THE KENTUCKY NATIVE PLANT SOCIETY NEWSLETTER
Vol.1, No. 1, February 1986. Editor: Julian Campbell

WELCOME TO THE KENTUCKY NATIVE PLANT SOCIETY by Ron Jones

Our new organization is off to a good start. We have more than 130 members, and new memberships are arriving daily. A spring business meeting has been scheduled, and a series of field trips are planned for the spring, as detailed in this newsletter. Many have written that they are very excited about the prospects of a native plant society for Kentucky, and can hardly wait to get involved. The members have expressed many different interests, but the common tie is the desire to learn about and protect our native plants and plant communities. There are many activities that our group could become involved with, and it is hoped that many of the members will volunteer their services in working towards the goals of the society.

There have been active native plant societies in nearby states for years, and Kentucky is long overdue for such an organization. The first meeting to discuss this need was held at Morehead State University on November 9th, 1985, as part of the Botany and Microbiology Sectional Meeting of the Kentucky Academy of Science. The meeting was called by Ron Jones and Ralph Thompson, Sectional Officers, and was attended by about 25 people. All agreed that a native plant society for the state was a good idea, and that we should proceed with organization. I was named Temporary Chairman, and the following people volunteered for committee work - Carol Baskin, Pat Dalton, Hal Bryan, Marc Evans, Willem Meijer, Julian Campbell and Harold Eversmeyer. A call for membership was mailed on November 21st, and again on December 11th. Committee meetings were held on December 4th, January 13th and January 30th, in order to develop bylaws, to arrange a field trip schedule, make officer nominations, and draft this newsletter. It has been a busy winter for all involved, and we now look forward to our spring meeting with eager anticipation.

Please mark the date, March 6th, on your calendar. This is the date of our first annual Spring Meeting, and it is very important that we have good attendance. The proposed bylaws will be discussed and presented to the assembly for adoption. Also on the agenda is the election of permanent officers. A slate of officers prepared by the nominating committee will be presented, and additional nominations may be made from the floor. There will be opportunities for discussions on the future interests of the Society, and to register your individual interests and hopes for the group. In addition, a talk on the wild orchids of Kentucky, with slides, will be presented by John MacGregor, State Non-game Biologist. After this meeting, the major initial activity of our Society will be monthly field trips, and it is hoped that each trip will offer exciting educational and recreational experiences for the members. We will try to have some trips in distant parts of the State so that all members will have opportunities to participate. We plan to issue the newsletter at three month intervals, announcing the general meeeting and field trips for the subsequent period.

This is your organization, and your help is needed for the Society to be a success. If you like to write, draw, photograph or organize, then you could help out with the newsletter or with committee work. If you know of plant communities that are threatened and need protection, let us know. Make suggestions for field trips, distribute forms for new members, and so on - there are many possibilities. A survey form on membership interests and activities is enclosed - please fill it out

and return it by the indicated date. We would like to get a lot of people involved, because we can then get more done, and, after all, its more fun that way. We are organizing at a time when there is increasing interest and concern about our native plants and other natural resources. It is a time of increasing threats from many fronts. There are other hard-working conservation groups in Kentucky, and perhaps we can work in association with these groups to accomplish our goals. There is a great deal of work to do, and much to learn about the rich and varied plant life of Kentucky. We are happy, and fortunate, that there are so many people in the state that share our interests. It is with very great pleasure that we look forward to the spring, to seeing new places and new plants, to meeting new people and old friends, and to making new friends. Let's all work together, and we will make a great success of the Kentucky Native Plant Society.

