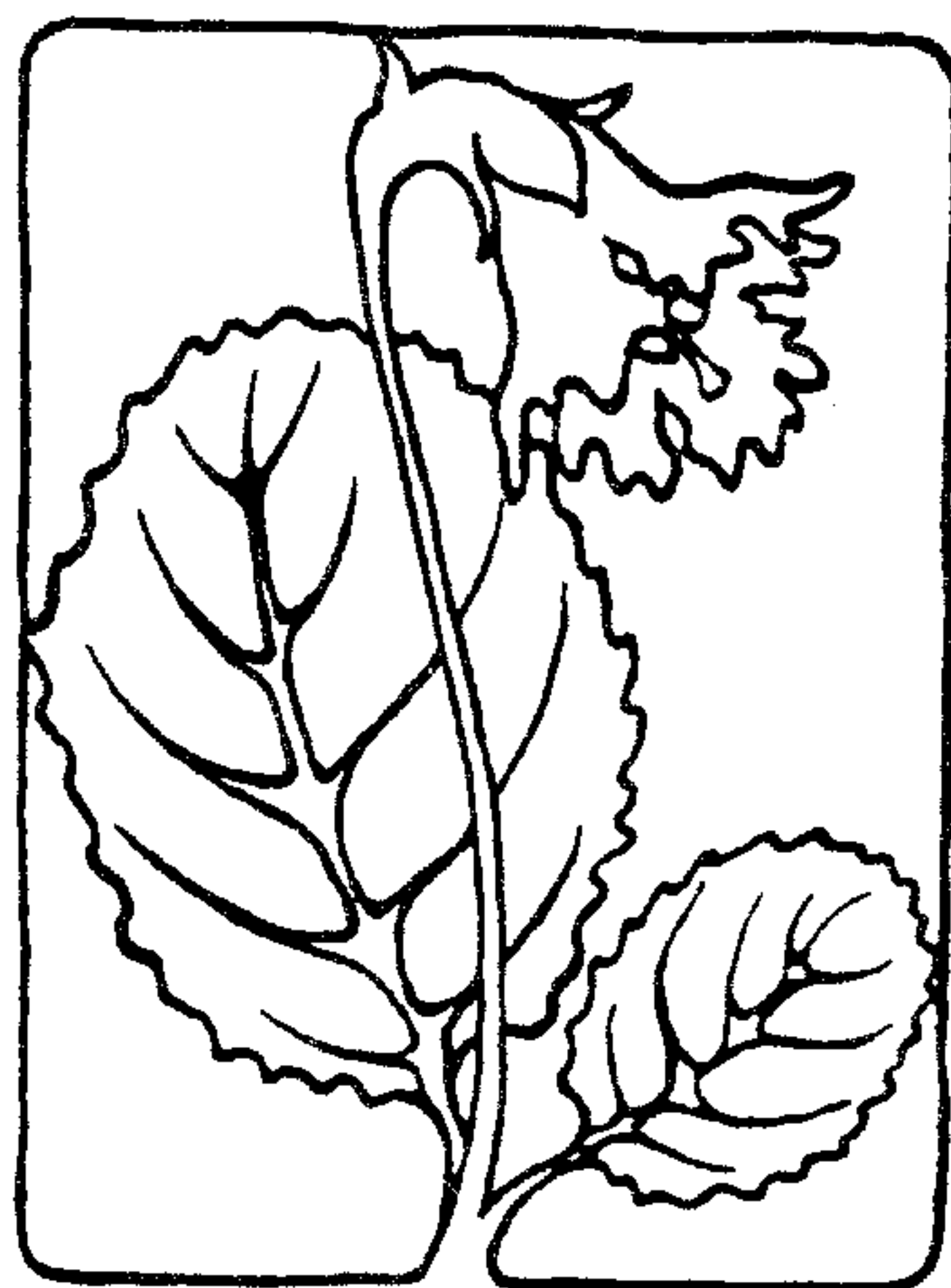


SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

SPRING 1989



DOROTHY RATHMANN, Editor

FROM THE PRESIDENT'S DESK.....Bill Verduin

Let me tell you about the Rosy Periwinkle. Some of you who are members of the Nature Conservancy may remember reading about it, but it's a story that bears repeating. No, I'll not tell it after all -- I'll let Larry Morse, Chief Botanist for the Conservancy, tell it:

"For thousands of years, the natives of the island of Madagascar used it in their folk medicine. But modern physicians simply laughed it off as yet another example of witchcraft.

