

The Kentucky Native Plant Society

NEWSLETTER: Vol. 2, No. 3, September 1987. Editor: Julian Campbell.

GINSENG--THE LEGENDARY HERB by Ron Jones

The generic name for ginseng is Panax, from the Greek word panacea, referring to the many curative powers attributed to the herb. The word ginseng is a derivative of jin-chen, a Chinese word for man-like, alluding to the shape of the roots. This resemblance indicated to ancient peoples that the herb could be used to treat various ailments of the body. This ancient belief, that the shape of a plant revealed its medical usage, is called the Doctrine of Signatures. The major species used by the Asiatic peoples is Panax ginseng, and there are several other species distributed through China, Japan, Korea and India. The North American species that is most similar to these Asiatic species is Panax quinquefolius, the American ginseng. These species are in the family Araliaceae, which also includes the Devil's Walking Stick (Aralia spinosa) and English Ivy (Hedera helix).

The American ginseng is a plant typical of moist, rich woodlands in the eastern United States. It is a perennial herb from a tuberous, branched taproot, with a single stem bearing a whorl of leaves, usually three, with each leaf divided into five toothed leaflets (see illustration below by Ann Rechten). The stem is topped with an umbel of greenish-white bisexual flowers, and the fruits are bright red berries. The plants flower in mid-summer and fruit in early fall. It is a slow grower, and may take 3-8 years to produce a root a marketable size.

The Chinese have used ginseng for thousands of years, and considered it to have nearly miraculous curative powers. A reference from the 2nd Century described it as a "tonic to the five viscera, quieting the spirits, establishing the soul, allaying fear, expelling evil effluvia, brightening the eye, opening up the heart, benefiting the understanding, and if taken for some time it will invigorate the body and prolong life" (1). It was also a favorite remedy for impotence, and was used as an aphrodisiac, and for treating anemia, atherosclerosis, diabetes, ulcers, and hypertension. The roots were eaten raw or dried in herbal preparations. They were also carried as sexual charms or worn in the shoes for warmth. By the 12th Century, ginseng was sold for near its weight in silver, indicating the increasing scarcity. Early efforts at cultivation were begun about this time in Korea. Ginseng was nearing extinction in some parts of Asia by the 19th Century, and collection was forbidden by royal decree in certain areas. By this time it was so expensive that its use was limited to the royal families and other high-ranking officials.

Ginseng was discovered in the New World by a Jesuit priest, Joseph Lafitau, around Montreal in 1715 (1). It was a herb known to the Indians and had numerous uses, including treatment for rheumatism, fevers, and the prevention of conception (2). As in Asia, the root was eaten either raw or dried, or brewed into a herbal tea. With the realization of the value of the plants, the Indians and early settlers began collecting the herb for sale overseas, and soon a thriving trade was established. A new character had emerged on the American scene, the "Sang Digger," and "sanging" became a profitable enterprise for many of the early settlers. Actually ginseng collecting was an important source of income for many struggling pioneer families, and sometimes made the difference in their financial success (3). To the Asians, the American ginseng was a somewhat inferior herb to their Asiatic varieties, but

still usable and therefore in demand. Over the last century, the plants have been heavily over-collected, causing the species to become very rare in some states. Sometimes large patches, 100's of years old, were totally harvested, yielding as much as 100 lbs of roots. As plants became more scarce, many efforts were made at cultivation, mostly unsuccessful. The successful growers were those that could best imitate the natural habitat of the plants.

