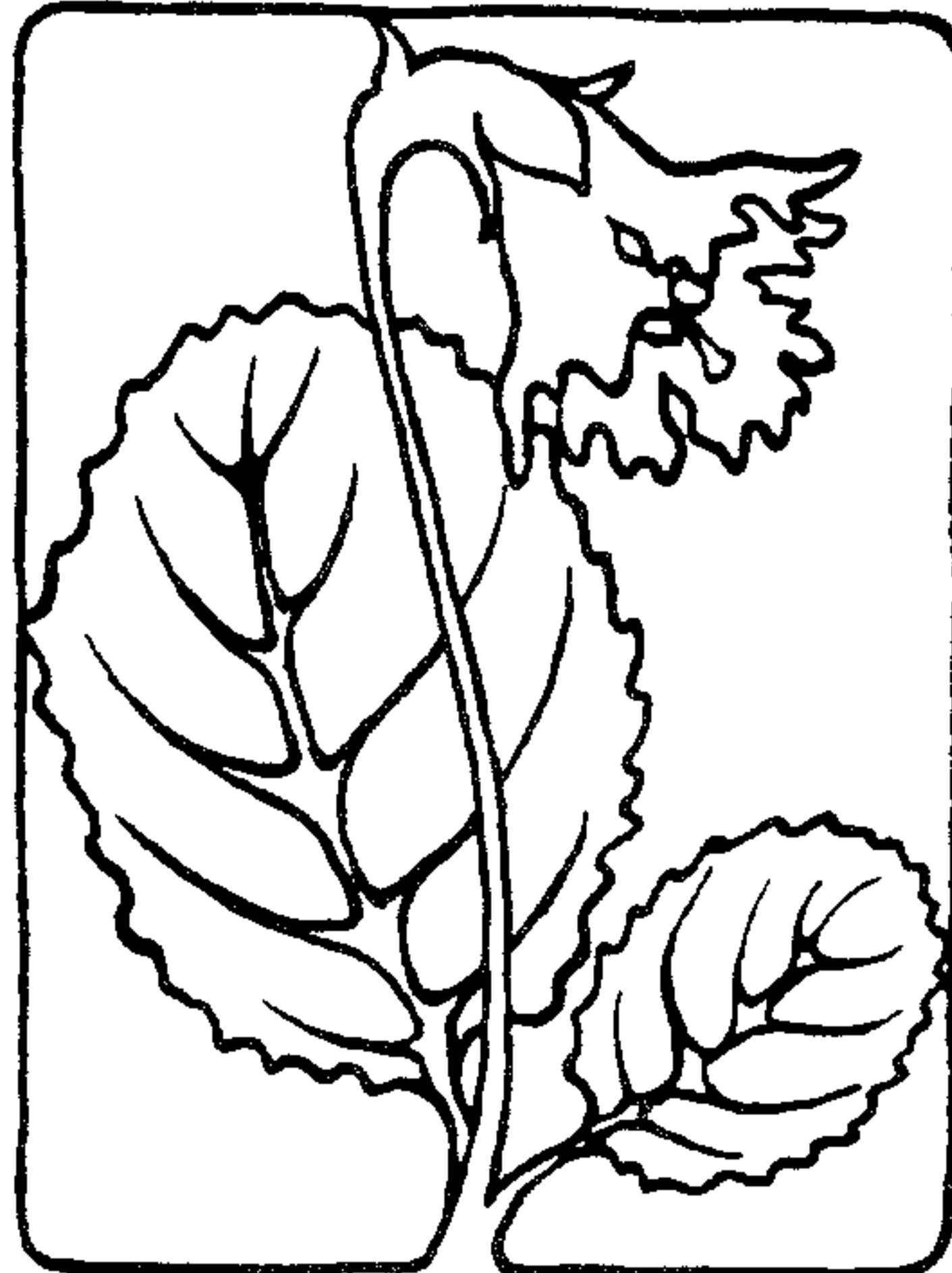


# SHORTIA

NEWSLETTER OF THE  
WESTERN CAROLINA BOTANICAL CLUB

AUTUMN 1991



BUD PEARSON, Editor

LEARNING THE FLOWERS

Can I tell the pleasure can I say anything  
That will tell you something of it  
The hard work the forgotten time  
The fulfillment the plain pleasure of knowing?

