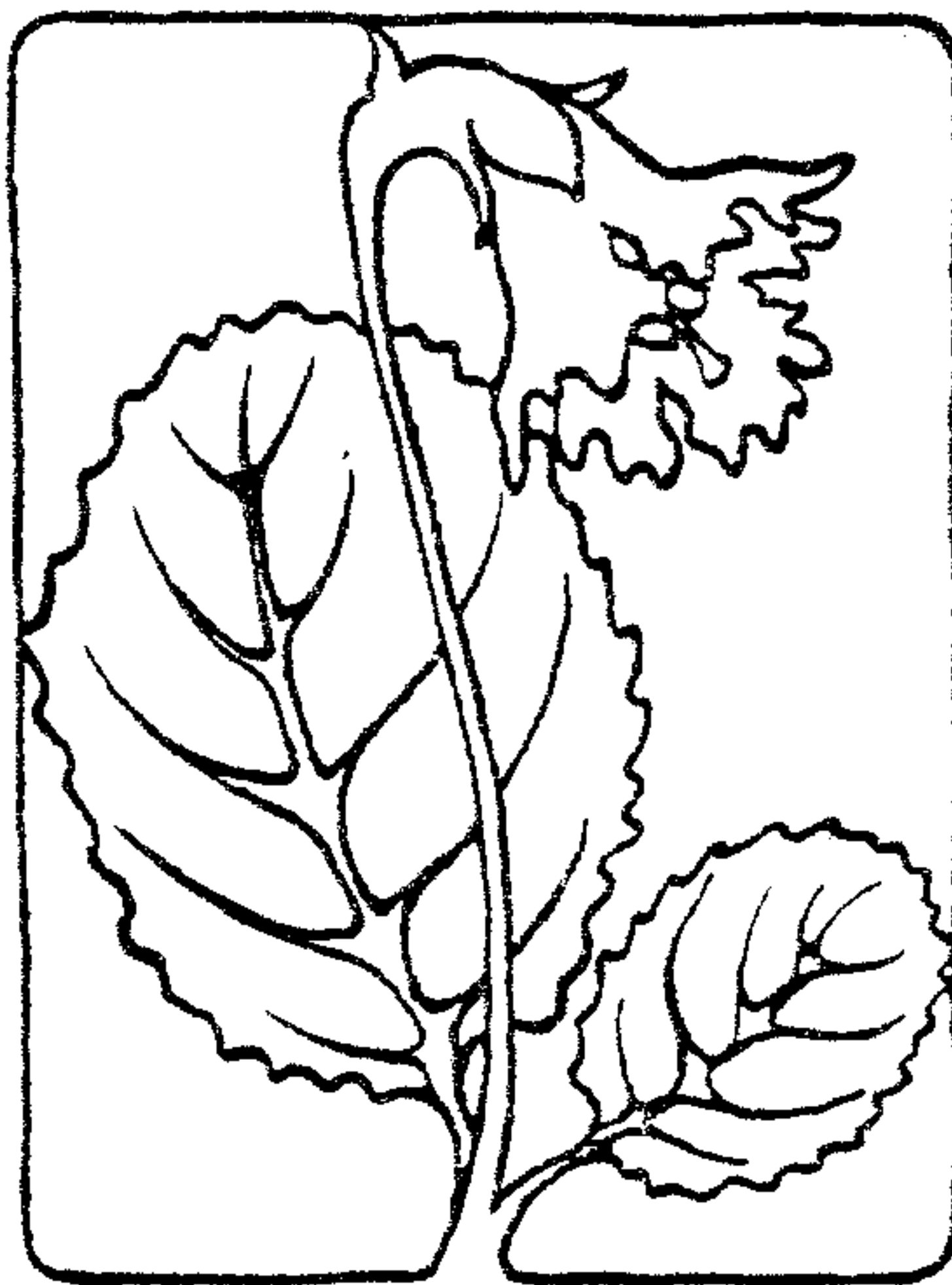


SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

WINTER 1983-84



HELEN TURNER, Editor

OFFICERS

President: Dick Smith Treasurer: Margaret Kuhn
Vice President: Sam Childs Historian: Louise Foresman
Secretary: Margaret Canfield

NOTICE OF ANNUAL MEETING

The Annual Meeting and Election of Officers will be held on Friday, January 27, 1984 in the Parish House of St. Johns-in-the-Wilderness Church. The meeting will be called to order promptly at 11:00 AM, to be followed by a covered dish luncheon.

