The Kentucky Native Plant Society

NEWSLETTER, Vol. 1, No. 2, May 1986. Editor: Julian Campbell.

A GREAT START FOR KNPS Ron Jones

In only six months, the KNPS has gone from an idea to an organization of over 300 members. This response has been very exciting and encouraging. Attendance at our initial activities has been surprisingly high, even overwhelming. On March 6th, our first annual Spring Meeting was attended by about 70 people - so many that we had to move to a larger room. Over 50 people showed up for the Jessamine Gorge hike on March 22nd - fortunately a number of guides were present also. On April 19th, in spite of rainy weather, about 40 people met in Mt. Washington for a cedar glade hike. The weather cleared up just long enough for the hike and a good time was had by all. We have thus had a very successful Spring, and the future looks good for the KNPS.

At the March 6th meeting, the proposed Bylaws were read and approved by the assembly. According to these Bylaws, the goals of the KNPS are as follows: to serve as a medium of fellowship and information exchange among Kentucky botanists, both amateur and professional; to promote conservation of native plants and natural plant communities in Kentucky; to promote public education in botanical science; and to encourage botanical research in Kentucky. All of the nominated officers, as listed in last newsletter, were elected at the meeting.

As the first President of the KNPS, I will work to direct the Society toward these goals. My objective is to develop the Society into a successful, state-wide organization, that provides frequent opportunities for members to meet and share their interests and information. For the immediate future, our major activity will be monthly field trips. We also plan to schedule seminars or workshops on various topics, such as woody plant identification or wildflower gardening. Our Bylaws call for a committee on "Conservation and Special Projects", which will formulate a plan of action for conservation-oriented activities. This committee has yet to be formed, and anyone interested in participating should let me know. Also, if you have ideas for the Newsletter or for possible field trips, please let us know. I cannot stress enough the importance of many people being involved in the planning and activities of the KNPS. It is a vital ingredient for a successful organization. The field trip schedule for Summer 1986 is given below. Included are two field trips in western Kentucky for our many members in that region. We are also planning an 'end of the summer' picnic and get-together for August 23rd at Natural Bridge State Park. There will be a variety of activities, and we hope that a great many people will be able to attend. The KNPS is off to a great start, and your continued support is very much needed and appreciated.

SPECIAL NOTE ON BYLAWS AND MEMBERSHIP LIST

A set of the KNPS Bylaws and a current membership list is available for our members. The list would be helpful to those who would like to car-pool to field trips, etc. If you would like a copy of either, send a stamped, self-addressed envelope to the return address on this newsletter.

FIELD TRIP SCHEDULE

NOTE: field trips are held rain or shine so come prepared. Additional suggestions for trip locations, and volunteer leaders, are welcome. Sites must be physically and legally accessible. Public lands are preferred; if private, prior permission must be obtained from the owner.

June 7th, Saturday: Bad Branch Gorge Nature Preserve. Meet at 10 a.m. in the parking lot of the Parkway Motel on Hwy 15, just before you get to Whitesburg, Letcher Co. (about 3.5 hours from Lexington). The hike will be moderately strenuous, about 2 miles round trip, with no steep climbs unless you want. Leader: Marc Evans (502-564-2886). See his article below.

Also on June 7th, Saturday: Murphey's Pond. Meeting place: Mayfield, KY, Hardee's Restaurant, at 8.00 a.m. CENTRAL TIME for breakfast or Fancy Farm, KY, School Building, at 9.00 a.m. Pond vegetation and surrounding bald cypress forests. Leader: Harold E. Eversmeyer (502-753-6505/762-6753).

July 19th, Saturday: Ballard Co. Wildlife Management Area. Meet at 10.00 a.m. CENTRAL TIME in parking lot of Days Inn Motel on Hwy 62 west of Paducah, McCracken Co., just east of I-24 (4-5 hours from Lexington). On Ohio River bottoms, with sloughs and swamps dominated by bald cypress and tupelo. Rare plants include sponge plant (*Limnobium spongia*), bladderwort (*Utricularia gibba*), *Cabomba caroliniana*, spider lily (*Hymenocallis occidentalis* and the smallest fern in the world - mosquito fern (*Azolla caroliniana*). Be prepared to get feet wet and muddy. Leader: Marc Evans.