On any and many a spring day going out  
Into the forest the field spending much sun  
Much wind finding so many blooming colors  
Of things bringing them back

Then sitting in the darkening room with the light  
The lens the book and looking so back and forth  
And touching and seeing the shapes and the feels  
The colors the numbers of things on the table

The keys that unlock the descriptions that tell  
The names that are ringing the music my tongue  
Says them softly I write them all down and now  
Every color of flower has its name

The next time then walking abroad in the sun  
I am not alone though no person is near  
For friends I can speak to and call them by name  
Are growing and touching my feet and my eyes.

Norman H. Russell

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FROM THE PRESIDENT

A message

Bessie Sinish

The summer of 1991!

If you were aware of the range of the different shades of green, the deeper blues, pinks and yellows; the beauty and variety of colorful mushrooms springing up out of the deep dark earth; the misty quality of the world surrounding you - your life indeed was enriched by all this beauty - a gift of nature.

Nature, on the whole, has been kind to us living here on earth. Where-ever she has done damage - minimal or great - she has healed or is in the process of healing herself. One has only to see the revitalization of the volcanic torn area of Mt. St. Helens, the fire destroyed areas of Yosemite or coal fields of Pennsylvania to see her remarkable powers of self-healing.

An article in the summer edition of the North Carolina Conservancy gives information concerning our area: "Two hundred years ago, the North Carolina landscape was shaped and formed by natural processes. Fire raced across the land, deterred only by rivers, wetlands, and lakes. Rivers flowed freely, periodically flooding bottomland forests. Kudzu and Japanese honeysuckle did not grow in North Carolina. Two hundred years ago, natural lands were unfragmented by human use. Today, the natural processes that kept the native plant communities healthy have been removed. Exotic species that compete with our native plants for space, nutrients and pollinators have been introduced. North Carolina natives have inherited the good and the bad. The beautiful facets of this state's natural beauty is the result of, or in spite of the stewardship of our ancestors."

Recent research stresses the following conclusions:

1. Introduced species which are added to a natural ecological balance displace or at least change the natural ecosystem. When this occurs, the natives lose their natural habitat causing new habitats which lack the control factors and the exotic plants spread and begin to crowd out the native plants.

2. Introduced trees and bushes grow a few years but seldom reproduce. From the American Horticulturist Magazine: "Native trees and shrubs can be beautiful as any hybrid and will thrive in landscapes where imports languish."

3. With all the studies and experiments being conducted with seeds, in micropropagation, in growing "snippets" of plants in the test tubes, perhaps the serious problem will be reversed.

What can man do to preserve the natural beauty, in being the stewards for the future generation? We can;

1. Support the continuing ecological research, and
2. Observe the conditions under which native plants grow best, - one objective of field trips.

3. Be aware of organizations involved in conservation and become involved.

4. Visit arboretums and specialized gardens such as the fern garden in Atlanta.

5. In planning our own gardens and in home landscaping, use native plants. Learn their habitats, - this will include their range. And SEEK GUIDANCE. Native plants are already acclimated and grow without pampering.

May we all become stewards of our heritage.



RECORDERS REPORT.....ELTON J. HANSENS

Study of our WCBC plant lists is always interesting. How many species do we see in 3 months of field trips? How diverse are they? How many families and genera of plants are represented? These and other questions can be asked.

