

The Kentucky Native Plant Society

NEWSLETTER: Vol. 3, No. 3, August 1988. Editor: Julian Campbell

KENTUCKY HERBARIA by Ron Jones

A herbarium is a collection of dried plant specimens that are arranged in some systematic manner. Each specimen has been dried in a plant press, then mounted on a special, long-lasting herbarium paper with some kind of adhesive (often Elmer's Glue), and a label is attached to indicate the scientific name, locality, habitat, collector, and date. The specimens are then arranged by family, genus, and species, either alphabetically or by a sequence based on natural relationships among the families.

In Kentucky, there are 15 institutions with herbaria. Those with collections totalling over 10,000 are as follows: Univ. of KY (Biology) - 50,000; Univ. of Louisville - 25,000; Murray State Univ. - 24,000; Univ. of KY (Agriculture) - 21,000; Eastern KY Univ. - 20,000; Northern KY Univ. - 19,000; Western KY Univ., - 14,000; Morehead State Univ. - 10,000. These numbers are based on a survey conducted in 1986-87. The total number of specimens in Kentucky herbaria is roughly 212,000, and this total has been increasing at the rate of 7,500 per year for the last decade. These numbers are not great when compared to collections in nearby states. For example, in 1981, there were over 600,000 specimens in Tennessee herbaria, and over one million in Ohio herbaria. It is obvious that there is much work to be done in Kentucky before this state is as well known botanically, as neighboring states.

How are these herbaria used? They have numerous functions in the areas of teaching, research, and public service. A herbarium is used as a source of reference specimens for teaching undergraduate and graduate courses. Farmers, foresters, naturalists, and just anyone interested learning the identity of a particular plant, can use the facility. Those involved in the writing of state and regional floras depend heavily on these collections for their basic information on species presence and distribution. Botanists doing monographs or revisions of certain genera or groups of species borrow specimens from numerous herbaria to complete their studies. The herbarium is, in reality, a great storehouse of information. It is in many ways like a museum, and each specimen is comparable to a book. This becomes understandable when one considers how much information is available from a single specimen - hundreds of bits of information, and it is therefore obvious why computers are being used more and more to handle these data. People who tend to think in computer terms have begun to refer to the herbarium as a "databank."

The management of a herbarium collection is a time-consuming affair, involving, for most curators, much of the collecting, pressing, mounting, typing labels, filing, treatments for insect damage, answering correspondence, supervision of student workers, etc. There are no full-time curators in any of the Kentucky institutions, as there are in some other state institutions, and the curatorial activities must be handled by the resident plant taxonomist of each biology faculty. The plant taxonomist carries in most cases a full teaching load in addition to the herbarium work. Most curators would therefore welcome any assistance they can get in the obtaining and processing of specimens for their herbaria.

Encouraging botanical research is one of the goals of KNPS, and supporting the state herbaria is one way KNPS members can become involved. How can KNPS members participate? They can make arrangements to make collections, either general collecting a perhaps in a definite area, possibly even a county flora. As I have previously stated in this column (KNPS Newsletter 1(3):1) only 32 Kentucky counties have published floras, with 12 of these dating from before 1900, and only 9 completed since 1950. KNPS members could volunteer to help with some of the backlog of specimens by typing labels, mounting specimens, etc. Just a few hours a month would mean a great deal. This volunteer work would require no previous training or knowledge, only an interest in learning more about our native plants. With a little practice, volunteers can learn to produce very attractive, even artistic, herbarium specimens. If you are interested, please contact the botanist at your local college of university, or, for more information write me at the return address on this newsletter, or call 606-622-6257/1531.

EKU HERBARIUM MOVING TO NEW FACILITY

The Eastern University Kentucky University Herbarium has now been moved from the small room it has occupied since its inception to a large, fully-equipped facility - Memorial Science 210 (tel: 606-622-6257). This new herbarium facility can be reached by entering the front doors of the Moore Building from University Drive and walking down the left corridor on the first floor, through the double doors, and onto the second floor of Memorial Science. The herbarium is actually in the connecting hallway between Memorial Science and the Roark Building. The EKU collections have been growing rapidly in recent years; more than 4,000 specimens were accessioned during the past year. The total collection is now over 20,000. There are special collections from Lily Cornett Woods, Maywoods, Kentucky Palisades, Oil-shale of Montgomery and Bath Counties, Rock Creek Research Natural Area, and various Kentucky Nature Preserves Projects. The curator is Ron Jones, and the associate curator is William Martin.

FIELD TRIP REPORTS

BRIGADOON NATURE PRESERVE, June 11. About eleven persons attended this walk through mostly old-growth woods on a beautiful and relatively cool day. Among some of the interesting plants observed were Panax quinquefolius (ginseng), Hydrastis canadensis (goldenseal) and Aristolochia serpentaria (Virginia snakeroot), as well as some very large beech, tulip poplar and black locust. Special thanks to Dr. and Mrs. Starr (former owners of the preserve) for helping with the tour and providing an interesting history of the area.

