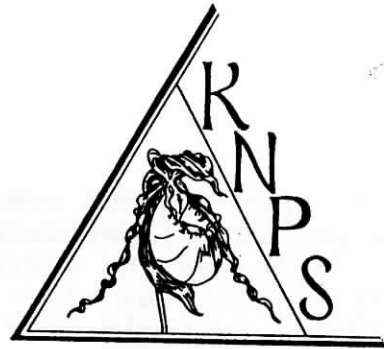


The Kentucky Native Plant Society



Newletter: Volume 4, Number 4

November 1989

THE FOURTH YEAR OF KNPS by Ron Jones

The KNPS has now completed almost four years of existence. As of this writing the membership number now stands at about 350 (members that have sent in dues for 1989). Please check your mailing label to determine the status of your membership. If you have not updated your membership since 1988, then this is the last newsletter that you will receive. Please send in your 1990 dues now, and if you are in arrears for 1989, please send in those dues also. We do not like to remove anyone from our mailing list, but we feel that after a year of unpaid dues, we have no choice. KNPS needs to continue to push for new members. Please tell your friends about our organization, and if you need extra membership forms just let me know.

We are still keeping the dues at \$3 for at least one more year. After that it is very likely that the dues will have to increase, probably to about \$5 for individual memberships. Our financial status at the present is OK, and the Board of Directors felt that it was unnecessary to increase dues at this time. Thanks to all that have sent donations to the society, for this is one of the main reasons that KNPS has remained in good shape financially. We hope to eventually become incorporated as a non-profit organization, so that your donations can be then considered as tax-exempt. We will also establish other membership categories, such as life-memberships, when KNPS becomes officially non-profit.

I would also like to thank those of you that have volunteered for various projects and other types of assistance to KNPS, and to apologize for not getting back to many of you very quickly. We are currently going through all of our membership forms in which you expressed your interests and making lists of people for the different projects (ie. slide show, roadside plantings, rare plant monitoring, UK arboretum, seed exchanges, etc.), and will be getting in touch with you in the near future.

Although I stated in a previous issue that the booklet Vegetation and Flora of Kentucky would no longer be available, I have decided to print 100 more copies because of the continuing demand. I anticipate no further reprinting, however, so that if you have not yet obtained a copy, or want additional copies, please request them now. (A few Wildflower Weekend T-Shirts are also still available, about 3 medium, 6 large, and 12 X-large).

The biggest event of our fourth year was our participation in the Wildflower Weekend at Natural Bridge State Park on May 5-7. Although the weather was bad, it was still quite a successful affair, and we also plan to be involved in the upcoming 1990 Wildflower Weekend at Natural Bridge.

KNPS field trips in 1989 have for the most part been very successful (see Field Trip Reports in this issue), and we continue to search for new and interesting sites. Please indicate on your membership forms if you have recommendations for field trip activities.

All in all the fourth year of the KNPS has been a very successful one, and we look forward to seeing many of you on our field trips, at our annual meetings, and in special project activities.

FIELD TRIP AND MEETING REPORTS

LILLEY CORNETT WOODS, LETCHER COUNTY, APRIL 22. Twenty-three people hiked the Big Everidge Hollow Trail on a warm, sunny day. The floral display was accented by several patches of white trillium, wild geranium, and purple phacelia. The central part of Big Everidge was particularly rich in spring flowers. The KNPS has sponsored trips to the Woods for two years and we hope to make this an annual visit to the largest old growth mixed mesophytic forest in Kentucky. Report submitted by Bill Martin

WILDFLOWER WEEKEND AT NATURAL BRIDGE STATE PARK, MAY 5-7. See report in KNPS Newsletter 4(2)

FLAT ROCK GLADE, SIMPSON COUNTY, MAY 20. This was a joint trip with the Kentucky Nature Conservancy, which owns the site. Fifteen people attended the trip on a beautiful sunny day. The purpose of the trip was to show people a unique, high quality limestone glade and some of the interesting and rare plants which inhabit the glade. The trip lasted about 3 hours and a nearby dry oak-hickory-cedar woods was also investigated. The terrain was mostly flat and the hiking conditions were easy. Interesting and rare plants observed during the trip included 2 glade cress (Leavenworthia torulosa, and L. uniflora), quillwort (Isoetes butleri), upland privet (Forestiera ligustrina), glade primrose (Oenothera triloba), melic grass (Melica nitens), and fame-flower (Talinum calcaricum). Also observed were large stands of prickly pear cactus, lip fern, and many others. Submitted by Marc Evans.

