

The Kentucky Native Plant Society

NEWSLETTER: Vol. 2, No. 1, February 1987. Editor: Julian Campbell.

THE PROBLEM OF EXTINCTION by Ron Jones

"What an appalling indictment it is, what a disgrace to mankind, that the road to his so-called civilization should be built on the memories of extinct species and species on the way to extinction" (The Right Honorable Earl of Jersey, speaking before the 1972 Conference on Breeding Endangered Species).

Extinction - it is a word that is often used but little understood in its impact and significance. Extinction of plants and animals is occurring all over the world, with the greatest rates being in tropical regions. Half of all tropical forests have already been destroyed, and the remainder are disappearing at the rate of about 50 acres per minute. Of the 235,000 species of flowering plants in the world, about two-thirds occur in tropical areas. It is estimated that 40,000 species of tropical plants will become extinct in the next few decades. Of the estimated 20,000 kinds of plants in the U.S., about ten percent are of concern (850 endangered, 1200 threatened, according to a Smithsonian study in 1978).

An excellent and important book has been written on this subject by Paul and Anne Erlich, titled "Extinction", and published in 1981 by Random House, N.Y. According to the Erlichs, we should be very concerned about the rate of extinction, which has increased markedly with human activities over the past 300 years, and by the end of the 20th Century could be as high as 400 times the normal rate. The earth has experienced several mass extinctions in its past, but these all occurred over much longer periods, usually millions of years. In the natural course of events, species become extinct, and others evolve to replace them. Today, the extinction rate is much greater than the replacement rate, and we are experienced a net loss of species. This loss of species is very sad, for each species is unique, the terminus of an ancient lineage dating back millions of years, and each species has developed intricate relationships with other organisms in its ecosystem. The loss of biological diversity could have dramatic effects on the fragile ecosystems that make up this living world, and could even threaten the survival of the human species.

It is sometimes difficult to defend the argument that a dam, or a power plant, or some other modern development, should be held up because of the presence of a rare plant or animal. Possibly the loss of that species would do no harm to the ecosystem, but, in most cases, we don't know, nor can we predict the long-term effects of continuing to force species into extinction. We know so little, even about the numbers of plant and animal species that exist - possibly as many as 30 million, and only 1.7 million have even been described! Many species are disappearing in the tropics without ever being known to science - these species might have provided new sources of foods or medicines. This is one of the most obvious arguments for protecting species - they provide us with economic benefits. Others argue that species should be protected for ethical and esthetic reasons - they have a right to exist as living entities, and they provide the world with astounding diversity and beauty.

There are also some extremely important ecological reasons for working to protect species. In a real sense, they provide life-support systems that make our environment livable. Natural ecosystems provide humans with many free public services - atmospheric quality (by affecting levels of oxygen, carbon dioxide, water and ozone), climate control (by forest influences on air

circulation, and by the effect of vegetation cover on heat reflection), freshwater supplies (by filtering out pollutants and controlling erosion), soil quality (by maintaining fertility and microbes), and nutrient cycling through decomposition. We are all dependent on these services, and the philosophy that allows us to continue to destroy other species may someday cause us to destroy ourselves.

The problem of extinction is extremely complex, but it is a problem that humans have the intelligence and the science to solve, if we only have the will and the vision to do so. It is a problem that must be dealt with at all levels - the individual, the community, the state, the country, and the world. In our first newsletter (Feb. 86), Hal Bryan wrote that "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 desperately needs a Plant Protection Law..." A Plant Protection Law could have the following provisions: protect rare plants on state property, prohibit the taking of rare plants from private lands without owner consent, licensing of nursery farmers who sell rare plants, and a legislature-approved "official" list of rare plants and animals in Kentucky. We need to write our state officials and let them know what we think about this issue. We need to get a bill written and started on the legislative process. Our neighboring states have already enacted such laws. The state of Kentucky has fallen behind in the protection of its species, habitats, and other natural resources. Let us work to catch up. It is still not too late.

*****MEMBERSHIP DUES*****

Many members still have not sent in their dues of \$2.00. If you want to remain a member of the Society, and continue to receive the newsletter, please send in the dues promptly. Thanks to all those who have already mailed dues in, and a special thanks to those who included an extra donation. Many of the donations were very generous, and will help greatly in meeting the expenses of KNPS and developing new activities.

REPRIEVE FOR THE KENTUCKY RIVER PALISADES

The Army Corps of Engineers has determined that a proposal to dam the Kentucky River in the Palisades section (see last issue) is not economically justified under current conditions. However, they will go ahead with a study for a smaller impoundment on Station Camp Creek in Jackson County. Does anyone have information on rare plants in that area? (Ed.)