If the Rosy Periwinkle had become extinct before 1960, nobody outside of Madagascar would have missed it very much. But about 25 years ago, scientists discovered that this strange and beautiful plant did indeed have magical properties. A drug called vincristine was extracted from the plant. And this drug completely revolutionized the treatment of childhood leukemia.

Before the discovery of vincristine, leukemia was almost always fatal in children. But thanks to the Rosy Periwinkle, kids attacked by leukemia now have a 95 percent chance of remission!

Actually, the case of the Rosy Periwinkle is not so strange, after all. Plants and animals long thought to be 'useless' are constantly acquiring new applications in medicine, science, agriculture and industry. It's amazing how fast things go from 'useless' to 'priceless.' Look at the useless fungus called 'Penicillium,' for example."

The Nature Conservancy is not buying beautiful natural areas which can be preserved and maintained as places for the public to enjoy. In fact, many of their preserves are closed, or open to only very limited use. They are buying and protecting areas of biological diversity containing threatened or endangered species and eco-systems. Nearly three and a half million acres are now under Conservancy protection.

Twenty five percent of the pharmaceuticals in use in this country today contain ingredients originally derived from wild plants. Peter Raven, Director of the Missouri Botanical Garden is quoted in a recent TIME magazine article as predicting that a hundred species of plant and animal life will become extinct every day during the next three decades! How many Rosy Periwinkles? How many hundred Rosy Periwinkles?

This business of preserving the snail darter, muhly grass and beakrush sedges -- the whole gene pool now in existence -- is serious business -- deadly serious! I urge you to join and support generously the Nature Conservancy. You may be protecting another Rosy Periwinkle.

Send at least \$15 to The Nature Conservancy, Membership Processing Center, Dept. 79181, Baltimore, MD 21279-0181.

OFFICERS FOR 1989.....Elton Hansens

PRESIDENT, BILL VERDUIN: WCBC will continue to enjoy Bill's leadership with his tremendous knowledge of our area, his interest in all aspects of the natural world, his ready wit and easy manner. He will continue leading us into new and old botanical areas. Don't be surprised if we see a waterfall now and then. They are his particular passion.

VICE PRESIDENT, LOUISE FORESMAN: Louise is always there to help. Her cheerful manner and helpfulness have stimulated a number of nicknames. Ask how she came to be known as "super bum." It is botanical.

SECRETARY, CHARLOTTE CARMAN: With one business meeting each year and few other duties Charlotte will have time to continue to lead hikes for several groups and engage in all of her many other interests.

TREASURER, JOHN SABY: John is a research physicist who, in retirement, has expanded his interest in gardening and botany. He is an efficient treasurer and has served WCBC well for the past year.

RECORDER: GRACE RICE was elected Recorder at our Annual Meeting but has now resigned for medical reasons. We are sorry this was necessary.

However, BESSIE SINISH has agreed to serve as Recorder for the rest of 1989. A committee will be formed to assist her.

Bess claims that she is "a girl without a state" and neither is she of foreign birth. Figure that one out! She was born in Washington, DC. She can remember that, at the age of 8, she was climbing in the White Mountains with her godparents. From that time, her interest in botany and plant culture has developed gradually. She attended Wheelock College in Boston and then became a teacher of pupils with dyslexia. I didn't ask her about how she caught Dr. Kenneth Sinish, nor about raising her 3 sons. Bess and Ken moved to Hendersonville in 1979 and since have participated in the WCBC and a wealth of other activities. Much more could be written but this gives the picture. We are confident that she will do a splendid job.

"Therewith my fate was sealed; for he who has once seen the intimate beauty of nature cannot tear himself away from it again. He must become either a poet or a naturalist and, if his eyes are good and his powers of observation sharp enough, he may well become both." (KING SOLOMON'S RING by Konrad Z. Lorenz)

BON APPÉTIT.....Ruth Mack

No doubt about it -- our recent annual meeting covered all the important business of the year. And that's as it should be. The covered-dish luncheon is the social part of the meeting, and I have been asked to report on that.

