

The Lady-Slipper

The Official Newsletter of the Kentucky Native Plant Society



Volume 12, Number 4

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President's Message

David A. Eakin

Eva Allen has penned some beautiful thoughts about the American countryside which adorned her 1997 Hallmark calendar. These words have touched me deeply throughout the past year. Let us be thankful for those who can so deftly weave words into poetry - and who bring expression to our own unpenned thoughts and feelings. Surely we find in her verse the expressions of a kindred spirit!

"The American countryside is waiting...waiting to be explored. In every season, it calls to us, from snowy woods or sunny fields or quiet harbor scenes: 'Come walk my roads, come listen to my brooks and restless waves. Come dream your dreams, wide as my skies - - I am your heritage.'"

"The maple's are first to don their festive autumn garb, but soon the other trees will add their splendor to the joyful celebration. With skillful fingers, autumn weaves its orange and yellow threads into summer's lovely tapestry of green."

"Bending low, the trees confide their snowy secrets to the brook, for they know the brook will never, never tell."

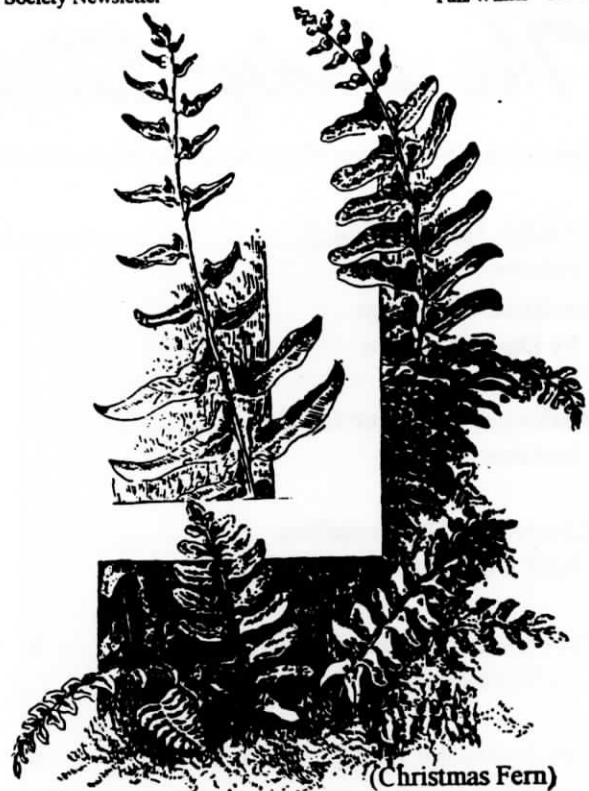
"The waves rise and fall, the rocks stand immutable. In the natural rhythms of life, everything changes - - everything remains the same."

As we close another year, may each of us give thanks for the glorious fabric we call the web of life. With appreciation for each small thread, which almost unnoticed, adds to the strength of the whole. Similarly, may we express our sincere thanks and appreciation for one another - for each individual effort, however small, that has contributed to the strength of our Society. It is with genuine thankfulness that we end this year with unprecedented growth and progress toward our common goals. For each of you who took upon yourselves a part of the overall effort of the KNPS, and for those who provided support and encouragement in these activities, we extend our sincere gratitude. May we use the quiet of winter to reflect upon the successes of the past year, and consider how we can continue to build upon each past success in order to strengthen the Kentucky Native Plant Society of future years. I am sure I speak for the entire Board of Directors, when I wish you continued personal success, a happy holiday season and a very merry new year!

Sincerely,

Dr. Dave

David Eakin may be reached at Biological Sciences Department, Eastern Kentucky University (606) 622-2258.



(Christmas Fern)

Walking in a Winter Garden

Gene E. Bush

Nature rests in near nudity cloaked only under the heavy gray of gloomy clouds. The landscape becomes almost monochrome in Indiana from December until February. Why would I even think of a garden during winter, much less want to be outside? Winter months are almost devoid of sunlight and warmth.

Lack of light effects my moods during these long months. I do not have sunlight deficiency disorder, but it can be hard to stay upbeat and cheerful amid the lack of color. I am an active outdoors person and remaining inside too long causes cabin fever to creep up on me. Unless the weather is so raw I could not force a Polar Bear outside with a clear conscience, I can usually be found walking in my garden each day.