FOR WILDFLOWER GARDENERS AND NURSERY OWNERS

KNPS is compiling a registry of wildflower gardeners and nursery owners, so that collections can be exchanged and stored in seed banks, etc. We would like them to send the following information.

- Name, address, county, phone.
- Type of wildflower garden or nursery (size, greenhouses, etc.)
- Special groups of plants that you deal with.
- Method of obtaining plants, i.e., seeds gathered in wild or purchased, rootstocks gathered in wild, etc.
- Recommendations of nurseries, garden centers or catalogues that sell wildflower seeds or plants.
- Recommendations of good books on wildflower cultivation.
- Any other comments.

Send to Patricia Haragan, Department of Agronomy, Agricultural Science Building-North, University of Kentucky, Lexington, Kentucky 40506-0091.

SPRING MEETING AND FIELD TRIP SCHEDULE organized by M. Evans

Note: field trips are on, rain or shine, so come prepared!

5th MARCH (THURSDAY), GENERAL MEETING IN LEXINGTON. Room 107 of the Biological Sciences Building, University of Kentucky. Business Meeting at 7:00 p.m. Talk with slides by Dr. Jerry Baskin at 7:30 p.m., entitled "Germinating Seeds of Wild Plants."

7th MARCH (SATURDAY), RAVEN RUN NATURE RESERVE (Fayette Co.). Dr. Willem Meijer will lead a Moss and Liverwort Walk (on easy trails). Meet at 10:00 a.m. at the entrance to Jacobsen Park, on Richmond Road 3 miles SE of New Circle Road, or meet at Raven Run itself at 10:15, if you can find it (turn onto Old Richmond Road for almost 3 miles, then onto the Jacks Creek Pike for 4 meandering miles to the reserve). Bryophytes (mosses and liverworts) are usually neglected, even by many botanists. W.M. will give us a beginner's guide to the larger and more distinctive species of this limestone region, and will show us some rarer species along the Kentucky River bluffs that are more typical of acid soil elsewhere. Even if the weather is cold and snowy, don't give up - the streams and waterfalls in the Reserve are particularly spectacular when frozen.

25th APRIL (SATURDAY), O'NAN'S BEND. Hal and Joyce Bryan will host a Picnic and Wildflower Walk (not strenuous) at their farm in Franklin Co. Meet at 12:00 noon. Directions from Frankfort: take Highway 421 north for about 8 miles, turn right onto Route 12, go 3-4 miles (past crossroads), turn right onto O'Nan's Bend Road for about 1.5 miles, turn left up the rough driveway with BRYAN mailbox, go as far as you can. Bring food and drink for potluck picnic. This farm is scenically situated on the Kentucky River bottom. There are deep ravines filled with colorful flowers, including large colonies of Blue-eyed Mary (Collinsia verna) and Synandra (S. hispidula).

9th MAY (SATURDAY), BIG BLACK MOUNTAIN (Harlan Co.), led by Richard Cassell. Meet at 11:00 a.m. at Harold's Restaurant in Cumberland, KY. For a relatively easy drive, take US 119 from Pineville. This high area contains the greatest concentration of northern plants in the state, and some remnants of fine northern hardwoods forest. Rare species that may be seen include Virginia waterleaf (Hydrophyllum virginianum), painted trillium (T. undulatum), rosy twisted stalk (Streptopus roseus) and mountain maple (Acer spicatum).

The tour will start with short easy hikes, but may become more strenuous later.

16th MAY (SATURDAY), LILLEY CORNETT WOODS (Letcher Co.), led by Dr. William H. Martin. Meet at 10:30 a.m. at the Visitor Center. Directions from central KY: take Mountain Parkway, exit at Campton, take Route 15 to Hazard, stay on 15 for about 6 miles beyond Hazard, turn right on Route 7 for about 13 miles, turn right onto Route 1103 for about 8 miles to the Visitor Center. This virtually virgin forest is one of the premier natural areas in Kentucky. Huge stately trees cover the mountain sides, and a great diversity of wildflowers and ferns carpet the forest floor. The guided tour lasts about four hours and the hiking difficulty is moderate. There are some relatively steep areas, but there will be frequent stops along the way. Remember to bring a lunch, camera and binoculars.

OTHER SPRING WILDFLOWER WALKS in the region are organized by Pine Mountain Settlement School - Pine Mt. on 24-26 April and Black Mt. on 8-10 May (call 606-558-3571 for details); by State Parks - Natural Bridge on 1-2 May (write Travel, Tourism Cabinet, Frankfort, KY 40601 for others); the Smoky Mts. Wildflower Pilgrimage - 23-25 April (call Gatlinburg at 1-800-251-9868).