This quarter I examined our plant lists for 12 field trips as follows: 5/3 Holmes State Forest; 5/6 Jackson Park; 5/10 Pilot Mtn.; 5/13 Green Cove; 5/17 Big Laurel Creek; 5/24 Sugarloaf Mtn.; 5/27 Big Butt; 5/31 Buck Spring Nature Trail; 6/14 Soco Gap to Heintooga; 6/28 Mount Mitchell; 7/12 Bee Tree Gap; and 7/26 Bear Pen Gap/Haywood Gap.

The number of species ranged from 19 spring species on May 6 to 80 species of summer and early fall flowers on July 26. A composite list of the families, genera and species numbered 277 species. These species belong to 162 genera in 54 families--a very diverse flora, indeed.

During this quarter we also enjoyed a picnic at Holmes State Forest, an exciting trip to the University Botanical Gardens at Asheville, and cancelled the Carter's Creek Falls trip --- RAIN.

The Fern Walk at Holmes State Forest on 7/19 was special. Barbara Hallowell gave a superior lecture-demonstration of fern morphology and life history and showed examples of the more distinctive and common ferns. On the trail we tried identifying the 12 local species using the Hallowell "Fern Finder".

FIELD TRIP TIDBITS. At Holmes Forest on 5/3 yellow lady's slipper (Cypripedium calceolus) was found at 3 sites. On 5/10 on Pilot Mountain, the greatest display of pink shell azalea (Rhododendron vaseyi) in 5 years was waning. Even the slopes in Deep Gap were covered with pink shells.

Surprise! 'Twas a foggy, grey morning on a steep part of the trail--horses suddenly came charging down the trail, members flew in all directions and the incident was suddenly over, safely. Frank Bell's, 5/13.

Sleepy catchfly (Silene antirrhina) was found on 5/24 near Sugarloaf Mtn. The plant is often not noticed because of its small insignificant flowers. Big Butt, 5/27. Blue bead lily (Clintonia borealis) was the highlight of the trip. Four days later Catawba rhododendron, wood betony and bluets were abundant on the Buck Spring Lodge Nature Trail. Flame azalea and mountain laurel were spectacular at Plott Balsam on 6/14. By 7/12 Bee Tree Gap on the Parkway was a "riot of color"--masses of phlox and many other species.