PURDUE-DAVIS ORCHID SITE, ETC., July 23. About 34 people attended this trip. Due to drought conditions, many of the native orchids were not flowering, but the vegetative plants of whorled pogonia, pink lady's slipper, pale green orchid, club spur orchid and adder's tongue orchid were located. Many ferns, including adder's tongue fern, were seen. For extra excitement, the group stopped to see a plant found this spring for the first time in Kentucky - may star (Trientalis borealis), discovered by Dan Dourson. After this, a dozen people went still further to Hawk Branch to look at some "old-growth timber". Finally, the group stopped at an interesting roadside with purple cone-flower, culver's root, wild bean, and crested coral-root.

*** REMINDER: NOW IS A GOOD TIME TO COLLECT FOR THE WILDFLOWER SEED-BANK ***

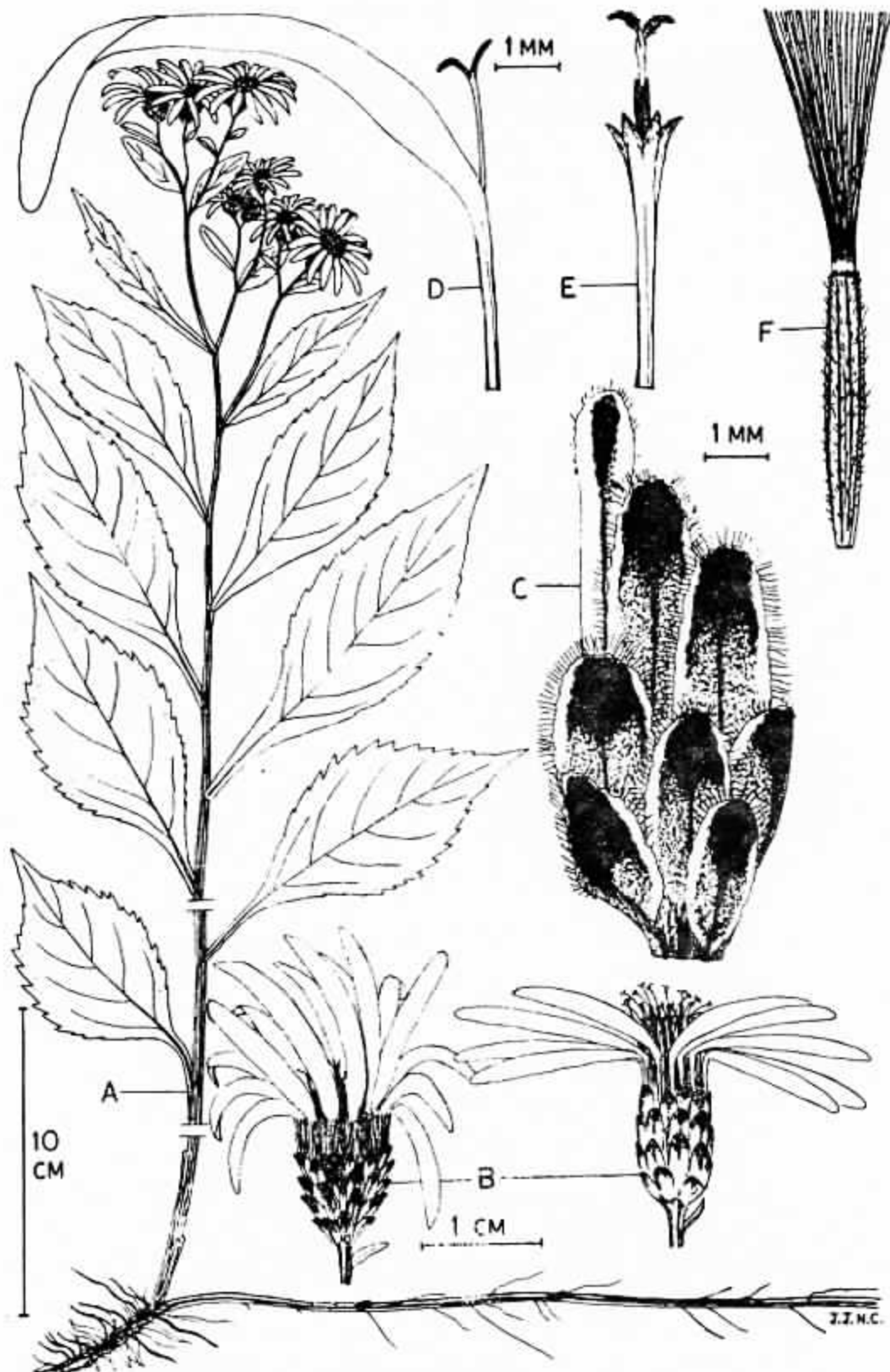
CALENDAR OF EVENTS

24th September (Saturday). MOREHEAD AREA: CLACK MOUNTAIN AND LOCKEGEE ROCK. Les Meade (Biology Dept., Morehead State Univ.), who is an unusually well-rounded naturalist - with much knowledge of plants and animals - will lead this easy field trip to a variety of sites in the Knobs Region and at the edge of the Appalachian Plateau. Clack Mountain has some exceptionally well-preserved prairie areas (on limestone), with many colorful fall-flowering plants, including the rare white gentian (Gentiana alba). Lockegee Rock (sandstone) is famous for its ferns, including the rare Scott's spleenwort, a hybrid of the walking fern (Asplenium rhizophyllum) and the ebony spleenwort (A. platyneuron). Meet 10 AM Heck's parking lot near Morehead; from the Morehead exit of I-64, turn south on KY-32 and go to the first traffic lights; turn left onto Fraley Drive and go to the end where you will find Heck's. Bring picnic lunch.

