

VOLUME 6, NUMBER 2

MARCH-APRIL 1991

CALENDAR OF EVENTS

- Apr 1-3**
Columbia
Annual Meeting of the American Forest & Grassland Council. Monday will include a tour of central Missouri showing current grassland usage. Papers will be presented on Tuesday and Wednesday. Held at the Holiday Inn Executive Center, Columbia. For more information, contact Alice Schawo, 314-882-9554, University Extension Conference Office, 344 Hearnes, UMC, Columbia, MO 675211.
- Apr 2, 5:30PM-DARK**
Jefferson City
Hike. Meet at Katy Trail trailhead, Cedar City.
- Apr 17, 7PM**
Kansas City
Speaker: Prof. Emeritus Norlan Henderson, "Canadian Wildflowers." Monthly meeting at Loose Park Garden Center.
- Apr 20, 10AM-3PM**
Kansas City
Fourth Annual Wildflower Walk/Membership Drive at Burr Oak Woods, Blue Springs, MO. Volunteers needed. Contact Linda Ellis, 816-472-0227.
- Apr 21**
Earth Day.
- Apr 25, 7:30PM**
St. Louis
Program on Riverlands National Environmental Demonstration Area. Speaker: Patrick McGinnis, U.S. Army Corps of Engineers. Monthly Meeting at Ridgway Center, Missouri Botanical Garden.
- May 4, time TBA**
Columbia/St. Louis
Field Trip to Danville Glades Natural Area (limestone) and a nearby sandstone glade comparing the 2 glade types. Natural Features Inventory will be conducted. Led by Mike Currier. For Columbia area information call Stephanie Smith 314-449-5473; for St. Louis information call Jim Bogler, 314-842-0111.
- May 4 & 5, 10AM-4PM**
Kansas City
Powell Gardens May Day Festival. The Kansas City Chapter will have wildflower plants for sale at a booth. Contact Linda Ellis to sign up for the event.
- May 7, 5:30PM-DARK**
Jefferson City
Hike to Earthquake Hollow. Meet at Katy Trail trailhead, Cedar City to carpool.
- May 10**
DUE-DATE FOR MATERIAL FOR MAY-JUNE PETAL PUSHER. Please send field trip information and articles to the editor by this date. Articles should be double-spaced and have the author's name, address, and phone number on them.
- May 11**
10:30AM OR NOON
Kansas City
Field Trip to Trice-Deadman Woods. Joint trip with Sierra Club. Bring your own refreshments; wear sturdy walking shoes for medium-rough terrain. Meet at Loose Park Garden Center (east side of parking lot) at 10:30AM to carpool or at noon at the site.
- May 11**
9AM OR 10:30PM
St. Louis/Columbia
Field Trip to Meramec Upland Forest Natural Area in Meramec State Park. Coordinator: Paul Stupperich. Meet 9AM at Sunset Hills Fuddrucker's, Watson & Lindbergh, St. Louis or 10:30AM at Visitor's Center.
- May 13, 7PM**
Columbia
Slide Presentation on "Native Missouri Ferns" by George Yatskiyevych who is revising Steyermark's *Flora of Missouri*. Monthly Meeting at Farm & Home Savings, 8th and Broadway Streets.
- May 15, 7PM**
Kansas City
Speaker: Judy Penner, Rosarian at Loose Park Garden Center. Monthly Meeting at Loose Park.

- May 18, 8AM
St. Louis **Field Trip to Hickory Canyon** led by Bill Summers and George Yatskievych. This is a rugged all-day hike so dress accordingly and bring lunch and beverage. Meet at South County Shopping Center Parking Lot, west side.
- May 25, time TBA
Columbia **Field Trip to Earthquake Hollow**, a diverse floristic area. Led by Greg Gremaud. For further information call Stephanie Smith 314-449-5473.
- May 28-30
(May 1 Deadline)
Knoxville, TN **Conference on "Use of Native Plants in Roadside Beautification and Maintenance."** Registration is \$95 + lodging; deadline May 1. Write Univ. of Tennessee Transportation Center, South Stadium Hall, Knoxville, TN 37996-0700 or call 615-974-5255.
- Jun 2, 11:30AM OR
1PM, Kansas City **Field Trip to Taberville Prairie**, joint trip with Sierra Club. Wear waterproof footwear. This site is usually wet. Meet at Loose Park Garden Center at 11:30AM to carpool or meet at site parking lot at 1PM.
- Jun 8, time TBA
Kansas City **Field Trip to Miami County, Kansas Prairies.** First joint trip with Kansas Wildflower Society. Details to be announced.
- Jun 10 **DUE-DATE FOR MATERIAL FOR JULY-AUGUST PETAL PUSHER.** Please send field trip information and articles to the editor by this date. Articles should be double-spaced and have the author's name, address, and phone number on them.
- Jun 15-16
ANNUAL MEETING **Caney Mountain.** Program, field trips, board meeting. Details to be announced.
- Aug 15-17
(Jul 15 Deadline)
Millersville, PA **Conference on "Native Plants in the Landscape."** Cost including registration, food, and lodging is \$135 single or \$130 double. For information contact Grace Evans, Continuing Education, 104 Dilworth Hall, Millersville University, Millersville, PA 17551, 707-872-3030.
- Aug 18-21
Springfield **2nd Conference on Agroforestry in North America**, at the Holiday Inn University Plaza. For information contact the University Extension Conference Office, 344 Hearnes Center, UMC, Columbia, MO 65211.
- Oct. 24-25
Indianapolis, IN **Conference on "Exotic Species."** For details see article on "Invasive Exotics," page 3.

