis*) and seaside goldenrod (*Solidago sempervirens*) with its fleshy, succulent leaves.

The following morning we returned to the Park and walked the adjacent Flytrap Trail which lead us to — what else? venus flytrap (*Dionaea muscipula*). Some of them were so tiny, though, we had to be careful not to step on them. A little off the trail Bob Tuggle lead us to some yellow trumpet pitcher plants (*Sarracenia flava*). We all paused a good while to gaze down their watery throats. Our trail bordered on a pocosin ("swamp on a hill") and thus contained pond pine (*Pinus serotina*), redbay (*Persea borbonia*) and loblolly bay (*Gordonia lasianthus*). Along this border we also brushed past sweet pepperbush (*Clethra alnifolia*) and royal fern (*Osmunda regalis*), both of which appeared to be enjoying the moist mirco-climate.

As we made our way back to our cars, I considered how many different native plant communities we passed into and through during our hikes. In the space of barely two miles we had traversed bogs, pocosins, longleaf pine and maritime forests, sandhills, marshes, and ponds. What made the experience even more pleasurable was the absence of clear-cut borders: natural communities quietly flowed into and out of each other, sharing plants and patterns, making it almost impossible to discern where one natural community ended and another began. Being able to observe this natural phenomenon was one of many joys offered by this trip.

Our sincerest thanks to Jeannie Kraus for serving as our tireless guide. We all benefitted from her excellent knowledge of coastal plain vegetation. Thanks also to our President, Charlotte Patterson, Craig Moretz, Eric Hawkins and Bob Tuggle for their efforts in making the weekend a success.

My Day with Moni and Mom: In Search of Schweinitz's Sunflower

Alice Zawadzki

It was just Momma, Moni, and me tootleing down NC 134 toward Troy in search of the federally endangered *Helianthus schweinitzii*. This was Mom's first trip to North Carolina where she could see. Mom wanted to do everything I did during her 12 day visit.

The day before the trip, Mom and I walked the rare plant walk at N.C. Botanical Garden in Chapel Hill to check out what Schweinitz's sunflower looked like. What a sight it was: 8 foot tall, resplendent with many stalks of yellow ray and disk flowers, sandpaper stems and lance-shaped leaves. Now we knew what to look for on our N.C. Plant Conservation Program foray with Moni Bates in Montgomery and Randolph counties on October 7, 1998. Thank you folks at NCBG.

Moni suggested that we start our day by going to inventory the reported sighting of a few plants near Montgomery County Community College. Instead of going through Troy, Moni suggested we take a short cut to avoid town traffic. Within seconds of turning off NC 134, we passed some farm buildings near a wooded area. "Moni, I think I see one!" Moni was very patient, diplomatic, and kind to this neophyte. "Let's check it out." And that's what Moni, Mom, and I did. I was thrilled when she declared the yellow-centered sunflower was indeed the federally endangered Schweinitz's sunflower. "Feel how rough the stem and leaves are." We found our first new site ... just a few plants, very vulnerable, but thrilling for me. I was on cloud nine.

We had a nice visit with the landowner who thought we were the surveyors that he was expecting. The site was next to a Highway Patrol building and lawn. The wheels in my brain started spinning as it dreamed about the future possibilities of reintroducing endangered plants on state properties near the historic areas where endangered plants once flourished. The property already is state owned, parking is available, someone maintains the land with pride, and there was *Helianthes schweinitzii* within feet of the lawn, near a great sunny open area. Wouldn't it be wonderful to have endangered species in protected areas where people could view and enjoy them while learning about endangered species.

Within minutes we were passing a prison unit with lots of *Bidens* across the road. We stopped so I could imprint how *Bidens* was different

from Schweinitzii. We travelled down the road to check out the roadsides and slopes. As we approached a railroad crossing, I saw one yellow-centered baby towering over the ever present Bidens. "Moni, I think we have another one!" "It's Bidens." "I don't think so."

Mom said to check out the woods too. Interspersed among the pine trees was about 100 Schweinitzii. Yo! I looked down the railroad track on the other side of the road. Way down yonder on the rocks of the cut-through for the tracks, I thought I saw the Schweinitzii silhouette. I was beside myself as I walked the track and found so many plants. "Hey, Moni! You won't believe this!"