8-9th October (Saturday-Sunday). CUMBERLAND FALLS STATE RESORT PARK: GENERAL FALL MEETING OF KNPS. A block of 10 rooms at the Park's Lodge has been reserved for KNPS members, to be given on a first come-first served basis. The price (\$53-55) must be deposited in advance. In addition to general business, this meeting will focus on the plants growing along the Cumberland River and its tributary, the Rockcastle River. We will begin meeting at 12 noon in the Lodge, in the meeting room on the 1st floor. Following a social hour and brief orientation, Julian Campbell and Max Medley will lead a field trip along the banks of the Cumberland River. The well-developed Sheltoewe Trace can be followed most of the way, with short side-tracks to the bouldery banks. In addition to unusual composites, grasses and legumes along the open banks, the trail also leads to some large rockhouses with the rare Eupatorium luciae-brauniae (Lucy Braun's white snakeroot). Supper can be got in the lodge restaurant after 5:30 p.m. At 7 p.m., we will regroup in the lodge for our fall business meeting and a slide show by Julian Campbell and Max Medley on the plants of the Cumberland and Rockcastle Rivers. On Sunday morning, starting from the Lodge at about 9:15 a.m., J.C. and M.M. will also lead a trip to the Rockcastle River, near the Bee Rock Recreational Area at "The Narrows" (getting to the parking lot there about 10 a.m.), to see some extremely rare plants in Kentucky, including their new species of Aster - A. saxicastelli (the Rockcastle Aster), Solidago uliginosa, S. spathulata (goldenrods), Ceanothus herbaceus (herb redroot) and Vitis riparia (riverbank grape).

22 October (Saturday). AQUATIC PLANT WORKSHOP AT ECU HERBARIUM. Meet at 9:00 AM in Memorial Science 210 (directions are given on page 2) at Eastern Kentucky University in Richmond. This workshop will last until about 4:00 PM, and will involve lecture and laboratory instruction on identification techniques for aquatic plants. Emphasis will be on basic terminology and keying exercises; information on habitats, life forms, and reproduction of aquatic plants will also be discussed. This workshop is limited to 20 participants; to reserve a place send a postcard to or call: Ron Jones, Biology Dept., ECU, Richmond, KY, 40475, PH-606-622-6257. No previous botanical training is necessary; just an interest in learning about aquatic plants!

4-5th November (Friday-Saturday), KENTUCKY ACADEMY OF SCIENCE ANNUAL MEETING. This year, the annual meeting will be at Eastern Kentucky University, Richmond. As usual there will be much to interest botanists - both amateur and professional. In addition to the regular papers on recent discoveries in the state and other local studies, there will be a symposium on Ecological Succession. For information on memberships write Dr. Varley Wiedeman, Dept. of Biology, University of Louisville, Louisville, KY 40292.



The newly discovered species of Aster found along the Rockcastle River, *Aster saxicastellii* Campbell & Medley (to be seen on 9th Oct. trip).
 A - whole plant; B - flowers; C - part of involucre bracts;
 D - ray floret; E - disk floret; F - fruit (cypsela or "achene")

THE LILY FAMILY, FOR INSTANCE by Jim Conrad

Each plant family projects a certain personality. For instance, always I've felt friendly towards the Mint Family because of the often-odoriferous leaves possessed by its members; I'm a serious drinker of herb teas, you see. Moreover, once deep in a McClean County woods, I found an abandoned homestead of which nothing remained but a rude chimney and a relict population of horehound, Marrubium vulgare, a mint much grown in earlier days for its medicinal and culinary value. Smelling the strange odor of the horehound's leaves crushed between my fingers, I mused on old-time gardens, home remedies and wholesome start-from-scratch cooking. Now anytime I meet a mint, these pungent associations come to mind.

Similarly, the Milkweed Family is a favorite because milkweed blossoms, when viewed close-up, are surprisingly unique and complex. Also, there's something poignant in how the leaves of most milkweeds "bleed milk" when they're wounded. In the fall I love how the pods burst, allowing the white-parachuted seeds to escape to parts unknown, floating on unpredictable winds. Maybe if I could be a plant, I'd be a common milkweed.