Beth Woodlock was the chairman of the luncheon. Beth is a volunteer tutor in the Job Corps program. In October when she attended a learning disability seminar in Charlotte, the banquet tables were decorated with paper flower pots filled with flowers. These had been made by students in a learning disability kindergarten group. After the banquet, she asked and was told these would be discarded. So she appropriated them for our meeting. Good thinking, Beth!

Beth said her committee made her job easier. They were: Bill and Evelyn Ammann, Aline and Elton Hansens, Marian and John Moor, Bill and Evelyn Verduin, and Doris and Al Washburn (Ammann's neighbors who just moved here a few months ago).

I can't remember that we ever acknowledged the excellent cooks we have in our Club. The buffet table groaned with delicious creations of all kinds. Many of these were generous in size, some serving 16-20. I hope you've noticed that quite a few men contribute to our covered-dish gatherings. John Brown brought slices from a "pepper roast" that he had prepared using a special marinade on an eye round cut of beef. After a period of marinating, this was wrapped in foil and oven-roasted. Different -- and very tasty! John Kuhn contributed "Delmonico potatoes", one of the dishes for which he is noted. Harry Logan is known for his originality when it comes to cooking. Today it was a casserole of lima beans, corn and mushrooms in a mushroom sauce.

Barbara Hallowell contributed a fruit-date-nut gelatin salad, which was pleasing to the eye as well as the palate. Calla Bell often brings a sherried (or curried) fruit casserole and it is always a hit. It consists of a combination of 7 or 8 kinds of fruit (varies with the season of the year) steeped in a delicious sauce. Calla graciously gave me her recipe, and I will share it on request.

The dessert table was not to be believed -- pies, cakes, and cookies of all sizes, shapes, and flavors. Al Washburn likes bread pudding, and he said no one ever brings that, so he made one which was served warm. Millie Pearson always brings two chess pies. Millie is a native of this area, and she uses a recipe that has been passed down in her family for generations.

Now that I have acknowledged that we have many excellent cooks in our midst, may I note that it has been rumored that WCBC members are no slouches when it comes to eating. But who notices? Not me!

MEMBERS HONORED AT ANNUAL MEETING.....Tom Hallowell

At the WCBC Annual Meeting on January 20, the Honors Committee recognized specially three members:

MILES PEELE was honored with Life Membership for his generosity in providing a wealth of botanical and general natural history information to Club members. Thanks to his quiet, professional, interesting way and gentle manner, we learn happily and easily.

FRANK BELL was honored with Life Membership for his long-time inspiration to those of all ages in the appreciation and search for knowledge of the natural world and for his genial sharing of his woods and hills with the Botanical Club.

LARRY KENYON was awarded a membership in The Second Wind Hall of Fame for his service to the Schenck Job Corps, The Friends of the Library, his church, the Botanical Club, and other varied community services. The Second Wind Hall of Fame recognizes and emphasizes community activities after retirement using talents developed before and after retirement.

After the Annual Meeting Larry received notice of the award in the back seat of his car while on the way to the doctor to have the case on his broken ankle removed.

Can't you just hear the **peelle** of the **bell** in the **kenyon**?

AN INVITATION FROM FRANK BELL.....Bill Verduin

There are few, if any, better places from which to see the sunset than Frank Bell's deck. And few places with more stimulating conversation than with Frank and Calla. Frank's very kind invitation will make it possible for half a dozen Club members to spend the night of either May 7 or 8 using three bedrooms and the kitchen facilities on the lower floor of Frank's lovely home. The Club will be hiking in Frank's woods on May 8.

Be one of the fortunate ones to enjoy this opportunity. Call Larry Kenyon for details and reservations (697-1835).

EXCERPTS FROM RECORDER'S ANNUAL REPORT FOR 1988.....Anne Ulinski

The Botanical Club scheduled 42 hikes this year, five of which were rained out. A total of 670 members attended the 37 hikes which did take place, an average of 18 per hike. The rained-out hikes were Jones Gap, Grandfather Mountain, Frying Pan Gap, the September Buck Spring Nature Trail and the Baxter Creek-Smokies fall hike. The best attended outing was the Shut-in Trail with 35 hikers. The Hardy Souls hike, the 3-day Smokies trip, Chimney Rock Park, and Green Cove each had 32 members attending.

Eleven indoor meetings, including the annual meeting, were scheduled with an average of 66 attending.

There were three workdays: Holmes Educational State Forest, Millie Pearson's Woods and the University Botanical Gardens.

