

# NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO

Founding Chapter Of

THE OHIO NATIVE PLANT SOCIETY

6 Louise Drive  
Chagrin Falls, Ohio 44022  
(216) 338-6622

*On the Fringe*

THE JOURNAL OF THE OHIO NATIVE PLANT SOCIETY

Vol. 7

July/August

No. 4

## THE ROYAL CATCHFLY CAMPAIGN

The article on the front page of the last Journal elicited response; indeed some of it extremely generous. **HOWEVER**, those who have given are definitely in the minority.

**EACH AND EVERY MEMBER OF EACH CHAPTER IS OBLIGATED TO SUPPORT THIS CAMPAIGN!** If we could get \$10 from **all** of our members, we would be over the top in a hurry. It is not fair "to let Joe do it."

Being a member of an organization means more than just paying your dues. Some of you do not have the free time to volunteer on projects, and we all understand that. But joining the NPS **MUST** mean that you believe in the preservation of native plants. It is time to put your money where your dues are.

In a book review elsewhere in the Journal the writer talks about the reasons for preserving species variety. His thinking can be transposed to our problem. Are we in the NPS in order to give **OURSELVES** pleasure, to go see the pretty wildflowers, read the Journal; or, is our mission perhaps more selfless? Will our lives be made better and happier because we know that we did what we could to ensure the survival of a plant that has been around a lot longer than we have? This is the season when we don't have to worry about heating bills. **PLEASE**, take just \$10, or whatever you feel you can afford, and send it to the Royal Catchfly.

It will thank you by blooming for perpetuity.

**Remember** your gift to Royal Catchfly is **deductible**. Make checks payable to: Native Plant Society and send to 6 Louise Drive, Chagrin Falls, Ohio 44022. Sit down and do it **TODAY**.

## **PROGRAM:**

- July 8 (Saturday) Conkles Hollow, State Nature Preserve - 9 a.m.** - Explore for plants. Meet in parking lot.
- July 9 (Sunday) Wilderness Center - 1:30 p.m.** - Shrub I.D. walk. Meet at Wilderness Center.
- July 9 (Sunday) -Cincinnati Chapter - 9 a.m.** - Field trip to Culberson State Nature Preserve, Clinton County. Call for details.
- July 15 (Saturday) Knox Woods State Nature Preserve - 10:00 a.m.** - Field trip for trees. Meet at Knox Co. Society Building parking lot.
- July 15 (Saturday) Wilderness Center - 9:00 a.m.** - Killbuck Marsh Wildlife Area. Call for details.
- July 15 (Saturday) Irwin Praire State Nature Preserve - 9:30 a.m.** - Plant communities of the preserve.
- July 15 (Saturday) Prairie Road Fen State Nature Preserve - 10:00 a.m.** - Field trip. Call DNAP for details.
- July 22 (Saturday) Clayton Gorge State Nature Preserve - 10:00 a.m.** - Woods exploration field trip. Call DNAP for details.
- July 22 (Saturday) Morris Woods State Nature Preserve - 10:00 a.m.** - Field trip. Meet in parking lot.
- July 22 (Saturday) Bigelow & Smith Cemeteries State Nature Preserve - 10:00 a.m.** - Prairie field trip. Meet at Bigelow Cemetary.
- July 22 (Saturday) Cleveland Chapter - 9:00 a.m. and 11:00 a.m.** - Canoe trip on Crystal Lake for aquatic plants. Limit: 15 per trip. Fee: \$8.00/person. Call 338-6622 for registration.
- July 22 (Saturday) Dayton Chapter - 10:30 a.m.** - Field trip to Stillwater Prairie Park. Call for details.
- July 29 (Saturday) Liberty Fen State Nature Preserve - 10:00 a.m.** - Unique chance to explore a fen. Call DNAP for detail.
- July 30 (Sunday) Kiser Lake Wetlands State Nature Preserve - 3:00 p.m.** - Field trip to discover a swamp. Meet at Kiser Lake Nature Center.
- August 5 (Saturday) Desonier State Nature Preserve - 10:00 a.m.** -Explore for foothill vegetation.
- August 5 - 6 (Saturday - Sunday) Dayton Chapter -** Prairie conference at Woodland Altars. Call for details.
- August 5 (Saturday) Wilderness Center - 1:00 - 4:00 p.m.** - Field trip to frame Bog and Herrick Fen. Call for details.
- August 5 (Saturday) Adams Lake State Nature Preserve/Chaparral Prairie State Nature Preserve - 10:00 a.m.** - Explore for prairie plants. Call DNAP for details.

**August 6 (Sunday) Bigelow Cemetary State Nature Preserve - 3:00 p.m. - Call DNAP for details.**

**August 12 (Saturday) Cleveland Chapter - 9:30 a.m. - Field trip to Watercress Marsh in Columbiana County. Meet at parking lot behind Columbiana County Court House in Lisbon.**

**August 19 (Saturday) Wilderness Center - 8:30 a.m. - Field trip to Jennings Preserve in Pennsylvania. Call for details.**

**August 19 (Saturday) Conkles Hollow State Nature Preserve - 10:00 a.m. - Field trip for hillside ecology.**

**August 26 (Saturday) Bigelow Cemetary State Nature Preserve - 10:00 a.m. - Prairie tour. Meet at Bigelow.**

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### CHAPTER CONTACTS

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"These five concepts: the beauty of natural systems, their complexities, dynamics, adaptive interaction and situational nature, have been the basis for mankind's long fascination with nature. Why then is it so difficult to pass this enthusiasm along to others? Only through education will we engender the zeal needed to preserve the natural world as a source of delight and pleasure for future generations".

Dr. Rich. Lighty 2/16/89

There are several letters reprinted elsewhere in the Journal. Connie White, garden columnist and lecturer, writes the following: "I would certainly hope that the ONP Journal would be able to continue — **particularly with the type of content** it has.

I would hope that perhaps some member who worked with computers and desk top publishing might be able to offer advice and help on publishing and cost. I feel that memberships could be raised, perhaps counting service (i.e., work on projects) as a point for those who have a dollar hardship.

It is nice to have a pat on the back for the Journal, but more importantly, it is nice to know that some of you out there read about our problems and respond with suggestions. We need more voices from all of you out there. Let us hear from you.

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We wish to announce that a gift of \$25 was sent to the Endowment Fund in memory of Gwen Woodcock, our member who passed away in February. In addition, a gift of \$25 was sent to the Endowment Fund in memory of Jay Beswick.

