



NATIVE PLANT SOCIETY OF NORTHEASTERN  
OHIO

9500 Sperry Road Mentor, Ohio 44060

(216) 338-6622

*ON THE FRINGE*

VOLUME 2

MAY 1984

No. 3

MAY PROGRAMS AND EVENTS:

11th, 12th, 13th-(Fri., Sat., Sun.) - Third Annual Plant Symposium at The Holden Arboretum. Begins Friday evening at 6:45 with two speakers. Saturday registration at 8:30 a.m. Speakers on "Ohio's Natural areas" and "Perspectives on Natural Areas Management." In the afternoon, your choice of five workshops. The evening will be spent at Lantern Court.

Sunday - Choice of five field trips.

ALL MEMBERS OF NPS SHOULD HAVE RECEIVED A PROGRAM FROM THE HOLDEN ARBORETUM.

Registration fee - \$15.00

Lunch - \$5.00      Dinner - \$10.00

For more information call The Holden Arboretum  
(216) 946-4400

JUNE PROGRAMS AND EVENTS:

10th (Sunday)

1 p.m. - Lantern Court

Tom Yates, resident expert and horticulturist will show us his many treasures. If you have never seen these grounds you should take advantage of this opportunity.

Lantern Court is located on Kirtland-Chardon Road, and is a part of The Holden Arboretum

16th (Saturday)

9:30 a.m. FIELD TRIP to Corry, Pennsylvania.

We will visit a friend's 1000 acre farm and forest and then go on to several nearby glacial bogs to see orchids and other rare plants.

By RESERVATION ONLY - limited to 20 people.

Call Ann Malmquist - (216) 338-6622. A map will be mailed to you

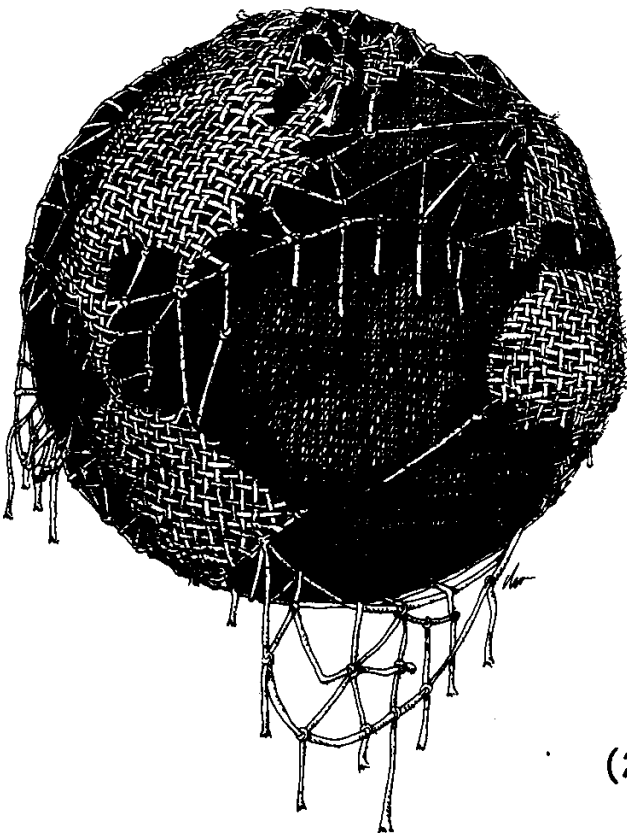
PRESIDENT'S COLUMN

At the April 26th meeting at the Rocky River Reservation those in attendance voted to try to get the White Trillium T. Grandiflorum named as the State Wildflower. This is an idea that has arisen in the past, even as recently as last year the idea died aborning in the State Legislature.

It has been decided that we will not attempt to replace the Carnation as the State Flower, but instead propose the Trillium as an additional and NATIVE flower to represent Ohio. We will seek the advice of the Ohio Department of Natural Resources and various lobbyists in Columbus before we proceed. It will probably be a long-term effort.