The Lily Family, offering some of spring's splashiest species, strikes me as being an aristocratic family. Besides having beautiful blossoms, their leaves and stems often seem sculpted into reserved, elegant attitudes. If I should sit on a springtime slope surrounded by trilliums, trout-lilies, bellworts, Solomon's seal and false Solomon's seal, wild hyacinths and maybe even something very special like Canada mayflower or white clintonia - all members of the Lily Family - probably I would feel a little drunk, rather as I do when certain fascinating high-class women walk by, their perfume and inscrutable glances causing me almost to drown...

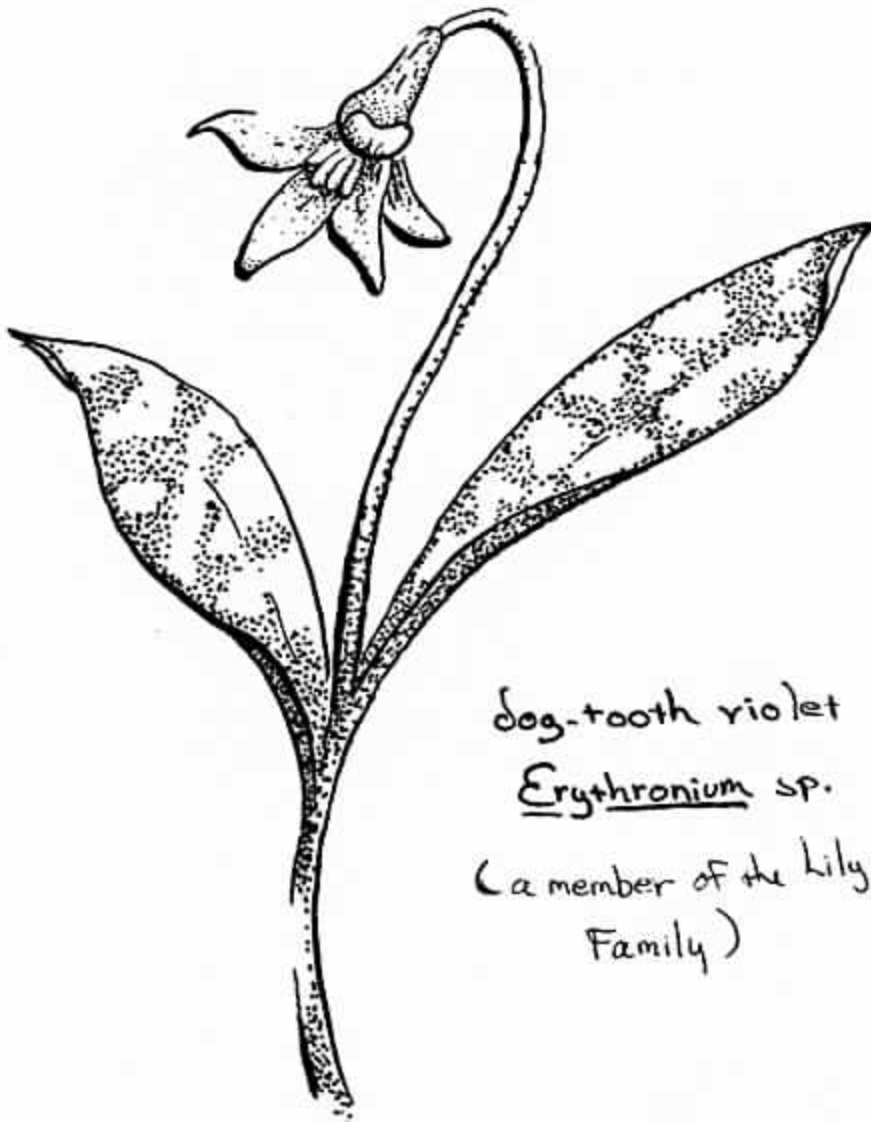
My general stereotype of the Lily Family is that its members usually are between ankle and knee high, are rather fleshy, seldom are covered with harsh, sticky hairs, and usually they're perennials that after flowering die back to a bulb, a bulb-like organ or a crown of fleshy rootstocks.

On a more technical level, their usually showy blossoms are distinguished by the following characteristics which, taken together, essentially define the Lily Family:

- ovary superior (residing above petals and sepals)
- stamens usually six; petals usually three; sepals usually three

Superior ovary, six stamens, three petals and three sepals - by remembering this "formula" usually you'll have this family pegged. Of course, as with any large family (about 2000 species in 175 genera, with Wharton & Barbour's THE WILDFLOWERS AND FERNS OF KENTUCKY dignifying 37 species as wildflowers), certain species just won't conform. For instance, the superior ovary is perhaps the most profound difference between the lilies and closely related families such as the Amaryllis (daffodyls) and Iris Families. Nonetheless, in Kentucky we have the wildflower called stargrass, Aletris farinosa, which has an ovary that is at least partially inferior. Similarly, the rare Canada mayflower, Maianthemum canadense, breaks the "rules" by having four stamens, two sepals and two petals.

Moreover, not all of Kentucky's Lily Family members are fleshy plants with attractive flowers. The roadside weed called wild asparagus, Asparagus officinalis, is as liliaceous as they come, a fact becoming clear only when the structure of the tiny blossoms is examined. Other Lily Family members we usually don't think of as "real lilies" include greenbriars and cat briars, Smilax spp., and wild onions, Allium spp.