Sometimes I see my garden, at other times it is simply a place to be. Sitting on the big rock beneath the old cedar in the center of the garden bad days drain away. I remain unfocused allowing all to flow downward through my connection with the earth. A new strengthening and centering in my universe flows inward while the old exits.

I always gain in my sense of serenity while renewing my connection. Entering the garden with observing eyes during the dead of winter is a quite joy lifting the gray gloom of overcast skies. My garden is arranged so that I can find a fresh clean green color in foliage, bark textures and colorful berries, along with blooms, twelve months of the year. There are always little surprises to greet me as I walk the paths in my woodland garden.



(Eastern Red Cedar)

Some of my favorite finds are the ferns. The old standby Christmas Fern (*Polystichum acrostichoides*), a steadfast friend, is always there. The bright shiny green of the fronds can always be counted on to lighten a dark corner of the woods and my spirits. Current seasons fronds will get pretty beat up by February, but come spring fresh foliage brings renewal.

The Hairy Lipfern (*Cheilanthes lanosa*) is a small spreading fern less than twelve inches in height that forms tight clumps. Great for a dry rocky site, it takes an open position in the garden. The fronds are covered with soft rusty colored hairs giving it a fuzzy appearance. Two or three days of not shaving and I feel a real affinity for sitting near this species of fern. The feature I like best is it's ability to take whatever mother nature has to deliver and remain stiffly upright.



(*Botrychium dissectum*)

Grape Fern (*Botrychium obliquum*) and it's frilly sister the Cut-Leaf Grape Fern (*B. dissectum*) belong near the path in stands of three to six. Growing to only around six inches in height a single frond is on display. One of our more colorful natives, it emerges a pinkish-mahogany. As winter progresses the fern turns to a deeper bronze with pink to red overtones. Get this one from a friend's garden with a ball of soil for it needs a second party present to feed.

Orchids have fascinating foliage during winter months. Showiest is the Rattlesnake Orchid (*Goodyera pubescens*). Leaves form a basal rosette reaching around two inches. The downy foliage is a bright green in color with a white stripe down the midrib. Each leaf is overlaid with a distinct netted pattern of white-on-green.

The Cranefly orchid (*Tipularia discolor*) sends up a single leaf in autumn that persists until late spring. Shape is elliptical, heavily veined with a pleated appearance. Color is a blackish-green having warty dark spots in between the pleats with a reverse side of rich purple. There is a bonus of blooms come August. Putty-Root (*Aplectrum hymale*) always makes me think of seersucker suits. One leaf emerges during autumn to show off over winter and into early spring. Larger than the Cranefly leaf, this one can reach six to seven inches. It is a dark dull green with light veins giving it a pleated and pinstriped effect.

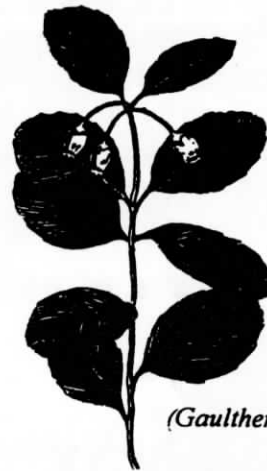
There are three great native groundcovers that belong beneath shrubs and small trees in the winter garden. All put on a twelve month display, coordinate well with other plants and exist peacefully with their neighbors.

Partridge-Berry (*Mitchella repens*) is a tiny trailing creeper hugging the ground to form a bright waxy green mat. Individual leaves are less than an inch long, rounded in shape with the midrib whitish-green. It will have fuzzy white flowers in pairs during June and July, followed by red berries into fall and early winter. It covers the bare earth left when Jack-in-the-Pulpit or Trilliums go dormant in summer.



(*Mitchella repens*)

Wintergreen (*Gaultheria procumbens*) is a miniature shrub with underground connections. Nothing sinister—simply shallow runners that pop up as four inch shrubs, then take off once more to form another until there is an open groundcover. A stiff little stem will carry lustrous leathery leaves, mat-green with prominent lighter veins. During winter the leaves take on bronze-red tones to form a background for the red berries that stay most of winter. I grow it where a leaf or berry can be picked to chew on as I pass.