In addition, the majority of those in attendance at the meeting voted to go ahead and file our papers with the Secretary of State under the name: Ohio Native Plant Society, operating in our sixteen county area as the Native Plant Society of Northeast Ohio. In actuality, we will be just as we have always been, but the state-wide organization is alive and waiting for additional Chapters to come about. Hopefully, this will be a spur to people with the same interests in other areas of the State to pick up the baton and run with it. In the meantime we are seeking the advice and experience of the Virginia Wildflower Preservation Society who have, very recently and successfully, done just this. In their second year they were able to inspire the organization of two new chapters, and this year plan to do the same.

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## STITCH IN TIME

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The earth like cloth consists of strands.  
Where worn, we ought to mend it.  
For no one knows which thread, once torn,  
May suddenly just end it.

ORCHID TIME IS COMING by David R. McAdoo

If the rest of you are anything like me during the winter, I am now to the point where I am just about buggy waiting for the wildflower season. Maybe the fact that it is snowing while I write this (after we had the nice temperature break in February) has something to do with how I feel. Part of my problem is that I am a "certifiable" orchid nut, and it takes very little to get the spring fever going. The trouble started this time when an article in the Sunday paper announced the new release of four orchid stamps by the Post Office.

Of course I had to buy some because they were beautiful! Once the day dreaming got triggered, I had to get my slides and books out and was lost in the world of orchids again. I don't know if you realize it or not, but we are pretty lucky to live in Ohio. Two of the stamps issued show orchids that are found in Ohio, and at last reading, there are some 45 more that can be found here as natives. Did you realize that Cuyahoga county, by itself, has more orchid species than are native to the entire state of Hawaii?

There is a lot of mystic about orchids. Most of the states protect them because they are "rare". Some of them are, but if you know what to look for, it is surprising how many places you can find them. For sure, they typically do not grow in great abundance, but they are around. I can't think of one of the the local metroparks that I've been in that I haven't found at least one.

Armed with a book, one of the best ways to get into orchids is to visit the wildflower garden at Holden Arboretum. I'm not sure how many different species are there, but a lot of the more commonly found ones are. That will give you a chance to see the plants and flowers so you can recognize them out in the wild. Pictures and line drawings can be pretty deceiving sometimes.



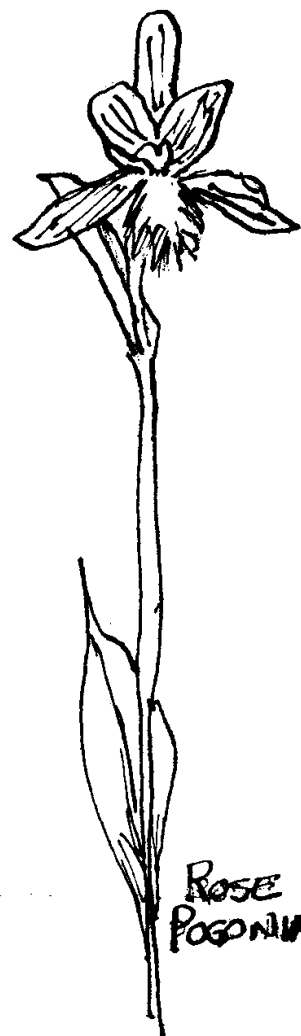
Northern Ohio's orchids start blooming about the middle of May with the Lady's Slippers and keep coming most of the summer and into Fall. There are three peak seasons to be looking for them.

*To attract pollen carriers, orchids have evolved into flowers that actually resemble female bees.*

Spring is the time for many of the woodland species like Pink and Yellow Lady's Slippers, Lily-leaved Twayblade, and Showy Orchis. Several others to look for that are not found in the woods are the White Lady's Slipper (prairie), Spring Ladies' Tresses (slumps), or Loesel's Twayblade and Queen Lady's Slipper (bogs and fens).

The next prime hunting time starts in mid July. Many of these orchids grow in fields, and in general, are not as colorful or showy as the Spring species. Two exceptions are the Rose Pogonia and Grass Pink which grow in bogs and couldn't be more beautiful. An elusive summer bloomer is the Prairie Fringed Orchid, which is being considered for listing as a federal endangered species.