ART CHRIST 1907-1991

by George Yatskievych

The Missouri Native Plant Society lost one of its staunchest supporters last month when charter member Art Christ died on 17 February at the age of 84. Art was active in both MONPS and the Webster Groves Nature Study Society's Botany Group. Born and raised in St. Louis, Art developed a love of plants early in life and worked at the Missouri Botanical Garden after graduating from high school, before going on to become a school teacher.

Art was an avid student of Missouri's flora, and he often accompanied a young Julian Steyermark into the field during the 1930s. He accumulated both a large collection of photographic slides and a personal herbarium of over 1000 specimens during his lifetime of studying the state's plant life. Friends remember Art's wit and his warm outgoing personality, as well as his amazing stamina in the out-of-doors. The day before his tragic stroke, he hiked with the Webster

Groves Botany Group at the Powder Valley Nature Center in St. Louis County, traversing rough terrain with ease and a smile. His funeral on Thursday, 21 February was a small but touching tribute to a life spent loving people and flowers, and was attended by about 100 of his closest friends.

FEN OF THE MIND

by Linda Lathrop

This summer I had the opportunity to collaborate with the *crème de la crème* Missouri Department of Conservation.

One of the areas Natural History Biologist Tim Nigh and I trekked was a fen near Wash Out Creek, and we chanced upon other fenlike areas during the course of our summer work. With each encounter I felt a strange quickening too great to be just enthusiasm sparked by my expert botanical confrere. Again, while in the field with Inventory Biologist Mike

Currier, we came upon a small area more lush than average and I felt swept away, like a little girl once again, being offered the most fabulous gift of which one only dreams.

The arousal returned whenever I reviewed the summer in my mind. I allowed my thoughts to take me on a journey which returned me to my childhood home in Pennsylvania. Ours was the first house of many to be built on a tract called Farmland Acres. The development was slow to materialize. Forty acres of old farm ground and pasture lay behind our home and it was there that I centered my life.

It was filled with seeps, small depressions and mounds, pools, and ravines that I grew to love. The years of my adolescence proved to be a world of discovery, flavored with a child's imagination. My finds became my friends and each I came to know intimately.

I learned to move among the brambles as nimbly as the cottontails, visiting them in sleeveless shirt, shorts, and no-socks summer attire. Many a visit included thoughtful pondering while caressing the staghorn sumac. Old wild pear trees, alders, red osier dogwoods, and mulberry, and later joe-pye-weed, goldenrod, milkweeds, honeysuckle, Queen Anne's lace, garter snakes, hoppers, pheasants, box turtles,



and numerous other species I grew to recognize by sight or smell but not their name.

I remember when the neighborhood finally accumulated human playmates. I could not entice anyone into my realm with whom to share the wonders I had discovered there. The older folk who watched me disappear into my world to return hours later berry-stained and full of natures' finest were envious; Mr.

Mummert planned a wine-making summer, but lost interest when my brambles grasped and tore. Even the boys who chanced to enter the perimeter to chase a misguided soft ball, hastened to retreat back to the artificial world with no interest in learning of a world rich in secrets if one

but would take time to observe it.

Fens in Missouri, I am told are seeps, usually at the toes of hills. Could the similarity between the wet fields of the Appalachian Piedmont I frequented as a child and those lush fens of Missouri be linked in some way?

This summer's episode I will remember, and as my mind replays the record of my life, it will superimpose the experiences of this summer to give fresh, clear images to those unbiased perceptions I assimilated as a child.

INVASIVE EXOTICS

Recent issues of the *Petal Pusher* have had articles on nonnative plant species such as garlic mustard (*Allyria petiolata*), which has become extremely invasive in states to the east of us and could potentially be a problem plant for Missouri. Perhaps the most notorious nonnative invader in Missouri is purple loosestrife (*Lythrum salicaria*), which crowds out native species in wetlands so badly that legislation was passed making it illegal to sell *Lythrum salicaria* or its hybrids.