It is never pleasant to contemplate the loss of one's friends and fellow members. But gifts to the Native Plant Society are the finest way to memorialize friends, particularly when that gift will further the work of something that they believed in, too. In addition to memorial gifts, a remembrance in your will would make secure our Endowment Fund, or help in the projects of the Society, such as, the Journal or the Wildflower Garden at the Garden Center. We realize that we are small potatoes compared to the huge organizations out there needing money, but every little bit helps. This is a subject that is difficult to approach, and perhaps the only way to say it is straight out. In a sense, **a gift in death is a gift of life for plants that need your hand of support.**

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The NPS gives a \$500 grant to an individual working in the field of native plants, or to an organization involved with them. This is done at the Annual Dinner each November. If you know of a likely candidate, send your suggestions to the address on the masthead.

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## **ESA APPROPRIATIONS**

The House Subcommittee on Interior Appropriations has not yet acted on ESA and other Interior Department appropriations for Fiscal Year 1990 (which begins in October). The budget compromise between President Bush and the Congress calls for large cuts in environmental programs, so competition for available funding will be extremely fierce. If you have not already done so, please write to your Representative and Senators urging full funding for endangered species programs, particularly in Hawaii and the Caribbean.

The following is a letter from T.E. Atkinson, president of the Canadian Wildflower Society:

Dear Ohioans:

Please accept my personal donation of \$25 toward saving your lovely Royal Catchfly (**Silene regia**). It is indeed a privilege to reach out to our Great Lakes cousins in Ohio in this noble campaign of yours.

Your current issue of "On the Fringe" (clever play on the Gentian's fringe!) is splendid. I particularly enjoyed Jane Forsythe's "Linking Geology & Botany." (I vote strongly to include her work "A Geologist Looks at the Natural Vegetation Map of Ohio" in an upcoming issue. No amount of such literature can ever slake my thirst!)

We in the Canadian Wildflower Society wish you well and look forward to further "hands across the lakes."

Sincerely,

Tom Atkinson, President, CWS

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A letter from a member:

To whom it may concern:

I received your May/June issue of the On the Fringe and enjoyed all that is printed within.

I applaud your alerting wild plant buyers to the companies that are selling dug native plants. I had ordered a yellow ladyslipper from Spring Hill nursery this spring not knowing the problem. My money was refunded with a notation that the plant is permanently out of order. You may wish to comment favorably in your next issue on a company that has changed its policy.

Sincerely yours,

Jane C. Klein

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#### **OHIO MOTH AND BUTTERFLY CONSERVATION WORKSHOP**

(August 19-20, 1989)

The Nature Conservancy, in cooperation with the Ohio Lepidopterists, and with a grant from the Nongame Species Program of the Ohio Division of Wildlife will present a Moth and Butterfly Conservation Workshop. This workshop will be held at Lakeland Community College in Mentor on Saturday, August 19 with a field trip on Sunday, August 20. The workshop and field trip should be of interest to land managers, teachers or anyone interested in moth and butterfly protection in Ohio.

Topics to be covered at the workshop will be field survey results of the Ohio Lepidopterists, managing for moths and butterflies in the Oak Openings of northwest Ohio and the wetlands of Ohio, managing old fields for moths and butterflies, and gardening for butterflies.

Dr. Paul Opler of the U.S. Fish and Wildlife Service will present a national perspective on moth and butterfly conservation. Dr. Ron Panzer of Northeastern Illinois University will present his research on preserve design and management for invertebrate protection. A panel discussion with representatives from the U.S. Forest Service, The Nature Conservancy, and the National Gypsy Moth Management Group, Inc. will discuss the problems associated with the advance of gypsy moths into Ohio.

For more information about the workshop and field trip contact Larry Smith at the Ohio Field Office of The Nature Conservancy, 1504 West First Avenue, Columbus, Ohio 43212. Larry can be reached by phone at 614/486-4194.

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## **ARCTIC REFUGE NEEDS YOUR URGENT SUPPORT**

Incredibly stunning in its beauty, the Arctic National Wildlife Refuge is still largely untouched by development. It is, in fact, the largest undisturbed wilderness in the United States. **Now we urgently need your help in the fight to protect the Arctic refuge from oil and gas development.**

As this article goes to press, the Senate Energy and Natural Resources Committee is due to vote on bills both for and against development. Regardless of the outcome, there will undoubtedly be much to be done in the coming months to convince your senators and representative of the need to save the refuge.

### **An International Ecological Treasure**

The Arctic coastal plain is the prime calving ground for the Porcupine caribou herd. The region's spectacular scenery and rich wildlife have led people to call the coastal plain the "American Serengeti." Ducks, swans, and loons nest on the plain and in the coastal lagoons; snowy owls, golden eagles, gyrfalcons, and peregrine falcons nest inland. At least sixteen species of fish live in the streams and rivers of the plain. Wolves, foxes, and polar bears also roam the area.

Oil companies believe there could be significant amounts of oil under the coastal plain. In response to intense political pressure, in November 1986 the Interior Department recommended the plain be opened for leasing to the oil and gas industry. This recommendation was made despite the U.S. Fish and Wildlife Service's finding that oil development would result in a "major population decline" of the caribou herd—up to 72,000 animals lost. The agency also predicted that muskoxen and lesser snow geese populations would be cut in half and polar bear habitats would be critically disrupted.

Oil field development is a large-scale industrial activity. It requires huge quantities of gravel for roads, drill pads, airports, and seaports; equally huge quantities of fresh water will have to be obtained from the rivers of the plain. Pollution will

affect the fragile tundra far beyond the actual edges of the facilities. Such effects have already been demonstrated at the nearby Prudhoe Bay oil fields.

Drilling in the Arctic refuge would destroy its pristine character forever. That is why Audubon has consistently opposed any industrial activity on the coastal plain.

### **Do We Need the Oil?**

Even the Interior Department admits that there is a one-in-five chance of even finding oil, and a smaller chance still of finding it in large enough quantities to make drilling profitable. Nevertheless, industry states it is necessary to develop the plain to avoid dependence on foreign oil imports. Audubon believes that these arguments ignore some important facts:

° 94 percent of all the potential oil-bearing land in Alaska and 90 percent of Alaska's arctic coast are already open to the oil industry. These lands should be explored first.