The last big season is early Fall. Rattlesnake Plantain grows in areas where Pink Lady's Slippers bloomed in the Spring, and there are several Ladies' Tresses to be found. This last family is probably the most complex to identify for a novice and causes a lot of argument between people who know what they are talking about. The distinctions are pretty technical and require you to examine the lip of the flowers under magnification. To make matters more difficult, the species hybridize.

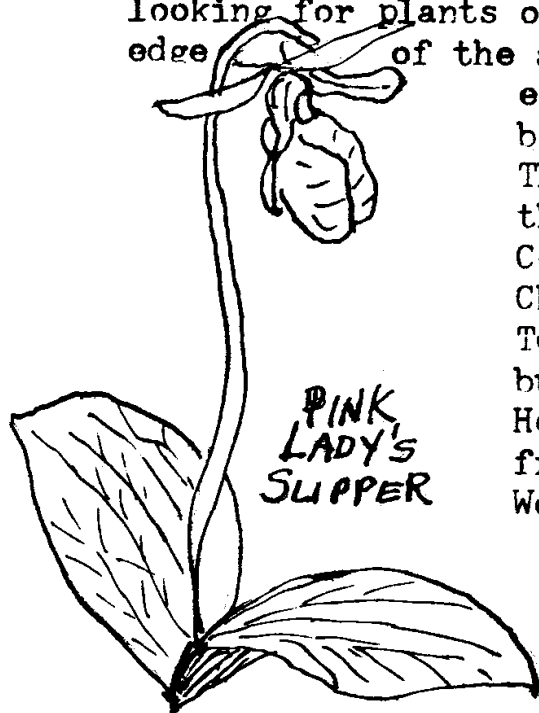


Rose  
POGONIA

One of the things about orchids in Ohio that interests me is looking for plants on the "Heritage" list or that grow near the edge of the state but haven't been found in Ohio. Sev-

eral stand out in our area because they are believed to be extirpated from the state. The Large Purple Fringed Orchis (*Platanthera grandiflora*) was last seen in Portage County in 1913 and Ashtabula County in 1928; Checkered Rattlesnake Plantain (*Goodyera Tesselata*) was collected in 1929 in Ashtabula County and hasn't been seen since; and Heartleaf Twayblade (*Listera Cordata*) is known from a single 1933 Ashtabula County find. Wouldn't it be great to refind them?

A species that wouldn't surprise me by being found is White Adder's Mouth (*Malaxis monophyllos*), since it has been collected on the Pennsyl-



PINK  
LADY'S  
SLIPPER

vania side of Pymatuning Lake and is a plant that would be very easy to overlook. Another, which would be a real find, is the Small Whorled Pogonia (*Isotria medeoloides*). It is not unreasonable to think that this relative of our Large Whorled Pogonia could be hiding in the southeastern mountains waiting to be discovered like the colonies that were found within the last several years in Michigan and Missouri. It has been collected in Greene County, Pennsylvania which borders Ohio.

I know that this information doesn't do much more than open the door to the world of orchids, but there is no way I can cover a topic that has had books written about it. My intent was to expose you to more of the richness of Northern Ohio and hope some of you will get as much pleasure out of enjoying it as I have.

HAPPY ORCHID HUNTING!

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EDITOR'S COMMENT: I couldn't be more grateful. Dave sent this article double spaced with the exact number of words per line that I would be using. ☺