SPRING GROVE CEMETERY IN CINCINNATI, JULY 15. Fifteen people attended this trip to view the impressive collection of trees at the cemetery. See article by Carol Hanley in this newsletter.

CARTER CAVES STATE PARK, CARTER COUNTY, AUGUST 12. Twelve people met at the park for a trip emphasized ferns. A total of 29 ferns species were found, as well as two orchids--Tipularia discolor (crane-fly orchid), and Triphora trianthophora (three birds orchid). Due to lack of time Lockegee Rock was not visited. Report submitted by E. H. Richards and John Tierney.

HEMATITE LAKE, LBL, SEPTEMBER 9. Twenty-three people met at 1:00 for a leisurely walk around Hematite Lake, a 100-acre subimpoundment of Lake Barkley (Cumberland River) in Land Between the Lakes. The weather was warm, mostly clear, and generally typical of early autumn in the hill country when blackgum leaves are turning red and pawpaws are ripening. Our route carried us through several community types, such as slope and low forests, beaver swamps, and lake margins. Along the way we saw five of our state or federally-listed rare plants, including Price's potatoe bean (Apios priceana), golden-seal (Hydrastis canadensis), ginseng (Panax quinquefolius), yellow water-stargrass (Heteranthera dubia), and a tiny knotgrass (Paspalum dissectum).

Several other rather rare species were also seen, including autumn coralroot (Corallorhiza odontorhiza), twayblade (Liparis lilifolia), sweet Indian-plantain (Cacalia suaveolens), and ladies'-tresses (Spiranthes ca. cernua). The extensive stand of yellow nelumbo (Nelumbo lutea) and other aquatics on Hematite Lake, several species of wet-forest ferns, and a colorful display of mushrooms, puffballs, and other kinds of fungi added to the floristic diversity. Most members arrived early enough to tour the displays and live wildlife exhibits at the LBL nature center or to observe the waterfowl on nearby lakes. Remnants of the 1800s iron industry, including old furnace, were also of general interest.

Overall the day was pleasant, botanically enriching, and the comradeship superb. Next, our route was southwestward, across Kentucky Reservoir to KenLake Lodge, looking forward to an evening program and the next-day trip further into western Kentucky. Report submitted by Edward W. Chester.

ANNUAL FALL MEETING, KENLAKE STATE PARK, SEPTEMBER 9. Twenty-two people attended the Fall Meeting of the KNPS at this western Kentucky site. Reports on KNPS finances, memberships, and field trips were given. Discussions were held on planning field trips, printing additional booklets, increasing dues, and the format and contents of the newsletter. Following the discussions the meeting was turned over to Dr. Harold Eversmeyer for a slide show presentation on the history, flora, and fauna of Murphey's Pond.

MURPHEY'S POND, HICKMAN COUNTY, SEPTEMBER 10. Thirty-five people visited Murphey's Pond on a Sunday morning. The day was a sunny pleasant day for all to discover the virgin bald cypress swamp world famous for its population of cottonmouth water snakes, although no snakes were seen. Notable plants were bald cypress (Taxodium distichum), virginia willow (Itea virginica), swamp rose (Rosa palustris), overcup oak (Quercus lyrata) and willow oak (Q. phellos). Report submitted by Harold Eversmeyer.

BAYLOR HICKMAN MEMORIAL PRESERVE, PULASKI COUNTY, SEPTEMBER 30. Ten people attended this hike to see this natural area recently purchased by the Nature Conservancy. A light rain was falling during the entire trip, and a long, muddy ridge had to be negotiated before reaching the Rockcastle River. But the group was persistent and along the ridge several flowering plants were spotted, including striped gentian (Gentiana villosa), smooth foxglove (Aureolaria laevigata), and a variety of asters and goldenrods. Upon reaching the river the group also observed the newly described species, the rockcastle aster (Aster saxicastelli). Report submitted by Julian Campbell.