August 23rd, Saturday. Natural Bridge State Park. Hikes and picnics.

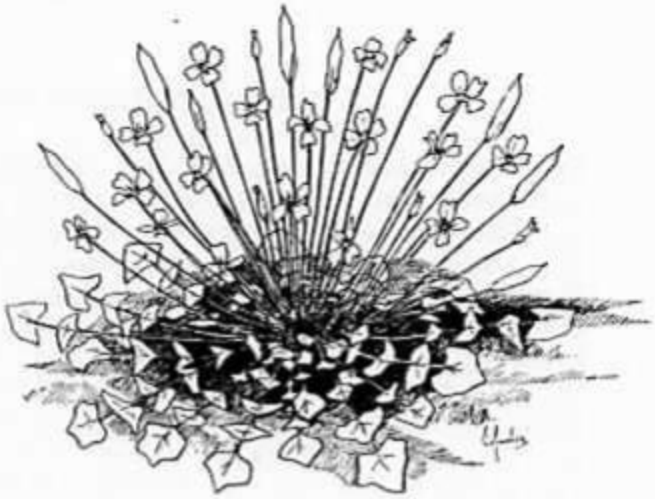
1 p.m. - Meet in Hoedown Island Parking Lot. Wilson Francis (Park Naturalist) will lead an easy to moderately rugged hike up to Natural Bridge to observe vegetation and rock formations of the area. Mark Evans (502-564-2886) will lead a rugged hike to Tight Holler, to observe virgin mixed mesophytic forest.

5 p.m. until late. Picnic supper at Picnic Shelter No. 1. (Head south from the parkway on HWY. 11, turn right at second entrance to park, then left just before bridge). Bring your own food and drink (but no alcohol). We can then have an informal discussion on future activities for the KNPS.

FIELD TRIP REPORTS

JESSAMINE GORGE (March 22nd). This was a pretty day and the early flowers were in good shape. The only problem was that my party, being more exploratory, encountered a steep slope by the creek, and some people with slippery shoes had to be helped along at a slow pace. We will try to warn people of such difficulties in the future! As well as the rare snow trillium (*T. nivale*), we saw the following flowers: purple cress (*Cardamine douglasii*), spring beauty (*Claytonia virginiana*), Dutchman's breeches (*Dicentra canadensis*), bloodroot (*Sanguinaria*), *Hepatica acutiloba*, twinleaf (*Jeffersonia*), toothwort (*Dentaria laciniata*), rue anemone (*Anemonella*), false rue anemone (*Isopyrum*). These are all whitish flowers, and the only blue we saw was bluebells (*Mertensia*), just beginning on the creek bottom. The predominance of white in the early spring flora seems to be a consistent pattern in this region. April flowers are more mixed, mostly blue. Has this got something to do with insects and their vision? I don't know of any research on this - does anyone have any information? About two weeks after this trip, some of us went further downstream and made some remarkable discoveries: *Pachystima canbyi* ("mountain lover"), *Viola walteri* (a creeping blue violet), *Schizachne purpurascens* (a grass), *Phlox bifida*, more snow trillium and *Cerastium arvense* (a native mouse-eared chickweed). These exceedingly rare plants in Kentucky make this gorge undoubtedly the best natural area in the Bluegrass. Reminder to further visitors: please secure permission with Hugh Archer (502-564-2886).

Snow trillium by Ann Rechtin



Glade cress by Cathy Justis

MT. WASHINGTON CEDAR GLADE (April 19th). Despite some rain, our spirits were high. This trip allowed some intensive study of the glade, which covers only about 15 acres. The most important plants we saw were cedar glade endemics: the cress - Leavenworthia uniflora, violet - V. egglestonii and St. John's Wort (Hypericum dolabriforme). Other uncommon plants of dry openings were little bluestem (Andropogon scoparius), a small sedge (Carex meadii), Agave virginica, Houstonia nigricans, hoary puccoon (Lithospermum canescens), winged elm (Ulmus alata), dwarf hackberry (Celtis tenuifolia), false pennyroyal (Isanthus brachiatus), prairie coneflower (Ratibida pinnata) and pale coneflower (Echinacea pallida). White prairie clover (Dalea candida) is also reported. Most are not yet flowering, and we hope to arrange a trip here in some future year during a later season.