A recent newsletter from the Eastern Native Plant Alliance (ENPA) reported that by the year 2030, kudzu (*Pueraria lobata*) may spread 250 miles beyond its present northern limit in Maryland. Researchers Boyd Strain and Thomas Sasek of Duke University found that when levels of carbon dioxide in the atmosphere are doubled, kudzu can grow as much as a foot in one day. If global warming trends acceler-

ate, the plant that ate the South could reach the Great Lakes.

Following are some things that others are doing about some invasive exotics, which we as individuals or as a society might adapt to problems in our own area.

The Piedmont Chapter of the Virginia Native Plant Society is organizing a project to remove garlic mustard and monitor the results. The removal will be on part of the G. Richard Thompson Wildlife Management Area near Linden, Virginia, an area widely known for an extraordinary display of spring wildflowers, especially *Trillium grandiflorum* colored or marked with various shades of pink.

At the J. N. "Ding" Darling National Wildlife Refuge on Sanibel Island in Florida, the printed guide



to the wildlife drive invites visitors to compare vegetation in the refuge with that on the other side of the road. In the refuge, exotics such as Australian pine (*Casuarina equisetifolia*) and Brazilian pepper (*Schinus terebithifolius*) have been systematically removed to increase habitat diversity. Contrasting with that diversity, these nonnative species are abundant just across the road from the Wildlife Refuge. From an observation tower, a long line of tall Australian pines beyond the boundary is clearly visible.

High above the Hudson River in the Bronx, Wave Hill, a former estate that is now a public garden has a trail guide to nonnative plants. The booklet describes 11 species that the managers are working to remove and includes brief histories on their introduction and spread. For a single copy send a self-addressed stamped (\$0.52 postage) #10 envelope to Wendy Mukendi, Wave Hill, 675 West 252nd St., Bronx, NY 10471 or call her at 212-549-3200.

A fact sheet on invasive species in the Everglades has been prepared by Faith Campbell in consultation with naturalists there. For a copy send self-addressed stamped #10 business envelope to Faith at NRDC, 1350 New York Avenue NW, Washington, DC 20005.

The invasion of natural areas by nonnative plant species is one of the subjects chosen for study and action by ENPA. It was the focus of a recent "call-to-action" flyer which pointed out that over 20% of the plants listed

in Peterson's *Field Guide to Wildflowers* are exotic and that a growing number of ecologists consider these "biological invasions" to be as threatening to biological diversity as global warming, ozone depletion, and human population growth. As a result, it is no longer sufficient to just set aside conservation areas; they also must be monitored and managed to prevent loss of their biological riches. Invasive alien plants will be a major topic at



ENPA's annual meeting in Chapel Hill in July, which will be listed in a future *Petal Pusher* when more information becomes available.

A conference on exotic species at the Indiana State Museum in Indianapolis will be held October 24-25. It will address the invasion of natural communities by exotic plants and animals. For more information, contact Bill McKnight, Indiana State Museum, 251 E. Ohio, Indianapolis, Indiana 46204, 317-232-8178.

SUGGESTED ADDITIONAL READING:

- Sawyers, Clair. 1989. "Native Plants Under Siege." *Garden* March-April.
- Schwegman, John E. 1988. "Exotic Invaders." *Illinois Outdoor Highlights* March.
- Schwegman, John E. 1989. "Exotic Weed Crisis." *Illinoisensis* 5(2).
- Spongberg, Steven A. 1990. *A Reunion of Trees*. Cambridge, MA: Harvard Univ. Press.
- Stevens, William K. 1990. "Legions of Plants Thrive Where They Don't Belong." Front page "Science Times" Section, December 18 New York Times.

FLORA OF NORTH AMERICA PROJECT

from FNA Organizational Center

The Flora of North America Project is a collaborative effort of more than 20 major botanical institutions to compile the first comprehensive description of all plants growing spontaneously on the North American continent north of Mexico. About 17,000 species of vascular plants grow in this area.

In addition to the 12 volumes of the Flora to be published by Oxford University Press (the first scheduled for late 1991), all the information will be compiled in a computerized database called Tropicos, which will be continually updated and maintained as a permanent resource. It will allow users to access the information in

a variety of ways, providing answers to such questions as, "What spring-flowering plant species with yellow flowers and simple leaves occur in the grasslands of Nebraska?"



The Flora will be useful not only for theoretical work in plant studies, but also for general reference in biology, conservation, wildlife management, forestry, horticulture, environmental sciences, and agriculture. As the single authoritative reference, the Flora will fill a crucially important need in providing thorough and reliable information for identifying endangered species.

The Missouri Botanical Garden serves as the Organizational Center for the Flora of North America.