WETLAND SEDGE AND RUSH WORKSHOP, ECU HERBARIUM, OCTOBER 21. Five people attended the workshop. They received detailed instruction on the leaf, flower, and fruit features of the Cyperaceae (sedges) and Juncaceae (rushes). Most of time was spent on the actual keying of specimens, with representatives of the genera Carex, Scirpus, Eleocharis, and Rhynchospora being used for the sedges, and species of Juncus for the rushes. The workshop lasted from 9 am to 3 pm and all seemed to enjoy getting a little better acquainted with these wetland inhabitants. RJ.

NOTE ON THE UPDATE OF RESEARCH INDEX IN KENTUCKY
by Ron Jones

An Index of Current Plant Systematic and Ecological Research in Kentucky was published in the May, 1989 issue of the KNPS Newsletter. I had planned on publishing an update of the Index in this newsletter, but have decided to postpone the article until later (probably the May, 1990 newsletter) to give all concerned more time to respond. If you are doing botanical research in Kentucky, even if you live out-of-state, or if you are a Kentucky botanist doing research elsewhere, and you want to be included in this Index, please write me and I will send you a data sheet to be filled out on your research projects.

WILDFLOWER SEEDS FOR SALE

The New England Wild Flower Society is offering for sale more than 150 varieties of wildflowers and ferns in their 1990 Seed List. Included in the List are natives for woodland, wetland, and meadow gardens. Early blooming wildflowers add color to spring shade gardens while many of the sun-loving varieties are vibrant splashes in perennial borders. Send \$1.00 and a self-addressed, \$.45-stamped envelope (#10, business size) to Seeds, New England Wild Flower Society, Garden in the Woods, Hemenway Road, Framingham, MA 01701. All requests for the 1990 Seed List must be received by March 1 because seed sales close March 15. Request will be filled in the order received. The Seed List is an adjunct of the Society's world-wide distribution effort.

NO KNPS FIELD TRIPS OR MEETING SCHEDULED FOR THE WINTER MONTHS

A LOOK AT LOPSEED

John W. Thieret
Northern Kentucky University

When the winter winds blow
and it's twenty below.....

Such weather is hardly the time to go on a botanical stroll through the woods. But when the winter winds are gentle and the temperature is in the 40s or above, a walk in our forests--and identification of their plants by "off-season" characteristics--can be rewarding experiences. Most of our sylvan plants are nearly as easy to identify then as they are when they are in full leaf and flower. Winter twigs, fruits of various kinds, and brown leaves on the forest floor can all be recognized after a little practice.

One of the forest dwellers that is as easy to recognize in the cold months as it is during the growing season is lopseed (*Phryma leptostachya*) (Fig. 1). This is a frequently seen, summer-flowering perennial that can be up to about a meter tall but is usually only about half this size. In late autumn and in winter, look for the long, slender spikes, each with its many "upside-down" fruiting calyxes, that persist on the brown and now-leafless dead plants. You can find lopseed in woods, often with beech, sugar maple, and oaks.