(*Gaultheria procumbens*)

Galax (*G. aphylla*) isn't frequently found in local woods or nurseries for it was almost collected into oblivion. Better hotels, until relatively recently, used the leaves to decorate plates and it was used in many holiday greenery decorations. Once seen it is easy to understand why Galax was so highly coveted. The rounded, heart-shaped leaves are large and have saw toothed margins. Each leaf has a glossy, highly polished, sheen over the bright green. Come cold weather the leaves turn a bright coppery color.

Trailing Arbutus (*Epigaea repens*) is a small creeping shrub with large leaves. This little ground hugger reaches only three inches in height, but each leaf is also about that long and the shrub lies on the ground. Foliage is heavily veined and textured, a

light, bright green with a glossy sheen. The quiet beauty of this little shrub along with it's heavenly scent when in bloom has almost been it's undoing. Everyone wants a large mat in their garden taking it home only to have it slowly die because they do not understand it's needs.

When cabin fever strikes this winter give some thought to an all year garden. In a well planned garden there is no such thing as 'dead of winter'. Your place of peace, a connection with nature you can share without having to use the car, will always be there for you. Travel is not necessarily a matter of physical distance.

Gene Bush is owner/operator of Munchkin Nursery. He may be contacted at 323 Woodside Dr. NW, Depauw, IN 47115-9039. By e-mail: genebush@munchkinnursey.com or at his web site: [Http://www.munchkinnursey.com](http://www.munchkinnursey.com)



Educational Opportunities

☞ KNPS Certification Program in Native Plant Studies

KNPS Native Plant Studies Certification is based on completion of the following **six core courses**:

Basic Botany for the Amateur Naturalist
Plant Ecology for the Amateur Naturalist
Plant Taxonomy for the Amateur Naturalist

Plant Communities of Kentucky
Kentucky Wildflowers (Fall and Spring)
Kentucky Trees and Shrubs

And completion of at least three of the following **special topic courses**:

How to Know the Kentucky Mosses
How to Know the Sedges of Kentucky
Field Methods for Native Plant Research
Field Geology for the Amateur Naturalist
Spring Wildflowers and Trees
Aquatic Plants of Kentucky
Kentucky Wildflower Keying
Field Botany
Gardening with Native Plants
Rare Plant Conservation

Courses are offered at Bernheim Arboretum and Research Forest, Eastern Kentucky University, and occasionally at other facilities throughout the state. For more information on the course offerings at Bernheim, please call Dr. Varley Wiedeman at (502) 955-8512.

For general information about the KNPS Certification program and course offerings at Eastern Kentucky University, please contact: Dr. Ron Jones at (606) 622-6257.

1998 Winter KNPS Certification Course Offerings:

Plant Ecology for the Amateur Naturalist: Varley Wiedeman, Ph.D., Bernheim Science & Education Advisor

This course is for the amateur naturalist and no previous background in botany or science is expected. This winter class will be taught primarily indoors, but occasionally outdoor visits will be made to

Bernheim sites. Topics to be covered will include environment factors and plant distributions, life-history patterns, species interactions, communities and succession.

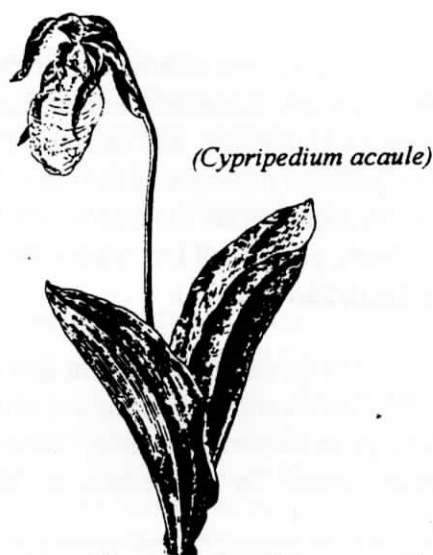
Time: 9 a.m. to noon, 4 Saturdays, *February 1 through February 22*

Place: Bernheim Arboretum Center

Fee: \$50 members, \$60 non-members (book fee \$15-\$20)

Limit: 30 participants

Registration: Bernheim Arboretum at (502) 955-8512.