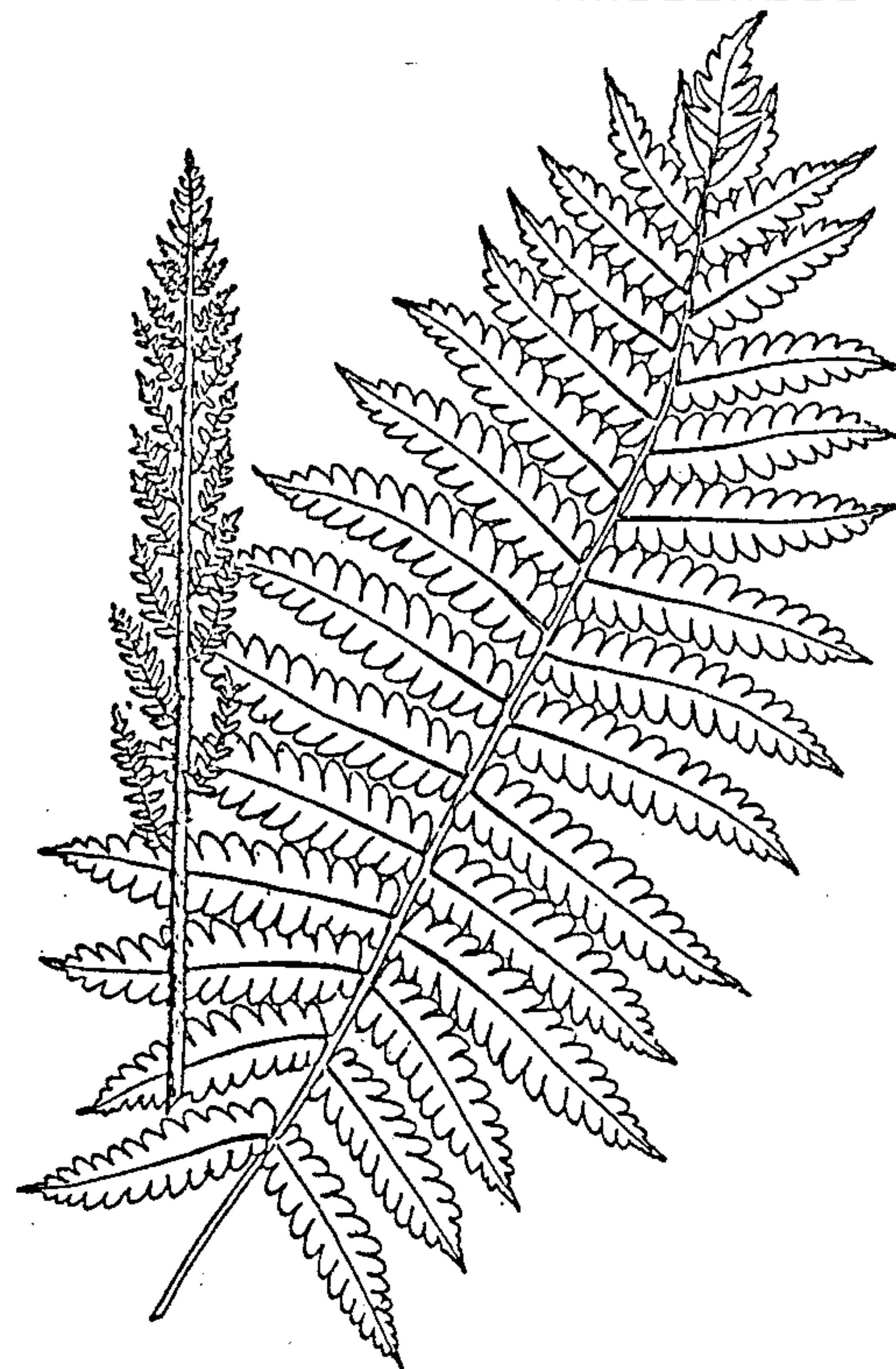
On 7/26 about a mile of steady climbing from Haywood Gap through evergreen forest brought one to an open meadow covered with great quantities of fly poison (Amianthemum muscaetoxicum) and many other flowers plus luscious blueberries. In the same general area we saw four other members of the Liliaceae----broad-leaved bunch flower (Melanthium hybridum), false hellebore (Veratrum viride), and feather fleece (Stenanthium gramineum) and bunch flower (Melanthium virginicum---an unusual opportunity to study the four in full bloom.

A SOMEWHAT DIFFERENT TOUCH OF FALL.....Barbara Hallowell

When people flock to the mountains to enjoy fall foliage, who thinks of ferns, especially ferns in autumn color? Yet cinnamon ferns sport one of autumn's brightest yellows--and it's common, too!

The dampish glens where these handsome ferns can stretch to five feet tall glow with sunny gold through several autumn weeks, challenging even the yellows of maples and tuliptrees. Then a rich, coppery tan creeps over the yellow, and finally, their annual effort expended, the leaves (fronds) turn brown and disintegrate into the leafy litter of the forest floor.

