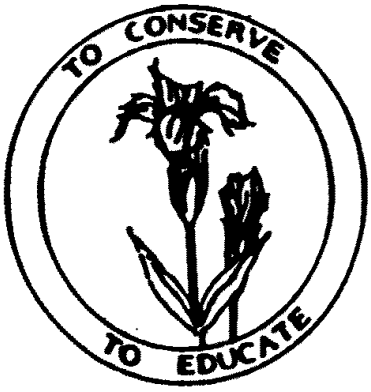
ON THE FRINGE

NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO



Founding Chapter of
THE OHIO NATIVE PLANT SOCIETY

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FROM THE EDITOR

I have been editor, writer, publisher and distributor of "On The Fringe" now for a year and one-half. Most of the time I have had little or no contribution towards the effort. I believe it is time for someone(s) to come forward to commence a take over of the roles of editor, publisher and distributor. I will certainly continue to contribute articles. In fact, with fewer other journalistic duties, I may be better able to serve as a regular contributor of original articles. However, I can rightfully say I have put in my share of time in a demanding role. There are many other things I can and would prefer to do with my time.

Therefore, I wish to encourage volunteers to come forward before I find it necessary to simply vacate the position.

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Linda Feix, Educational Specialist for Old Woman's Creek, will be the trip leader. Highlights of the floras here include Nelumbo lutea (American water-lotus) and a very large number of species of prairie plants in the sand barrens. In Erie County, proceed on Route 2 to a point several miles East of the town of Huron. Here there is a very large sign labelled "Old Woman's Creek Estuary" - drive down the entrance road of the preserve and park. We will meet inside of the museum.

Saturday, August 22nd/10:00am - 2:00pm at LATERN COURT (Holden Arboretum)

Tom Yates, a representative of the Arboretum, will discuss "Ferns of Northeastern Ohio and then some". From Route 90 (east of Cleveland), turn off at Exit 193 onto to Route 306 - proceed southward on Route 306, to the bottom of the long hill. Turn left onto Kirtland-Chardon Road and continue for three miles. Lantern Court is located on the left side of the road (9203

Kirtland-Chardon Road) - turn left and proceed down a driveway and park in the lot at the end of the driveway. Along the driveway you will first pass a gatehouse and then a house, i.e., LANTERN COURT.

Sunday, September 20th/9:30am at RESTHAVEN WILDLIFE AREA

Art Kuhlman, a member of the Board of the Native Plant Society will lead this trip. Diverse prairie plants will be observed here, particularly, species of Compositae (e.g., of the genera Coreopsis and Liatris). In Erie County, from Route 2 go southwest on Route 101 and follow this road to Castalia. We will meet at the duck pond in town and there we will travel together to the wildlife area.

Tuesday, October 6th/7:30pm - ROCKY RIVER NATURE CENTER

Dr. Roger Laushman, Assistant Professor of Biology at Oberlin College will discuss "Water plants". This will be a combined

meeting with the Western Cuyahoga Audubon Society (a liaison with the Society is Mrs. Carol Ball - (216) 234-0505). From Route 90 (somewhat west of Cleveland), go south on Clague Road and proceed to the point where Clague Road dead-ends - go west on Mastick Road and proceed for about one-quarter mile - make the first-left turn onto Shepherd Lane (there may be no street sign for Shepherd Lane; however, there is a sign labelled "Rocky River Reservation") - proceed to the end of Shepherd Lane, ca. one-quarter mile - turn right onto Valley Parkway. After travelling ca. 200 yards, turn right into the driveway of Rocky River Nature Center and park. Note: the driveway begins at a curve in Valley Parkway and opposite the driveway is a subtle sign labelled "Nature Center".

Saturday, November 14th/5:30pm - CLEVELAND MUSEUM OF NATURAL HISTORY

Annual Dinner and Meeting. Evening speaker - Dr. John W. Thieret -Poisonous Plants.

Thursday, December 10th/7:30pm - DON MEYER NATURE CENTER (Big Creek Park, Chardon - 9160 Robinson Road)

A panel of naturalist will undertake an informal discussion about "Significant changes in the natural history of Geauga County." This program will represent a continuation of a series of comparable discussions already held, pertaining to Summit and Lake Counties. According to Bob Bartolotta, a representative of the Cleveland Museum of Natural History and a member of the Native Plant Society, who will serve on the panel, "we will touch upon change that has been witnessed directly by our panelists but we will also present information about specific natural areas that has been known and passed down over a century or more". In Geauga County, beginning in Chardon (situated at the

junction of Route 6 and Route 44 - proceed north out of town on North Street (which is called Painesville-Ravenna Road once you get out of town). Continue for 1.5 miles - go East on Woodlin Road and travel 0.8 miles - turn West at this sign and follow the signs to Meyer
Center.