NOMINATIONS FOR OFFICERS

From the nominations committee, chaired by Carol Baskin. At the general meeting (March 6th), the following nominations will be considered, with any additions from the floor, then voted upon.
President: Ron Jones (Associate Professor, Biology Department, Eastern Kentucky University, teaching General Botany, Plant Systematics, Dendrology, Aquatic Plants).
Vice President: Marc Evans (Botanist at the Kentucky Nature Preserves Commission, Frankfort).
Secretary: Patricia Dalton (Curator of the Herbarium, College of Agriculture, University of Kentucky).
Treasurer: Kathleen Lutz Jones (Wildlife Biologist and Environmental Education Instructor at Raven Run Nature Reserve near Lexington).
Directors: Harold E. Eversmeyer (Botanist, Professor in Department of Biology, Murray State University); Jerry M. Baskin (Plant Ecologist, Professor in School of Biological Sciences, University of Kentucky); Hal Bryan (Biologist in Division of Environmental Analysis, Department of Transportation, Frankfort); Richard Cassell (Amateur botanist from Louisville, active in Kentucky Natural History Society).

SOCIETY CALENDAR, MARCH TO MAY 1986

Further information on the following schedule, and detailed plans, can be got from Marc Evans (Nature Preserves Commission, Frankfort): telephone 606-564-2886 (office); 606-223-1679.
March 6th, Thursday: General Meeting for all members, to vote on officers, to approve bylaws, discuss society interests and activities, and to see a talk and slide presentation by John McGregor - "WILD ORCHIDS OF KENTUCKY". Meet at 7-00 p.m. in Room 108/109, T.H. Morgan School of Biological Sciences, University of Kentucky, Lexington.
March 22nd, Saturday: Field Trip to Jessamine Gorge (near Nicholasville in Jessamine County) to see early spring flowers of woodland on limestone slopes, with special interest in snow trillium (*Trillium nivale*), which is found nowhere else in Kentucky. Meet at 12 noon in the Druther's parking lot on U.S. 27 in south Nicholasville.
April 19th, Saturday: Field Trip to cedar glades near Mt. Washington (Bullitt County) to see spring flowers typical of this rare open habitat type, with special interest in *Lesquerella uniflora* and *Viola egglestonii*. Meet at noon in the High School parking lot on KY 44 in Mt. Washington.
May 17th, Saturday: Field Trip to South Fork of Cumberland River (McCreary County, etc.) to see rare vegetation of wild river rock bars, with special interest in *Comptonia peregrina*, *Marshallia grandiflora*, *Conradina verticillata* and *Orontium aquaticum*. Meet at 10 a.m. 2 miles south of Whitley City at the Parkland Motel on U.S. 27.

OTHER WILDFLOWER MEETINGS AND FIELD BOTANY COURSES

Smoky Mountains National Park -- Spring Wildflower Pilgrimage
April 24, 25, 26: Call 615-974-2256 for information.

Pine Mountain Settlement School. For information write:
Mary Rogers, Pine Mt. Settlement School, Bledsoe, KY 40810
-- Spring Wildflower Weekend: April 18, 19, 20
-- Black Mountain Wildflower Weekend: May 2,3,4
-- Edible Wild Plant Weekend: June 6,7,8
-- Medicinal Wild Plant Weekend: August 1,2,3
Note: the Elwood J. Carr collection of edible and medicinal plants is housed here, containing specimens, slides, books, and is available to students of plant life.

Natural Bridge State Park -- Spring Wildflower Weekend, May 2,3
Call 606-663-2214.

Raven Run Nature Sanctuary (Fayette County) will be having wildflower walks through April and May; for more information call Carol Chambers at 606-272-6105.

Appalachian Botany course, May 13-June 10, taught by W. Meijer at University of Kentucky: register April 9-16th; call 606-257-4711 or 257-3240.

Aquatic Plants and Plant Ecology courses for undergraduate or graduate credit in summer school at Eastern Kentucky University, taught by Ron Jones and Bill Martin: call 606-622-1531.