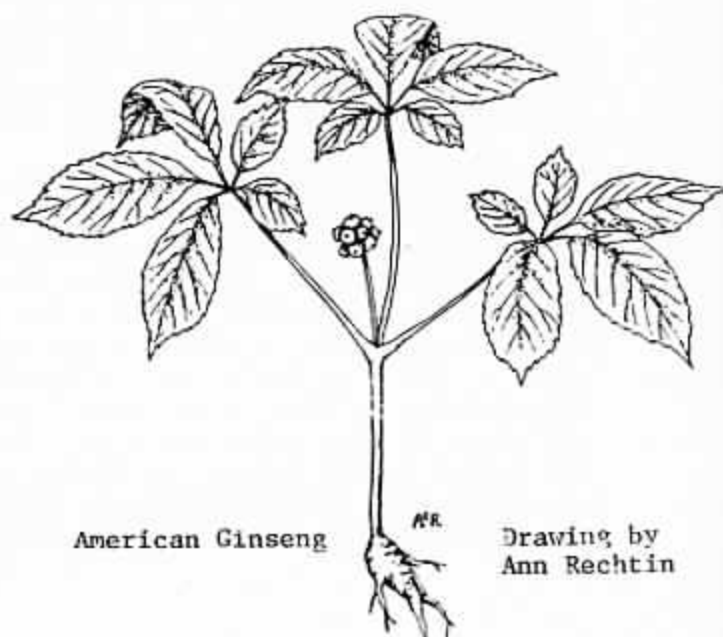
Today, the trade continues with both wild and cultivated stock, and the species is protected by state and federal guidelines. In some areas, it appears that the species is making a comeback in population numbers. The following information on the Kentucky ginseng program was obtained from the Kentucky Department of Agriculture. Kentucky is the number one state in the Union in ginseng production, totaling about 25,000 lbs/year. The harvest season is from August 15th to November 30th, and diggers are to remove seeds from collected plants and plant them in the vicinity of the parent. The current value of ginseng is \$125-140/lb for wild stock and \$25-30/lb for cultivated. Dealers must be certified with the state and must keep accurate records of their ginseng business. An on-going research program on ginseng propagation is being carried out by investigators at the University of Kentucky School of Agriculture.

The supposed curative properties of ginseng have long been scoffed at, and even considered worthless by some scientists. Modern research, however, indicates that ginseng should be considered as an "adaptogen" (4), allowing the body to adapt to certain stresses. Naturally occurring chemical compounds in ginseng appear to have a variety of effects, including stimulation of the circulatory and nervous systems, decrease of blood sugar, and increase of vitamin C levels. It seems to generally increase both mental and physical efficiency. Thus, although many of the reported qualities of ginseng are undoubtedly based on folklore and superstition, the long history of usage, as well as recent studies, show that ginseng does merit its reputation as one of the healing herbs of nature.

References:

1. Dixon, Pamela. 1976. Ginseng. Duckworth & Co. Ltd., London.
2. Krockmal, Arnold & Connie. 1973. A Field Guide to Medicinal Plants. Times Books, New York.
3. Gibbons, Euell. 1966. Stalking the Healthful Herbs. McKay Co. Inc., New York.
4. Spoerke, David. 1980. Herbal Medications. Woodbridge Press. Santa Barbara.

Editor's Note: this newsletter was prepared in record time under the influence of ginseng.



American Ginseng

Drawing by
Ann Rehtin

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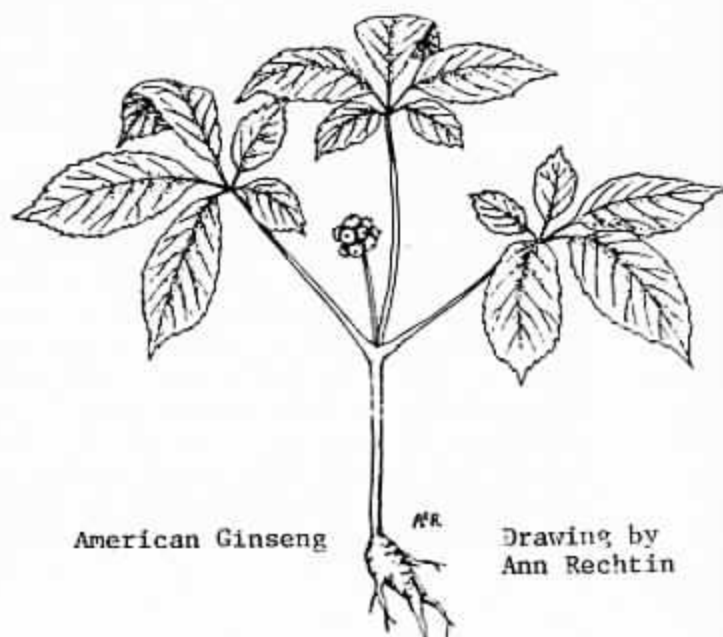
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FIELD TRIP SCHEDULE AND OTHER EVENTS

25-27th September (Friday-Sunday). KENTUCKY ENVIRONMENTAL EDUCATION CONFERENCE, MAMMOTH CAVE NATIONAL PARK. This event will feature many workshops, field trips, and music. The Native Plant Society will have a display. For more information, call Ann Seppenfield at 502-564-2672 or Sharon Ganci at 502-758-2251.