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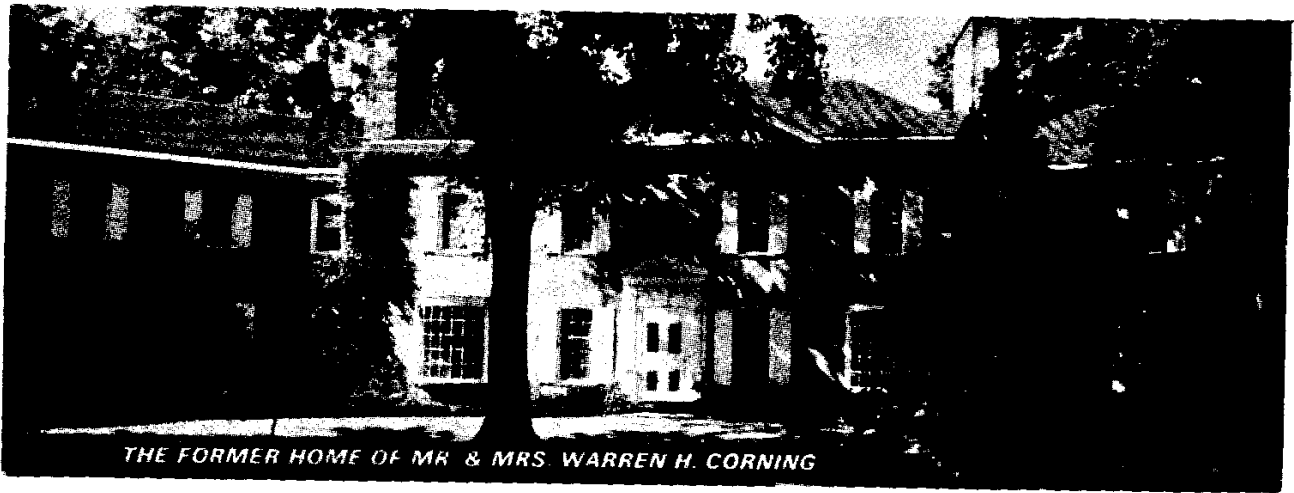
BOOK REVIEW by Dave McAdoo

There are several books and field guides in print devoted to the orchids of North America. For someone who is just starting, the one I would recommend is Guide to Orchids of North America by Dr. William Petrie which was released in 1981 by Hancock Press and lists for \$12.95. It is about the size of a Peterson field guide, 128 pages long, illustrated with some good photography of the different species, and has distribution maps of them. If you want to get into it deeper, two other hard bound books are recommended. The first, published in 1950 and reprinted in 1978 is Native Orchids of North America by Donovan S. Correll which is illustrated with line drawings and gives good notes on culture. The other is a two volume set by Carlisle Leur which cover Florida in one and the rest of North America in



the other. They were published in 1972 and 1975 and are beautifully illustrated with several photographs of most species along with good text and distribution maps.

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### LANTERN COURT at THE HOLDEN ARBORETUM

Lantern Court is a Georgian Colonial house built as a residence in the early thirties by Mr. and Mrs. Warren H. Corning. The house is surrounded by 25 acres of informal gardens and woodlands which include many unusual shrubs and trees. One terrace overlooks a wooded ravine where a tributary of the east branch of the Chagrin River forms a 20-foot waterfall. There is a spring bulb garden, which should be beautiful.

The Holden Arboretum makes direct use of Lantern Court for research, teaching and administrative purposes. Unfortunately, public visiting hours and general sightseeing are not possible at this time. Normally, Lantern Court is closed on Sunday, but Tom Yates has graciously consented to leading us on a field trip on the 10th of June. See you then.

To get to Lantern Court: This mansion and grounds are a part of The Holden Arboretum. If you are coming from the north, take Rte. 306 south to Kirtland-Chardon Road. Watch for the sign. If you are coming from the south, take Rte. 306 to Billings Road in Kirtland Township. Turn Right to Sperry Road. Left to Kirtland-Chardon Road. Another left and you are practically there.

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Ants provide the necessary nutrients for the Bucket orchids of Central and South America. Their roots provide nests for the ants, thus resulting in a symbiotic relationship.

SPRING EPHEMERALS by Kevin Mattingly

One of the pleasures of springtime is the sight of wildflowers carpeting our woodlands in a mosaic of color and delicate blossoms. Spring beauty, Dutchman's breeches, bloodroot trout lily and cut-leaved toothwort are representative herbs of deciduous forests that make their brief appearance after snowmelt and before the overstory canopy fully closes in leafy array. Most of us rarely consider, however, what these spring ephemerals are up to at times other than spring or what influence, if any, they might exert on the economy of the woodland ecosystem as a whole.