(*Cypripedium acaule*)

Cypripediums in Kentucky

Mark Evans

Cypripediums derive their name from the Greek words *Cypros* (Cyprus, the island sacred to Aphrodite), and *pedilon* (slipper); meaning Aphrodite's slipper. There are currently five *Cypripediums* taxa in Kentucky, but I have little doubt that our state was once host to several more. Unfortunately, they and the old growth forests that supported them have fallen prey to progress.

Cypripedium acaule (pink lady's

slipper) is probably the most common *Cyp* species in the eastern two thirds of the state. It produces a solitary, nodding flower that can usually be seen in April throughout our range. *C. acaule* exhibits variable flower color; ranging from deep magenta to white, but the lighter shades are only seen infrequently. Flower stalks may be 35 cm tall, but the plant has only two basal ground-level leaves that are quite pubescent. This species presents itself in a variety of habitats. I've found it in great numbers on the thin, dry sandstone soils that cap the Knobs. Here, as elsewhere, it has a special affinity for growing in a mulch of pine needles over rock, but it seems equally at home in moist live sphagnum moss.

Cypripedium acaule and other *Cypripediums* utilize a trap shaped flower as an aid to the pollination process. Insects are lured into a slit in the front of the pouch shaped labellum by dark pink stripes and scent. Once inside, the insect (usually a bee), fails to find the reward of nectar or pollen and is guided to escape by hairs lining the interior of the pouch. These hairs lead to two escapes on each side of the labellum, where the bee comes into contact with the stigmatic surface before encountering the pollinia thus effectively preventing self-pollination. Bees learn very quickly however, and soon avoid other *C. acaule* flowers. All members of the genus utilize variations on this pollination scheme and are dependent on young or naive bees and generally experience comparatively low pollination rates.

Cypripedium parviflorum variety *pubescens* (yellow lady's slipper) flowers at about the same time as *C. acaule* but typically produces one or two flowers on each stem. It has 3 to 5 pubescent leaves and can reach a height of 80 cm. This

species was formerly known as *C. calceolus*, but the calceolus epithet is now reserved for the Eurasian species. The fate of this counterpart in England serves to remind us of how sensitive terrestrial orchids can be when confronted with the unnatural pressures of habitat loss and overcollection.

English gardener Reginald Farrer wrote in 1908 that "wickednesses untold have been perpetrated upon this plant." In those days, concerned individuals would try to protect the plants by deflowering them and thus make them less conspicuous to unscrupulous diggers. Despite these efforts, collectors have managed to completely exterminate the species in England, with the exception of a single individual which is reported to have lingered for over four decades. *Cypripedium parviflorum* variety *parviflorum*, the small flowered yellow lady's slipper, is similar except it is of shorter stature, usually under 40 cm, and has smaller flowers with less twisted sepals.



(*Cypripedium calceolus*
var. pubescens)

Cypripedium kentuckiense, the Kentucky lady's slipper, produces the largest flowers of any Kentucky Cyp. They are usually ivory or very pale lemon in color and share many features with the yellow lady's slipper. Favorite haunts for these 50 cm tall plants are floodplains in heavy shade. Kentucky lady's slipper may be more

common than is currently documented because large areas of potential habitat in eastern Kentucky are inaccessible. Nevertheless, this infrequently encountered species is prone to the same pressures as all orchids and has suffered greatly from logging and other alterations of habitat. It probably once occurred in much greater numbers before the state's old growth forests were effectively decimated.