TENTATIVE FUTURE FIELD TRIPS: Murphy's Pond (Hickman Co.), Reelfoot Lake (Fulton Co.), Carter Caves State Park (Carter Co.), Boone County Cliffs, Central KY Wildlife Refuge (Boyle Co.), Rocky Run Glade (Bullitt Co.), Mantle Rock (Livingston Co.), Mammoth Cave (Edmonson Co.), Breaks Interstate Park (Pike Co.), Otter Creek Park (Meade Co.), Falls of the Ohio (Jefferson Co.), Brigadoon Nature Preserve (Barren Co.), Red River Gorge. More information will appear in subsequent newsletters. Some trips depend on finding leaders, so if you are interested in being a leader, or know someone who might be, please let us know.

GARDENING AND LANDSCAPING WITH WILDFLOWERS AND OTHER NATIVE PLANTS by M. Evans

For generations, our native plants were virtually ignored for use in flower gardens and landscaping. Instead, most people planted 'exotics' (non-native species), many of which require constant attention and care. Over the last several years, however, use of native plants has become more and more popular. As people became more aware of their natural environment, they recognized the beauty of many native plants as well as the advantages they have over exotics. Most native plants are far easier to establish, require little maintenance, and can tolerate our weather extremes without special care. In addition, many native plants provide wildlife with a source of food in their seeds and fruits.

What to plant, and where, is often difficult to decide. In open areas, where you don't want trees or shrubs, consider using native prairie grasses and wildflowers. Once established, almost no maintenance is required, and prairie flowers of different kinds bloom throughout the summer and fall. In shady areas, consider planting woodland flowers and ferns. They too require little care in the shade. If you have wet or poorly drained areas, try some wetland plants. They can add beauty to an area that may otherwise seem troublesome. Of course, don't forget our many native trees and shrubs when landscaping the yard.

The information below provides a partial listing of sources for plants and books about identification and gardening. It is always best to obtain native plants from a nursery rather than collect them from the wild. This will help prevent harmful impacts to wild populations and possible digging of rare or endangered species. Before ordering nursery plants, make sure the nursery propagates their own wildflowers, and does not collect them from the wild. It is also a good idea to get plants from a nursery as close to where you live as possible, so the plants will already be adjusted to the local climate.

General guides to nursery sources are as follows:

- "Sources of Native Seeds and Plants", available from the Soil Conservation Society of America, 7515 Northeast Ankeny Road, Ankeny, Iowa 50021 (price: \$3.00, includes shipping and handling).
- "Nursery Sources for Native Plants and Wildflowers", available from the New England Wildflower Society, Inc., Garden in the Woods, Hemenway Road, Framingham, Massachusetts 01701 (price: \$3.50, includes shipping and handling). This society also distributes a Seed-Sale List of their own, with over 150 species (including fern spores) in 1987. To get this list, send a self-addressed, 39 cent stamped envelope (#10 business size) before March 2nd.

Books on Wildflower Gardening are as follows:

- Aiken, George D. "Pioneering with Wildflowers", Countryman Press, Taftsville, Vermont. 1978.
- Allen, O. "Wildflower Gardening", Time-Life Encyclopedia of Gardening Series, Time-Life Books, Alexandria, Virginia. 1977.
- Birdseye, Clarence and Eleanor. "Growing Woodland Plants", Dover Publications, Inc., New York. 1972.
- Brooklyn Botanic Garden. "Gardening with Wildflowers Handbook No. 38" from the Botanic Garden, Brooklyn, New York. 1979. (See also their "Propagation Handbook No. 24". 1982.)
- Bruce, Hal. "How to Grow Wildflowers and Wild Shrubs and Trees in own Garden". Alfred A. Knopf, New York. 1976.
- Hartman, H.T., and D.E. Kester. "Plant Propagation", 4th ed., Prentice-Hall, Englewood Cliffs, New Jersey. 1983.
- Steffek, Edwin F. "The New Wildflowers and How to Grow Them", Timber Press, Portland, Oregon. 1983.

Books on Wildflower Identification (in addition to August 1986 Newsletter):

- Newcomb, Lawrence. "Newcomb's Wildflower Guide", Little, Brown & Co., Boston. 1977.
- Niering, William, and Nancy Olmstead. "The Audubon Society Field Guide to North American Wildflowers: Eastern Region", Alfred A. Knopf, New York. 1978.
- Peterson, Roger T. and Margaret McKenny. "A Field Guide to Wildflowers", Houghton Mifflin Co., Boston. 1968.
- Venning, Frank D., "Wildflowers of North America: A Guide to Field Identification", Golden Press, New York. 1984.