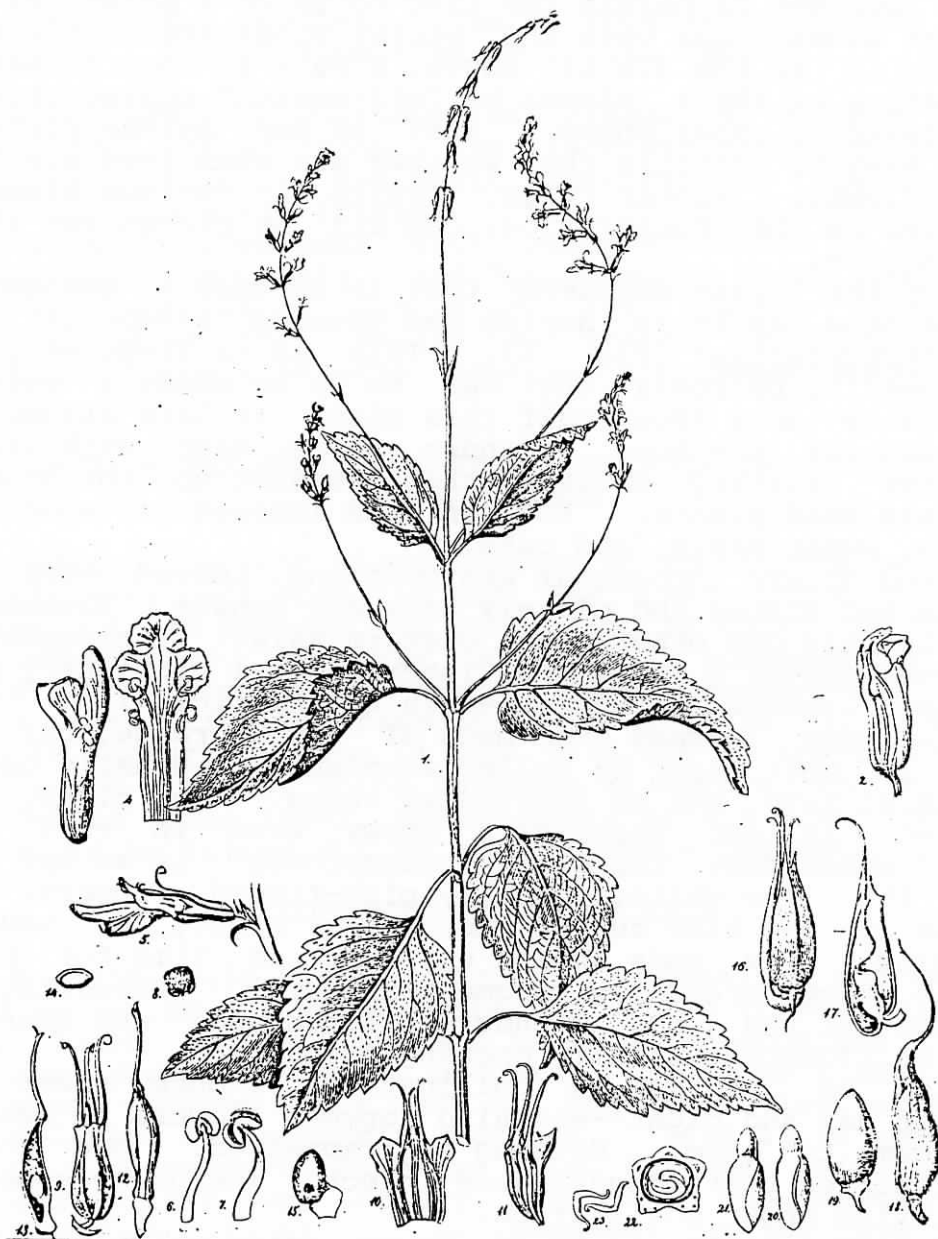
Lopseed occurs throughout Kentucky and, indeed, over much of eastern United States and closely adjacent Canada. Elsewhere, it is found in only one other area: eastern Asia. (Incidentally, do not believe Webster's Third New International Dictionary when it reports that lopseed is "adventive in No. America.")

I have seen lopseed over much of its US range, but only a few times in what might be called abundance. Usually one notes an individual here, and an individual there. The plant, it must be admitted, is not especially showy, even in full flower. Indeed, I think that the word "inconspicuous" is an apt one to describe it. The white, usually pink-tinged flowers. 5-8 mm long, open at one time during the day or night, but usually in the morning. The buds point up, but as time for blooming approaches, they gradually become horizontal. Flowering begins at the base of the long, slender inflorescence and then moves upward, the flowers typically opening in pairs.

Having an interest in pollination, I once spent several hours--both day and night--watching lopseed flowers to see if any visitors came to them. Nothing ever appeared. One observer, though, reported that long-tongued insects, including some kinds of bees, bring about pollination.