Dog-tooth violet

Erythronium sp.

(a member of the Lily
Family)

Notwithstanding such Billy Carters of the Miss Lily Family, in Kentucky this family provides more than its share of species that are spectacular for one reason or another. The Turk's cap lily, Canada lily, wood lily and Michigan lily are all members of the genus Lilium, and bear largish, colorful flowers. The Canada mayflower of our eastern mountains is a surprising relict left over from the Ice Ages. Spotted mandarin, Disporum maculatum, is quite rare because of its requirements for rich, climax-forest soils. For me, the orange daylily, Hemerocallis fulva, once frequently planted and now spreading along roadsides and at old homesteads, is a favorite. I like its robust, plain-speaking demeanor. Moreover, when this plant comes into blossom, I cut off a few flowers, rip out the stiff stamens and hard green parts, dip the succulent corollas in a batter made of eggs and cornmeal, and fry those flowers, and eat them!

Every family has its own personality and I see no harm in this kind of anthropomorphizing with plants. In fact, maybe it's a good exercise. I've noticed that some of the most wonderful statements about reality in general simply cannot be articulated. How would you say the thing that the last movement of Beethoven's Ninth Symphony describes? Similarly, how can you say in words the message of the lone, scraggly Virginia pine on a sandstone ledge overlooking the Kentucky River?

Every species, every genus and every family of plants says something. And surely it is good for us to listen.

UNIVERSITY OF KENTUCKY HERBARIUM HISTORY, PART II. By Willem Meijer.*

The year 1890 heralded the "Second Morrill Act." One year later a Chair of Zoology and Entomology was started as a consequence of this second Act. Harrison Garman became the first Professor of this chair. He retired in 1929 and died August 1944. Born and raised in Illinois, he had a great interest in the local flora of prairies and weeds of Kentucky (see his article, "The Vegetation of the Barrens" in *Trans. KY Acad. Sci.*, 1929, 2:107-111). He was also part of the time in charge of plantings on the University grounds (see "Notes on the History of the Department of Entomology and Botany" by Mary Le Grand Didlake, 1940?, in the Archives, King library, Univ. of KY). He made botanical collections and he published at least six botanical papers (see my article "The Flora and Vegetation of Kentucky as a field for Research and Teaching", in *Castanea*, 1970, 35:161-176). The Garman collections still survive in the College of Agriculture Herbarium. A few rare species of Carex and Solidago were transferred around 1975 to the main UK Herbarium in Funkhouser building. A number of photographic botanical plates made by him survive in the Biological Sciences herbarium.

In 1891, Clarence Wentworth Mathews from Cornell, who studied under Bailey, became Professor of Agriculture and Horticulture. Around 1905, he planted trees at the corner of Limestone and Washington, where his daughter lived until the spring of 1984 in the house Mathews built on land bought by himself. He also had a private herbarium which was preserved in the Mathews Hall since 1908.

J. Alan Smith (in his 1982 article "College of Agriculture, University of Kentucky. Early and Middle Years 1865-1951", available from Kentucky Agricultural Experiment Station) relates that the UK herbarium was also the outgrowth of collections made by Dr. Robert Peter some sixty years before that date. Peter retired in 1886 at age 82, against his will (Smith, loc. cit.). In 1833, '34 and '37 he published the "Catalogue of Plants of Kentucky" with Charles Wilkins Short, successor of Rafinesque at Transylvania University. His son A.M. Peter, mentioned earlier, was also a chemistry professor at the Agr. Exp. Station. He retired at age 70 in 1927, two years before Garman. We have two specimens labelled "Herbarium State College of Kentucky" collected by Robert Peter in 1848. The two specimens are among collections of Trillium which escaped the fire of the UK Herbarium in Norwood Hall during Armistice Day, November 11, 1948. Apparently Robert Peter also had some of Short's collections, stored at Mathews Hall attic. These went to Funkhouser building after the fire of Norwood Hall in 1948. Again we see that the History of the UK herbarium almost goes back to the days of Rafinesque, the first resident botanist besides Short in Kentucky.

There is a story about that fire in the Kentucky Kernel of November 19, 1948. It was reported that the herbarium at that date had 25,000 specimens. Dr. Frank McFarland, the curator, lost, for a value of 8,000 dollars, his collection of private books. Dr. Riley, who had his office in the wing of the building which was less destroyed could save his belongings at least partly. He left us with pictures of the buildings before and after the fire, kindly supplied to me by Mrs Riley.

In 1913, Dr. Frank McFarland joined the University of Kentucky, apparently as a member of the new College of Arts and Sciences. He was by training a mycologist and he became the new curator of a UK Herbarium, which according to Helen King (in her article, "A botany museum that won't stop growing is under

*Note: F.A. Michaux visited Lexington in 1802, not 1902 as typed in Part I. Also, the reference to Shinnars (1962) paper was omitted: *Sida* 1:1-31.

way at U. of K., Courier Journal Dec.3. 1939), contained about 8,000 specimens. As mentioned earlier, during 1918 a new Botany Department was split off from the College of Agriculture. Apparently the collections were divided after McFarland's arrival into two herbaria, a weed herbarium for the Agricultural college and the rest for the College of Arts and Sciences.