° Sensible energy alternatives that do not threaten to destroy the coastal plain exist. For example, better fuel efficiency for cars: It is estimated that a mere **1.7 mile-per-gallon improvement in fuel efficiency standards for cars would save more oil than drilling in the refuge could ever produce.**

### **What You Can Do?**

Write to your senators and representatives today. Give them the facts about the Arctic National Wildlife Refuge.

We have a worldwide oil glut. Now is the time to implement conservation measures that will make our nation secure for decades without sacrificing this priceless treasure.

Address your letter(s) to:

The Honorable \_\_\_\_\_  
U.S. Senate  
Washington, DC 20510

The Honorable \_\_\_\_\_  
U.S. House of Representatives  
Washington, DC 20515

For more information, contact Brook Evans, National Audubon Society, 801 Pennsylvania Avenue, S.E., Washington, DC 20003.

This is a reprint from the Hocking Valley Audubon Society, May 1989 publication.

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### **NOTICE ON NEWSLETTER SUBSCRIPTIONS**

If you wish a subscription to "On the Fringe" they are available at the rate of \$7.50 per year. Send your check along with your request and make it payable to: Native Plant Society, 6 Louise Drive, Chagrin Falls, Ohio 44022.

The following article on the ethics of plant conservation was the keynote speech that Dr. Lighty delivered at the February Wildflower Symposium at the Garden Center. Dr. Lighty is the Director of the Mt. Cuba Center for the Study of Piedmont Flora, and is well-known for developing and administering the Longwood Graduate Program and directing horticultural research at Longwood Gardens. We thought that those of you who could not attend the Symposium would like to read his thoughts on this subject.

## **THE ETHICS OF PLANT CONSERVATION** by Richard Lighty, PhD

The earth is by and large a closed system, and in the process of dividing its available space, light, moisture and nutrients, life upon it has evolved an astounding diversity. It is this diversity that has allowed us to be what we are — and any ethic that serves us well for the long run must respect that diversity as the nurturing environment against which our humanity is displayed.

Since the biosphere is an evolved system, its present form is the result of the past histories of its components and the ways in which these have opportunistically interacted around the available resources. It is a beautiful story in which each species has optimized its survival in concert and conflict with other species. This is the loom on which the web of life is spun.

Until very recently in evolutionary history it was the physical survival of each species that dictated how it fit into the web. The result of this give and take was an accommodation that has clothed the earth in a green mantle, has resulted in the occupation of even the most inhospitable niches and created the bewildering diversity of life in which we delight.

But that very ability, Homo Sapiens' capacity to be delighted by the world around us, signaled a qualitative change in the nature of life. That change has been documented many times in many cultures — in ours, by the book of Genesis. It was the change from a simple existence where survival depended on fate, as with microorganisms, or in the case of higher animals and plants, on a prescribed genetic program. But somewhere in recent evolutionary history the intellect began to appear and this novelty has seen its greatest success in man. Yet as predicted by the story in Genesis, this success seems to hold within it the seeds of its own destruction — because it puts the burden of fitting into the world on the organism's willful behavior and not on a strand of DNA.

Let's take a closer look at what this intellectual nature means:

1. It means that we have the capacity to stand back, look at the world, enjoy its beauty and diversity, be thrilled by discovering its complexity and analyze and integrate our unfolding understanding. Every step gives us a measure of higher pleasure.
2. But this self-same capacity gives us the ability to manipulate the world in a technological sense. Genetic engineering is only the most recent and striking example of a series of manipulations we have performed on our environment that goes back to the cave man's club. Because of our capacity for intellect,



Homo Sapiens long ago chose to emphasize the route of environmental manipulation for its physical survival.

But somewhere along the way we have lost perspective. As masters of our environment, we have held it to be trivial. We have been ignorant of the lesson that mastery does not imply the ability to create or restore.

Now every species, according to its lights, seeks to optimize its potential for survival. Man is no exception, but modern man is unique in his ability to affect the environment in a massive way to assure his own survival. But we've gone even further. We work to assure our comfort and, increasingly, to assure our constant pleasure. Thus we have created demands on earth's resources that far exceed those of any other species. Indeed we frequently view other species' successes as our losses. We have, in short, created a battle to the death where once conflicts were fought with, as it were, mutual respect, the way friends play games.

The fields on which these battles are waged are necessarily the habitats of our fellow species. If one by one, these disappear, and if we manage to physically preserve our own species, the question must be asked "will life be worth living?" If there is to be a resolution to this problem short of Armageddon, it too must lie in our intellectual nature, for that is where ethical systems have their origin. An ethic is based on a culture's concept of the ideal ends of human activity. It involves a sense of duty and moral obligation. Our culture has tended to think only in terms of itself, certainly only in terms of our species' short-term welfare and to ignore not only our own ultimate enjoyment of life but the moral obligation we have to our fellow species.

Not all cultures have been so callous. The American Indians, cruel as they sometimes were to each other and to the white man, had mores which guided their relationship to nature, an evolved environmental ethic, as it were, assuring the long-term survival of the tribe and its way of life. That way of life was, for the tribe, a principal source of its pleasure. Many primitive peoples have evolved a religious-based ethic which assures respect for the environment. I've often wondered about the enormous shell Middens left in the Mediterranean region by post-Pleistocene inhabitants. Why did they put shells, pots, and other refuse in piles instead of throwing it over their shoulders as we advanced cultures do with our litter? Or consider the reverential attitude of the Japanese craftsman for the materials with which he works -- an attitude with roots in the Shinto beliefs of his ancestors.

But today, at this conference, we are concerned with modern American culture, what we are doing to our fellow species and how we may improve the relationship. American culture, in my judgment, is just coming of age. I say this in respect to our ability to enjoy the large array of intellectual pleasures that technology has put within our grasp. We can leave Cleveland and in a matter of hours be snorkeling along a barrier reef, birding in a Costa Rican rain forest, working on an archeological dig in New Mexico or watching an operatic performance in Milan. Our education system provides the basis for personal fulfillment whether we wish to be astronomers, authors, entomologists, musicians, plumbers, or botanists. In short, never have so many people had so many opportunities to enjoy life in so many ways. Our work day is as short as it has been in recent history, and our work week is similarly

shortened. Most people can look forward to annual vacations and to retirement at a reasonable age. Leisure time, and the opportunity to participate in joyful living have never been so available. Yet the technology that made these possible has, through insensitivity and lack of perspectiveness, been grossly misused to supply fun and games in their simplest forms.