Each flower lasts 12 to 36 hours, after which the corolla drops. Then within one or two days the calyx and the growing fruit within it turn sharply downward and remain in this "upside down" position. The seedlike fruits--each containing one seed--remain enclosed in the calyx, which enlarges to accommodate their growth (Figure 2).

Figure 1. Lopseed. A plate from A. Schnizleins's Iconographia published about 1850. The central fruiting spike, shown here in a graceful curve (to fit the space allotted for the figure), really should be quite erect.



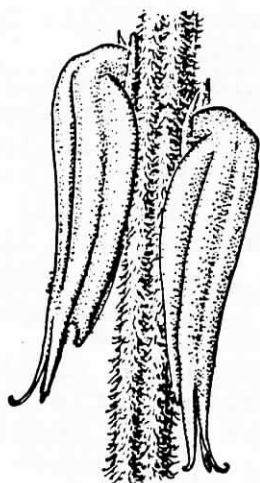
Three of the calyx lobes, longer than the other two, are hooked at the tip, which presumably is aid to dispersal by animals: I have found lopseed fruiting calyxes attached to my socks after an autumnal walk in the woods. The fruits, though small, are known to be eaten by certain birds--for example, wild turkeys.

The fruits may be edible for some animals, but an extract from the leaves and roots of lopseed has been found to act as an insecticide. Indeed, one of the names by which the species is known in China is "poisonous fly-plant." But don't throw away your Black Flag or other household or garden bug killers. Lopseed is hardly likely to replace them: the plants are simply too infrequent, and the concentration of the poisonous principle in them is just too low for commercial exploitation.

The name "lopseed" recalls the "upside down" position of the fruiting calyxes. "Lop" is a rather infrequently heard adjective meaning "hanging down" or "pendent." We use it perhaps most often--other than for Phryma leptostachya--for lop-eared rabbits, those with the droopy ears.

Long in a family all its own--the Phrymaceae--lopseed has more recently been placed by some authors in the verbena family, but the evidence for this new placement is not overwhelming. Not only is the family relationship of lopseed uncertain, but other aspects of the species--especially pollination and dispersal--need investigation. There is still much to learn about lopseed--and about most other plants in our own backyards.

Figure 2. The fruits of lopseed are enclosed in the calyx (ca. 7 mm long), which has three hooked lobed and becomes bent sharply downward after flowering. From Journal of the Arnold Arboretum, Vol. 53 (1972).



A FIELD GUIDE TO THE SPRING GROVE CEMETERY

By Carol D. Hanley, Frenchburg, KY

The Spring Grove Cemetery of Cincinnati, Ohio (visited on July 15 with Dr. John Thieret of Northern Kentucky University) was a veritable menagerie of unusual shapes, both biotic and abiotic. The representatives of the abiotic world were constructed of stone and iron, carved and twisted, to pay homage to those more transient types. While the representatives of the biotic world, the Zelkovas and Eucommias, were no less exotic, just less bedizened. Many were old friends (to those of us currently involved in a Dendrology course at ECU), and many also were completely new, or as Dr. Thieret would say, "Ah, look an old friend!!" or "Here... a fine new acquaintance!!" Both ingredients, arboreal and ecclesiastic, mix in just the right proportions to give Spring Grove a slightly macabre yet fanciful ambiance. Within the following pages an interested sojourner can find a few examples of the dendritic specimens found flourishing among the mausoleums.

Old Friends. Those species sited who were completely familiar to the young botanists from ECU were Magnolia tripetala (umbrella magnolia), Morus alba (white mulberry), Quercus imbricaria (shingle oak), Quercus phellos (willow oak), Quercus macrocarpa (bur oak), Liquidambar styraciflua (sweetgum), Gymnocladus dioica (Kentucky coffeetree), Gleditsia triacanthos (honeylocust), Ilex opaca (American holly), Acer rubrum (red maple), Acer saccharum (sugar maple), Acer nigrum (black maple), Aesculus octandra (yellow buckeye), Tilia americana (American basswood), Cornus florida (flowering dogwood), Nyssa sylvatica (blackgum) and Tsuga canadensis (eastern hemlock). Tests for positive identification were included at almost every site including the "nerd test" for the genus Cornus. In this test a leaf is torn in half to expose silky hairs which continue to connect the two leaf fragments.