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WILDFLOWER PROPAGATION WORKSHOP

By Tom Sampliner

On Sunday, May 3rd, a nice size group of 18 attended a wildflower propagation workshop conducted by our board member,

Larry Giblock, who has recently become assistant grounds keeper at the Garden Center of Greater Cleveland.

Larry came well prepared with some excellent handouts, including; a list for sources of wildflower seed and native plants, a list of recommended species of wildflowers, grasses, shrubs and trees for Ohio, and list of wilflowers for shaded woodland areas.

Larry proceeded to explain and outline for the class such concepts as different dormancy periods and methods to properly terminate them; seed preparation methods; soil mixes, transplanting and plant division.

Much new and helpful information was passed along to the participants. We then proceeded to plant seeds and pot some small seedlings. It will be interesting to compare experiences among the participants as we try to coax our little wards to maturity.

After lunch, we were led on a windflower walk by Geauga Park naturalist, Judy Barnhart along with surprise guest, Duane Ferris. All agreed the day was a great success and more cooperative efforts with park districts are encouraged.

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DISAPPEARING MUSHROOMS: ANOTHER MASS EXTINCTION?

As fungi vanish from Europe, scientists search for causes and possible effects on forest ecology

By Jeremy Cherfas
(Science, Vol 254, pg. 1458)

All over Europe this year, gourmets with a taste for the subtle flavors of fresh autumn mushrooms have been returning from their collecting trips with the same complaint: Where have all the fungi gone? Take the most prized fungus of all, the delicious, apricot-scented chanterelle: "A few years ago, it was easy to pick a basket in an afternoon," says Eef Arnolds, a fungal ecologist at the Agricultural University of the Netherlands. "Now, it's quite impossible. You can't find ten in one place."

If anyone can find the chanterelle, it should be Arnolds, who has spent two decades studying mushroom populations in Europe. Now, with his empty collecting basket and a grim set of data assembled from records of fungal foraging trips going back to 1912, he has come to the distressing conclusion that fungus species are in catastrophic decline throughout Europe. Other experts agree with him. "Mass extinction" is the term used by John Jaenike,

an ecologist at the University of Rochester, who is concerned that fungi may also be vanishing from the United States. But no one knows fro sure: As Arnolds points out, "There are no observations" - the United States does not have the long historical records of Europe.

Arnolds has ruled out overpicking as the culprit because both inedible and edible species are affected. And it isn't changing forest management practices, because fungi in all types of mature forest have shown a similar drop. And that, concludes Arnolds, leaves air pollution. Throughout Europe, there is a negative correlation between the abundance and diversity of fungi and levels of nitrogen, sulfur, and ozone in the air, he says. In Holland, the main offender appears to be farming, which uses prodigious quantities of nitrogen fertilizer, much of which is dispersed by the wind as hydrides and oxides of nitrogen and falls to Earth in nearby rainfall.

Any decline in the number of fungi has consequences that reach far beyond the disappointments suffered by a few gourmets: Without fungi, forests may not be able to survive. The fungi under thereat mostly live in close symbiotic association with trees, providing water and minerals in exchange for carbohydrates. If trees ose their fungi, and the find network of fungal filaments that extend the reach of their roots father into the soil, they become much less resistant to stress. Thanks to the mass extinction of fungi, "severe frost or drought could lead to a mass dying of trees," Arnolds warns.

Quite how the excess nitrogen affects fungi is not clear. It could be an indirect impact of pollution on the tree, which does not grow as well, and hence cannot nourish a healthy crop of fungi, says Arnolds. Or it could be a direct effect of nitrogen and sulfur in the soil, which Arnolds' experiments show can prevent the fungus forming an

association with the tree. Either way, the end result is an unhealthy tree.

The scale of the loss of fungi is vividly illustrated by Arnolds records. Surveys carried out in the Netherlands between 1912 and 1954, for example, recorded an average of 71 species of fungus per foray. But by the period between 1973 and 1982, a matched series of 15 surveys could turn up only 38 species per foray. more recent field work tells the same story. Counting every fungal species in marked plots in holland over the past 20 years, Arnolds found that the average number of species has dropped from 37 to 12 per 1000 square meters A half-dozen other fungus experts working in Germany, Austria, Czechoslovakia, Poland, and Hungary have charted similar declines. Johannes Schmitt, a mycologist at the University of Saarbrucken, has been visiting the city market since 1950 and weighing the annual crop of locally gathered wild mushrooms. The total weight on sale of

chanterelles to make up a kilogram in 1975 as it did in 1958.