Let us now look at plant conservation. First, why conserve? We often hear the argument that we must conserve because any species, even those not yet discovered, may prove of use to us in the future. Note the anthropocentric basis of this appeal. We point to quinine, penicillin, curare and other useful chemicals derived from plants. I would submit that such appeals provide a poor basis for an ethic of conservation, even if they do give us good reason to conserve diversity. I needn't dwell on mankind's supreme ability to resist what is reasonable.

There are three better appeals and the first is:

1. Emotional Delight - This is at once the simplest reason and the most compelling. Most people get pleasure from plants — from discovering a plant new to them, from taking one under their care, from seeing a familiar plant bloom anew each year or from an appreciation of the organization that life, exemplified perhaps by a flower, imposes on our apparently disorderly world. Some people experience this in the shadow of a 500-year old white oak, some when looking at a rose, while others feel it in the presence of an unfolding fern frond or the fragile architecture of a shell. What happens when there are no more 500 year old white oaks — when the number of wildflowers is diminished? Is there a loss in our capacity for joy? I think so.
2. The second basis for an ethic of plant conservation is intellectual curiosity - this is firmly grounded in our having minds - and having to use them. We are an information gathering animal, programmed to seek out new things. When we get this information we then work it over in our minds, analyzing, classifying and integrating it into our storehouse of understanding. This intellectualization of information is, for some, the greatest joy in life. We get this pleasure when we suddenly realize that Hepaticas are in the buttercup family - and why. Or, when walking in a Kalmia grove, we say to ourselves, "Cypripedium Acaule should grow here", then looking around we find it. It also comes from working out plant combinations for the garden by sorting through our mental lists of textures, habitat and bloom times. Similar pleasures are available to birders, geologists and all who appreciate earth's diversity. These are high types of pleasure and they are available to each of us whenever we interface with nature. Contrast these with the simpler, less lasting pleasures of video games, shopping malls and television. Only a few human productions come close to supplying the long-term, repeated enjoyment that nature can provide. Among these are literature, the visual arts, music and some participatory sports. None is as universally available as the appreciation of nature.

If we lose one species of native plant, will our capacity for joy diminish? I believe so, inasmuch as we have specialists in even the most obscure and apparently insignificant plant groups. Consider, for example, the pleasures

of a bryologist in studying mosses, or an expert in weed biology studying the nature of competition in a corn field. The arguments are analogous to those used for preserving wilderness: we do it so that, for those who can get to it and enjoy the process and the place, the experience will always be available. To participate in those higher human experiences we must preserve the variety and complexity of life as well as the inanimate world and its phenomena. They are, after all, the basis of our genesis, our evolution and our existence.

3. But the most compelling reason to work toward an ethic of plant conservation is our moral obligation as a part of the web of life. We are obliged not to needlessly meddle with the tremendously complex system of which we are but a part, and of which we know so little. There is no being that will hold us to this obligation. Like a spider's web, the web of life is apparently resilient to minor tampering, and to human eyes will seem intact even when a number of threads have been broken. But finally, and precipitously, the web will collapse with disastrous consequences for the integrity of the remaining threads, and we are one of these.

**Ultimately we must elaborate an ethical system that respects the diversity of life because we came from it and continue to be a part of it. We have no greater excuse for our existence than does any other species. We have come to make the rules because we have the short term power to do so. But unless those rules are made with respect for those ruled — we will at best doom our species to a narrow, inward looking and joyless life. At worst, we will sow the seeds of our own physical destruction.**

To summarize then — if we wish, as a species, to continue to maintain, let alone advance, our enjoyment of life, one of the things we must do is develop an ethic of plant conservation. That ethic must be based in an appreciation of the emotional and intellectual joy that plants now contribute and can contribute in the future to the lives of those who interact with them. It must also be grounded in respect for the role that every species on earth plays in the intricate web of life. Nothing is really redundant. Nothing is unnecessary. Nothing can be removed without producing vibrations in the web, and enough vibrations will finally destroy it.

Stated simply then, our ethic of conservation must change our behavior so that we do nothing that will deplete the diversity of a species, nor change its environment so that its survival is imperiled. Since habitat destruction by bulldozer or by acid rain or by any of the countless other, ingenious ways we have devised, is the greatest threat, we must work to stop this. (1) The best place to start is to assure that no pristine habitats be touched by any kind of development. We must begin to live only off the land we have already made unnatural. We must fight attempts by a desperate human species to justify destroying even more in the name of its own welfare. We must recognize that the root of the problem is in population and in the idea that growth is always good. (2) Beyond this, we must recognize that our activities have already caused the extinction and near extinction of hundreds of species of plants. Only massive efforts will stay further disasters. But we understand so little about any of the species we threaten, that we must study them to know

how to save them. For surely the natural world of tomorrow, if it exists, will be a managed world. Let us hope that we can manage it, not as has been done in central Europe, but in such a way that there will always be prairies to burn, fallen logs rotting in forests, mountain ledges safe from the feet of the insensitive hikers, and fragile deserts and barrens for each generation to discover a new.

There have been experiences in human history that will never again be tasted because the landscapes on which they were played out have disappeared. Let us not be the cause of further erosion of our species' capacity to know what it means to be human. And if the best education is by example, let us tell the world of our personal pleasures and delights, so as to bring them to the appreciation of life in all its dimensions. Only in this way will they care to save what we need for our own survival as human beings.

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## **BUREAU OF LAND MANAGEMENT**

The Federal Land Policy and Management Act (FLPMA) of 1976 instructed BLM to identify and protect "areas of critical environmental concern," including habitats of rare wildlife and unique vegetative communities. Natural Resources Defense Council (NRDC) recently completed a review of the "ACEC" program which found that it has not yet resulted in enhanced protection for these important areas. While nearly 400 ACECs have been designated, protective planning has lagged and implementation of those plans has lagged even further. Most ACECs for which significant protective actions have been undertaken were already under special management at the time of their designation. Finally, many ACECs are too small, in our view, to protect the resources responsible for their designation.

For a copy of the report, please send \$5 to me here at the Washington Office.

Congressman Bruce Vento has introduced H.R. 828, a bill to reauthorize and strengthen FLPMA. The bill would improve ACECs by broadening them to protect ecological resources and biological diversity on the public lands or affected by decisions concerning the public lands and by setting up a public nomination process; would make "maintenance and enhancement of diverse plant communities . . ." and "timber production" as major uses of the public lands; would require BLM to minimize adverse environmental impacts of authorized use, not just "prevent unnecessary degradation"; and would broaden public participation in BLM land-use advisory councils.