Books on Wildflower Ecology:

- Davis, Millard C., "The Near Woods", Alfred A. Knopf, New York. 1974.
- Jorgensen, Neil. "A Sierra Club Naturalist's Guide: Southern New England". Sierra Club Books, San Francisco. 1978.
- Scott, Jane. "Botany in the Field: An Introduction to Plant Communities for the Amateur Naturalist", Prentice-Hall, Englewood Cliffs, New Jersey. 1984.
- Watts, May Theilgaard. "Reading the Landscape of America", MacMillan, New York. 1975.

Further titles of interest may be found in the "AHS (American Horticultural Society) Native Plants Book List". To request a copy, write to the Assistant to the Editor, American Horticultural Society, P.O. Box 0105, Mount Vernon, Virginia 22121. Also, the "AHS 1987 Endangered Wildflowers Calendar" is available for \$6.95 from Robin Williams at the same address.

WILDFLOWERS IN LANDSCAPE ARCHITECTURE by Chris Manning

Accelerated economic development in Kentucky may eventually reduce the attraction for new businesses, and reduce the quality of life. But the choice does not have to be either economic development or sound ecological practice. Our goal should be to achieve as much of both as possible.

Currently at Vivian Llambi and Associates (VLA), a Landscape Architecture and Planning Firm in the Northern Kentucky/Greater Cincinnati area, we are designing a park and a trail system that will both implement several ecologically sound "development" principles: the relocation of many native trees that would otherwise be destroyed; the use of native limestone, disturbed during previous construction, to now build curbs, walls, sculptures, etc.; the preservation of sensitive ecosystems along the trail, with educational interpretive stations; and the planting of an extensive variety of Kentucky's native wildflowers. In each case, the aim is to use indigenous elements that complement the needs of man and his neighboring species. We have been fortunate to have a client, the Thomas More Foundation, who is very cooperative and shares many of the same concerns. These designs will be implemented in the next few years, and we hope to arrange field trips for interested groups like KNPS.

These endeavors initiated my research into the realm of Kentucky wildflowers, a subject I have been fond of for some time. I am developing a state wildflower handbook specifically oriented to applications by Landscape Architects in Kentucky. Often there is a communications gap between the ecologically educated and the general public. This gap may be bridged by the Landscape Architect, dealing with environmentally technical issues for the public clientele. A handbook like this could add another sound ecological element to the Landscape Architect's palette - the use of native wildflowers. In the long run, this could help public education on environmental and conservation issues. If anyone has any suggestions, information or questions about these projects, please feel free to contact me anytime at Vivian Llambi & Associates, 211 Grandview Drive, Suite 113, Fort Mitchell, KY 41017. Tel:606-331-3044.

NATIVE PLANTS OF VALUE TO WILDLIFE IN WINTER by Charles Elliott

Whether you live in the country or within the city limits, nothing is quite as enjoyable as seeing wildlife in your own backyard. The sight of colorful birds or a chance viewing of a rabbit can quickly change a drab winter day into a pleasant experience. To attract wildlife to your home requires supplying certain wildlife needs. All wildlife require four basic elements to survive: food, water, cover, and areas where the animals can reproduce and raise their young in safety. Combinations of these four elements are special for each type of animal, but you can plan a habitat that offers enough combinations to attract the greatest number and variety of wildlife your area will support.

Cover is any place that protects animals from predators and the weather. Different animals have different cover requirements, e.g., rock piles for chipmunks, brush piles for rabbits and towhees. Cover also serves as a home base - the farther an animal must venture from cover, the more vulnerable it is to predators. Many cover plants can also be food plants. Food for wildlife is easy to furnish. You can supplement natural growth with a variety of products, especially for seed-eating birds. In fact, many people who don't have enough land to provide all four basic wildlife needs, can enjoy wildlife through feeding alone.

Since we are presently in the winter season, I'd like to provide you with some insight on what native plants are important food to wildlife at this time of year, and yet can be used to beautify your home. Among the species of trees that are available in Kentucky, the oaks, maples and dogwoods rate high with regard to their wildlife value in winter. The seed crop of these trees, in addition to the insects they attract, provide important sources of food during the scarcity of winter. Food habitat studies have shown that oak trees in winter are important to tufted titmice, flying squirrels, gray squirrels, and raccoons. Maple trees are important to flying squirrels, gray squirrels and cottontail rabbits, while robins, cedar waxwings, cardinals and cottontail rabbits also utilize dogwood trees. Shrubs that provide cover during inclement winter weather as well as providing food, are highly prized by many wildlife species. Greenbrier, hackberry and grape are important plants for mockingbirds, robins, cedar waxwings, cardinals, raccoons and opossums. And if you have some corner of your yard, a fence row, or a ditch or streambank that can be unmowed or unburned, weedy plants such as smartweed and ragweed are very important sources of winter seeds for white-crowned sparrows.