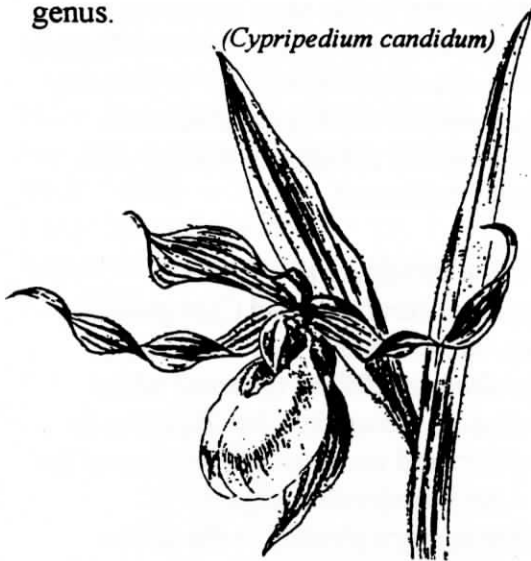
The remaining two species, *Cypripedium candidum* and *Cypripedium reginae*, are extremely rare in our state. *Cypripedium candidum*, the small white lady's slipper, occurs in a few localities in the northern and northeastern sections of the state. Like *Cypripedium reginae*, *C. candidum* is more plentiful in the cooler climates to our north. This is a species of moist calcareous meadows and is certainly one of the most memorable of wildflowers. Flowering plants can be 10 to 40 cm tall and sport one, or rarely two, pristine white blossoms with a decidedly crystalline texture and intense fragrance. The sepals of this species are pale yellow green with streaks of purple. Flowering usually occurs in May in our region.



(*Cypripedium calceolus*)

I only know of two small colonies of *Cypripedium reginae*, (the queen lady's slipper) in Kentucky, and both are in the cool hemlock forests of the southeastern corner of the state. This is another of the plants that probably managed to survive in Kentucky

during the last Ice Age. Enormous stands are found in states north of Kentucky, but here in the southern Appalachians, it has been relegated to cool microclimates. This species is truly the queen (*reginae*) of the genus.



Plants are robust, up to 90 cm tall, and produce large, fragrant pink and white flowers. Undoubtedly, other colonies exist in the state and remain undocumented. This is almost exclusively a calcareous wetland species. It is sensitive to fluctuations in the water table and has suffered greatly from the draining and alteration of its habitats. In addition, recent observations have shown that a small European skipper (a non-native butterfly that has become common throughout much of the range of *C. reginae*) gets trapped in the labellum and effectively prevents pollination by bees. Some believe that this will cause a further decline in the numbers of this species.

Its easy to see why unnatural pressures have taken such a toll on this genus throughout the state. *Cypripediums* have never been common and have always suffered by any contact with man.

Mark Evans has written two previous articles about Kentucky's native orchid species. He lives in Madison County, Kentucky and may be reached at (606) 622-1793.

Nominate the 1998 Kentucky Wildflower of the Year!

Sherri Evans

Each year the Kentucky Native Plant Program of the state Fish and Wildlife Resources Department and the Kentucky Native Plant Society designate a native wildflower as the *Kentucky Wildflower of the Year*. The purpose of the designation is threefold 1) to increase public awareness and appreciation of the beauty as well as landscape, wildlife and other values of native plants; 2) to promote the conservation of the species in the wild; and 3) to encourage local nurseries to make these native species available to the gardening public.

The 1997 *Wildflower of the Year* was **Butterfly Milkweed** (*Asclepias tuberosa*). We would like your help in selecting the 1998 *Kentucky Wildflower of the Year*. Selection criteria are: 1) the species is easy to grow in appropriate habitat conditions; 2) it is presently native to and common in Kentucky; 3) it has known value to wildlife; and 4) plants or seeds are readily available, at least through mail order sources. A species will be chosen based on the number of nominations it receives.

If you have a favorite wildflower that you feel deserves this recognition, please complete the Nomination Form on page 12 of this newsletter and mail it to: Kentucky Native Plant Program, Salato Wildlife Education Center, #1 Game Farm Road, Frankfort, KY 40601. Nominations must be received no later than January 10, 1998 to be considered.

Sherri Evans is a founding member of KNPS and Director of the Kentucky Native Plant Program.

ANNOUNCEMENT

KENTUCKY NATIVE PLANT SOCIETY RESEARCH GRANTS FOR STUDENTS

KNPS is pleased to again offer financial assistance to enhance botanical knowledge and understanding in Kentucky. For 1998, two grants of \$250 are available for **field-based botanical projects which contribute to the knowledge of Kentucky's flora or natural communities**. Grants will be awarded to students attending a Kentucky college or university. Both graduate and undergraduate students are eligible with one grant reserved for each level.

Proposals will be reviewed by the KNPS Grant Committee. Proposals must include:

1. Curriculum vitae;
2. Proposal (not to exceed two single-spaced typed pages) describing the proposed research and the role the grant would play;
3. Itemized budget;
4. Two letters of recommendation, one of which must be from the major professor or project director.