Charles Shull, who was from 1906-1912 head of the Department of Biology at Transylvania University, was from September 1918 to August 1921 the first head of the new Botany Department. He published a paper on vegetation of Western Kentucky in *Ecology*, Vol. 2 (1921). In that year Frank McFarland took over as Head of the Department. Shull was, according to Dr. Herbert Riley (interviewed by me), a mycologist. He brought some collections to the herbarium made by his brother, who was Riley's major professor at Princeton, around 1914-1915, mainly vouchers of biosystematic and genetic experiments with *Oenothera* (now largely donated by us to the Herbarium of the Missouri Botanical Garden) and mass collections of *Capsella bursa-pastoris* (shepherd's purse). These collections were never incorporated in the cabinets, as well as an anonymous collection from Letcher county made in 1885, which also survived the later fire.

The list of Kentucky plants published by McFarland in 1942 ("A catalogue of vascular plants of Kentucky", *Castanea* 7:77-108) was based on his 30 year's work with the Botany Department herbarium. This was one year before Lucy Braun published much more extensive data on the same subject (in "An annotated catalog of Spermatophytes of Kentucky", Univ. of Cincinnati). Apparently McFarland was afraid that his work would be scooped by Lucy. We can learn what was in this herbarium from some of the prefire Masters' thesis lists. One M.Sc. thesis by Joe Kendall Neel in 1938 on "Lower Howards Creek; a biological survey" (near Winchester, Clark Co.) was overlooked by me and everybody else who recently did bibliographic work on the Kentucky flora (available only in the Special Collections of Univ. of KY library). He reported *Arenaria fontinalis* (an extremely rare plant - see previous newsletter) from that creek.

McFarland apparently collected rather slowly. In 1923 he was at number 106, but one collection of 1917 bears number 2073. We have some prefire collections which were not yet mounted and the Trilliums were out on loan. Important collections that were lost include McInteer and Shacklette on Black Mountain in 1939 and 1947, some on fieldtrips with Lucy Braun; Shacklette, 1940, in Meade County; Shacklette, Templeton and Lyle in Clinton County, 1940; and McInteer, 1939.

According to Dr. Herbert Riley (in his 1965 "History of the College of Arts and Sciences", Univ. of Kentucky), who became head of the Botany Department in 1942, McInteer was officially the Plant Physiologist. He was instructor from 1924-25 and became Assistant Professor in 1925. In 1957 he was put to work on expansion of the Botanical Museum Herbarium. He apparently liked to go collecting much more than McFarland and found to the chagrin of the latter many more novelties, by aiming at different habitats (Dr. Carl Henrickson, pers. comm.).

The reason that McFarland did not want to move the herbarium from Norwood Hall to Funkhouser Building when it was ready in 1940 was his well-known animosity towards Dr. Sherago, an outstanding researcher and teacher and the Head of Bacteriology, later on Microbiology. The Kentucky flora suffered as a consequence. Of course both McFarland and McInteer were much discouraged by the losses of collections caused by the fire. They started new series. Within one year McFarland had over 137 collections made, but apparently gave up after that. He had been replaced by Dr. Riley as head of the Botany Department in 1942, and

he retired in 1951, a very bitter man. His botanical position was filled four years later by Dale Smith (working here during 1955-1960), who collected much among sunflowers and who paid more attention to cytology and polyploidy of plants, the clue to taxonomic problems among the sunflowers. Smith left to accept a position at the University of California.

Also lost in the 1948 fire were around 6,300 specimens collected by Mary E. Wharton for her 1945 Ph.D. dissertation (Univ. of Michigan), "Floristics and Vegetation of the Devonian-Mississippian Black Shale Region of Kentucky." These were donated by the University of Michigan to the UK herbarium. To replenish part of the loss, Dr. Wharton in the 1950's sold to the University some of the specimens from the black shale collection which she had retained, along with others of her miscellaneous collections. Dr. Henrickson who arrived in 1950 assisted in acquiring these collections during Dr. Riley's absence. The Mary Wharton collections started around 1937.

Ted Brown, who came from North Carolina, started around 1960 as curator of the herbarium and left for Memphis in 1967, after the arrival in 1965 of Dr. Sam Conti the Director of the new School of Biological Sciences. The Indonesian forest botanist Guhardja took his Masters' on the Flora of Bourbon County with Brown in 1962. Dr. Conti was recruited under the reorganization of the University under UK President Oswald, a biologist himself. It was said that Oswald took the University of Kentucky in the 20th century (see Alex Crouch's article, "Oswald's term brought change to administration", Kentucky Kernal October 25, 1963 - see also 24 and 26). That certainly does not apply to the UK Herbarium. Under the new rules heads of Departments did no longer have tenure in those jobs. Instead they were rotated. This meant that Dr. Riley had to give up this prestigious post, much to his disappointment. Brown added, with his wife and students, many collections to the herbarium but he could not explain to microbiologist Dr. Conti what he was trying to do, getting on with the flora of Kentucky, and, with other problems of ill-health, he left. But he has completed a book on the Kentucky flora with R. Athey, now in press.