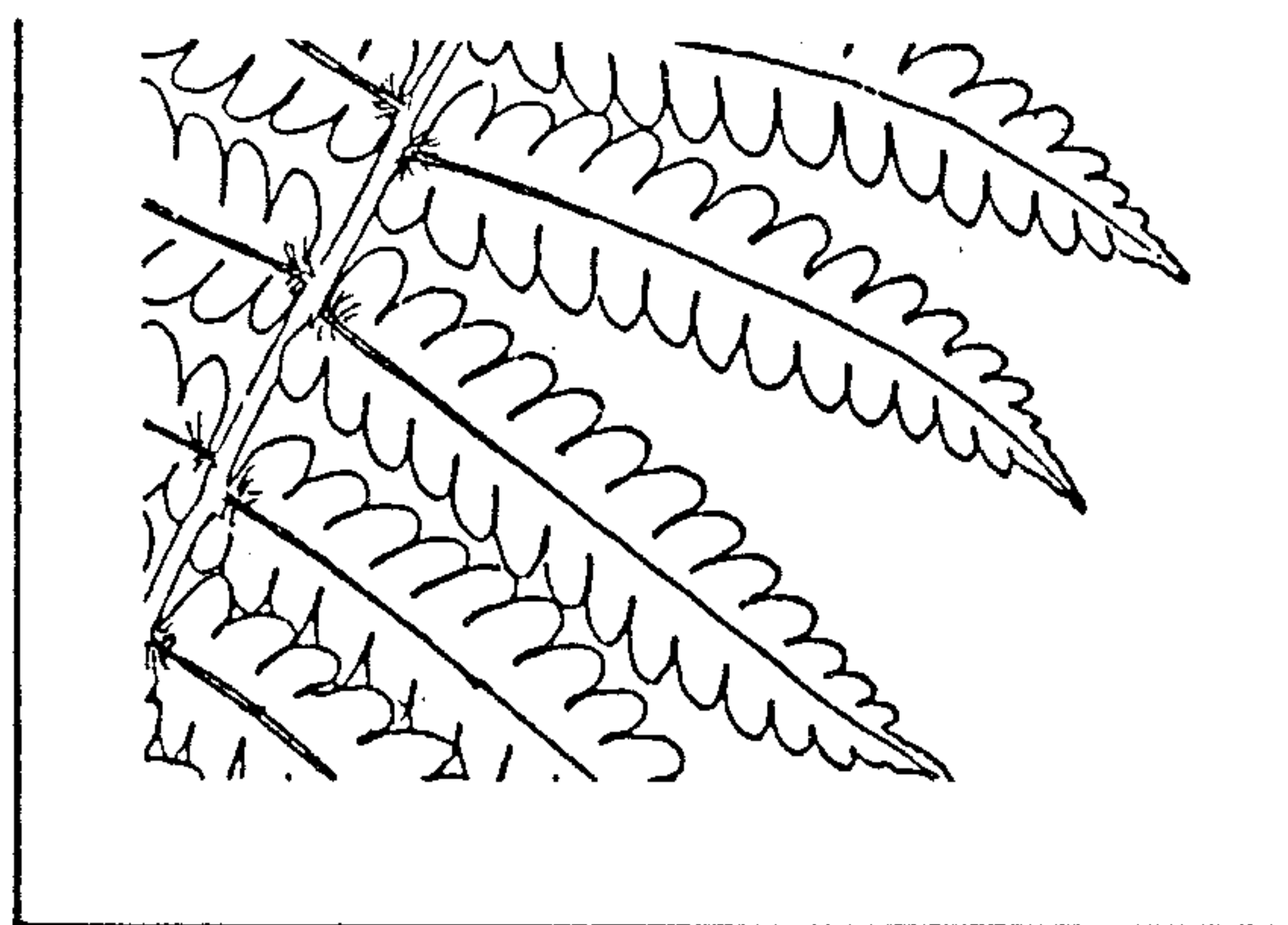
Why does this fern bear the odd name of "cinnamon?" When its fiddleheads and stalks push up in spring, a soft cinnamon-colored wool encloses them. That's reason enough, but there's a much better one.



The fern's fast-growing, spore-bearing stalks, laden with dense clusters of dark green spore cases, grow straight up in the center of a crown of graceful, slower-growing, leaf stalks. When ripe, the cases burst open, scattering dark green spores. The empty cases turn a superb, intense cinnamon color--and there's the name!

So, if you see a springtime crown of lush green fronds with cinnamon colored stalks in the center, you know it's cinnamon fern. But within just a few days, the fertile stalks wither and collapse to the ground or lie entangled in leaf stalks, difficult to find to assure identification. If you can't find them, what can you do to be sure it's really cinnamon fern?