The life cycle of many spring ephemerals revolves around the perennating organ, the corm. The corm is found underground in the upper 10cm of soil. It is 1-2 cms in length, often elongate or oblong and is composed primarily of storage tissue in the form of starch. We are all familiar with the aboveground and readily visible aspect of the ephemeral life cycle - rapid shoot growth after snowmelt in late March and April, then senescence shortly after canopy closure several weeks later. During this time the spring ephemeral allocates photosynthetically derived energy into the flower and fruit, or into rhizomes and new corms that will produce new individuals, or into the parent corm. Senescence begins with yellowing of the leaf and ultimately ends with the aboveground portion rapidly decomposing. The spring ephemeral, therefore, apparently spends a brief yet glorious time in the sun, only to lie dormant for 11 months. That's not quite true, however. Lurking underground is the everpresent corm and it happens to be active throughout the year.

During the summer, root growth from the corm continues as it attempts to stake out territory in the soil in anticipation of the spring burst of aboveground growth. In addition, during this time next year's shoot is already beginning to form. Growth continues underground throughout the fall and about mid-November to mid-December the shoot begins to elongate. At this stage, the shoot consists of a furred immature leaf blade. Elongation of the leaf continues through the winter and pushes the shoot up through the soil and, in more northern habitats, actually into the snowpack. Poised and primed, the spring ephemeral is now ready to rapidly and efficiently exploit the moist, warming, sunny, nutrient-rich and largely competitor-



BLOOD ROOT

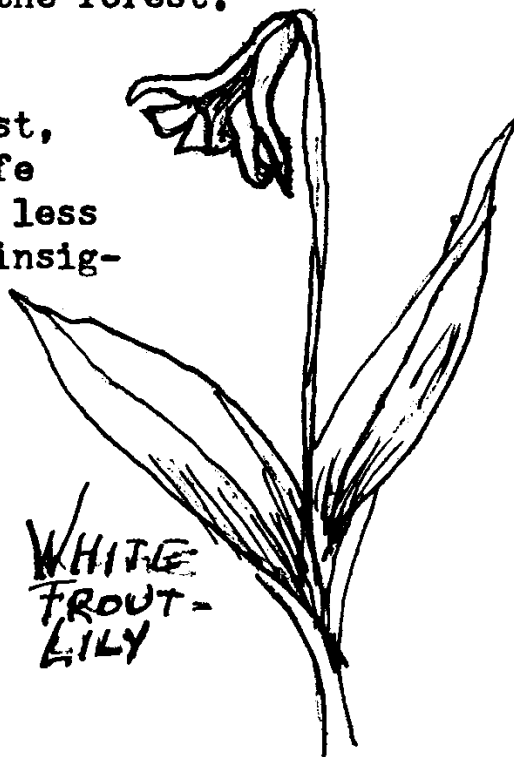
free niche provided in many deciduous forests just after snowmelt and before canopy closure.

Summer, fall and winter activity of the spring ephemeral is essential for the successful utilization of this niche in time and is entirely fueled by energy stored in the corm. We enjoy the beautiful and often flashy spring wildflower show but are largely unaware of the vigorous off-season underground activity of these herbs.

Aside from the aesthetic pleasures spring ephemerals afford us, would they be missed if suddenly eradicated? Spring is a somewhat vulnerable time for the undisturbed deciduous forest, especially with regard to nutrient cycling. Greatest loss or flushing of nutrients occurs during the spring months when snowmelt and rain runoff is high and the influence of summer-green species is low. That is, nutrient uptake during the spring by the dominant summer plants is initially low and the available nutrient pool on the forest floor is relatively large due to the presence of litter from the fall leaf drop. Thus, potentially large amounts of nutrients can be leached from the forest. Under these conditions, spring ephemerals can act as a short-term sink, or "vernal dam", with nutrients being incorporated in their accumulating biomass during the spring flushing period and released when they senesce and decompose in early summer. Such a mechanism would reduce spring losses and preserve the nutrient capital of the woodland ecosystem. Studies indicate that this vernal dam effect shown by spring ephemerals can play an important role in the overall nutrient budget of the forest.