Members of the Nominating Committee are Ben Tullar, Martha Taber and Win Newcomb.

DID YOU KNOW?

We have two address changes:

Ben Tullar's new residence is 1041 Blythe St., # 502, Hendersonville.

Miles and Eleanor Peelle have returned to his Bok Tower project in Florida. Their winter address is: 151 Buckeye Terrace, Haines City, FL 33844.

We extend deep sympathy to Gladys Mulvey at the death of her husband.

Reports coming in from all over the Eastern US have been enthusiastic and positive about Anne and Barbara Hallowell's FERN FINDER. Reviews in various publications, including one in the American Fern Society's newsletter, have been highly favorable. A second printing is scheduled for September; the first was 15,000! Cheers for FERN FINDER and its authors!

WCBC members are again giving courses at Blue Ridge Technical College: Harry Logan on Landscaping for the Homeowner; Tom Hallowell about Birds (so many students registered that the group was split into two classes); Elton Hansens on Knowing the Insects.

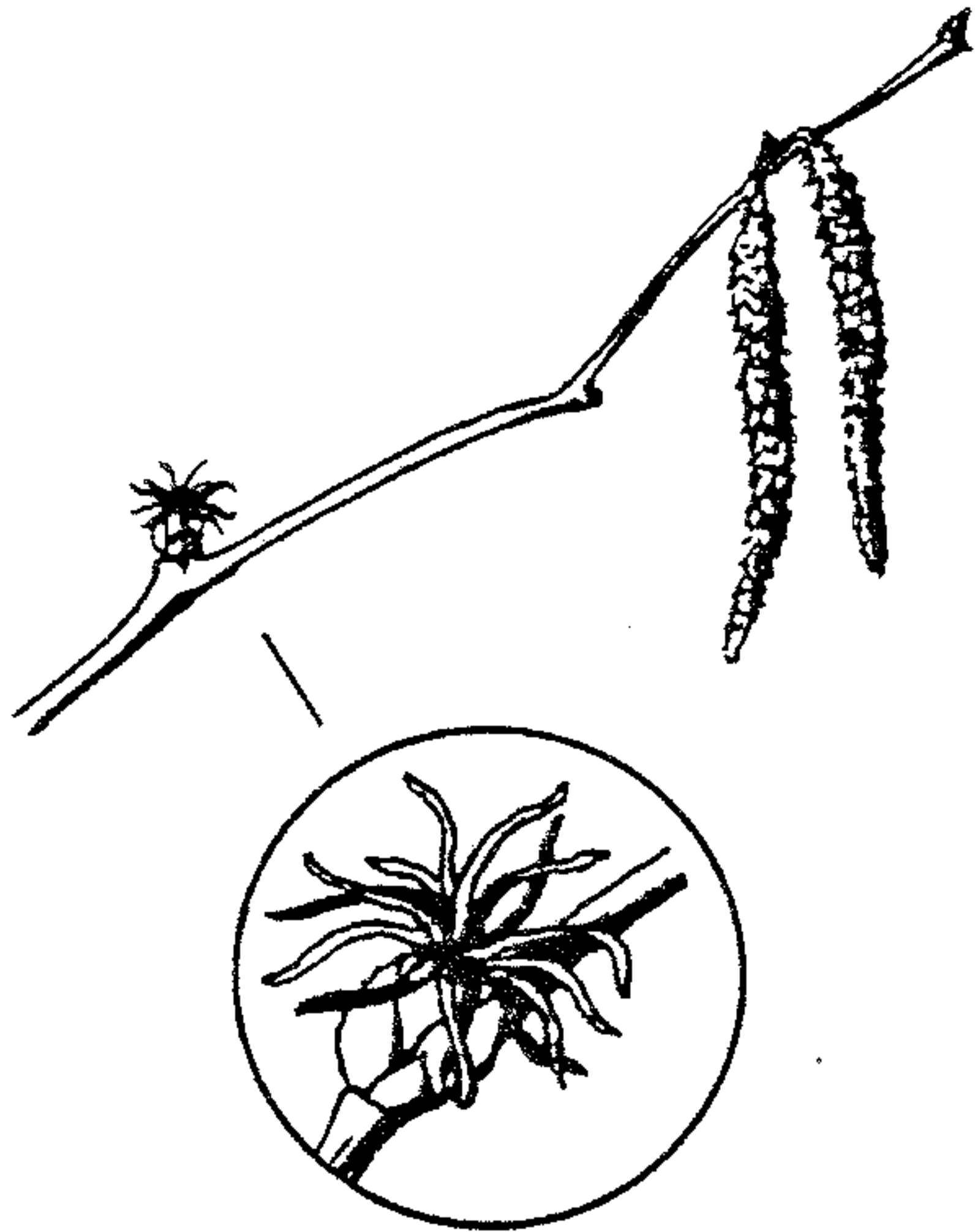
WELCOME -- NEW MEMBERS

Hendersonville unless otherwise stated

- Frye, Mrs. Helen, PO Box 152, Lake Toxaway, NC 28747.....966-4039
Gadd, Charles & Frances, 218 Pleasant Run.....692-1075
Jeiliff, George & Gladys, Rt. 2, Box 493, Easley, SC 29640..
Sewell, Winnefred E., 1040 Greenwood Dr.....
Steele, Bernice M., 12 Friar Tuck Lane, Sherwood Forest,
Brevard, NC 28712.....885-2085
Willis, John G. & Anne C., Route 4, Box 540E.....891-4170

LOOK AGAIN!

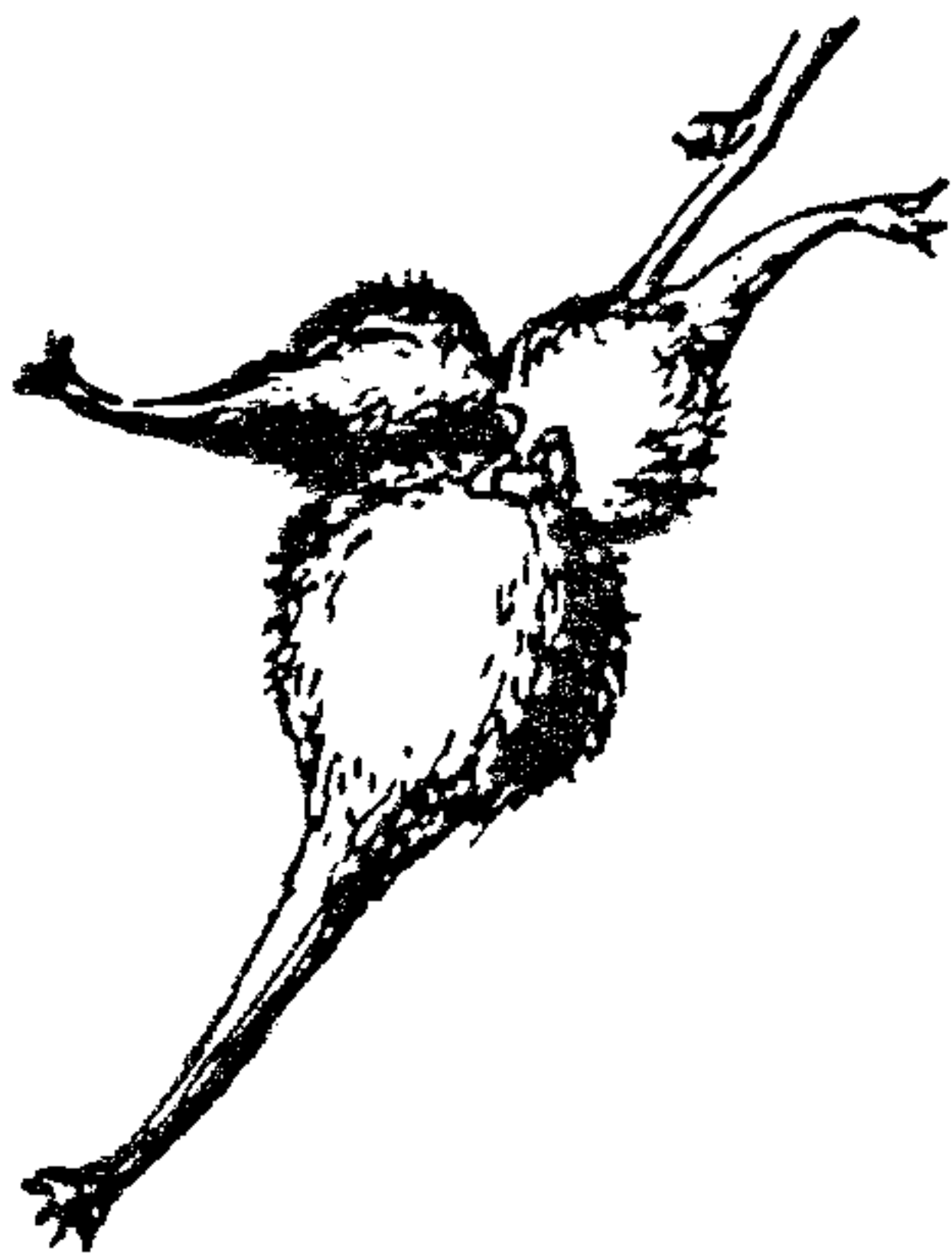
Without leaves or flowers, winter identification of woody plants depends principally on examination of the twigs, with their buds and other features. Carrying on this activity into late February brings with it the chance of coming upon the blossoms of one of the very earliest-blooming shrubs of the year, the hazel.