During 1967, Dr. Andre Kostermans from Indonesia was visiting Full Professor for one Semester. He was able to impress Dr. Conti and he sold him on the idea that the most ideal curator would be a tropical Botanist. As a result I arrived on the scene in August 1968, with as terms of reference to work in cooperation with Dr. Wharton and others on a Kentucky flora as well as carrying on research on tropical floras. My initial plans for a reorganized herbarium and a local arboretum took 15 years to find response within the school and the rest of the University, but they were ultimately put on the backburner for lack of support from the state.

During those fifteen years various important collections were lost for the UK herbarium as the result of chronic anaemia of staff and funds. Dr. Conti, a microbiologist, followed the national trend and abolished the Botany Department. The very gifted Graduate Student Michael Grayum left during the summer of 1980, while I was working on Tiliaceae of West Africa in Paris France. His 5,000 collections found a better home in California, though some were returned later on. Now we are expecting the return from Berkely of a major part of the Ray Cranfill collections, another 5,000 made by this ardent young native born collector, still an undergraduate student while he was assistant in the herbarium and now a successful patent lawyer in San Francisco. The collections of the Nature Preserves Commission made during 1976 to the present went to the understaffed and little supported Herbarium of the Univ. of Louisville and later on to Eastern KY Univ., after the School of Biological Sciences at UK did not succeed to assert the flagship function of the UK herbarium, the oldest Landgrant Institution in this state. In the new 5-year plan of the date 1983

this function was underlined and all ideas already supplied by me two weeks after my arrival to Dr. Conti, were finally been adopted, after a good benchmark study by the Thomas Gray Committee (1982-Spring 83).

The living plant resources of the university were also treated with rather spasmodic interest. Buildings always had priority over arboreta, greenhouses, wild-flower gardens or old trees which might be preserved. It began in 1882 when apparently Ashland and Woodland Estates were abandoned for the 52 acres of the Lexington City Park, an old part of the Bluegrass Savannah Burroak Woodlands, of which a few trees still remain. [F.H. Dickey notes that this decision was made because of the necessity to keep a publicly supported institution free of religious denominational control...] In 1980 the university even contemplated getting its own Robinson Forest stripmined.

The first act of real conservation was in 1980 to declare the little woodland at Shady Lane a Nature Sanctuary. This was the first good initiative for the future of botany in the state taken by Samuel Conti, just before his departure. Now we were told by one of the top administrators that we would have there an area of almost 100 acres adjacent to the sanctuary for a native arboretum and a new Natural History Museum, large enough to house a very well organized and well staffed herbarium, which really can function as the central depository of the plants of Kentucky, but after a lot of planning and effort we were shunted aside and left with our pipedreams. Fifteen years ago Vice President for Academic Affairs, Dr. Lewis Cochran urged me to plan a kind of botanical garden or arboretum at this university. There was however too much opposition to it in some parts of the university and it never came off the ground. Is the time ripe now?

Cynical people may point to the old Botanical Garden, described in an undated story in the archives. It was written by Mary LeGrand Didlake, who served from 1901-1944 as entomologist and botanist of the Experiment Station (Smith, loc. cit.). Probably around 1940, she described a seven acre botanical garden and wild flower preserve, planned in the fall of 1927 by her and a Committee from the Garden Club of Lexington at the request of President McVey, between the old stadium and Rose Street. (McVey as also the president who in 1937 laid the first stone for the Funkhouser Building). The Garden Club of Lexington and seven garden clubs in the state took part in the Bot. Garden Project. It was of course too small to represent all the trees of Kentucky.

Mary Didlake described this garden as follows in her "Notes on the History of the Department of Entomology and Botany" (UK Archives): "for thirteen years this was a most interesting project. Many people became interested and contributed time, money and plants and made trips to remote ravines collecting native wild flowers. We developed a slope from the White Hall to the football field and from Limestone Street to Rose Street into a beautiful garden to plant and label correctly our native shrubs, trees and wildflowers in addition to showy cultivated plants and each year celebrated a Garden Day, which attracted people from all over the state. The Garden Club of Lexington made financial contributions as did the University...the little stream which ran through the grounds was considered a picturesque feature. It overflowed its banks two different years and wrought considerable havoc. The City decided it must be covered over. Then University buildings encroached on the area and funds were inadequate to care for and guard the plantings. Students, visitors and vandals would pull up the labels and even valuable plants. It was hard to give up the project after so many people had spent so much time and money and effort on it, but we finally did in 1940 and returned to the Garden Club of Lexington funds on hand which had been contributed toward securing a definite plan for a Botanic Garden." The only place where some local herbs survived until the Fall of 1984

was Miss Mathews' garden, used to her great delight by my botany classes.