This bill will face strong opposition from user groups in the West. Please urge your Representative to co-sponsor it.

# THE OHIO DISTRIBUTION OF BIGLEAF AND UMBRELLA MAGNOLIAS

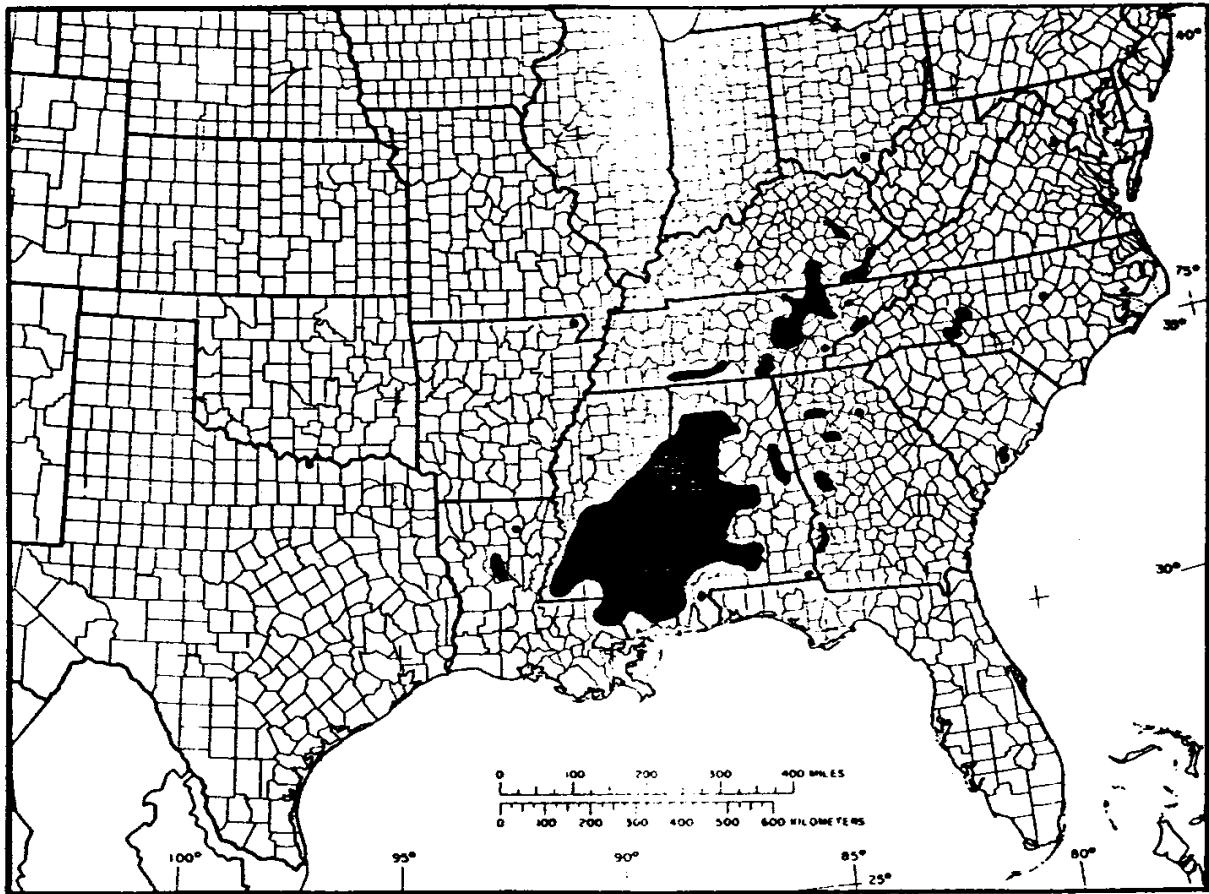
by James F. Burns

Earlier botanical workers in Ohio, such as Braun, Gordon, Transeau, and Wolfe, have documented that the flora of the southern Ohio portion of the Unglaci-ated Allegheny Plateau has strong affinities with that of areas farther south, especially the Cumberland Mountains and the Southern Appalachian Mountains. These workers have cited numerous examples of plants that are disjunct from ranges farther south or reach the extreme northern edge of their range in this area. We will now examine two of the more striking examples of these range types. **Magnolia macrophylla**, Bigleaf Magnolia, is a tree of the southeastern U.S. with disjunct populations in Jackson County, Ohio, where it occurs in mesic woods of deep, rocky gorges. The next nearest population is more than 100 miles to the southwest, in central Kentucky. It is listed as Endangered in Ohio. **Magnolia tripetala**, Umbrella Magnolia, is another southeastern tree that reaches the northern edge of its total range in southern Ohio where it inhabits mesic woods in bottoms and lower slopes of ravines. It is state-listed as Threatened.