The staminate catkins are not especially remarkable, looking pretty much like those of other members of the birch family; it is the pistillate flowers that are worthy of a close look (use a hand lens, for they really are tiny). These flowers are gathered into clusters and even at this late stage are almost entirely concealed by bud scales. All that protrudes is a bunch of stigmas - less than three millimeters long, but a glistening ruby-red. Were it not for their small size, the astonishing color would make them light up the late winter woods like lanterns.

The flowers do not, however, help us to decide whether we are looking at American hazel (Corylus americana) or beaked hazel (C. cornuta), so if we wish to know we must go back to studying the twigs. There the evidence is plain, but don't put the lens away. The twigs of C. americana will be densely beset with bristles and stalked glands, while those of C. cornuta will be smooth or at most will have a few scattered soft hairs.

Final proof of their identity will not come until fall, when the faintly pungent nuts - sometimes called filberts - ripen, but it is very positive! Hidden by the scales



beneath the red stigmas were minute bracts, and these have now grown enormously, the pair subtending each flower forming an involucre to completely enclose the nut. In C. americana they resemble leaves, with their raggedly cut edges, but in C. cornuta they fuse together and are prolonged far beyond the nut into a narrow, tubular beak.



Dick Smith

BOOK REVIEW: FUNGI, DELIGHT OF CURIOSITY

Fungi that trap eel worms -- in less than a second.
Microscopic molds -- only a dozen cells.
The sphere thrower -- extraordinary power.
Water guns -- one of nature's most remarkable mechanisms.

Since early spring we have searched for and found beauty of color and of form. How oft have magnifying glasses been passed around better to see the marvelous architecture of milkweed flowers. Even in the dead of winter (I dislike that phrase) we see all around us the beauty of form in the skeletons of deciduous trees and in the great hemlocks and pines as they show off their beauty without competition from the hardwoods. Winter is, also, a great time to expand our appreciation of nature by delving into what could become a deeper and more lasting satisfaction: the beauty of function and process.

Dr. Harold J. Brodie, in a fascinating book, FUNGI, DELIGHT OF CURIOSITY, challenges us to look for beauty in the unlikely area of molds and fungi. "When it comes to function and process and the intricacies of structure related to function, he who cannot find beauty in the drabest mushroom needs to look again, and look also to his own ability to perceive." This little volume of only 125 pages -- would it were 500 -- is one of the most interesting books I've read in recent years. In clear, easily understandable English, Dr. Brodie introduces us to some of nature's "unbelievables" that put Ripley to shame.

Take, for example, the sphere thrower, a tiny fungus seldom more than one-sixteenth of an inch across -- but what power! When the spore case ripens, this lowly fungus "hurls its tiny cannon-ball projectile to a distance of several hundred times as great as its own width" with six different layers of mycelia each making its own contribution.

How about a wild-west microscopic mold that with great agility springs a trap of its own design to catch eel worms from which it then absorbs the nutritious "innards." The whole trap consists of only three cells and the action takes only one-tenth of a second! Just an ugly old mold growing in the ground. We will never see it, but just knowing it's there makes the world a more interesting place.

And then there's the ever pervasive matter of sex. Scientists don't call it male and female in most fungi; they refer to "plus" and "minus" but don't be fooled, it's the same old game of "let's get together sometime." Consider the Laboulbeniales (sorry, no other name), molds so small that they grow on the bodies of insects -- a few species even on the bodies of mites! (Have you seen a mite recently?) There are several hundred species; some consist of only a dozen or so cells. But wouldn't you know, even these have male and female appendages.