After estimating about 500 plants, Moni suggested we move on and leave this location for further exploration on another day. Moni walked up the hillside to check out the centers of a wonderful aster we saw. It looked like *Aster concolor*, Eastern silvery aster, the NCBG 1996 flower of the year, but it had distinct white centers. Could it be the very rare *Aster georgianus* that Moni had told me about? Perhaps. We found some more later that day at still another Schweinitzii site.

This story can go on and on about that glorious day ... another site with one plant before we got to the community college site ... another 100 plants down the road from the college. It was time for Moni to go home to meet her son after school but we needed to check out a *Helianthus levigatus* site to see how it was doing. It was doing nicely but before we got there we found another 100 plant site of Schweinitzii and a little further a 100 plant site of *Helianthus levigatus*. I had to promise to put my blinders on. Moni was calling me eagle eyes.

What a day! It was so exciting to find new sites for a federally endangered species. It ranks up there in the top 10 days of my life — right up there with Angel, the 35 ton, 50 foot gray whale who came up to me in a 20 foot wooden boat in San Ignacio lagoon in Mexico to have her chin and snout petted.

When I shared my excitement with Janice Swab the next week at Neomande Bakery, she was excited for me but assured me it was beginner's luck. Mom said she prayed that we would find three sites. Her prayers were answered. However it happened, it was a cosmic jubilee day of magic moments with Momma, Moni, and me. Cecil promised "the staff of PCP insists on having fun." He kept the "magic" a secret.

Calendar of Events

April 23-25, 1999

NCWFPS Spring Meeting
Smoky Mountains, NC

June 12, 1999

NCWFPS 2nd Annual Picnic
and Plant Auction

August 21, 1999

NCWFPS Board Meeting

September 10-12, 1999

NCWFPS Fall Meeting
Bluff Mountain/Roan Mountain area

April 14-16, 2000

NCWFPS Spring Meeting
Piedmont Triad area

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 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 Services regulations. Donations are tax deductible.

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

Membership Application

ANNUAL DUES

Individual or Family: \$15.00

Sustaining: \$25.00

Lifetime Membership: \$180.00

Scholarship Fund Donation: _____

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

Please send this and all
address corrections to:

*North Carolina Wild Flower
Preservation Society, Inc.*

Ms. Nancy C. Julian

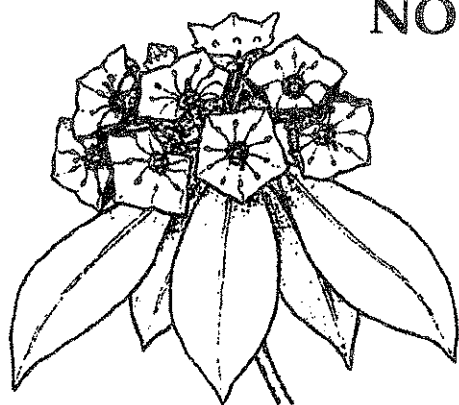
1933 Gaston Street

Winston-Salem, N.C. 27103-3733

Please include your added four digit zip
number for your address in your dues
payment. It will soon be mandatory.

☐ New ☐ Renewal

NOTES



NCWFPS PAST PRESIDENTS

Mrs. Herbert Smith	1951-52
Mr. J.A. Warren	1952-54
Mrs. Paul Spencer	1954-56
Mr. Lionel Melvin	1956-58
Mrs. Carl Pegg.....	1958-60
Mr. Walter Braxton	1960-62
Mr. Gordon Butler	1962-66
Dr. H. Roland Totten.....	1966-68
Dr. Herbert Hechenbleikner.....	1968-70
Dr. Marjorie Newell.....	1970-72
Mr. Thomas Shinn.....	1972-74
Mrs. Pearson Stewart	1974-76
Mr. Ken Moore.....	1976-78
Mrs. O.G. Allen	1978-82
Mr. Tom Howard.....	1982-84
Dr. Ray Noggle	1984-88
Dr. Benson Kirkman	1988-94
Mr. Bob Tuggle.....	1994-96

The above are permanent advisors and members of the board of directors.

NCWFPS NEWSLETTER

Newsletter Editor	Craig Moretz
Editorial Staff.....	Eric Hawkins
	Harry Phillips
	Tom Howard
Editors Emeritus	Jane Welshmer
Past Newsletter Editor.....	Linda Lamm