10th October (Saturday). NATURAL BRIDGE STATE PARK (Powell Co.). This is a Fall Wildflower Weekend organized by the State Park. Hal Bryan will lead a hike starting at 2 p.m. from the Nature Center in the Park. Also, he will give a slide show at 7 p.m.

16-18th October. PINE MOUNTAIN SETTLEMENT SCHOOL (Bell County). Fall Color Weekend, with many botanical activities and trips. Call:606-558-3571/3542.

17th October (Saturday). THE 'BIG WOODS', MAMMOTH CAVE NATIONAL PARK (Hart Co.). This field trip is one you won't want to miss. The Big Woods is possibly the largest and most impressive old-growth forest left in Kentucky. Though fairly easy to get to, this part of the National Park is 'off the beaten trail' and few people ever visit it. Park personnel will guide us into this remarkable forest, similar to what Kentucky's forest used to look like before settlement. This trip will coincide with the height of the fall color season, so the woods should look spectacular, if the weather cooperates. The hike will only be moderately strenuous, with no cliffs or steep grades to climb. Meet at 10.00 a.m. (CENTRAL TIME) in the Community Building Parking Lot in the Mammoth Cave National Park. When you get to the park, go to the visitor center and ask for directions to the Community Building. The hike will last several hours, so you may want to pack a lunch.

7th November (Saturday). SYMPOSIUM ON RARE PLANTS OF KENTUCKY, AT WESTERN KENTUCKY UNIVERSITY, BOWLING GREEN, sponsored by the Kentucky Academy of Science (this being part of their annual meeting) and the Native Plant Society. Chaired by Hal Bryan, the symposium will consist of short talks with slides, from 10-30 a.m. to 4 p.m., including a break for lunch and discussion at the end. There has never been a meeting like this before in Kentucky, and it will be an important event to stimulate interest in protecting the rarest members of our flora. The public is welcome. Also, there will be other talks on rare plants in the regular paper sessions at 8-9 a.m.

21 November (Saturday). FALL MEETING OF KNPS AT NATURAL BRIDGE STATE PARK.

SCHEDULE OF EVENTS: 10:00 AM--Place: Activity Center at NBSP

Program: Slide Show titled "Mixed Mesophytic Forest at Natural Bridge State Park: Trees, Shrubs, and Flowering Plants.

Speaker: Wilson Francis, Park Naturalist

11:00 AM--General Business Meeting of KNPS at Activity Center-- Discussion topics: field trips, special projects, membership drive, future activities, etc.

12:00 PM--Lunch at Lodge.

1:30 PM--Place: Meet at Hemlock Lodge, at front entrance.

Field Trip: Winter Botany Hike along original trail to Natural Bridge, with emphasis on identification of woody plants by twig, bark, and fruit characters. Return along Balanced Rock Trail.

(In the event of bad weather a slide show on medicinal plants will be presented in the Activity Center.)

Hike will be led by Wilson Francis and Ron Jones.

PLEASE MARK ON YOUR
CALENDAR AND PLAN TO ATTEND!!!

FIELD TRIP REPORTS

O'Nan's Bend, Franklin County (25th April). At this dedicated Nature Preserve, with rich bottomland Western Mesophytic Forest, about 25 people came to picnic and enjoy a spectacular display of Blue-eyed Mary (Collinsia verna), Phlox divaricata, Jacob's Ladder (Polemonium reptans), water-leaf (Hydrophyllum appendiculatum), bent Trillium (T. flexipes), bluebells (Mertensia virginica), Jack-in-the-pulpit (Arisaema triloba), yellow poppy (Stylophorum diphyllum) and more, with the uncommon Synandra hispidula in bud. The endangered Arabis perstellata hung on to low cliffs above the main display.