Curl up with this book some winter evening. (The Hendersonville Library has a copy.) You won't be sorry. You'll surely gain a new appreciation for what is out in those woods we cherish, even if you never actually see a single specimen of Dr. Brodie's marvels.

Bill Verduin

WCBC EXHIBIT AT HENDERSONVILLE LIBRARY

During the month of December one of the cases inside the main entrance to the Hendersonville Library will contain an exhibit about WCBC featuring our shoulder patch and three major areas of activity: Exploration -- illustrated with maps, our calendar and field guides; Education -- including the slide program for Holmes State Forest, books and pamphlets; Preservation -- with information about endangered species. Live specimens will be changed frequently during the month. Many WCBC members participated under the leadership of Ken and Bessie Sinish: Dick Smith, Aline Hansens, Sam Childs, Harry Logan, Millie Pearson. This is a new type of activity for WCBC.

A BOTANICAL TIDBIT

Trillium grandiflorum seeds are dispersed by ants, according to research by Burton Gates in Worcester, Mass. Since his early observations were published on July 14, 1939, several species of ants have been observed carrying seeds of bloodroot, hepatica and bellworts. An oil substance attracts the ants. It is produced in a special flange on the margin of the seeds. The function of this structure, the Elaisome, had long puzzled botanists. Since the attractant has the odor of dead insects, several species of ants which are scavengers on dead insects are fooled and, in consequence, carry the seeds back to the nest where in years that follow they may germinate and start a cluster of new trilliums or bloodroots.

Miles Peelle

RAMBLINGS -- PEOPLE, PLANTS AND PLACES

On September 2, we reverted to our one-a-week hiking schedule. Sixteen hikes and two indoor programs from mid-August to mid-November made for an active time. An average of 18 persons enjoyed each hike and both indoor meetings were well attended. All trips were most interesting -- here are a few highlights.

TRESTLE GAP is our favorite annual hike -- we found tall thistle, turtlehead, sundew, green adder's mouth, green wood orchis, green-headed coneflower, mountain saxifrage, asters and many others in bloom -- eagles, harassed by ravens, were flying up on the mountain top as we ate our lunch below on the rocks, and blueberry picking as always gave visions of muffins and blueberry buckle. The rarer, white form of monkshood, the red morning glory, black knapweed, slender gerardia, liatris, tick trefoil and many other flowers were seen on SUGARLOAF MOUNTAIN -- remember the pony that nuzzled Miles Peelle every time he stopped to identify a flower and almost ate his straw hat? Many flowers were blooming on BLUE RIDGE PARKWAY WEST -- pink turtlehead, bottle gentian, grass-of-Parnassus, cross-leaved milkwort, three birds orchid, water hemlock, buttonweed, arrow-leaf tearthumb.

On a lovely new trail on the KANUGA CONFERENCE grounds we saw ragged robin, hairy golden aster, water horehound, hedge hyssop, elephant's foot, cudweed, pitcher plant, meadow beauty and others; the hike ended with the special hospitality of the Verduins at their home. SHERWOOD FOREST is an area which, after a rain, turned out to be a most interesting hike because of the great variety of mushrooms and Dr. Tish's expert help in identifying them -- along the way, monkey flower, small-flowered false hellebore, blue-stemmed goldenrod and other flowers were blooming.

PLEASANT RIDGE STATE PARK, SC, is an interesting area to explore -- we saw Aneilema keisak, a flower rare in the mountains, false boneset, arrow-leaf tearthumb, pencil flower, water shield, seedbox and others. OGLE MEADOW is a treasured hike mainly because of the spectacular views of most of the mountain ranges in this area -- stiff gentians were numerous in the fields, a few closed gentians, ten species of asters, nodding lady's tresses, wingstem and others -- no snow this time, Ben! RAVEN CLIFF FALLS OVERLOOK was a trail new to most of us and those who commented felt that, although it was strenuous in part, it was well worth the effort, particularly to see the beautiful waterfall. The only flowers in bloom were gentians (decora), white lettuce (Prenanthes), some aster cutissi, white snakeroot, goldenrod -- we also saw quite a few horse-sugar and some grape fern.