Barbara Hallowell gave a fern workshop in August and Bill Verduin and others a workshop on plant relationships in December.....

Remember the gold stars we'd get in school for special effort? Well, here are my gold star awards for this past year:

To Bill Verduin and Elton Hansens for the 3-day trip to the Smokies in April. This well-planned trip was a botanical highlight for many.

To Elisabeth Feil for her two programs: "Introduction to Chimney Rock" on February 19 and the tour of Chimney Rock Park on May 13. Elisabeth introduced us to many unusual botanical species in this cold "micro-climate" area, and she increased our awareness of the importance of habitat.

To those members who volunteered to be leaders or co-leaders for the first time this year and thus increased our roster of available leaders for the future.

To the volunteers who guided at Shinn's Garden during the Spring Wildflower and Bird Pilgrimage, to those who guided children at Lake Powhatan, and to Millie Blaha who kept saying, despite misgivings on the part of some of the guides that yes, they could do it.

In the three years since I have been recorder, I have seen a change in the way we approach plant identification. At one time the emphasis had been on identifying only those plants which were in bloom. We now include in our observations not only the flowering plants but trees, ferns, plants still to bloom, and plants in fruit. One more step in our identification skills would be a greater emphasis on habitat. Walking the trails we might ask ourselves: Are we walking on a north slope? Through hardwood growth? Through a wet area or at an especially high altitude? What plants can we expect to see in these places?

I'd like to thank all of you who have helped me in the last three years. It was Louise Foresman who encouraged me to take the job of recorder, and Millie Blaha who helped me with my lists and showed me how to check the plant identifications in Radford. Everyone helped me on the trail, but when I think back on this past year, I would like to thank especially Dick Smith and Millie Pearson who so willingly shared their knowledge and enthusiasm with me. My message to Grace Rice who succeeds me as recorder is, "Enjoy the challenge."

A WINTER WALK.....Ivan Kuster

Let's take a winter walk through nearby field and woodland before snowfall covers the ground. Who does not enjoy shuffling through the dry leaves? Note the various shapes and colors. The oaks are stiff and leathery in shades of brown, dull maroon, and tawny brown. Maples vary from pale yellow through orange and red as do the red gums. Beech leaves in their golden brown usually hang on firmly until pushed off in spring by the new growth. They brighten the woodland as they glisten in the pale winter sunlight

Peeking through the brown leaf litter are glossy leaves of numerous small evergreen plants. These hardy plants survive the rigors of freezing winter cold with thick waxy coats which cut down on evaporation when water is scarce. They usually have woody stems and grow close to the ground as a protection from the drying winds. It is believed that they are not killed by the frost because water within the cells, which would rupture them if turned to ice crystals, is channeled to the spaces between cells where freezing does less damage. Also the sugar content of the cells is increased, thus lowering the freezing point of the remaining water.

What are these ingenious little plants? Partridgeberry (Mitchella repens) is one common ground cover with its small round opposite leaves on trailing stem. Its bright red berries, often eaten by mice and birds, are formed from paired tubular blossoms in early summer. They are edible, but rather dry and seedy.

Next we find shiny dark pointed leaves with a white mid-vein in a whorl with a short upright stem in the center bearing two or three round seed capsules. This is Spotted Wintergreen or Spotted Pipsissewa (Chimaphila maculata). Another similar Pipsissewa without the white stripe is C. umbellata. Nearby we find small rosettes of pale green with white veins and an occasional dried flower stalk about a foot tall bearing many tiny rounded seed pods tightly spaced along the upper part of the stem. This is Rattlesnake Plantain (Goodyera pubescens), one of our small native orchids.

Along a sloping bank we find numerous rosettes of spatulate shaped leaves varying from dull green to pale maroon which are seedling plants of Robin's Plantain (Erigeron pulchellus).

Now we come upon a large area carpeted with green cedar-like foliage with three to five-inch spikes of yellowish candelabrum. This we call Ground Cedar. It is perhaps our most abundant clubmoss (Lycopodium complanatum). We may also find, in smaller more isolated clumps, another more upright shiny, single stemmed clubmoss called Ground Pine (L. lucidulum). If you were to flick the fruiting stalks in fall and light a match to the spores as they fly out they would explode with a bright flash. In the days before electricity and strobe lights, photographers used "lycopodium powder" for their flash exposures. These spores were also gathered commercially for use in fireworks.