Big Black Mountain, Harlan County (9th May). With another good turnout of about 25 people, all the promised plants were seen. In addition, at Castle Rock, the party discovered a population of the Canada mayflower (Maianthemum canadense), known at very few places elsewhere in the state. Also, on the next day, some people went on to discover a population of at least 200 whorled Pogonias (P. ophioglossoides) at Kingdom Come State Park.

Lilley Cornett Woods, Letcher County (16th May). With the biggest turnout of the year, 38 people toured the virgin forest on the long trail through Big Everridge Hollow. During this wet spring, the flora was lush, and at least 40 species were seen. Notable were the blankets of stonecrop (Sedum ternatum), pink lady-slipper (Cypripedium acaule), and several profusely flowering shrubs - alternate-leaved dogwood (Cornus alternifolia), pawpaw (Asimina triloba), flame azalea (Rhododendron calendulaceum), strawberry-bush (Euonymus americanus). No state rarities are known here, but the large trees and lack of disturbance makes this protected site one of the most important for conservation in Kentucky.

Boone County Cliffs (23rd May). Six devotees to the Bluegrass turned out for this hike on a beautiful spring day. The spring flora was in full swing, and goldenseal (Hydrastis canadensis) was observed. On the edge of the Bluegrass, this area has one of the best old-growth woods remaining in the region. We need more attention to what little remains of the natural vegetation in the Bluegrass.

Reelfoot Lake, Fulton County (6th June). Only 8 people made it to this swampy western border of the State. But those who did were rewarded with hardwoods bottoms, cypress swamps, and open water with the minute floating mosquito fern (Azolla caroliniana), featherfoil (Hottonia inflata) and the rare water willow (Decodon verticillatus). Such areas are being drained rapidly for farmland. On the way back, a search for the rare copper iris (I. fulva) was unsuccessful - apparently it had been eliminated by herbicides at one former roadside site.

Panther Glade Natural Area, Hardin County (11th July). We had an excellent field trip with about 25 people. We saw many interesting prairie and glade plants, such as purple coneflowers (Echinacea purpurea), Gaura, fever-few or wild quinine (Parthenium integrifolium), blazing star (Liatris), adder's tongue fern (Ophioglossum) and several rare species such as the white lady's slipper (Cypripedium candidum) and silky aster (A. sericeus). We also got to see scorpions hiding under rocks! On the way out of the glade, in the woods, we were lucky enough to walk into a small colony of crested coralroot orchid (Hexalectris spicata). After the field trip, many of us continued on to see a very rare plant in Kentucky, the royal catchfly (Silene regia). Marc Evans.

Carter Caves State Park, Carter County (22nd August). With about 15 people, plus a few Park guests, the group saw the most important rare plants in this area of limestone caves and cliffs - mountain maple (Acer spicatum), Canadian yew (Taxus canadensis), cliff-green or mountain-lover (Paxistima canbyi), and Viola walteri. Also, about 15 species of fern were seen in the sandstone Box Canyon, including some spleenworts (Asplenium montanum, A. pinnatifidum).

KNPS WILDFLOWER SEED BANK: REMINDER

This is the perfect time of the year to collect seeds and share them with other members of the Society. So don't forget to send in your extra seeds to the KNPS Seed Bank. The address is: Patricia Haragan, Department of Agronomy, Herbarium Room A-4, Agricultural Science Building North, University of Kentucky, Lexington, KY 40546-0091.

NATURAL COMMUNITIES OF KENTUCKY: GLADES by Marc Evans*

A Natural Community is an assemblage of native plants and animals that are interrelated with each other and their environment. Natural Communities are usually differentiated based upon a number of criteria, including vegetation structure, indicative plant and animal species, soil moisture, geologic substrate and topographic position. Kentucky, because of its diverse topography, varied geology and geographic location, has a wide variety of Natural Communities. Some examples include Dry Upland Forest, Limestone Savanna, Wet Bottomland Forest, Forested Acid Seep, Mesic Prairie, Marsh and Swamp.