ENDANGERED PLANTS IN KENTUCKY by Hal Bryan

The Kentucky Academy of Science recently adopted a list of 337 plant species considered to be endangered or threatened in Kentucky. This list was developed by the Kentucky Nature Preserves Commission in Frankfort. Despite this action, only one species in Kentucky has any official protection: Short's goldenrod (Solidago shortii) is our only federally "endangered species". It is endemic to Kentucky, known only from a few sites within 1-2 miles of Blue Licks State Park in Nicholas, Robertson and Fleming Counties. It is a goldenrod of cedar glades and open rocky woodlands and edges. Its distribution is correlated with the historical occurence of large herds of buffalo. It thrives in the rocky openings that have persisted since their creation by masses of these grazing animals moving to and from the Salt Licks. Short`s goldenrod also once existed on a rock outcrop island in the Ohio River at the old buffalo crossing near Louisville. But it has not been found here or elsewhere in Jefferson County since the mid-1800s. Although Short`s goldenrod is Kentucky's only officially protected species, even federal endangered status will not absolutely ensure its continued survival. That only imparts protection to the plant if it occurs on federally-owned land, which S. shortii does not, or if federal monies were to be used for its destruction. Unlike federally protected animals, plants remain the property of the landowner, who can eliminate all plants that grow there if he wishes. Additionally, if state or private funds were to be used to develop a site of a federally endangered plant, there is no protection afforded by law.

Despite this minimum of protection offered by federal endangered status, Short`s goldenrod is Kentucky`s only plant with even this meagre measure of legal safeguard. None of the hundreds of rare plants compiled from nominees suggested by our Commonwealth`s scientists, and

painstakingly verified by the Kentucky Nature Preserves Commission, have any official status. None of the thirty-two plants in Kentucky under federal status review by the U.S. Fish and Wildlife Service (and therefore rare throughout their range) are afforded any real legal protection. The Federal Register that listed these status review plants did state that they were candidates for federal listing, and it "requested" that they be given consideration in environmental planning, but this carried no force of law.

The realities of development are such that rare species and their habitats will continue to be lost without consideration, until they have some legal standing. Kentucky's natural heritage and the future legacy will disappear as progress proceeds. These special attributes that contribute to our desire to live and work in the Commonwealth will no longer persist. At least three other plants currently under status review deserve federal endangered status immediately. White-haired goldenrod (Solidago albopilosa), Lucy Braun's snakeroot (Eupatorium luciae-brauniae) and Cumberland rosemary (Conradina verticillata) are all very rare plants of the Daniel Boone National Forest that warrant federal protection. In addition, and more importantly, Kentucky desperately needs a Plant Protection Law such as that enacted by our neighbor, Tennessee, in order to assist in the preservation of other rare plants and places. The Kentucky Native Plant Society can be a force to encourage passage of such legislation in our Commonwealth.

BOTANICAL HISTORY IN KENTUCKY: ANDRE MICHAUX by Julian Campbell

The study of native plants must, to a considerable extent, be a historical science. There are two basic reasons: (1) different botanists in the past have used different names for the same species, and we must adopt the earliest published usage to reduce further confusion and abide by international rules - at the same time it is also useful to note common names used by non-scientists, past and present, so as to improve communications; (2) many species have declined greatly due to human disturbance, with some on the brink of extinction or already extinct - we must use historical information on the distribution of such species to understand their biology better, and to work for their preservation. In Kentucky, it is especially important to look back now, because, although there have been relatively few botanists working in the state, their pioneering efforts form the basis for our current expansion, aided by the Kentucky Native Plant Society. As a regular column in this newsletter, I will try to outline the work of earlier botanists in Kentucky, beginning now with Andre Michaux, who was the first person to travel in Kentucky with a serious scientific interest in native plants. After two or three years of quartlerly newsletters, these notes may be compiled for a complete account. Let's hope that general work on Kentucky plants will also have progressed in that time to the point where such an account may introduce a complete description of the state flora.