GOING, GOING, GONE

Backbone Swamp, Franklin County; just NE of Frankfort, below the isolated hill called "Backbone". This patch of swampy forest was mostly ash, but with a nice group of old swamp white oaks and oak hybrids scattered about. It was the only site known in the Bluegrass with the soapwort gentian (G. saponaria) and southern blue flag (Iris shrevii). The white water-buttercup (R. longirostris) also occurred here. A complete study of the site was never finished. There are only about a dozen similar swampy forest patches left in the Bluegrass. This site was drained and logged last year. Will the rarer species still survive this year? Can they be rescued, and perhaps transplanted to similar sites or gardens?

Liberty Road glade, Fayette County; on the faulted Eden Shale, now zoned for warehouse development, etc., just NE of Liberty Rd. x New Circle Rd. This site is most intriguing, historically. It has the only downy sunflower (H. mollis) known in the Bluegrass, and the grass Aristida oligantha and ground cedar (Lycopodium flabelliforme), which are rare in the Bluegrass. Also, there are scattered scraps of cane (Arundinaria). The site is on, or close to, the original large buffalo road that settlers followed from the east. The sunflower probably is a relic from those primeval years when buffalo maintained some open areas suitable for prairie species like this attractive sunflower, still covering acre or so between red cedars. Can a patch of it be left for a little city park in memory of the wilderness? [The last solid acre of cane in Lexington, behind Wellington Drive, is said to have been ploughed up for bluegrass sod about 10-15 years ago. But the best two remaining patches of upland Bluegrass cane still survive at the edge of town, in forest. None is yet protected.]

BAD BRANCH NATURE PRESERVE by Marc Evans.

Bad Branch Gorge, Letcher Co., in extreme SE. Kentucky, is one of the best and most beautiful natural areas in the Commonwealth. It is home to many rare and endangered species, some found nowhere else in Kentucky. Tumbling down the south slope of Pine Mt., Bad Branch drops over 1000 ft. in less than 3 miles. The racing mountain torrent has cut a deep scenic gorge in its lower reaches, plunging over a majestic 60 foot waterfall. The gorge is surrounded by towering sandstone cliffs, and huge boulders are strewn along the course of the crystal clear stream. When visited in the early 1930's by Dr. E. Lucy Braun, an emminent forest ecologist and botanist, she described an undisturbed hemlock-mixed mesophytic forest here, with an incredible species diversity. During World War II, the forests of this region were logged, and the gorge was all but forgotten by biologists. When "rediscovered" in the 1970's, the forest was recovering well, surprisingly with most of the rarer plants. The slopes are dominated by tulip poplar, red maple, sweet and yellow birches, Fraser and bigleaf magnolias, etc. The stream banks are mostly shaded by hemlock and Rhododendron maximum. A diverse herbaceous flora flourishes in the moist protected environment, with the greatest concentration of rarities in Kentucky. These include some northern or high mountain plants that survive here due to the coolness. Examples are matricary grapefern (Botrychium matricariaefolium), Fraser's sedge (Cymophyllus fraseri), painted Trillium (undulatum), brook saxifrage (Boykninia aconitifolia), Michaux's saxifrage (Saxifraga michauxii), American burnet (Sanguisorba canadensis) and fetterbush (Leucothoe recurva). The fauna is also remarkably diverse, including several rare or endangered species. A very rare fish, the arrow darter (Etheostoma sagitta) is known only from Kentucky. Small mammals include the long-tailed shrew (Sorex dispar), pygmy shrew (Microsorex hoyi), masked shrew (Sorex cinereus), cloudland deermouse (Peromyscus maniculatus nubiterrae) and woodland jumping mouse (Naperzapus insignis). Only through the close cooperation of private organizations and state agencies could Bad Branch have the high measure of protection that it has today. It is now a State Nature Preserve, administered by the KY Nature Preserves Commission. The land was first purchased by the KY Chapter of the Nature Conservancy, an international non-profit organization. Much of the upper watershed is also protected by the Conservancy through management leases. In addition, a bill declaring Bad Branch part of the State Wild Rivers system was passed during the recent legislative session. KNPS will visit here on June 7th; see field trip schedule.