As man's activities make an impact on the country side, more and more habitat for wildlife will disappear or be altered in such a way as to make it unattractive to animals. By using native plants of value to animals, farmers, home-owners in subdivisions and estates, or apartment-dwellers with little more than a window box planter, can sometimes lessen the negative impact of man's activities on Kentucky's wildlife.

Everyone who owns or maintains property is eligible to participate in the National Wildlife Federation's "Backyard Wildlife Program". To learn more about this program, and how to receive a Backyard Wildlife Registration Certificate for your property, write to: Backyard Wildlife Habitat Program, National Wildlife Federation, 1412 Sixteenth Street N.W., Washington, D.C., 20036.

(Next issue: Native Plants of Value to Wildlife in Spring.)

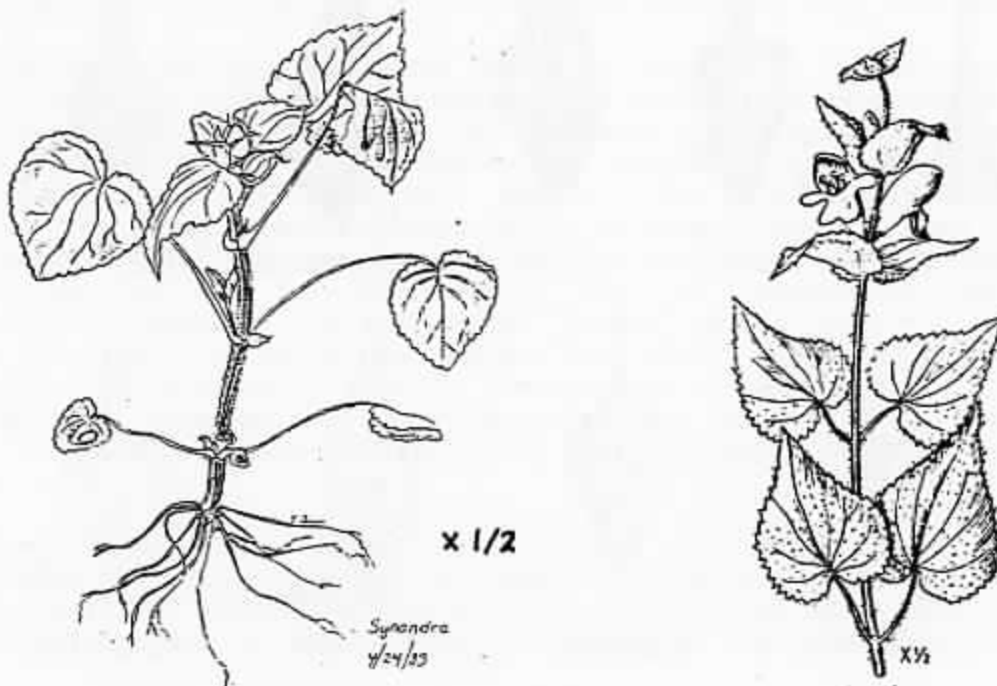
SYNANDRA by Hal Bryan

Synandra hispidula is a herbaceous plant of the mint family that grows in rich deciduous forests. Its beautiful helmet-shaped flowers are white with purple lines and appear in a terminal spike. Like other members of the family Labiatae (or Lamiaceae), it has a square stem and opposite leaves. Although now known from 38 counties in Kentucky, from Floyd to Trigg, it is much rarer in neighboring states and is therefore under consideration for protection by the U.S. Fish and Wildlife Service.

This is a beautiful plant that usually grows in attractive places. The deep loamy soil where it thrives usually also supports an assortment of other spring wildflowers like trout lilies, trilliums, squirrel corn, Dutchman's breeches, Jacob's ladder and bluebells. These grow under mesophytic trees like sugar maple, black walnut, yellow poplar, buckeyes and basswoods.

Most other wildflowers of stable habitats are perennials and survive the winter by storing their life-force in enlarged underground structures. However, Synandra is a biennial that depends on fortuitous seed production, germination and seedling persistence for continued existence on a site. The plant germinates in early spring and grows by adding pairs of leaves at the base throughout the summer if moisture is sufficient. Synandra then overwinters as a rosette and often grows through mild winters. In early April, stem elongation begins. Flowering generally occurs from early or mid-May to early or mid-June, but it may last until July if the plant is grazed by deer. On most plants, seeds are ripe by the end of June.