Andre Michaux (1746-1902) was a Frenchman sent to North America by his government in the search for economically useful plants, and for political work. His travel journals have much general historical interest. Material relevant to Kentucky was published in 1904 as part of "Early Western Travels, 1748-1846", edited by R.G. Thwaites. He passed through the state three times during 1793-96, spending a total of about 6 months here. His major botanical work, "Flora Boreali-Americana" (Plants of North America), was published posthumously in 1803. In that work, he mentions several plants that he knew only in Kentucky or nearby. The primary set of his plant collections are housed in Paris, and it is not clear how many of those

can be traced to Kentucky. As will be documented in future newsletters, some duplicates of his collections may have been aquired by Short and Peter in Kentucky, about 1830-50, but none are known here today.

He travelled mainly in the Bluegrass and Knobs regions of central Kentucky, describing the fertile land that had already been rapidly settled. The original vegetation of the Bluegrass region was quite different from regions further east, and some of the typical plants appear to have been relatively new to him, such as "Guilandica dioica" (coffee tree), Gleditsia triacanthos (honey locust) and Fraxinus "quadrangularis" (blue ash). He noted these species at Washington, near the "Dickson" (Dix) River, and near Louisville. Some species appear to have been completely new, including two of "Serratula" (perhaps Cacalia or some other composite), but his decriptions are insufficient to identify them now. Among the species he did identify are some that are uncommon today: Iresine "celosioides" (= I. rhizomata), an amaranth relative that he found on the banks of Ohio and Kentucky Rivers; "Sophora floribus coerulis" (= Baptisia australis), blue false indigo, which he found on the "Dickson" (Dix) River banks; Tragia (cordata), a twining, stinging spurge that he found 22 miles from Danville on the road to "Beardstown" (Bardstown); "Juglans pacane" (pecan), which he noted as rare near Louisville (perhaps also with overcup oak). On the calcareous hills 3-4 miles before reaching Bardstown, he stated that "The neighborhood would be very interesting for a botanist to visit", but he only had time to note "Fagara" (prickly ash) and Rhamnus species (buckthorn relatives). A number of rare species typical of prairies and cedar glades remain in this region, though seriously threatened by development at some sites. In contrast, he noted that "The country between Beardstown and Louisville possesses no interest for a Botanist". It is true that the rather monotonous oak forests of the Knobs here, as represented in the Bernheim forest, have relatively little plant species diversity. However, just three and a half miles south of Louisville, he measured a yellow poplar 22 feet in circumference, which may surpasss the current Kentucky record for this species (17 feet, 8 inches, according to the Division of Forestry).

On his one trip across Western Kentucky, he "passed through a Country covered with grass and Oaks which no longer exist as forests, having been burned every year. These lands are called Barren lands although not really sterile. The grasses predominate: Salix pumila [S. humilis/tristis, upland/dwarf willows], Quercus nigra [perhaps Q. velutina, black oak] Quercus alba called Mountain White oak [perhaps Q. stellata, post oak]. Gnaphalium dioicum [probably Antennaria plantaginifolia] also grows there in abundance. It is called by the Americans White Plantain." These famous Barrens have interested Kentucky botanists ever since, though only small scraps of this once extensive prairie-like vegetation have survived the environmental changes caused by settlement, with suppression of fire, and agriculture.

The other region of Kentucky that was originally characterized by relatively open areas was the Bluegrass, especially the lands formerly covered by cane, Arundinaria gigantea (a woody grass related to bamboo). The twenty years of settlement in that fertile region had already eliminated most of the cane when Michaux visited, but he still found much in Tennessee. He noted that "This species of grass which grows abundantly in many places which have not been settled, is destroyed when completely eaten by Cattle; Swine also destroy it by rooting in the earth and breaking the roots....it seldom bears fruit in the territory of Kentuckey, in that of Tenesee or in that of the Carolinas."