On the other parts of the campus, except the Shady Lane Preserve, wild plants are prosecuted by herbicides, lawnmowers and other means. In August 1972 some Cannabis sativa still survived. It was illustrated in the student journal, "THE KENTUCKY KERNEL," along with a picture of the statue of Patterson, the first President of UK, with the text inscribed on it: "He kept the seed for the next generation."

POSTSCRIPT: MISSED OPPORTUNITIES

Extensive collections made by resident botanists in Kentucky and others have little or no representation in Kentucky herbaria generally because the facilities here have been inadequate. Some of the major examples are as follows.

| Collector | Date of coll. | Based at: | Number | Current location |
|-----------------|---------------|---------------|---------|----------------------|
| C.S. Rafinesque | 1818-1826 | Lexington | >5,000? | mostly lost |
| Charles Short* | 1815-1863 | Lexington | 25,000 | Philadelphia |
| Sadie Price | 1893-1904 | Bowling Green | unknown | Missouri. Bot. Gard. |
| Lloyd Brothers | 1920s? | Cincinnati | 5,000? | Univ. of Cincinnati |
| John K. Small | 1920s | New York | unknown | New York Bot. Gard. |
| Lucy Braun | 1920-1940s | Cincinnati | 10,000 | Smithsonian |
| Clyde Reed | 1950-1962? | Morehead | 20,000 | private |
| Dorothy Gibson# | 1955-1961 | Casey Ct. | 5,000 | Field Ms., Chicago |
| Ray Cranfill | 1974-1980 | Lexington | >5,000 | private |
| Michael Grayum | 1976-1980 | Lexington | 5,000 | California |
| Raymond Athey | 1960-1970s | Paducah | 10,000 | Memphis (closed!) |
| Warren Wagner | 1950s-? | Ann Arbor | unknown | Ann Arbor |

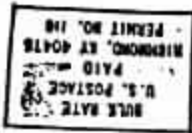
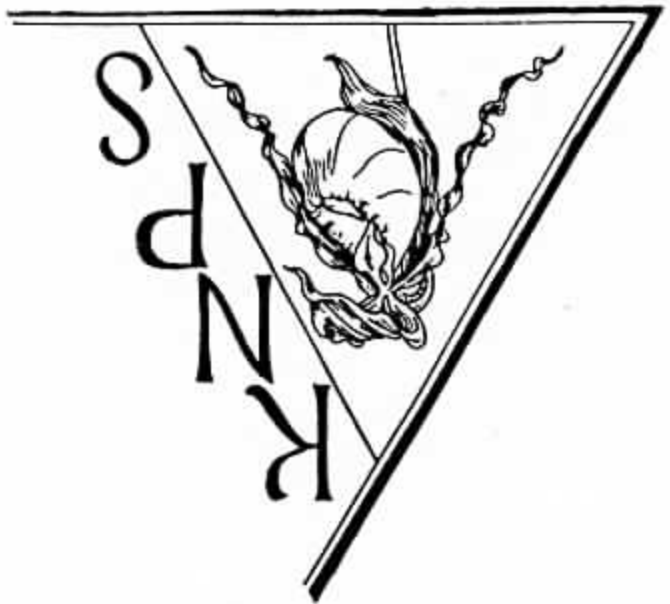
*Core, E.L. 1970. The botanical exploration of the southern Appalachians. In P.C. Holt (ed.). The Distributional History of the Biota of the Southern Appalachians.

#Gibson, D. 1961. Life-forms of Kentucky plants. Amer. Midl. Nat. 66:1-66.

Other surrounding state herbaria with important collections from Kentucky include Carbondale, Purdue, Memphis, Knoxville, Nashville, Vanderbilt, Austin Peay, Cincinnati, Miami University (Oxford, Ohio) and Huntington. Some of these institutes have reserved collections for the UK herbarium, but the majority of their Kentucky collections are not yet located here. The growth of other state herbaria in Kentucky has taken place mainly since 1970 (see Ron Jones article in this newsletter). If duplicates of all collections ever made in Kentucky had been preserved at the UK herbarium then an estimated 250,000 collections would be located there, comparable with Ohio State herbarium in Columbus, Ohio. Some publications about common plants sometimes show curious Kentucky gaps in their distribution maps, simply caused by lack of collections. Often about one fifth or so of collections cited from this state are located in Kentucky herbaria.

Acknowledgments

Great use has been made of the Archives in the Special collections of the King Library of the University. Frank B. Stanger and Mrs. Warth there were very helpful, supplying me with all sorts of files and information. Dr. Herbert Riley and Dr. Carl Henrickson were my main sources of anecdotes in the School of Biological Sciences. Dr. Charles Boewe and Kathleen Bryson of Transylvania University enriched my knowledge about Rafinesque. Dean Barnhart of the College of Agriculture supplied me with a copy of Allan Smith's book. F.A. Dickey, Mary Wharton and Mrs. Herbert Riley supplied some corrections to the manuscript.



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