BOTANICAL HISTORY IN KENTUCKY: FRANCOIS ANDRE MICHAUX by Julian Campbell

F.A. Michaux (1770-1855) travelled with his father in America, and later, in 1802, made a special tour for the French Government to study agriculture and forestry in the U.S.A. Although he apparently left no botanical collections from that tour, he made several interesting observations in his journal (again published in the R.G. Thwaites series of 1904). Eventually, he also wrote three volumes of "The North American Sylva", with odd notes relevant to Kentucky (published in Paris, 1817-19).

He approached Kentucky in 1802 down the Ohio River, describing the great bottomland forests with admiration. The largest sycamore ("palm") he saw was on an island near Marietta, Ohio: 40 feet 4 inches in circumference (5 ft. above ground), previously measured nearly as large by General Washington himself. "I have also measured palms in Kentucky, but I never met with any

INSERT

LOGO CONTEST

The KNPS needs a logo to head the newsletter, for T-shirt designs, etc. We are therefore announcing a contest to find a logo for our Society. The prize will be Ferns and Fern Allies of Kentucky, by Ray Cranfill, or 5 years free membership in KNPS. Entries will be judged by a special committee appointed by the President and the winner will be announced at the Fall general meeting. All types of logos will be considered, such as illustrations of native plants, graphics symbolizing the society, etc. Rules are as follows:

1. Only KNPS members may enter contest.
2. No more than 3 entries per member.
3. All entries must be accompanied by a contest form.
4. Deadline for all entries will be September 1. 1986.

LOGO CONTEST FORM

Name: _____ Phone: _____

Address: _____

Number of entries: _____

Send to: Kathleen L. Jones
308-C Hounchell Dr.
Richmond, KY 40475 606/623-6494

REMINDERS

Please send in questionnaires from last newsletter.

The KNPS is calling for volunteers to work on committees. Please fill out the form below and indicate what committees you would like to work on.
CALL FOR NEW MEMBERS If you know of others interested in joining the KNPS please duplicate the form below for new members.

MEMBERSHIP/ACTIVITY FORM

New Member: _____ Current Member: _____

Name: _____ Phone: _____

Address: _____

below KNPS committees and programs that you would like to work on).

_____ Conservation/Special Projects _____ Newsletter/Communications

_____ Field trips/Programs Other, Please specify _____

Dues of $2.00 enclosed _____

above 15 or 16 ft...." The tulip poplar was next to sycamore in size, sometimes 15-18 ft. in circumference; "between Beard Town and Louisville we saw several parts of the wood which were exclusively composed of them. The soil is clayey, cold and marshy; but never inundated."

"At Alexandria [Ohio], and the other little towns in the western country, which are situated upon a very rich soil, the space between every house is almost entirely covered with [Datura] stramonium...Jamesweed [Jimsonweed]. Mullein is the second European plant that I found very abundant in the United States, although in a less proportion...It is very common on the road leading from Philadelphia to Lancaster, but less so past the town; and I saw no more of it beyond the Alleghany Mountains." This species is of course now common throughout the U.S.A. Few people made such early notes on the spread of exotics.

His description of the Barrens in mid-western Kentucky largely supports his father's (see last issue). He listed "the gerardia flava, or gall of the earth; the gnaphalium dioicum, or white plantain; and the rudbeckia [Echinacea] purpurea [purple coneflower].. summer grapes, the bunches as large, and the grapes of as good a quality as those in the vineyards round Paris.. quercus obtusiloba [stellata, post oak].. black oaks, or quercus nigra [velutina].. hickery.. small willows, about two feet high, salix longirostris [humilis], and a few shumacs.. gleditsia triacanthos [honey locust].." The settlers still set fire to the grass in March or April, much like the former natives, though the practice was "generally censured".

His Journal and Sylva also provide some general observations on trees and their soil preferences, which I am summarizing elsewhere. But his comments on cane are particularly interesting; "In all the fertile parts covered by the forests the soil is completely barren; no kind of herbage is seen except a few plants, scattered here and there; and the trees are always far enough apart that a stag may be seen 100 or 150 fathoms off. Prior to the Europeans settling, the whole of this space, now bare, was covered with a species of the great articulated reed, called arundinaria macrosperma, or cane, which is in the woods from three to four inches in diameter, and grows seven or eight feet high; but in the swamps that border the Mississippi it is upwards of twenty feet. Although it often freezes in Kentucky, from five to six degrees, for several days together, its foliage keeps always green, and does not appear to suffer by the cold." One of the factors destroying this species must surely have been hogs; "Of all the domestic animals hogs are the most numerous...These animals never leave the woods.." Another native plant that must have been suffering large declines then was ginseng, whose trade he details: "...there is not a single species of colonial produce in Kentucky, except ginseng, that will bear the expense of carriage by land...to Philadelphia."