Easy! Just turn the frond over & look closely at where the leaflets join the main stalk. Is a tuft of wool there?



If so, it's cinnamon fern. That tuft is a sure way to tell it from its cousin, the interrupted fern. Sterile fronds of each can look a lot alike. The tuft often disappears by the time the fronds turn yellow--but rest assured, those big ferny fellows that brighten our mountain forest floors with yellow have got to be cinnamon ferns!

Enjoy them!



## SEDGES, GRASSES, AND RUSHES

We don't give much time to grasses, sedges, and rushes on field trips. They are always present but there is little about them to attract much attention. Often they seem to provide an ignored background for other more attractive species. The distinction between these three categories are usually unimportant to the average person, troublesome to the biologists, and a scientific puzzlement for many professional botanist.

All three groups of plants generally have long, narrow, "grasslike" leaves; all three have tiny, nonshowy flowers, so that differences are not readily detected with the naked eye; and most all do best in wet or at least damp places. They are different enough, however, to be classified into separate families, with the rushes considered to be more closely related to members of the lily family than to either sedges or grasses.

Some general characteristics can be useful clues in distinguishing the three groups. The stem of sedges are often triangular and almost always solid, whereas the stems of grasses are usually round and hollow, and the stems of rushes are mostly round and solid.

The leaves of sedges are normally flat and arranged in three distinct rows on the stem. The leaves of grasses are normally flat or curved under the edges and arranged on two sides (two-ranked) of the stem. Rush leaves may be flat or cylindrical and hollow, and as in grasses, they are arranged along two sides of the stem.

In the rush family the male parts of the flowers, which produce pollen, and the female parts, which produce the eggs and ultimately the seeds, are surrounded by six tiny, usually greenish or brownish structures that botanists consider to be the equivalent to petals and sepals. A similar pattern is found in most members of the lily family, except that the petals and sepals are large and colorful, forming flowers attractive to pollinating insects. Rushes are pollinated by the wind, and their small, drab flowers are therefore no disadvantage. Their fruits (the developed ovaries and the seeds they contain) consist of small, dry capsules encasing many tiny seeds.

Grasses and sedges are also wind pollinated and have similarly drab flowers, usually greenish or brownish. But the male and female parts are not surrounded by six structures. In grasses, a pair of tiny structures usually enclose the male and female flower parts, at least for a while; in sedges, there is only a single accompanying structure. The seeds are born singly and never grouped inside capsules. In sedges, the developed ovary provides a thin coat over the seed and can be rubbed off, while grasses, the fruit (called a grain) consists of a seed fused with the surrounding ovary.