England, too, may be facing a similar loss of fungi. A preliminary survey of 60 fungus species inspired by the dismal evidence from mainland Europe shows 20 species in decline. "There is a lot of concern," says mycologist Bruce Ing, conservation officer of the British Mycological Society, "and we feel we should be examining a lot more species with a lot more vigor."

Along with the decline in mushroom numbers is an equally worrying disruption in the way the pattern of association between fungi and trees changes over time. Normally, as a tree gets older, one species of fungus gives way to another in a steady progression. But something appears to have gone wrong. "The trees are getting older quicker," says Philip Mason, a mycologist at the institute of Terrestrial Ecology outside Edinburgh in Scotland. "The tree is middle aged, but with

old-age fungi," says Mason. The trees drop their leaves more readily and may die early.

Given that their appears to be an intimate two-way coupling between the health of the fungal population and the health of the tree population, the state of a forest's fungi began to drop out before the trees," in areas where forests have been disappearing. That makes it sensible to begin monitoring fungal population in the United States too. He is hoping to get a project started with cooperation from amateur mycologists. But it won't be easy to monitor U.S. fungi.

"Many of the U.S. species are undescribed," says Jaenike. "Some genera are just very sketchily known, and there are no historical databases." That, Jaenike thinks, is because the United States does not have along history of collecting-and eating-wild fungi. Europe's gourmets, it seems, can lay claim to a little credit for helping advance the science of mycology, even if they are now going hungry.

BUTTERFLY WEED

Asclepias tuberosa
1992 Virginia Wildflower of the Year

By Catherine Tucker
(Butterfly Weed pamphlet published by Virginia Native Plant Society)

Butterfly weed in bloom is one of our most easily spotted perennial wildflowers. In mid-to late summer the brilliant orange flower clusters stand out vividly along highways and in fallow fields throughout Virginia.

Orange mildweed, as it is also called, has typical milkweed flowers, symmetrical with five petals below an unusual crown, or corona, of petal-like expansions of the fused

filaments. Each portion of the corona has a horn curving upward from inside, arching over the center of the flower. The anthers adhere to the stigma, forming a specialized central structure called the gynostegium. Pollen is united into a waxy mass called a pollinium.

The plants grow erect with stems from 15 to 30 inches high. Fuzzy, lance-shaped, nearly sessile leaves are alternate, unlike the opposite leaves of other milkweeds. Leaf shape and density of leaves on the stem can vary. Also unlike other milkweeds, the stems of butterfly weed do not have milky juice. A young plant may produce just one umbel of flowers at the top of a stem, but often the stem branches to produce broad, flat clusters with several umbels of flowers, each about one-half inch long.

In the fall, these flower clusters are replaced by one or two narrow three-inch-long seedpods, these pods, standing upright on stems bend downward, split down one

side to release light, wafer-thin seeds, each with a gossamer parachute to aid wind dispersal.

Called butterfly weed because of its attraction for butterflies, this vividly colored wildflower has earned many common names, indicating both its common occurrence and wild distribution. Names like pleurisy root, orange root, white root, or chigger-weed reflects associations or ways to recognizing this plant. The Latin name Asclepias honors Aesculapius, the Greed god of medicine, tuberosa means bearing tubers and refers to this species' habit of growing shoots upward from horizontal underground stems. What may look like a patch of several plants may be branches connected by underground tubers, forming a clone.

. . . . . IN THE WILD

Finding butterfly weed in summer is easy. Watch for the flaming patches of flowers in abandoned fields or pastures and along un-

mowed rights of way. The shade of orange may vary from deep butter-yellow to fiery red-orange. Butterfly weed thrives in a wide variety of soils from sandy loam to heavy clay as long as it is not too wet. Usually the plants are scattered singly or in small groups. Occasionally you may discover a spectacular display where plants have become established at the top of a slope and spread downhill. Since they spread both by seeds and by creeping tubers, large patches may develop where the soil is more fertile and the site is sunny and well-drained.

Butterfly weed attracts many difference butterflies, especially monarchs and viceroys whose orange and black colors complement the flowers. Although they also draw many other insects, the flowers are pollinated only by wasps that are adapted to butterfly weed's intricate flower structure, and some element of luck is also needed. Large numbers of blossoms thus produce very few fruits.