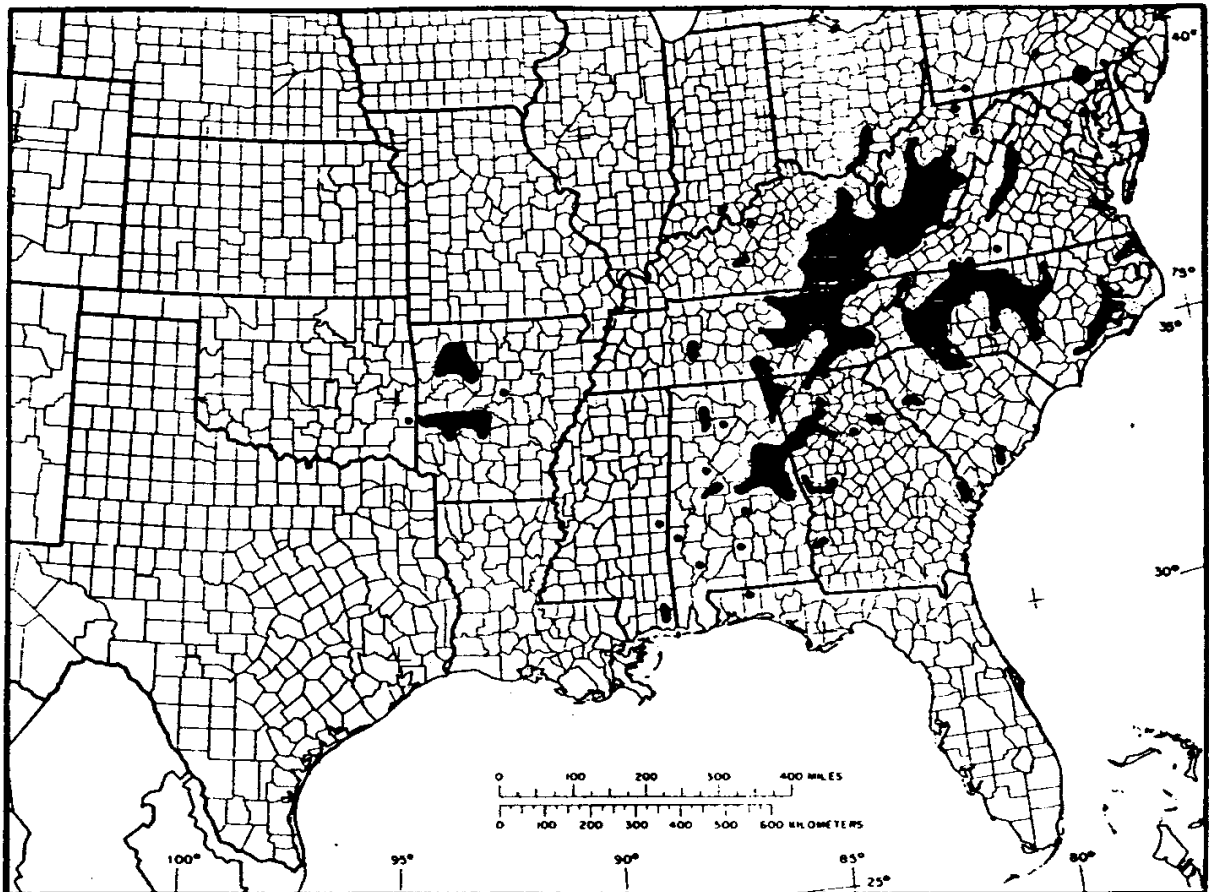
Bigleaf has the largest simple leaves of any native Ohio woody plant. Its leaves can grow to 80 by 25 centimeters (32 by 10 inches). Umbrella has the second-largest. Its leaves can reach to about 50 by 20 centimeters (20 by 8 inches). The leaves of both are apparently easily damaged by high winds. The flowers of both are large and showy and pollinated by beetles. They reach peak bloom in early summer. The fruit is a cone-like aggregate of follicles. They produce some flowers and fruits every year, but large seed crops every three to five years. The seeds are reportedly eaten by turkey, quail, and other seed-eating birds; and small mammals such as squirrels, opossums, mice, and chipmunks. The fleshy portion is digested and the actual seed deposited in droppings. The bark is gray or brown and thin: 5 to 7 millimeters (1/4 inch) in Bigleaf and 10 to 14 millimeters (1/2 inch) in Umbrella. It presumably offers little fire resistance. In Ohio, a large bigleaf is 15 to 20 centimeters (6 to 8 inches) diameter at breast height. They can grow to about 15 meters (50 feet) tall. Umbrellas in Ohio may also reach 20 centimeters (8 inches) DBH, but much more often are 5 to 10 centimeters (2 to 4 inches) and grow as multiple trunks. They seldom grow more than 10 meters (35 feet) tall. Both trees attain greater size in the heart of their range farther south.

Bigleaf's main range lies across Mississippi and Alabama, with a limited distribution in the Cumberland Plateau and Cumberland Mountains. Umbrella's main range is in the Allegheny and Cumberland Plateaus and Cumberland Mountains. Their distributions overlap mainly in the Cumberland Plateau and Cumberland Mountains. According to E. Lucy Braun in **Deciduous Forests of Eastern North America**, this general area was the center of distribution and area of best development of the Mixed Mesophytic Forest. She cited these two trees as typical understory elements of this forest type here.

Bigleaf and Umbrella Magnolias occur in four counties of southern Ohio. Bigleaf occurs in three valleys of the Sharon Conglomerate area of Jackson County: White's



Map 79. *Magnolia macrophylla* Michx., bigleaf magnolia. (from Little, 1977).



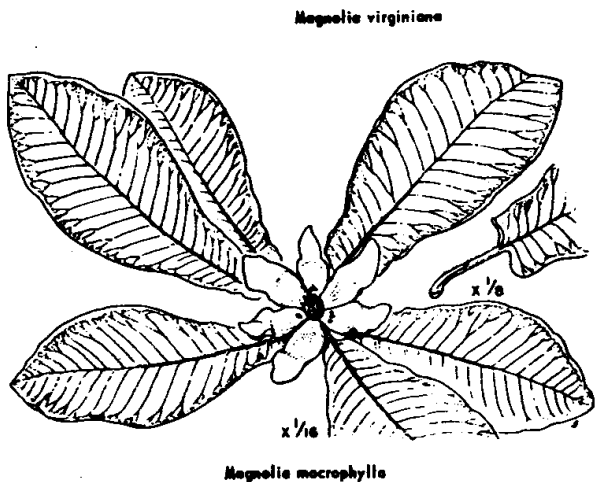
Map 81. *Magnolia tripetala* L., umbrella magnolia. (from Little, 1977).

Gulch, Rock Run, which is now encompassed in Lake Katharine State Nature Preserve, and Weaver Hollow. Umbrella can be locally common in this same area of Jackson County, especially at White's Gulch and Lake Katharine. It can also be locally common in two drainages of Shawnee State Forest in Scioto County. There are isolated populations in northern Jackson County, northern Vinton County, and on the Hocking/Vinton County line. Several of these populations have well over a thousand mature trees.

The Sharon Conglomerate area of Jackson County was well-known to Ohio geologists by the late 1800's. Unfortunately, it did not become well-explored botanically until much later. The following is a quote from Wilbur Stout's 1916 publication, Geology of Southern Ohio:

"White's Gulch is probably the roughest and wildest spot in southern Ohio. The valley is narrow with high massive walls and projecting cliffs of dull gray conglomerate. In sharp contrast to the somber hues of the rocks are the plants growing in the crevices and along the ledges, anywhere that a bit of soil is collected to give them root-hold. Even the sheer vertical cliffs, where they are shielded from the sun, are often green with mosses or liverworts. Many species of rockloving plants are represented here, each seeming to find its own most favorable environment with regard to moisture, light exposure and other conditions. At the base of the cliff are huge masses of broken rock among which are various species of hardy trees, growing tall and straight in their efforts to spread their leaves to the rays of the sun. Under the protection of their dense shade numerous delicate ferns and creepers grow in association with other plants that thrive best in deep shady valleys. The

abrupt, massive cliffs, and the profusion of plant life along the valley, watered by the meandering stream, unite to form a scene of wild beauty such as is seldom found in Ohio. A feature of importance also, is the large number of fine living springs that are found near the base of the conglomerate. The flow is strong, even in the dry seasons, and the water pure and cold."