As usual, Frank and Calla Bell gave us a hearty welcome to GREEN COVE CAMP. On this rainy morning, they invited us indoors and Frank read a number of pieces, including one by Chief Seattle which is reprinted at the end of this report. After the rain stopped, he led us along the hemlock trail and, later, up the mountain to see the high rope equipment used in an outward-bound type of survival program at the camp. We had trouble visualizing ourselves walking along those ropes some 40 feet above ground. Trees were beautiful, especially the meta-sequoia and gingko, and there were some 25 flowers in bloom.

CHIMNEY ROCK is liked especially for its variety of areas -- a walk through apple orchards; in the forest to the rock outcropping from which there are lovely views; on the boardwalk built along one cliff; and finally on logging roads (mostly uphill) back to the cars -- had there been no fences on Exclamation Point at the top, we might have been blown right off the mountain, it was so windy! -- on the way we noted the wafer ash shrub or small tree in bloom, mock orange, thistle, cat's ear, witch-hazel, the marginal wood fern and the mountain woodsia fern, mountain mint, sundrops and others.

The two indoor meetings turned out to be very popular. It is always a joy to hear Charles Moore and a treat to see his slides and learn of the many special orchids here in Western North Carolina. Miles Peelle's presentation of slides, specimens and sketches and his discussion on Central Florida and its unique flora interested a great many people -- a teacher who can be most informative and yet add an enthusiasm which captivates all. Thus ends our latest reports.

Louise Foresman, Historian

CHIEF SEATTLE - at the forced sale of Indian land. (From Frank Bell)

How can you buy or sell the sky - the warmth of the land? The idea is strange to us. Yet we do not own the freshness of the air or the sparkle of the water. How can you buy them from us? Every part of this earth is sacred to my people. Every shining pine needle, every particle of sand, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people.

We know the white man does not understand this. The earth is not his brother, but his enemy, and when he has conquered it he moves on. He leaves his father's grave behind and does not care. He kidnaps the earth from his children. His father's grave and his children's birthright are forgotten. The sight of your cities pains the eye of the red man. But perhaps it is because the red man is a savage and does not understand. There is no quiet in the white man's cities. No place to hear the leaves of spring or a rustle of an insect's wings. But perhaps because I am a savage I do not understand; the clatter only seems to insult the ears. And what is there to life if a man cannot hear the lovely cry of a whippoorwill or the arguments of frogs around a pond at night? The Indian prefers the soft sound of a wind darting over the face of the pond, and the smell of a wind cleansed by a mid-day rain or scented with pinion pine. The air is precious to the red man. For all things share the same breath - the beasts, the tree, the man. The white man does not seem to notice the air he breathes.

The white man must treat the beasts of the land as his brothers. I am a savage and do not understand any other way. I have seen a thousand rotting buffaloes on the prairie left by white men who shot them from a passing train. I am a savage and do not understand how the smoking iron horse can be more important than the buffalo. What is man without the beasts? If the beasts were gone, man would die from great loneliness of spirit, for whatever happens to the beasts also happens to man. Whatever befalls the earth befalls the sons of earth. One thing we know which the white man may one day discover: Our God is the same God. You may think you own him as you wish to own the land. But you cannot. His compassion is equal for the red man as for the white: the earth is precious to Him. To harm the earth is to heap contempt on its creator. The whites too shall pass - perhaps sooner than the other tribes. Continue to contaminate your bed and one night you will suffocate in your waste. When the buffalo are slaughtered, the wild horses are tame, the secret corners of the forest, heavy with the scent of many men, and the view of the ripe hills blotted by falling wires - where is the thicket? Gone. Where is the eagle? Gone. We might understand if we knew what it was the white man dreams, what hope he describes to his children on long winter nights, what visions he burns into their minds so that they will wish for tomorrow. But we are savages. The white man's dreams are hidden from us. We will go our way if we agree it will be to secure the reservation you have promised. There perhaps we may live out our brief days as we wish. When the last red man has vanished from the earth and the memory is only the shadow of a cloud moving across the prairie, these shores and forests will still hold the spirits of my people, for they love this earth as the newborn child loves his mother's heartbeat. If we sell our land, love it as we've loved it. Care for it as we've cared for it. Hold in your mind the memory of the land as it is, when you take it, and with all your strength and might and heart preserve it for your children and love it as God loves us.

One thing we know though we are savages. Our God is the same God. The earth is precious to him. Even the white man is not exempt from his common ancestry.

S H O R T I A

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