Michaux's Flora of North America was published a decade after he first visited Kentucky. It was based on his collections, listing several hundred species. The descriptions were brief, with little direct practical value today. However, it is interesting to note the 45 or so species that he had found only in Kentucky or nearby. Some of these are rare or unknown in the state today (more so than those noted in his journal): "Leptanthus dubia" (= Heteranthera dubia, water-stargrass), which he found in the Ohio River near Louisville; Plantago "kentuckiensis" (= P. cordata, a large true plantain), which he reported from streams of Kentucky, Tennessee and nearby; Gentiana "amarelloides" (= G. quinquefolia, stiff gentian), from hills of Kentucky; "Sida" alcaeoides (= Callirhoe a., poppy mallow), from glades of Kentucky and Tennessee; Trifolium reflexum (buffalo clover), from Kentucky, Tennessee and Carolina mountains; Hypericum sphaerocarpum (a subshrubby St. John's Wort), from Kentucky; "Arethusa parviflora" (= Triphora trianthophora, nodding pogonia - a purple orchid), from shady woods in Kentucky; and Podostemon ceratophyllum (riverweed), from the Falls of the Ohio River near Louisville. The two water plants from near Louisville, which were new to science when he described them, can no longer be found here or nearby, as in the case of Short's goldenrod (see Hal Bryan's article above). The riverweed (Podostemon) appears to require clear unpolluted water, and it is still becoming increasingly restricted to the headwaters of rivers in eastern Kentucky (see W. Meijer's article of 1976 in Castanea 41:319). It has even disappeared in the past decade from the Red River Gorge, almost certainly due to road work or strip-mining upstream.

The plants listed by Michaux that are now rare are mostly typical of natural open habitats along watercourses, in prairies and glades, or on rocks. Such natural openings represent the most threatened class of habitats in Kentucky today, with many other endangered species. Damming of rivers, drainage of marshes, and farming of former prairies and glades, has done even more serious damage here than the general felling of virgin forests. These openings in the general forested landscape must have been charming places for an early botanist in Kentucky, but the small remaining patches of such land are being disturbed and destroyed at a continuing rate. We urgently need a special survey of these habitats and their remaining plants, with more effort to preserve them for their natural historical interest.

THE COLLEGE OF AGRICULTURE HERBARIUM by Patricia Dalton

The role of the University of Kentucky College of Agriculture in laying the foundation for Kentucky Botany is not well known. In the first hundred years of statehood, only five or six proper botanists can be said to have worked in Kentucky. The first permanent botanical collection, or "herbarium", was set up during 1830-50 at Transylvania University by Charles Short and Robert Peter. This was later transfered to the University of Kentucky, as the nucleus of the main U.K. Herbarium, now in the School of Biological Sciences. Tragically, these original collections were largely destroyed by fire in 1948, and the modern U.K. herbarium, though relatively large, is mostly composed of more recent collections. However, with the formation of the University of Kentucky during the 1870s, a separate agricultural herbarium was started by Harrison Garman, and this has survived as the College of Agriculture Herbarium. Currently, it is undergoing some reorganization around a special project to describe the weed species in the state. With the formation of the Kentucky Native Plant Society as well, it is interesting to look back on those formative years.

Harrison Garman (1858-1943) was a zealous insect and plant collector. He began cataloguing plants and insects in Illioins when working with Dr. Forbes, a well-known entomologist. He came to Kentucky in 1887 and two years later was called to head the Department of Zoology and Entomology at U.K. He brought with him some of his early plant collections from 1870-1880 in Illinois, which began the College of Agriculture Herbarium. While at the University of Kentucky, his enthusiasm for collecting took him to Banff in Canada, to Arizona, Michigan and Wisconsin. However, the bulk of his collections are from Kentucky, including native plants as well as exotic weeds and grasses of agronomic importance. Most of his specimens date from 1889 to 1930. As a result of his extensive field work, he published "The Woody Plants of Kentucky" in 1913 (Agricultural Experiment Station Bulletin No. 169), "Some Kentucky Weeds and Poisonous Plants" in 1914 (Bulletin No. 183), and other papers. These publications are extremely interesting for their species lists, ecological information and photographs. Many unpublished photographs also survive in the main U.K. herbarium. Apart from the work of Garman, with his associates and students, there are few surviving botanical records from central Kentucky during this period. Perhaps the most important collection made by Garman, though initially misidentified, was a specimen of running buffalo clover (Trifolium stoloniferum), on Mt. Tabor Road in Lexington during 1902. This is the last Kentucky record of that extremely endangered species, which is known to survive only in two small patches in West Virginia. No efforts were being made then to preserve rare species in Kentucky.