Applicants are encouraged to become members of the KNPS, but membership is not required to be awarded a grant.

Submit three copies of all items listed above including letters of recommendation to:

David D. Taylor
USDA Forest Service
1700 Bypass Road
Winchester, Kentucky 40391

Deadline for receipt of all materials: 13 February 1998

KENTUCKY NATIVE PLANT SOCIETY ANNOUNCEMENT

NATIVE PLANT DEMONSTRATION GARDEN GRANTS FOR KENTUCKY PRIMARY AND SECONDARY SCHOOLS

KNPS is pleased to announce the third year of offering a funding source for demonstration gardens designed to enhance basic awareness of native plants and their importance in the environment among young Kentuckians. In April 1998, two grants of \$250, will be awarded to further fund needs for educational projects which promote an understanding and knowledge or appreciation of Kentucky's flora and natural communities. Grants may be awarded to either a Kentucky primary or secondary school, but preference is for primary/middle schools. These grants are designed to supplement funds already secured from other sources and are not intended as stand-alone grants. Grants may be used to purchase materials such as trees and wildflower plants or seeds native to Kentucky. The grant may not be used to pay for earthwork, pond building or building supplies. Proposals may be submitted by groups of people as well as individuals at Kentucky schools.

Proposals will be reviewed by the KNPS Grant Committee. Proposals must include:

1. A brief resume presenting project direction experience, educational experience, etc, which indicates the knowledge/experience to carry the project to completion;
2. A proposal (not to exceed three pages excluding supporting drawings/diagrams) which describes the project, explains how it promotes education towards botanical/ecological understanding of Kentucky's environment, lists other project contributors (e.g., financial, in-kind and labor), and describes the role the grant would play;
3. An itemized budget; and
4. A letter of support from the school principal

Applicants are encouraged to become members of the KNPS, but membership is not required to be awarded a grant. Submit three copies of all items listed above including letters of support to:

David D. Taylor
USDA Forest Service
1700 Bypass Road
Winchester, Kentucky 40391

Deadline for receipt of all materials: March 20, 1998

KNPS Field Trips & Events for 1998

Clara Wieland -- KNPS Field Trip Coordinator

These are our standing meetings for 1998. We are busy working on the excursion calendar for 1998, if you have trip ideas or suggestions please call *Clara Wieland* at (606) 266-5548.

May 1-3, 1998. Friday-Sunday. Kentucky Native Plant Society Spring General Meeting and Wildflower Weekend. Natural Bridge State Resort Park, Slade, Kentucky. For reservations call (606) 663-2214. Details to follow!

October, 1998. Mid-month Saturday-Sunday. Kentucky Native Plant Society Fall General Meeting. Bernheim Forest, Colorfest October 18-19, at Bernheim Arboretum and Research Forest, Clermont, Kentucky. Details to follow!

Kentucky Native Plant Society 1998 Membership Form

Memberships are for calendar year (Jan-Dec). Dues are modest, please keep your membership current. Membership expiration is listed at the top of your mailing label.

Name _____ Address _____

City _____ State _____ Zip _____

KY County _____

Please mark membership category, enclose **check** (please do not send cash) payable to "KNPS", and remit to: KNPS Membership, c/o Biology Department, Eastern Kentucky University, Richmond, KY 40475

Membership Renewal _____ New Membership _____

Individual Membership (\$7.00) _____ Family Membership (\$10.00) _____

Lifetime Individual (\$100.00) _____ Lifetime Family (\$140.00) _____

1998 Kentucky Wildflower of the Year Nomination Form

Species common name _____

Latin name (if known) _____

Reasons for nominating _____

Your Name _____

Address _____

Daytime phone # _____

Date Rc'd. (Office use only) _____

See accompanying article on page 8, this issue of the Lady Slipper for nomination details.
Nominations must be received by **January 10, 1998**. Send to: Kentucky Native Plant Program,
Salato Wildlife Education Center, #1 Game Farm Road, Frankfort, KY 40601

**The Kentucky
Native Plant Society**
c/o Department of Biological Sciences
Eastern Kentucky University
Richmond, KY 40475

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