Glades are a little known, but unique, type of Natural Community in Kentucky. Basically, a glade is a naturally occurring open area where soil is usually thin or absent, and the underlying bedrock is near the surface of the ground. They can occur in perfectly flat areas or on slopes or crests of hills. Usually glades are dominated by a somewhat sparse cover of grasses and forbs, with trees and shrubs occurring only as scattered individuals or in woody 'islands'. In some respects, glades are similar to dry prairies and they share many characteristic species of plants. However, prairies usually occur on deeper soil with little influence from the underlying bedrock, they have a greater density of vegetation, and they require periodic fires to maintain their integrity and to control encroachment by trees and shrubs. Glades often grade into more prairie-like areas where the soil deepens.

Glades, by their open exposed nature, are subject to extremes in environmental conditions. They are often wet to saturated from winter through spring, then dry and dessicated during summer and fall. In winter, glades experience rapid warming and freezing during the days and nights. This causes repeated frost upheavals of the shallow soil, which can have a profound effect on the vegetation. In summer, the intense solar radiation literally bakes the exposed surface, creating desert-like conditions. Despite the harsh environment, many species adapted to extreme conditions live and flourish in glades. Gnarled and stunted red cedar, post oak and blackjack oak trees are usually scattered throughout the glade, creating an aesthetically pleasing park-like landscape. Depending upon the time of year, many showy and unique wildflowers grace a glade. Among the many species that can commonly be found in glades, there are purple coneflower (*Echinacea purpurea*), yellow coneflower (*Ratibida pinnata*), hoary puccoon (*Lithospermum canescens*), downy phlox (*P. pilosa*), rattlesnake master (*Eryngium yuccifolium*), false dragonhead (*Physostegia virginiana*), *Gaura biennis*, rosinweed (*Grindelia squarrosa*), prairie dock (*Silphium terebinthinaceum*), and several kinds of blazing star (*Liatris*), milkweeds (*Asclepias*), sunflowers (*Helianthus*) and *Aster*. Grasses such as little bluestem (*Andropogon scoparius*), big bluestem (*A. gerardi*), Indian grass (*Sorghastrum nutans*) and dropseed (*Sporobolus asper*) often carpet a glade and are also quite beautiful, especially in summer, when they flower and fruit, and in fall, when they turn many shades of orange, rust and yellow.

In addition to the more common plants, many of Kentucky's rare or endangered species are found in glades. At least two species, Short's goldenrod (*Solidago shortii*) and a glade cress (*Leavenworthia exigua* var. *laciniata*), are endemic to Kentucky - found nowhere else in the world. Other rare plants more or less restricted to glades in Kentucky include Gattinger's lobelia (*L. gattingeri*), prairie gentian (*Gentiana puberula*), Great Plains ladies' tresses (*Spiranthes magnicamporum*), white lady-slipper (*Cyripedium candidum*), Eggleston's violet (*Viola egglestonii*), silky aster (*A. sericeus*), side-oats gramma (*Bouteloua curtipendula*), pale corydalis (*C. sempervirens*), Butler's quillwort (*Isoetes butleri*), Carolina larkspur (*Delphinium carolinianum*), fame flower (*Talinum teretifolium*) and many others.

Glades are scattered throughout much of Kentucky, but they are never abundant and usually rare. They are relatively small, ranging, from less than 0.2 acres up to 10 acres. Technically, any exposed rock or rocky opening can be called a glade, but small outcrops or openings rarely develop the distinctive flora of a true glade. An opening has to be large enough to prevent any surrounding trees from shading the area. Sometimes several glade openings occur in close proximity to each other, forming a glade complex. In Kentucky, there are basically two types of glade, differentiated by their underlying bedrock - limestone and sandstone. They share certain features, but they have different species composition and character. Also, because glades are often isolated from each other, individual glades can vary considerably in species composition, even on the same rock type.