Some odd comments on trees in his Sylva also deserve special mention. Shingle oak was "abundant only beyond the mountains [i.e., west of Alleghanies, etc.], and particularly near Washington Courthouse [KY] and in some [other] parts of Kentucky and Tennessee." He also stated that the largest mockernut hickory he saw in North America was near Lexington (over 20 inches in diameter). Under black ash, which is unknown in Kentucky, he made a curious statement: "Observation. Another lofty species of ash exists in Kentucky, which is also called black ash; but I am too imperfectly aquainted with it to attempt a description." This is one of several early records suggesting that a type of black ash did indeed exist here before settlement.

PROPOSED FEDERAL ENDANGERED SPECIES: BRAUN's ROCK CRESS. By Hal Bryan.

Arabis perstellata var. perstellata is a perennial member of the mustard family found only in a small area of central Kentucky, with about 15 locations in Franklin Co. and one each in S. Henry and S. Owen Cos. The plant is currently under status review by the U.S. Fish and Wildlife Service, for possible listing as a federally endangered or threatened species. It is considered endangered in Kentucky by the KY Academy of Science and the Nature Preserves Commission. The other variety of the species, var. ampla, was know from a very limited calcareous bluff system in Davidson Co., Tennessee, but it now may be extinct. Our plant was discovered and described in 1940 by E. Lucy Braun, based on specimens collected on the banks of Elkhorn Creek in Franklin Co., which was thought to be the entire range then. Thirty-seven years later, Stephen P. Rice (now KNPS member) rediscovered it in a wooded hollow near the Elkhorn. Susequent searches by biologists from Dept. of Transportation and Nature Preserves Comm. (on their own time) showed that the species was locally abundant on steep wooded hillsides around Frankfort, and downstream on cliffs of the Kentucky River and its tributaries, to just beyond the county line. However, much seemingly suitable habitat upstream is unoccupied. The plant usually flourishes best on limestone rock outcrops, with minimal competition, in mature, shady upland forest. Unlike the common smooth rock cress (A. laevigata) and sicklepod (A. canadensis), Braun's rock cress has more than one semi-erect flowering stems in spring, branching from near the base of an overwintering rossette. It is definitely perennial by a slowly elongating central axis. After several years, much of the central stem is decumbent and somewhat woody. The flowers are clustered near the end of the stem, about a quarter inch across, with four white petals (like other Cruciferae). The toothed rock-cress (A. dentata) is a close relative, often sympatric (occurring close together), but in floodplain woods. Braun's rockcress differs in its gray-green color and its minute stellate (star-shaped) hairs; toothed rock-cress has straight simple hairs. In some areas, abundant seedlings are produced in the fall, which overwinter and produce a rosette of leaves next spring. Observations indicate that this plant is fairly intolerant of competition from other herbaceous plants. Its only competitor on the limestone rock is early saxifrage (S. virginiensis). It also often occupies the bare ground around the bases of trees where local erosion has eliminated competition. Its diffuse root system allows it to persist in such shallow soil. Its limited distribution may be related to specific rock strata or to poor dispersal. Many seeds of the mustard family appear to be eaten and distributed by ants. There is a possibility that other sites exist downstream of Franfort. At present, the only protected population is in the Rock-Cress Natural Area of Franklin Co., registered by KY Nature Preserves Comm. and Nature Conservancy.