A cross-section of White's Gulch would show that it is relatively deep and narrow with very steep lower slopes, and in places with vertical faces of Sharon Conglomerate. This configuration offers protection from high winds. The microclimate studies of Wolfe and others have demonstrated that deep gorges like this also are not subject to the temperature extremes that occur on an adjacent ridgetop or in a larger,

more open valley. The springs in this valley flowed even during the worst of last year's drought. Thus, the deep, steep-walled gorges of this area provide a relatively stable habitat with a constant and abundant moisture supply, and protection from wind and temperature extremes.

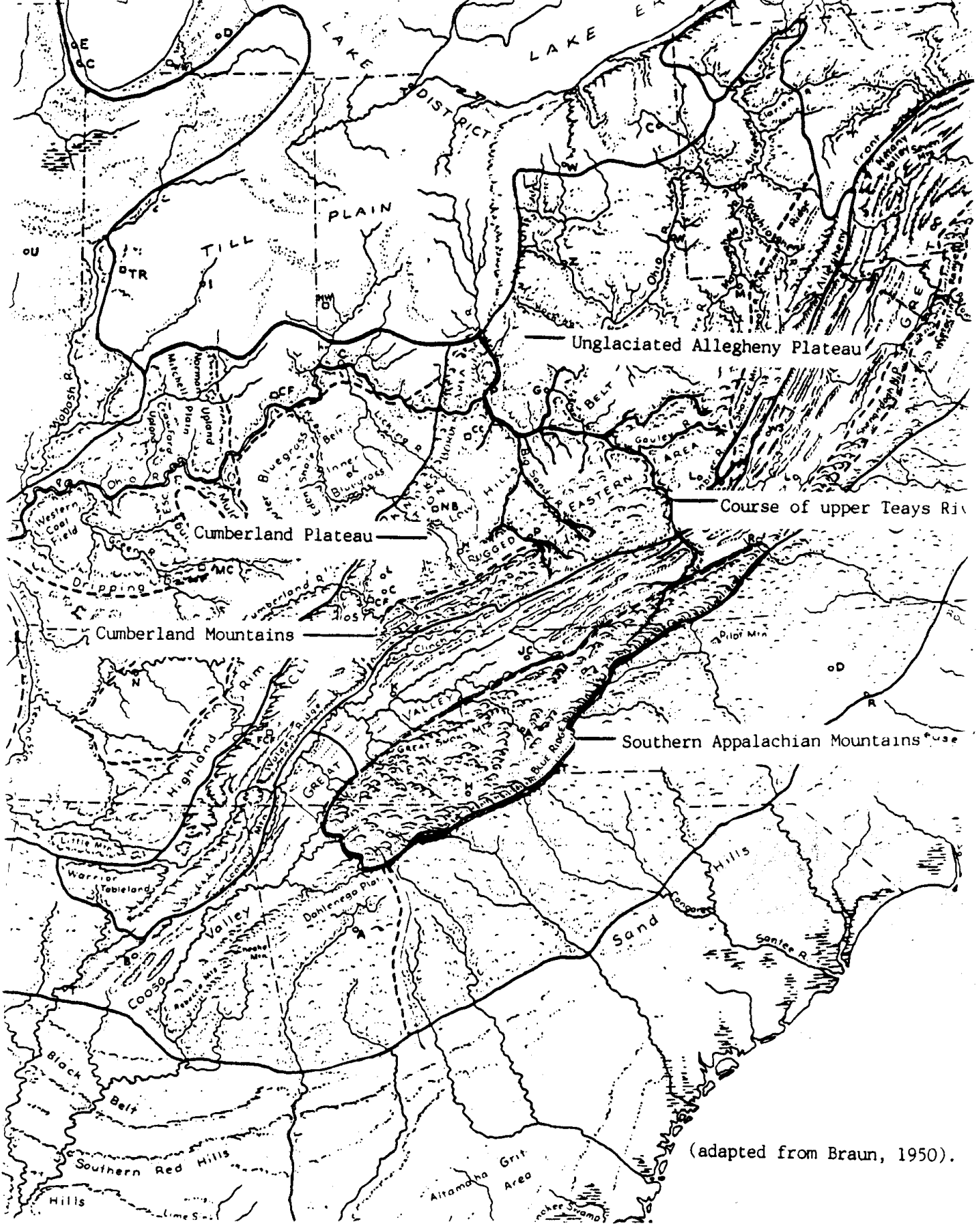
The general area of the Southern Appalachians was cited by Braun as the center of origin and distribution of the Mixed Tertiary Forest, the ancestral progenitor of the Deciduous Forest Formation. This area has been above marine waters and continuously available for plant occupancy for about 250 million years. The genus **Magnolia** was occurring in forests of this area by 100 million years ago. By a few million years ago true Mixed Mesophytic Forests with Bigleaf and Umbrella as components had developed here. With this in mind we will now take a brief and simplified look at some of the stages and events of the past and speculate as to how these factors affected Magnolia distribution in Ohio, with special reference to the Jackson County area.

A few million years ago a large river, similar in size to the present-day Ohio River, flowed northward through southern Ohio. This river, named the Teays, originated in the Southern Appalachian Mountains of North Carolina and drained parts of Virginia, West Virginia, and Kentucky. The course of the lower Teays was later buried by glacial drift, but only the upper Teays concerns us here. This river acted for millions of years as a migration corridor for the movement of biota from farther south. The occurrence of Bigleaf and Umbrella in Ohio is directly attributable to this function of the Teays. In fact, it seems likely that the entire portion of the Allegheny Plateau that was drained by the Teays system had a rich Southern Appalachian flora. We can speculate that Bigleaf and Umbrella were much more widespread here and that many other southern elements that have since been lost, were present at this stage.

The first Pleistocene glacier to enter Ohio was probably the Nebraskan and it had profound effects on the distribution of southern Ohio biota. It dammed and ponded the Teays, ending forever its function in Ohio as a migration corridor. These ponded waters formed a huge proglacial lake, named Lake Tight, with a level that rose and fell with advances and retreats for the glacier. This lake existed for several thousand years. At its highest point it apparently reached to the present-day 900-foot contour level. Even at its highest levels the lake had numerous islands and peninsulas that acted as refugia to which all the terrestrial biota of this area were restricted. The extant Magnolia populations lie in close proximity to areas that would have acted as upland refugia.