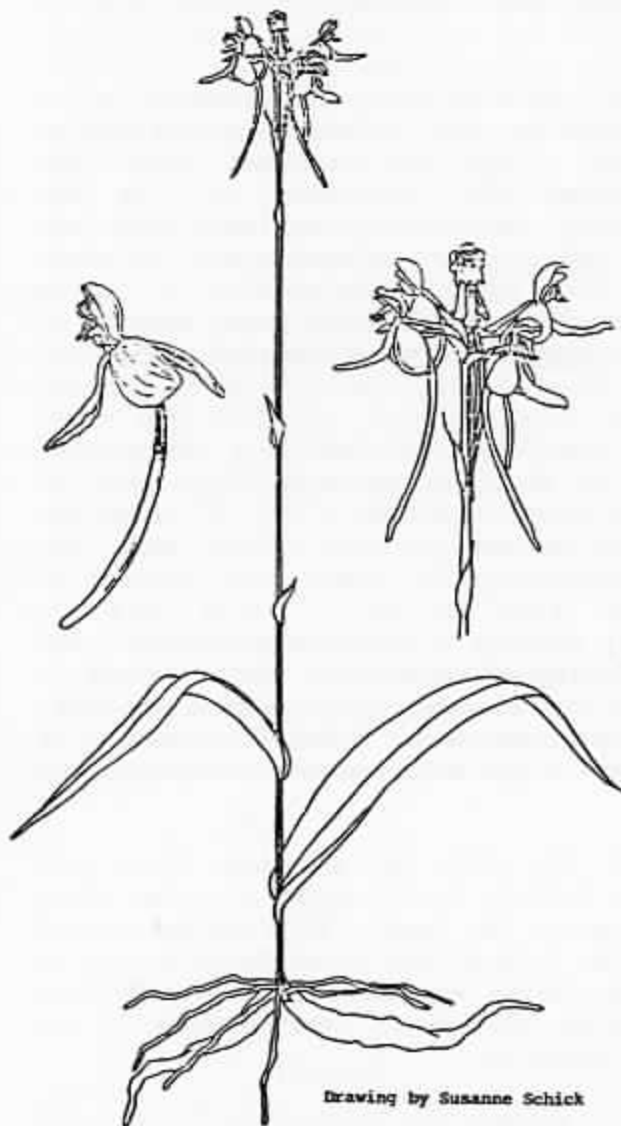
Limestone glades occur in parts of the Mississippian Plateaus (Pennyroyal Region), the Knobs, the Outer Bluegrass and the Shawnee Hills of western Kentucky. Many types of limestone occur in Kentucky, and each supports a distinctive glade community. One special example is the dolomitic limestone glade type that occurs mainly in parts of Bullitt and Jefferson County. Sandstone glades, which are not well documented in Kentucky, occur in the rugged cliff section of the Cumberland Plateau and in more hilly sections of the Shawnee Hills. These glades often occur on massive, nearly level outcrops of solid sandstone, usually along the top of a cliff or ridge. They are often covered in part by extensive mats of lichens and mosses, which are the only plants that can colonize the expanses of bare rock.

Though not well known by most people, glades are a rare and unique part of Kentucky's natural heritage. They add considerably to Kentucky's natural diversity, being home to many rare species. Many have been destroyed since settlement, and most of those remaining have been severely impacted through human activities. It is important to preserve the few remaining high quality glades before they are gone forever. Hopefully, with a little help from people who care, organizations like the Nature Conservancy and the Kentucky Nature Preserves Commission can protect at least a few of the best remaining glades to pass on to future generations.

* If anyone reading this knows of any natural, rocky open areas that appear to have native prairie-like vegetation, I would appreciate hearing from you. I can be contacted at the Kentucky Nature Preserves Commission, 407 Broadway, Frankfort, Kentucky 40601. Thanks!

WHITE FRINGELESS ORCHID by Hal Bryan, Frankfort, Kentucky

White fringeless orchid, *Platanthera integrilabia*, is a rare resident of the streamside woodlands of Southern Appalachia. This is a conspicuous orchid that grows to about two feet in height and bears, in mid-August, 6 to 15 flowers one and half inches in size. It persists in isolated "islands" of habitat: shaded moist sphagnum bogs near the heads of streams draining sandstone-derived woodlands. The orchid is considered endangered in the Commonwealth by the Kentucky Academy of Science and the Nature Preserves Commission. It is also under status review by the U.S. Fish and Wildlife Service for possible listing as a federally endangered species. Unlike most orchids which bloom in full sun or woodland openings, white fringeless orchid usually flowers in the deep shade of late summer under such light limiting trees as beech and red maple. The large flowers suggest its other common name of monkey-face.