Finding butterfly weed in the fall or winter is more difficult. The green or ripened brown pods are much less conspicuous. However, watching for the open pods with floss shining in the sunlight or following the path of parachuting seeds upwind will be rewarded. Butterfly weed pods, less woody than other milkweed pods, tend to flatten out as they dry and curl into interesting shapes. The showyflowers, although not very fragrant, are quite attractive and long-lasting in bouquets. Picking them early in the season from a large population may be acceptable when plants have time to bloom again. However, avoid picking from isolated plants or removing all blooms from one plant. Picking dry pods for winter bouquets does no harm once the seeds are dispersed. Plants should not be dug from the wild.

. . . . . IN THE GARDEN

Butterfly weed is an attractive specimen plant in any garden, especially striking as an

accent in a perennial border. The dark green foliage stays neat and attractive through the driest summer. Its colors and low habit blend well with other plants, and it adapts to almost any soil with reasonably good drainage. With a gardener's attention, less competition, and more fertile soil than is usual in the wild, a butterfly weed plant can become bushel basket size after several seasons and bloom profusely from July well into fall. Not only with its color brighten the garden, it will live up to its name and attract butterflies as frequent visitors.

Butterfly weed is most successfully grown from seedlings or seeds obtained from commercial sources. Sow seeds outdoors in spring or summer at least four months before frost. Sown indoors at 68-75(type in degree)F they should germinate within 21-28 days. Transplant to a permanent location after the second pair of leaves develops. Due to difficulty of obtaining all of the deep tap root or sufficient

tuber to support the plant, mature plants do not transplant well.

Too much water, rich soil, and shade are butterfly weed's only enemies. Once the roots are established, it is impervious to borrowing animals, fire, over-zealous picking or cultivation. Unlike some other milkweeds, it does not become invasive for many years. The flower clusters dry well in silica gel and hold their color for many months.

. . . . . WHERE TO SEE BUTTERFLY WEED

You'll find butterfly weed blooming throughout Virginia from July well into September along trails, roadsides, in abandoned fields and pastures, and along power line and railroad rights of way. Its range extends throughout the east, southeast and Midwest, from Ontario and Minnesota, east to New York, south to florida, and west to Texas and Arizona. Four distinct subspecies have been defined over this large range, based on variation in leaf shape. In Virginia most plants have lanceolate to ovate-lanceolate leaves with even margins, but some show variations. According to the Atlas of the Virginia Flora (1986), butterfly weed may be found in nearly every county in the Commmonwealth, under pine trees in the Coastal Plain as well as along the Blue Ridge Parkway or in the pastures and fields of southwest Virginia.

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MUSHROOM CLASS & FIELD TRIP
at the
MUSEUM OF NATURAL HISTORY

Fungus Fundamentals

Wednesday, September 16th\7:00pm and 9:00pm and Sunday, September 20th \2:00pm and 5:00pm
Limit 20

Mushrooms, lichens and sometimes slime molds (depends on the author of the book) constitute the Fungus Kingdom in part. To many the fungi are confusing. We will eschew obfuscation and learn some truly beautiful organisms in the process. The Wednesday session will be at the Museum. Come openminded and eager to learn as the instructors present examples of fungi live, in

displays, via slides and microscopically. For the Sunday session please dress for the weather as we explore a local park for the fungal inhabitants. We want to select a park with one of the best fungal displays for the season, therefore, the location will be announced at the Wednesday class. Participants will provide their own transportation to the park. Prior knowledge of fungi is not required, just the willingness to learn. Members $8; nonmembers $10. Instructors: Bob Bartolotta, Bruce Mack & Tom Sampliner.

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EASTERN NATIVE PLANT ALLIANCE MEETING

You are invited to attend the annual meting of the eastern Native Plant Alliance. It will be held in New England, August 10-12

at Connecticut College, New London in the college's handsome Blaustein Humanities Center.

At these meetings, important issues are addressed. Interactions are both formal and informal in common effort to conserve our native plant heritage. Working groups meet to set courses of action for the coming year.

The meeting is open to members and non-members.

This year's gathering will have a nautical backgroud as the Coast Guard Academy is located on the road to the campus and the United States Submarine Base is close by. Connecticut College and its staff look forward to the ENPA meeting as well as other cooperating organizations including the Connecticut Botanical Society and the Connecticut Forest and Park Association.

Call Tom Sampliner for more information, (216) 321-3702.

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Founding Chapter of THE OHIO NATIVE PLANT SOCIETY

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Annual Dues and Membership Category - Check One

( ) Active $10.00 ( ) Sustaining $25.00
( ) Family $15.00 ( ) Patron $50.00
( ) Life Membership $500.00

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