Despite its occurrence in many places across Kentucky, the existence of Synandra may not be as secure as it first appears. An especially dry year may reduce seedling survival considerably, thus affecting seed production the following summer. At a central Kentucky site, only 4% of the seedlings produced in 1983 then flowered in 1984, when rainfall was well below normal. In the following year, however, when rainfall was more abundant, 86% of the marked seedlings persisted to flower in the spring. Several successive dry summers could eliminate the species from a location if there is not a sufficient seed bank waiting in the soil from previous years to stabilize the population.

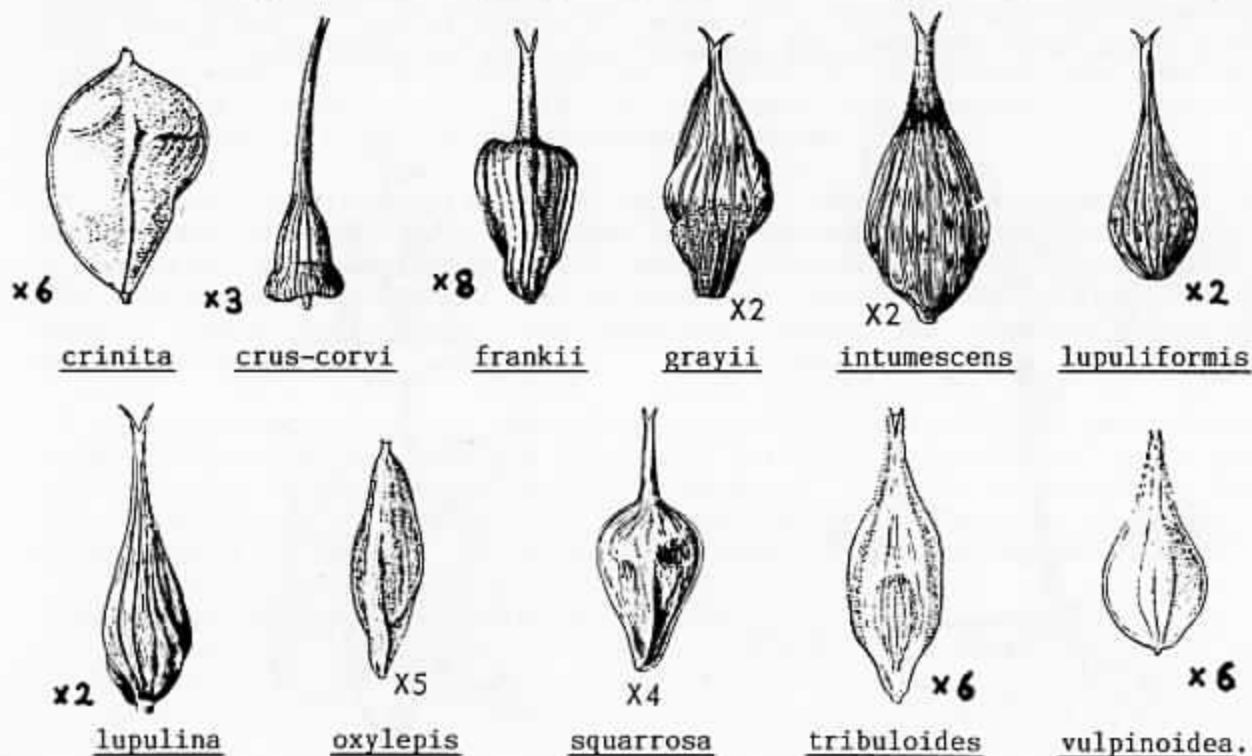


DRAINAGE DITCHES AND SEDGES - THE GENUS CAREX by Jim Conrad

If magnolia blossoms are lush Gershwin melodies and pine-cones are folksy Bavarian polkas (!) then for me Carex (or sedge) flowers are nothing less than Bach fugues. At the handlens level, they reveal simple but exquisite anatomies. With a little study, the species, frustratingly similar at first glance, resolve into elegant and quite distinct entities. Here in McClean County, between Owensboro and Central City in the Western Kentucky Coalfields, drainage ditches often provide refuge for species extirpated from swamps and marshes that have gone the way of soybean fields. Carices (sedges) are prominent in the drainage ditch flora. Some of the flashier non-Carex ditch species are sweet flag (Acorus calamus), spider-lily (Hymenocallis occidentalis), purple fringeless orchid (Habenaria peramoena) and blue flag (Iris virginica var. shrevei). So far, I've found eleven species of Carex in McClean County's drainage ditches. They are: C. crinita, crus-corvi, frankii, grayii, intumescens, lupuliformis, lupulina, oxylepis, squarrosa, tribuloides and vulpinoidea. Of course Carices also grow in other habitats. In McClean County, other habitats have provided eleven more species. That's twenty-two species of Carex! And I'm sure that I've missed a few. My 1950 edition of "Gray's Manual" lists 267 species for the area it covers.