Many times a genus could be identified but the species was unfamiliar or too elusive to be determined. Magnolia soulangiana (saucer magnolia) had prominent encircling stipular scars placing it in the genus Magnolia but the species was previously unknown. Carpinus betulus (European hornbeam) was indistinguishable as Carpinus but the upright branches gave it a different aspect than C. caroliniana. The hybrid Quercus bebbiana was a derivative of Q. alba and Q. macrocarpa. Fagus sylvatica obeyed the rules of beechdom and possessed sharp buds, however it exhibited unconventional fastigate behavior unlike those beeches of the eastern U.S. forests. Weeping varieties of Prunus (cherries) and Morus (mulberries) were found seemingly commiserating with the patrons. Pinus strobus was present but since there are no native pines in Ohio, it was deduced that this was an introduced specimen. Picea orientalis, P. abies and P. pungens were identified as members of the spruce group of gymnosperms because of the small pegs that persisted on each twig after the needle had fallen. Many of the Picea species are suffering from the

effects of acid rain, not only in the United States but in Europe as well. A species of Abies was located and used to demonstrate the fir's unique characteristics (leaf scars that are flush with the surface of the twig, and cones that disintegrate upon maturing). Dr. Thieret explained that cross fertilization is enhanced in the fir and other gymnosperms by the production of pollen cones near the base of the tree and seed cones nearer the top. This arrangement makes it more likely that pollen is blown to seed cones of other individuals rather than to those on the same tree.

NEW ACQUAINTANCES. Many times the only familiar aspect of a tree was its family; sometimes this luxury wasn't even allowed. Phellodendron and Evodea were Asian members of the Rutaceae. The former is a dioecious tree with very soft spongy bark. The elm family was represented by the delightfully slavish Zelkova serrata. This tree could be identified by the equal number of side veins and leaf teeth. Eucommia ulmoides, an Asian rubber tree, possessed more teeth than side veins. Larix decidua, a deciduous relative of the pines and spruces, was also found. This tree differs from the fir in that the cones fall intact. It differs from the pines in that it has many needles per bundle.

The new families discussed contained some common and some exotic species. Taxus species (yews) of the family Taxaceae can be distinguished by their flat, sharp pointed needles with five stripes on the bottom. The needles and seeds of this species are poisonous. Another deciduous gymnosperm, Taxodium distichum (bald cypress) of the family Taxodiaceae, was introduced. In this interesting species instead of just the leaf falling the entire branchlet is shed. The ancient family Gingkoaceae contains only one species, the anachronistic Gingko biloba (maidenhair tree). In the orient the people prepare "silver apricots" from the seeds by carefully removing the fowl smelling exterior. A species of Cedrus, the Cedar of Lebanon, represented the Old World family of cedars which are not native to the western hemisphere. They have stiff needles in bundles of many and their cones are similar to those of Abies in that they are shed scale by scale. A species of Tamarix resembled a gymnosperm but was actually an angiosperm. It was an Asiatic species naturalized to the American southwest. Two members of the family Cercidiphyllaceae lent an oriental cast to portions of the journey. The Katsura tree and a weeping Cercidophyllum were identified as member of this family. The leaves of these trees were very similar to the native Cercis canadensis (redbud). One of the last trees to be inspected was the incense cedar, a Calocedrus species. It can honestly be said that these trees helped to write history since they were dismembered in order that sharp No. 2's could become ubiquitous.

A sortie to Spring Grove does not do the grounds justice. This brief paper barely introduces the variety of native and exotic species found within its borders. A more extensive journey through this arboretum is definitely in order.