Drawing by Susanne Schick

Platanthera integrilabia

Until very recently this beautiful species was thought to be possibly extirpated from the state. The last collections in the wild were from the 1940s in McCreary County. The original specimens that were used to describe the species were collected near Witley City and hundreds of plants were sent to museums as isotypes. Perhaps overcollecting led to a demise of this orchid in Kentucky, but such human activities as hoglots, construction operations and drainage projects have destroyed much of this already uncommon bog habitat. This past summer, three isolated populations of white fringeless orchids were discovered in McCreary and Pulaski Counties by biologists working in the Daniel Boone National Forest. The largest of these populations includes a few hundred plants, of which about 40 flowered this year. Another large population, with about 200 hundred plants, occurs in a Tennessee bog. Usually only a small percentage of a population flowers in a season. Since this remarkable orchid is one of the rarest species in the orchid family in Eastern North America, it is very susceptible to extinction caused by overcollecting. Its populations have been decreased by zealous botanists, wildflower gardeners and commercial collectors. Every effort should be made to find and preserve its restricted habitat, and to avoid digging or collecting from its few known sites. With these special considerations, it should remain as part of our natural heritage for future generations.

LOOKING AT GRASSES by Jim Conrad, Rt. 1, Box 21, Calhoun KY 42327

Once you've learned your local wildflowers, trees and ferns, even the rare ones, then what? Here's one answer. Take a look at grasses.

For grass-looking, you need three items that usually the general wildflower-, tree- or fern-looker may be able to do without. First, you need a hand lens, or jeweler's loop--one of those powerful little double-lensed magnifying glasses. At jewelry stores, they cost \$20 or more, but sometimes I've bought them as parts of toy-store detective kits for less than \$3, and that way I get a false mustache and badge, to boot. I made my present hand lens by gluing together the two ocular lenses scavenged from some discarded binoculars.

Second, by "grass-looking", we mean "grass identifications, and, possibly, grass collection and species mapping." For identification you need a special kind of book. The usual big manuals and floras will help, but for beginners and folks who don't want to invest too much money, I recommend How to Know the Grasses by R.W. Pohl. This is one of the "Pictured Key Nature Series" published by Wm.C. Brown Company Publishers of Dubuque, Iowa. College bookstores usually stock this series.

The third thing you need for grass study (the science of grasses is called agrostology) is a certain frame of mind. Serious grass-looking requires a more technical, methodical, self-disciplined, finessful approach than the page-flipping, illustration-matching technique that sometimes suffices for wildflowers, trees and ferns. For one thing, you'll need to learn some new terms. Words like glume, palea, lemma and pulvinus are all-important in grass study. Happily, you can teach yourself these terms quite readily by taking advantage of the glossary in whatever book you're using, or the grass section of a general botany text. How to Know the Grasses makes a special effort to illustrate difficult concepts.

Inevitably, grass-identification books use "keys." A key is a written-out system of questions that leads you, step by step, to an identification. You answer one question and it sends you to FF, for instance. Then FF asks you another question and your answer sends you to another part of the key. You just keep inch-worming through the key until the point comes when instead of being sent elsewhere, a name is provided. Keys can be a little hard for beginners. They ask very precise questions, usually of a technical nature, and one wrong reply can ruin you. No mind-wandering or forgetting where you are is permissible. But, here's the thing: keying out plants can be a kind of yoga. Keying thrusts your mind into regions that you never dreamed existed. By focusing so intensely on the exact qualities of the most recondite matters, you can escape every-day humdrum...

What's it like working with grasses? To give you an idea, I've just stepped outside my study here in Calhoun (in McClean County about 20 miles south of Owensboro) and collected a grass growing in the lawn. It's called annual bluegrass, or Poa annua. This is a species naturalized from Eurasia and is found in more or less weedy situations from Alaska and Newfoundland to Mexico. It's smaller and more fragile than Kentucky bluegrass. Take a look at my drawings of annual bluegrass and let's talk about it.

First of all, look at the spikelet. In nature the whole spikelet is only about an 1/8-inch long. Each of the spikelet's five florets is itself a flower. At certain periods of time, each floret has its own pollen-producing stamens, and fuzzy, pollen-receiving stigma. Each floret will produce a seed, or grain. Annual bluegrass is such a humble little being that one might imagine it to be

so characterless that not much could be said about it. Well, let me point out just a few of its more important distinguishing traits.