The spring ephemeral demonstrates two themes that are common to many living systems. First, the most visible aspects of an organism's life cycle are often the result of many months of less visible preparation. And second, seemingly insignificant components of ecosystems (in terms of relative biomass) can sometimes play major roles in whole ecosystem function. Small is beautiful and sometimes important.

REFERENCES: Ecological monography 48:1-20,  
Science 193: 1126-1128  
Oecologia 47: 96-98  
Kevin teaches at Hawken School





PLACES TO GO

ARTHUR B. WILLIAMS FOREST - The uplands bordering the west side of the Chagrin River Valley at North Chagrin Reservation are the setting for the Memorial Forest. This national natural landmark is one of the best examples of northeast Ohio's landscape. Besides its aesthetic and historic appeal, the Williams forest's scientific value is immeasurable. Since Dr. Williams published The Components and Dynamics of a Beech-Maple Climax Community\* in 1936, this forest has become a dynamic laboratory of forest ecology. The studies and documentation that Dr. Williams performed have left us with a valuable tool for understanding how undisturbed parts of the planet work.

This 65 acre site is an old growth mature forest that contains numerous trees that are well over 200 years old, with some reaching 400 years of age. A variety of trees highlight this ecological preserve. Steep, hemlock-shaded ravines, numerous birds, and a rich supply of wildflowers add to the diversity of the area.

However, the essence of the Williams forest is neither the individual organisms nor the longevity of the ancient trees. The essence is the continuity - the changelessness of an everchanging natural landscape.

SUBMITTED BY BOB FABER

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EDITOR'S COMMENT:

Why not take a day? From the west take Rte. 90 to Rte. 91 South to the second Metroparks sign on the left. From the East, same way. From the South take Rte. 422 (Chagrin Blvd.) to River Rd. and drive through Gates Mills. Enjoy the scenery and notice the influence of Greek Revival and New England on the architecture of the homes along the way. River Road becomes Riverview Road and Rte. 174 at Rte. 322.

Stop at Squire's Castle for a picnic and walk. There is an old farm along the way - nice for walking and picnicking.

Turn left at No Ox Road for more picnic areas, a walking path, a pond and so many other recreation areas for those who enjoy the outdoors.

In this same area is the North Chagrin Interpretive Center. Park there and walk the Arthur B. Williams Forest.

HAVE A NICE DAY!

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FASCINATING FACETS OF NATURE

What sound do animals and birds have in common?

(Answer elsewhere in this issue.)

FASCINATING FACT ABOUT ORCHIDS: The vanilla plant is the only commercially used orchid.

PLACES TO GO by Jim Bissell (The Cleveland Museum of Natural History)

OAK OPENINGS METROPOLITAN PARK, managed by the Toledo Metropolitan District, is one of the most interesting botanical areas in Ohio. It contains more than 3,000 acres of gently rolling dry sand deposits alternating with wet, sandy depressions. Where the sand deposits form ridges or low hills, dry oak woods predominate. Prairie plants are common along roadsides, wood edges, railroads and abandoned fields. Some prairie plants reach their eastern range limits within the Oak Openings area. A vast array of wetland plants occur in the numerous depressions between the sandy oak woods.

The Oak Openings of Ohio bear some resemblance to the Pine Barrens of New Jersey. Both areas have high water tables just beneath extensive deposits of sand. Plants considered bog species can be found in the ditches at both areas. Sweet fern, a common shrub in the dry openings of the Pine Barrens, can be found in a few sandy openings at Oak Openings.