Under Beech trees (Fagus grandifolia) we can usually find a non-evergreen plant looking much like a dried winter weed having no leaves and about ten inches tall. These are Beechdrops (Epifagus virginiana). They have no chlorophyll and so must secure their food in another way -- by becoming parasitic on the roots of the Beech tree.

Another attractive evergreen creeper, usually found on northerly slopes under Rhododendrons, is Trailing Arbutus (Epigaea repens). Its hairy, woody stems and waxy-edged leaves in a rather loose arrangement are a welcome sight. Like a number of other woodland denizens, they are very difficult to transplant because of a mycorrhizal association they depend on to make needed nutrients available.

Often in a similar situation we find the glossy one to three-inch round dark green leaves of Galax (Galax aphylla). The winter sun often changes the green to a beautiful dark red-maroon color. Since we are on a north facing slope we find such shrubs as Rosebay (Rhododendron maximum) and Carolina Rhododendron (R. minus) and Mountain Laurel (Kalmia latifolia), all of which like the cool moist shady exposure.

In a drier warmer more southerly area we find Sweet-shrub (Calycanthus floridus) with its fig-shaped fibrous seed pods containing many small brown bean-like seeds which are poisonous. The stems are very spicy-aromatic, and opposite in arrangement.

Down in a hollow along a brook grows a low arching evergreen shrub with alternate glossy leaves from dark green to maroon red. This is called Leucothoe, Fetterbush or, sometimes, Dog Hobble (Leucothoe axillaris). Up on the drier slopes we may find an upright deciduous form of Fetter-bush (L. recurva) with its three-inch long curving racemes of seed capsules.

Among the ferns we find large clumps of evergreen fronds of Christmas Fern (Polystichum acrostichoides) with its stocking-like shaped pinnae growing on shady slopes. And here on a large rock is a patch of Rock Cap Fern (Polypodium virginianum) with six-inch fronds.

There are many more plants, trees and shrubs which beg our attention as we walk through the woods. And in the meadow are countless dried stems in a maze of fascinating forms such as Goldenrods, Black-eyed Susans, Joe Pye weeds, Yarrow, Queen Anne's Lace, Teasel, Thistles, Peppergrass, Giant Mullein, Milkweeds and many more. A winter walk can capture our imagination and pique our curiosity as well as stimulate our minds. So let's go!

LOOK AGAIN !

Jack-in-the-pulpit (Arisaema triphyllum) gets a lot of attention not only because of its unusual flowers but because of the many variations that occur between individual plants.

These differences can be perplexing. There may be either a single leaf or a pair, each with three leaflets, but the lateral ones might be lobed so as to make it appear that there are five. The spathe may be pale green or striped with green or purplish brown, its tube smooth or fluted, and its hood horizontal or drooping. As might be expected, there is disagreement among taxonomists, some of whom consider the aberrants to be varieties (e.g., atrorubens, pusillum and stewardsonii) of A. triphyllum, while others insist that they should be accorded specific rank.



ARISAEMA
TRIPHYLLUM

A question that frequently arises is how to distinguish a male plant from a female--in other words, a Jill from a Jack. (In England the related Cuckoo-pint, Arum maculatum, is also called Lords-and-Ladies; the first part of that name denotes plants with purple stripes, the second the plain green ones.) The only sure way to determine the sex of a Jack-in-the-pulpit is to look at the base of the spadix to see whether it has staminate or pistillate flowers, or both. It is interesting to note that this is one of a very few species in which individuals are capable of changing their sex in response to growing conditions.



A. DRACONTIUM

Occasionally someone who has heard the name Green Dragon will mistakenly assume that it refers to a green-flowered Jack-in-the-pulpit. It really belongs to Arisaema dracontium, a rarer and even more bizarre plant with more numerous leaflets and an extremely long spadix that extends far beyond the spathe.

Dick Smith

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Editor: Dorothy Rathmann

Distribution: Frances Gadd

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Dorothy Rathmann, Editor
Carolina Village Box 23
Hendersonville, NC 28739.

SHORTIA

c/o Frances Gadd
218 Pheasant Run
Hendersonville, NC 28739



FIRST CLASS

L. & H. Pearson
2514 Kanuga Road
Hendersonville, NC 28739