Garman's title changed over time, as did the institution, and in 1929, he became head of the Department of Entomology and Botany in the Agricultural Experiment Station. Here he worked with Miss Mary "Maime" Didlake, who first came to the University in 1901 as "Assistant Entomologist and Botanist" of the Experiment Station. She was the first woman hired to a staff position at the Experiment Station. She was trained as an entomologist, with Masters Degrees from both the old Agricultural and Mechanical College of Kentucky, and the University of Chicago. However, she worked mainly on the botanical side once at the Experiment Station, and she was the one truly responsible for maintenance and development of the herbarium. Her specimens date from 1902 to about 1940, from extensive work in Kentucky, and other trips to Florida, Bermuda, Arizona and South Carolina.

No correspondence or early records of the herbarium have been found. This is unfortunate because there are some specimens here from other regions, made by famous plant collectors such as Dr. E.J. Palmer, Dr. Geo Vasey, C.R. Orcutt, Dr. Sudsdorf, W.G. Cusick and Mr. Edward Palmer. Most of these specimens were collected in Colorado, Oregon, Arizona, Montana, New Mexico and Mexico, about 1881-1889. The oldest specimen found to date is of Poa leptocoma Trin., a bluegrass collected in 1862 from the Rocky Mountains.

Today, the College of Agriculture Herbarium is growing and contains approximately 20,000 specimens, housed in 15 cases. The collection specializes in specimens of agronomic interest, especially weeds, grasses and crop plants. As full-time Curator, I maintain the collection and also provide public information services for the farmer, County Agent, horticulturalist or naturalist. We welcome inquiries from anyone interested in identification of these plants.

QUESTIONNAIRE FOR ALL MEMBERS

Please fill out this form so that the new society can best serve its members interests. We want input from all members, with or without a professional interest in botany. Mail to Ron Jones, Dept. of Biology, Eastern Kentucky University, Richmond, 40475. Which of the following potential society goals would you be most willing to support? Please give each a general rank of importance, with 1 for most important, 2 for the 2nd most important, etc. Also, indicate whether you would be personally interested in developing each goal.

	Rank (1-6)	Personal Interest
--Promote pure enjoyment of native plants	____	____
--Increase our knowledge of native plants	____	____
--Increase public knowledge of nat. plants	____	____
--Lobby for protective legislation	____	____
--Raise independent support for protection	____	____
--Engage in research to help protection	____	____

Which of the following specific activities do you most support? Check "personal commitment" if you feel you can contribute your time directly, attending most field trips, meetings, workshops, etc., at least in your region of the State.

	Rank (1-12)	Personal commitment
--Field trips to see beautiful flowers	____	____
--Field trips to see rare plants	____	____
--Field trips to collect scientific data	____	____
--Meetings with educational slide shows	____	____
--Expanding the newsletter	____	____
--Interact with other conservation groups	____	____
--Interact with colleges and schools, etc.	____	____
--Work with KY Nature Preserves Commission	____	____
--Physical conservation work in the wild	____	____
--Establish rare plant gardens, seed banks	____	____
--Work with existing gardens, arboretums	____	____
--Persuade developers to preserve sites	____	____

Please be more specific if you want, and enclose further comments. Do you have any suggestions for particular species or sites that merit immediate attention?