SEED EXCHANGE AND REGIONAL NURSERY UPDATE

Members of KNPS are welcome to participate in the KNPS Native Plant Seed Swap. If you would like to request seeds of up to three species from the following list, please send your wishes along with a self-addressed, stamped envelope to

KNPS Native Plant Seed Swap
c/o Charles Chandler
924 Maywick Drive
Lexington, KY 40504.

List a substitute or two in case any of your choices is no longer available. If you have other native plant seeds that you'd like to share with fellow members, clean them as much as you can and send enough for ten small packs or so to the address above. If you can package them in individual envelopes (coin envelopes from the office supply or dime store work well) it will make distribution much easier. Be sure to label them with the name, and the date and location where they were collected. They must get here by the end of the year to be included in an updated swap list in the spring newsletter. As of now, you may make your three selections from the following list:

Asclepias tuberosa (Butterfly Weed)
Aster novae-angliae (New England Aster)
Campsis radicans (Trumpet Flower)
Cassia marilandica (Wild Senna)
Cimicifuga racemosa (Black Snakeroot)
Hedeoma pulegioides (American Pennyroyal)
Lobelia siphilitica (Great Blue Lobelia)
Mimulus ringens (Monkey-flower)
Opuntia humifusa (Prickly Pear)
Ranunculus hispidus (Hairy Buttercup)
Rudbeckia hirta (Black-eyed Susan)

Don't forget the regional nurseries that are taking an interest in propagating native plant species. They will have a wide variety of seeds and plants available for next year's planting.

Barrett's Native Plants will have several species of native azaleas and rhododendrons. Send inquiries to Danny Barrett, P.O. Box 181, Booneville, KY 41314 or call (606) 593-5097.

Nurtured Gardens will have wildflowers and a good selection of woody ornamentals. Send a self-addressed, stamped envelope to Larry Linville, P.O. Box 1, Morehead, KY 40351. (606) 784-3950.

Shooting Star Nursery will be offering a list of wildflower seeds and plants as well as grass and wildflower seed mixes. Inquiries should go to Sherri and Marc Evans, 311 Bates Road, Frankfort, KY 40601. (502) 223-1679.

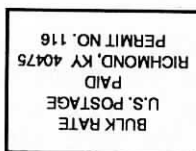
WOODPECKERS AND NATIVE PLANTS

Charles Elliott, Biology Dept. Eastern Kentucky University

Among the birds that frequent Kentucky's forest are members of the scientific family Picidae--the woodpeckers, flicker and sapsuckers. All these interesting, specialized birds have the common characteristic of a heavy bill supplemented by strong neck muscles for drilling purposes. By this means woodpeckers probe into wood for much of their food and also sculpture their nesting holes in dead trees. Most people identify woodpeckers and their relatives as insect eaters--pecking away on trees and consuming insect larva, ants, or (in the case of sapsuckers) drilling holes to gain access to a year-round use of the fruits and seeds of many native plants. Seven members of the Picidae family occur in Kentucky; the pileated, hairy, downy, red-headed, and red-bellied woodpeckers, the flicker, and the yellow-bellied sapsucker.

The pileated woodpecker, largest of our woodpeckers, readily eats grapes and sassafras fruits in the summer, while consuming blackgum, Virginia-creeper, and holly fruits in the fall and winter. Pileated woodpeckers have also been observed to eat the fruits and seeds of dogwood, greenbrier, cherry, pokeweed, serviceberry, blackgum, Virginia-creeper, and apples throughout the year. The smallest woodpecker, the downy, consumes poison-ivy year-round and dogwood, serviceberry, oaks, Virginia-creeper, and hophornbean in the fall and winter. The fall and winter diet of red-bellied and red-headed woodpeckers includes oak, grape, Virginia-creeper, poison-ivy and bayberry. Ten to 25% of the fall and winter diet of flickers consists of poison-ivy--with blackgum, Virginia-creeper, hackberry, and dogwood contributing to 2 to 5%. In addition to tree sap, the yellow-bellied sapsucker utilizes holly fruit and wood as well as cherry, dogwood, and Virginia-creeper.

So in the future, when you see a woodpecker--recognize it for the natural form of insect control it represents--and for its dependence on many species of native plants.



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