Braun's Rock Cress by Cathy Justis

TO COLLECT OR NOT TO COLLECT by Marc Evans

Today, many people collect plants for enjoyment, profit or research, but many species are becoming extinct. There is no longer an unlimited supply. It is no longer necessary for most of us to collect wild plants for survival. Collection is often done for scientific reasons. Many species can only be identified under a microscope. Collections are permanent records of distribution, needed to justify protection of rare species. Specimens collected long ago can be used to indicate changes, and may show that a species occurred in Kentucky, even if unknown now. Old specimens sometimes lead researchers back to specific sites, so that rare species are rediscovered. In certain cases, living wild plants are taken for research to use in conservation. Collecting for profit is carried out by people who scour the woods for showy wildflowers, like orchids and lilies, for sale to the nurseries. Some trees are collected in the wild, for sale to unsuspecting customers. Most plants can be propagated instead. It is best to obtain wildflowers from a reputable dealer, prooving that the plants are only nursery grown. It is also a good idea to get plants from dealers close to you, so that plants may already be adapted to the local climate. Valuable herbs, such as ginseng and goldenseal, are collected in large quantitites by some people. Even though these plants still occur in many counties of Kentucky, their populations have declined substantially, and they should not be collected in quantity any more. If some collecting is to be done, it should be in an ethical manner, only when the seeds are ripe. Seeds should then be carefully planted in the same vicinity, to help replace the mature plants being dug. Pharmaceutical companies and horticulturalists collect wild plants to investigate medicinial properties, new potential food sources, or potential genetic contribution to domesticated crops. These are valid reasons for collecting, only if they do not endanger a species. Collecting for any reason should be done with the utmost concern for the natural population. It does us no good, not to mention the species, to collect a plant to the point of extinction. There are genetic and moral reasons to ensure survival of all wild species. Recognizing the fact that people sometimes want or need to collect wild plants, the Plant Conservation Roundtable has developed a list of guidelines. This group is composed of botanists and conservationists from the U.S. Fish and Wildlife Service, Smithsonian, Nature Conservancy, World Wildlife Fund, American Horticultural Society, National Park Service, U.S.D.A., Natural Resources Defense Council, several native plant societies and university faculties.

(1) Never collect rare plants, except for conservation and related science. In general, collect only species that are widespread and locally abundant. If possible, identify the plant before you collect it, particularly if it is for transplant to a garden, and know whether the species is locally or nationally rare or protected. [You may obtain a copy of the "Endangered, Threatened, and Rare Plants of Kentucky" from the KY Nature Preserves Commision, 407 Broadway, Frankfort, KY 40601.]

(2) Avoid indiscriminant collecting in a population. Avoid repeated collecting or following other collectors. Never collect more than a small percentage of the plants. If a population is small, find a larger one. Never collect the last plant.

(3) Always inquire first about permits to collect on public lands, and obtain permission from landowners on private lands.

(4) For classroom use, collect only portions of the plant necessary for identification. Only visit non-sensitive areas and take care not to trample the site. Instill these ethics in your students.

KENTUCKY NATIVE PLANT SOCIETY

Department of Biological Sciences

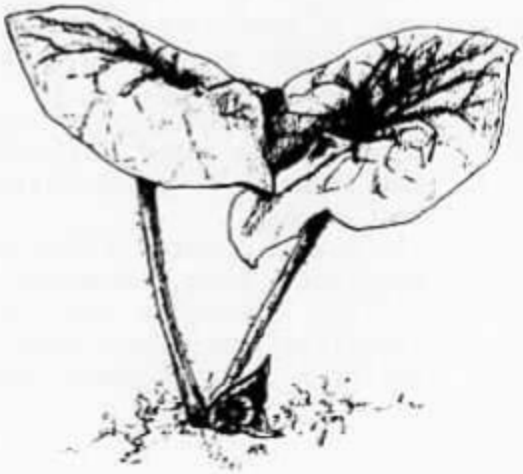
Eastern Kentucky University

Richmond, Kentucky 40475

MEDICINAL AND FOOD PLANTS OF KENTUCKY

Wild Ginger (Asarum canadense)

Wild ginger is a member of the Birthwort Family (Aristolochiaceae). It is an attractive, spring-flowering, perennial herb of rich woods. The two leaves are heart-shaped and hairy, and arise from a slender rhizome. The single flower is purplish-brown, with 3 sepals, no petals, 12 stamens, and a 6-celled, inferior ovary. The fruit is a capsule. Early settlers used the ground up rhizome as a subsitute for commercial ginger (which is unrelated). The powdered or candied rhizome has also been used as a cure for flatulence. As the old saying goes--"when stomach troubles cause a toot, just take a nip of ginger root."



R.J.