Most people think of Carices, which are members of the Cyperaceae or Sedge Family, as something that tried to be a grass, but didn't make it. Carex suffers an image problem. One reason for this is that if you want to identify Carices, the popular illustration-matching field-guides usually won't even mention them. And if you use "Gray's Manual" or "Gleason & Cronquist", you'll run into mind-boggling terms like "beaked perigynium", "trigonus achene" and "cross-puckered sheath". However, I can tell you from personal experience that spending a few hours in a drainage ditch identifying Carices compares favorably with taking advantage of a Saturday afternoon, a tad of fine, white wine and a string of fugues. In a drainage ditch, the pleasure derived from elegant little Carices can more than compensate for the mosquitoes and cross-puckered sheaths.

The following pictures are perigynia (bracts containing seeds) of the 11 species



A MERMAID BY MISTAKE by John Thieret (Northern Kentucky University)

A forest is certainly no place to go looking for a mermaid, but Kentucky - in common with many other states in the Northeast - is alleged to have one in its woodlands: an unassuming wildflower named "false mermaid" (Fig. 1). This common name is, in my opinion, notable for being really quite ridiculous. Also notable, but for its intimidating aspect, is the plant's scientific name - Floerkea proserpinacoides. But before we discuss these names, let's consider the plant itself.

Seek for false mermaid in mixed, mesic forests, often along streams, undersugar maple, silver maple, beech, white ash, white oak, and American elm. In this habitat, annual plant species are not common. Those few that may be found with false mermaid are bedstraw (Galium aparine), wild chervil (Chaerophyllum procumbens), chickweed (Stellaria media), and jewelweeds (Impatiens capensis, I. pallida). The mermaid grows in dense populations, even as dense as one individual for each square inch of soil surface. Often with thousands of plants, these populations tend to be, in my experience, few and far between, at least in Kentucky, where our plant is known to me only from the extreme northern counties.

The seeds of false mermaid, shed in spring and early summer, germinate the next winter, but the seedlings develop hardly at all until the advent of warmer weather in March or early April (later further north). From then on, growth is rapid, the first flowers appearing about 2 weeks after the seedlings emerge above the leaf litter on the forest floor. Finding a way through this litter is probably the greatest challenge in the life of the plant. A recent study has shown that a single, isolated seedling has perhaps only a 40% chance of getting through the maze of fallen leaves. But the seeds usually occur in rather great numbers, often in bunches, under the litter. A bunch of seedlings, then, all developing at the same time and rate, is actually able to push aside or lift the dead leaves, thus removing this barrier to upward growth, a fine example of botanical cooperation. The stems of false mermaid are delicate, rather weak, and unbranched or branched only near the base. The longest ones I have seen were about 35 cm, but most are only about half this length. As the season progresses, they become increasingly floppy, often prostrate. Alternately arranged on the stem are the plant's few leaves. The first leaf - and sometimes also the second - have only three leaflets, but succeeding ones have mostly five.

Flowering continues until the death of the plant in late spring or early summer - the life span is only about 60-70 days. The long-stalked flowers grow singly in the leaf axils (except the lowest); typically their parts are in 3s, although exceptions are known. The sepals are about 5 mm long; the translucent white petals, less than half this length. The most distinctive part of the flower is the three ovaries, which share a common style - much like the mints and borages. The fruit consists of one or two (very rarely three) egg-shaped seedlike sections 2-3 mm long, their red- to brown-purple surface somewhat roughened. At maturity, the individual "seeds" simply fall to the ground. No special dispersal mechanism is known for them. They may contain poisonous substances - this point should be investigated - which might account for the fact that they seem not to be sought after by animals of any kind, so far as known. The seeds remain dormant until the following winter - and the cycle repeats.

C.L. Willdenow, the German botanist who gave this plant its binomial in 1801, named the genus Floerkea in honor of one Gustav Heinrich Floerke (also spelled Florke) - another German botanist - who lived from 1764 until 1835. My curiosity being aroused about Floerke, I went to the Lloyd Library in Cincinnati

to learn something about the gentleman. I eventually located an obituary on him in the 1864 volume of Bulletins de la Societe Royale de Botanique de Belgique. (Why it took 29 years after Floerke's death for the obituary to appear, I cannot say.) I learned that Floerke worked in Berlin from 1799 until 1816. It was probably then that he became acquainted with Willdenow. They were friends, perhaps even drinking companions. Floerke's scientific writings are mostly about lichens - I gather he was highly regarded as a lichenologist. Lloyd Library has a copy of his book De Cladoniis (1828) (Fig. 2), described in the obituary as being indispensable to anyone working with the lichen genus Cladonia. (You probably have seen these lichens - some of them are the "reindeer-mosses" and some of them form grayish to dull greenish patches [called, by some, "scabs"] on tree trunks.) Floerke also wrote a number of "popular science" articles on natural history, physical geography, astronomy, and palaeontology.