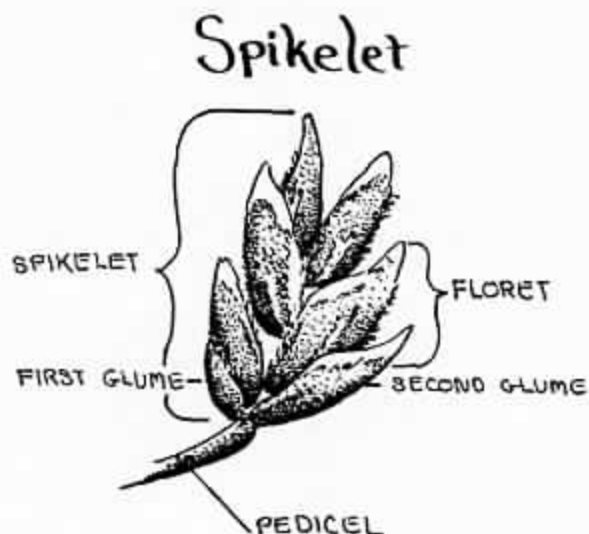
Above the glumes are more than one floret (many species have only one, or many more than five); each floret has five hairy ribs on it; no awns (needle-like things) are on the florets or glumes; the florets' greenness does not extend to the edges of the outer bracts (they have "scarious-margined lemmas"); the florets' outer sides are shaped like the sharp bottom of a sleek yacht, not squashed and bulging like a super-tanker's keel; no cobwebby tufts of white hair are at the florets' base (as you DO find in Kentucky bluegrass), and; the plant has no rhizomes (as Kentucky bluegrass does have).

Well, you get the picture. Even modest little annual bluegrass may be absolutely charismatic if you look at it discerningly, analytically, open-mindedly and lovingly.

I have three main reasons for writing about grasses now. First, late summer and fall is THE season for looking at grasses. By then most species have produced well formed spikelets which you need for good determinations. Second, grasses make fine subjects for collecting, mainly because they're so dry. You can simply collect most species, place between newspaper sheets, and then press them under some books, and they'll keep for years. Do that with a fleshy wildflower and you'll end up with a lot of mold. Finally, most average wildflower lovers simply ignore the grasses, so grasses are not well collected and studied in our state. If you want to do some serious collecting and maybe even some publishing, the grasses would be an easy way to begin, your help would be appreciated, and the time to begin work is now.

Most of my fun with grasses has been in finding those species that are "relict" from the prairies that once existed along the Mississippi Plateau Region of Western Kentucky (around Bowling Green). It's always a pleasure to find big bluestem, for instance—one of the principal grasses of the original tall-grass prairie. Sometimes you find it in open areas in glades or along dry cliffs, or even along railroad tracks where mowers do the cropping instead of buffalo. In my own McClean County so far I've collected 54 grass species, which includes a dozen "panic-grasses," three blue grasses and four bentgrasses. And I feel as if only now am I getting to the interesting stage.

Yes, once you have a book to help you feel a little comfortable with grass identification, consider doing a "grass flora" for some understudied part of Kentucky. Drop your nearest professional botanist a letter describing your interests and he'll help you define a good project and maybe even eventually help you publish your findings!





KENTUCKY NATIVE PLANT SOCIETY
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KNPS MEMBERSHIP APPLICATION FORM
 (Please photocopy and pass on to prospective members)

The annual dues for 1987 are \$2.00 per member. New members joining now will receive a complete set of KNPS Newsletters for 1987. Please print or type in filling out the form, and indicate your general interests, especially if you would like to become personally involved in KNPS committee work.

Name _____

Committee and Project Interests:

Address _____

Field Trip Committee _____

City _____ State _____

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General interests and other comments:

Plant-Watch Network _____

Other activities _____

The Kentucky Native Plant Society was founded in 1986 as a botanical organization for all persons interested in the native flora and vegetation of the state. The goals of KNPS are to serve as a medium of information exchange, to promote conservation and education concerning native plants and plant communities, and to encourage botanical research in Kentucky. Membership dues are \$2.00 per year. The KNPS Newsletter is published quarterly (Feb., May, Aug., Nov.). Back issues are available at \$.50 each.