The east boundary of Oak Openings Park is situated about ten miles west of Toledo. There is a KOA Campground called Big Sandy on Ohio Rte. 295 just east of the entrance to the park. Irwin Prairie State Nature Preserve is about a ten mile drive from KOA Big Sandy. A fine boardwalk has been constructed thru the wet meadows at Irwin Prairie. A visit to the Oak Openings area would be rewarding any time of the year.

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RELATED BOOKS TO READ:

Numerous articles have been published on the flora of Oak Openings. The first published plant list for Oak Openings was prepared by Edwin L. Moseley in 1928. Dr. Nathan W. Easterly, with the Department of Biology at Bowling Green State U. has conducted many recent studies on the O. O. flora and has published articles in the Ohio Journal of Science which compare the recent flora with E. L. Moseley's 1928 list. He also published the WOODY PLANTS OF THE OAK OPENINGS in 1976.

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FASCINATING FACTS about orchids;

The volcanic island of Krakatoa exploded in 1883. All plant and animal life were blotted out. In 1896, 13 years later, botanists found three species of orchid which had hitchhiked rides on seeds. Krakatoa is FORTY MILES from Java.

Orchids are considered to be parasites by some botanists. The seeds are too small to store food, so before they can sprout they have to find a compatible fungus.

JIM BISSELL is curator of Botany for the Cleveland Museum of Natural History and Board Member of the Nature Conservancy.

NEW MEMBERS

Elizabeth and Charles Poutasse  
F. C. & Marilyn Monkman  
Wayne E. & Claire Micheel  
Carol Reschke

Harold Malmquist  
Sandy Wiebush  
Barbara Spere  
Daniel J. Gale  
Matthew H. Koran  
Edward A. Flaws



Renewals

Grace James  
J. Preston Larimer  
Gerald B. Norris  
Judith Routzon  
Neil Henderson  
Becky Owens  
William Owen

Mr. & Mrs. Steven Elkinton  
Nate Finck Marueen Bartel  
Anthony & Jackie Evangelista

CONSERVATION ALERT

The Cuyahoga Wetlands, 130 acres near Burton hosts about 50 endangered species and is a museum of plants and insects that lived 16,000 years ago in the Ice Age. Fern Lake, Lake Kelso and Frieds Bog were formed by gaps in an Ice Age glacier.

The non-profit Nature Conservancy is trying to raise \$815,000 to buy the land, which is part of the original 2,000 acres of wetlands. Fern Lake is owned by the Cleveland Museum of Natural History and the Nature Conservancy own Lake Kelso. Despite grants from Sohio, the Knight Foundation, TRW and other corporations, individuals and groups, the project still needs \$125,000.

Preservationists see the wetlands as "windows on an underground river", says Jim Bissell, curator of botany for the Museum of Natural History and board member of the Nature Conservancy.

The Wetlands would be managed by the Natural History Museum, the Conservancy and the Geauga County Parks District.

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We felt that members of the Native Plant Society should be aware of the urgent need to preserve these wetlands. Please contribute what you can. THANKS.

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Above article excerpted from The Geauga Times Leader - 4/16/84

FASCINATING FACETS - ANSWER

Recent studies by researchers at the Smithsonian Institute have proven that not only animals growl. Birds do too.

Tom Sampliner  
3390 Clayton #7A  
Shaker Heights, Ohio 44120



NATIVE PLANT SOCIETY OF NORTHEASTERN  
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EDITOR'S COMMENTS

Many friends and relatives live in Florida and love it.  
But, is ANY PLACE in the world more beautiful and exciting as  
Northeastern Ohio in the Spring?

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My thanks and appreciation this month go to:

- \* Dave McAdoo for the marvelous article and awakening my interest in little known facts about orchids.
- \* Kevin Mattingly for his wonderful article on the ephemerals. Kevin is leaving us for New Jersey when school is out. We will miss you Kevin.
- \* Bob Faber and Jim Bissell for their articles on Places to go. I am sure many of us will want to go to Oak Openings and the Arthur B. Williams Forest in the North Chagrin Reservation.

Next issue I hope to have an article or two by our lady members.

Gene Spohn