As early as 1849, Asa Gray used the common name "false mermaid" for our plant. This name is based on the plant's specific epithet, proserpinacoides, which means "like Proserpinaca". Proserpinaca is a genus of aquatic and wetland plants whose best known species, P. palustris, the so-called mermaid weed, is widely distributed in eastern temperate North America. Species of Proserpinaca - like Ceres' daughter, Proserpine, their namesake - live in two worlds: the lower part of the plant usually remains submersed, but the upper part is typically emersed. The name "mermaid weed" alludes to this growth form. Willdenow mistakenly thought our plant was one of aquatic habitats: he wrote that it "grows in lakes and ponds" - exactly the habitat, of course, of Proserpinaca. This misinformation about Floerkea apparently came from the person who sent dried specimens to Berlin for Willdenow to study. Not only did Willdenow have reason to believe that Floerkea and Proserpinaca might grow together, but he also noted a general resemblance of Floerkea leaves to the submersed leaves of Proserpinaca (Fig. 3). Logically enough - to him - he called attention to this resemblance by means of the word "proserpinacoides". And thus, eventually, our plant came to be known as false mermaid by mistake - it is well worth knowing. Look for it this spring. We need more knowledge about its distribution in Kentucky. The woodlands where it grows are the places to see best-known and showiest vernal wildflowers. If there you find Floerkea - relatively little known and anything but showy - consider the discovery to be a bonus.

Fig. 2. Title page of De Cladoniis (1828), a book by the man - Gustav Heinrich Floerke - in whose honor Willdenow named the genus Floerkea. Copy in Lloyd Library, Cincinnati.





Fig. 1. False Mermaid (Floerkea proserpinacoides). Note vague resemblance of the middle and upper leaves to the submersed leaves of mermaid-weed (Fig. 3).



Fig. 3. Mermaid-weed (Proserpinaca palustris), submersed leaves below, emersed leaves above.

PAT'S WEED PATCH by Patricia Dalton Haragan

Whitlow-grass, Draba verna L., is a member of the Mustard Family, or Brassicaceae (or Cruciferae). It is an early flowering delicate winter annual that reproduces by seeds and grows to only 10 cm tall. The leaves, which are basal, are oblanceolate or spatulate, green or purple-tinged and up to 1.5 cm long. Arising from the basal mat of leaves are the threadlike flowering stems, which elongate in fruit. The small, white flowers are produced in racemes and each flower has four sepals and four clefted petals. The fruit or siliques are oblong to elliptic, smooth, 4-10 mm long and contain as many as 60 minute, orange-brown seeds that are notched at the base. Introduced from Europe, it is found throughout the state growing in pastures, turf, open gravelly soils, fallow and cultivated fields. It is one of the first plants to flower in early spring, and can be found blooming in late February to early May.



KENTUCKY NATIVE PLANT SOCIETY
Department of Biological Sciences
Eastern Kentucky University
Richmond, KY 40475

DATES TO REMEMBER -- See inside for details

- March 5** -- 7:00 p.m., University of Kentucky, Biology Building, Room 107. General Meeting and Talk by Dr. Jerry Baskin on "Germinating Seeds of Wild Plants."
- March 7** -- 10:00 a.m., Raven Run Nature Preserve. Moss and Liverwort Walk by Dr. Willem Meijer
- April 25** -- 12:00 p.m. O'Nan's Bend. Picnic and Hikes at farm of Hal and Joyce Bryan.
- May 9** -- 11:00 a.m., Big Black Mountain. Field trip led by Richard Cassell.
- May 16** -- 10:30 a.m. Lilley Cornett Woods. Field trip led by Dr. William Martin.

The Kentucky Native Plant Society was founded in 1986 as a botanical organization for all persons interested in the native flora and vegetation of the state. The goals of KNPS are to serve as a medium of information exchange, to promote conservation and education concerning native plants and plant communities, and to encourage botanical research in Kentucky. Memberships dues are \$2.00 per year. The KNPS Newsletter is published quarterly (Feb., May, Aug., Nov.). Back issues are available at \$.50 each.