BUTTERFLY GARDENS

from *The Idalia Society*

For a successful butterfly garden the rules to follow are simple—choose flowers that attract butterflies, select

SPECIES ATTRACTIVE TO BUTTERFLIES ANNUALS AND PERENNIALS

Aster (<i>Aster</i>)	Gay Feather (<i>Liatrix</i>)	Milkweed (<i>Asclepias</i>)
Bergamot (<i>Monarda</i>)	Goldenrod (<i>Solidago</i>)	Mint (<i>Mentha</i>)
Blue Star (<i>Amsonia</i>)	Indiana Hemp	Mountain Mint
Cosmos (Klondike)	(<i>Apocynum</i>)	(<i>Pycnanthemum</i>)
Daisy	Ironweed (<i>Vernonia</i>)	Perennial Phlox (<i>Phlox</i>)
(<i>Chrysanthemum</i>)	Lantana (<i>Lantana</i>)	Petunia (<i>Petunia</i>
Culver's Root	Larkspur (<i>Delphinium</i>)	hybrids)
(<i>Veronicastrum</i>)	Leadwort (<i>Plumbago</i>)	Purple Cone Flower
Four-o'clock	Live-for-ever (<i>Sedum</i>)	(<i>Echinacea</i>)
(<i>Mirabilis</i>)	Marigold (<i>Tagetes</i>)	Zinnia (<i>Zinnia</i>)

SPECIES FOR LARVAL FOODPLANTS ANNUALS AND PERENNIALS

Asters	Hollyhock	Partridge Pea
Cabbage Family	Violets	(<i>Cassia</i>)
Carrot Family	Hops	Snapdragon
Clover	Lamb's	Sunflower
Crown Vetch	Quarters	
Gas Plant	Milkweed	
(<i>Dictamnus</i>)	Nettles	

species with a long blooming period, and plant them in beds as large as possible. It also helps if you grow some butterfly foodplants in your yard and garden. Many of these also have attractive foliage and flowers and produce edible fruits.

SHRUBS AND TREES

Blue Spiraea	Redbud (<i>Cercis</i>
(<i>Caryopteris</i>)	<i>canadensis</i>)
Bush honeysuckle	Smooth Sumac (<i>Rhus</i>
(<i>Lonicera</i>)	<i>glabra</i>)
Butterfly Bush	Spice Bush (<i>Lindera</i>
(<i>Buddleia</i>)	<i>benzoin</i>)
Lilac (<i>Syringa</i>)	Spiraea (<i>Spiraea</i>)
New Jersey Tea	Plum (<i>Prunus</i>)
(<i>Ceanothus</i>)	Vitex (<i>Vitex</i>).
Privet (<i>Ligustrum</i>)	

SHRUBS, TREES, AND VINES

Apple	Pashion Vine	Soft Maple
Elm	Pawpaw	Spice Bush
Grape	Pipevine	Tulip Tree
Hackberry	Plum	Walnut
Hickory	Prickly Ash	Wild Cherry
Honey Locust	Rose Acacia	Willow
Oak	Sassafras	Wisteria

NEW PUBLICATIONS

"Methods of Establishing Wildflowers on Missouri Highway Rights-of-Way," a 1990 report by Mervin Wallace and John Logan for MO Dept. of Highways and Transportation. Photocopies available from the Columbia Chapter for \$3.50 from the chapter treasurer, Chuck Litecky, 706 Ingleside Dr., Columbia, MO 65201.

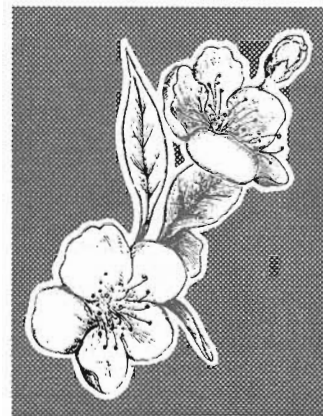
"A Key to Missouri Trees in Winter," by Jerry Cliburn and Ginny Klomps. A 1990 revised edition just released by MDC, is available for \$1.59 from the Missouri Department of Conservation, Publications Program, P.O. Box 180, Jefferson City, MO 65102.

Free Energy Publication. DNR has a booklet that lists free materials you can order. Call 1-800-334-6946 or 314-751-4000.

CENTER FOR PLANT CONSERVATION

The Center for Plant Conservation (CPC) has moved from the Arnold Arboretum, Jamaica Plain, Massachusetts to the Missouri Botanical Garden. CPC is temporarily housed at 3115 S. Grand, St. Louis, 314-664-1200, until an addition to an existing building can be built to house them on the Garden grounds. Since 1984, when CPC was created, the main focus of the group has been to collect and organize threatened

American plants in a cooperative program with more than 20 botanical gardens throughout the U.S. CPC will now begin the most important phase in their program: the re-introduction of rare or endangered plants back into their natural American habitats.



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