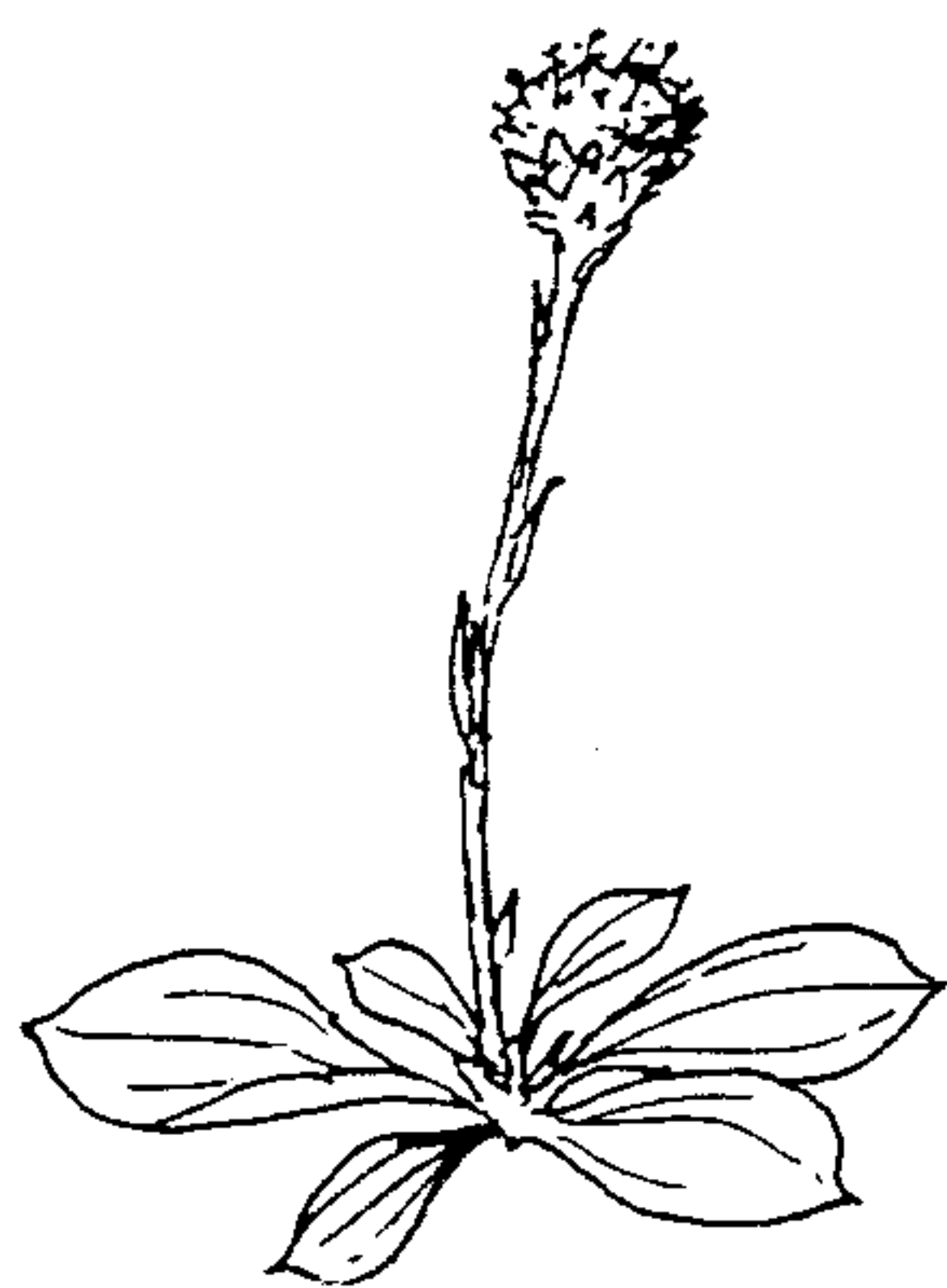
There are some 10,000 species of grasses (f. Gramineae) in the world, 4000 sedges (f. Cyperaceae) and 400 rushes (f. Juncaceae). These plants are worthy of more attention, since, in usefulness to man, grasses seem the most important family of the plant kingdom. With over 1,000 species in the United States, knowing the grasses might be a formidable undertaking.



# LOOK AGAIN !

In early spring, when showy blossoms are scarce, inconspicuous plants such as the rayless composites receive much more attention than they would later in the year.

Two common examples of this are to be found in the genus Antennaria. Solitary Pussytoes (A. solitaria) is unique in having but a single head of whitish flowers, unlike Plantain-leaved Pussytoes (A. plantaginifolia), which bears several in a compact cyme. Both species spread by means of stolons.



A. SOLITARIA



G. PURPUREUM



A. PLANTAGINIFOLIA

The season is shared by Purple Everlasting, Gnaphalium purpureum; in this genus the principal leaves occur along the stem instead of in a basal rosette. The heads are distributed in a narrow inflorescence and the involucrel bracts have a reddish purple tinge.

Our only other species, G. obtusifolium, does not come into flower until late summer. It is larger than the others, has off-white bracts, and because it is often dried for fragrant winter bouquets it is known as Sweet Everlasting.

*Dick Smith*

S H O R T I A

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FIRST CLASS

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