In time, the ponded waters found new outlets to the west and Lake Tight was drained. The Nebraskan glacier made a final full retreat. The ensuing interglacial period has been referred to as Deep Stage, in which new and often reversed drainage patterns developed. There was now no longer a migration corridor between southern Ohio and areas farther south. Biota that recolonized the former lakebed in general came from the upland refugia. Some elements were unable to spread far, if at all, but Bigleaf and Umbrella Magnolias must have re-expanded into some newly-exposed ravine-bottoms and lower slopes. In subsequent glaciations, possibly the Kansan,





(adapted from Braun, 1950).

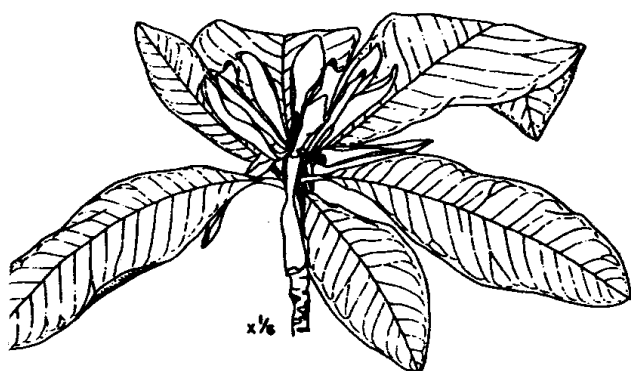
but certainly the Illinoian and Wisconsinan, the ice fronts advanced to within 20 or 30 miles of the Jackson County area. A harsher, colder climate prevailed during these glaciations. The evidence is overwhelming that most southern elements present here today rode out these glacial periods in place, often in deep, narrow, steep-walled gorges that had a more favorable microclimate than adjacent unprotected areas. With the final retreat of the Wisconsinan glacier, the climate of the area became milder. Present-day drainage patterns became established. The south-flowing Scioto now drained the area of Ohio that had been drained by the north-flowing Teays. Once again, the Magnolias were probably able to re-expand into some less-protected ravines and slopes.

The Xerothermic Period occurred about 5000 years ago and was an era of warmer drier climate. There was likely an increased fire frequency in most of the forests of this area. The Magnolias were probably restricted to cool, north-facing slopes of deep, narrow gorges with a constant water supply, which once again acted as refugia, this time from the warmer drier climate and probable increased fire frequency. After the close of the Xerothermic Period there was a return to a milder, wetter climate similar to that of today. Once again, the Magnolias may have been able to re-invade some local areas of less-protected habitat. So, by the time of settlement they had already weathered several severe natural perturbations with the attendant contractions and re-expansions of their local range.

With settlement came the major human disturbances of cutting, burning, farming, and grazing. Later, large scale logging of the remaining forest became so widespread as to eliminate all the presettlement forest stands. Some stands existing today may have already been cut over two or three times. Thus, both Bigleaf and Umbrella

have obviously survived some form of logging of their habitat. Conglomerate quarrying and coal strip mining have also taken their toll of habitat. With the decline of the forests, it is also likely that there was a major decline in Magnolia seed dispersal vector populations. An example is the wild turkey, which was eliminated from this area and has only recently started to reappear because of reintroductions.

The Ohio distribution of these trees did not become known to the scientific community until relatively late. Umbrella was first collected from Scioto County in 1911 and from Jackson, Vinton, and Hocking in 1923. Bigleaf was not collected until 1931. Thus, much major human disturbance had already taken place by the time these populations were discovered. So there is no way of knowing if any populations were



*Magnolia tripetala*

lost prior to discovery. However, there is no documented evidence that either Bigleaf or Umbrella occurred in Ohio outside of these areas since all the above mentioned populations are still extant.

The future prospects for Umbrella in Ohio seem favorable. A large population complex is protected at Lake Katharine State Nature Preserve and elsewhere it seems to be thriving under current timber management practices. It occurs on a wider variety of sites than Bigleaf and appears to be more tolerant of disturbance. The most distant Ohio populations are about 70 miles apart, thus a local insect, disease, or other pest outbreak may not reach all populations simultaneously. For Bigleaf in Ohio, however, future prospects are not as good. It occurs in more restricted habitats than Umbrella. Whereas the largest population complex is protected at Lake Katharine, the other two could be lost at any time. Although it has obviously survived logging of its habitat in the past, it is not known if it can survive the large scale clearcutting so often practiced today. The most distant Ohio populations are less than five miles apart, which makes them all susceptible to a local pest outbreak; especially to an introduced pest for which they have no natural defenses. So, let us hope that these magnificent trees, which have survived here through major climate and drainage changes, are not ultimately done in by the hand of man.

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James Burns is a botanist in the Heritage section of the Division of Natural Areas and Preserves, concentrating on inventorizing rare and endangered species of plants. Jim is an expert on the Flora of Northeastern Ohio.

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#### **Further Reading:**

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## THERE'S NO POISON IN IVY, JUST A SAP WITH ZAP IN IT

Among nature's uglier souvenirs are the itchy, oozy blisters of poison ivy.

Nothing is actually poisonous in poison ivy, oak and sumac. The troublemaker is an allergen that runs through the plants' roots, stems and leaves. The allergen, a milky sap called urushiol, is also found under the skin of mangos and in ginko tree berries and Japanese lacquer trees.

If you are allergic to urushiol, you are allergic to all three poison brothers — ivy, oak and sumac — and you would be unwise to nibble mango skins or prop bare elbows on a lacquered table.

Urushiol has all kinds of ways to get people in trouble. The most direct problem comes from bruising the poison plant's greenery or tugging at the roots. Wherever the plant touches a sensitive person's skin, itchy, hivelike bumps will arise. The rash can show as soon as eight hours or as late as five days, but it usually pops up in 24 to 48 hours.

Urushiol needs only 10 minutes on the skin to set a reaction in motion. And for the next few hours, it can slide around on your body — or onto someone else's — and spawn a rash far from where you first brushed a leaf.

It can stick to gardening tools, picnic baskets and golf clubs, and, in a climate with low humidity, retain its potency for months unless washed off. Urushiol sticks to animal fur, too. If your pet Fido, romps in poison-oak filled woods, you may feel itchy in a day or two.

The best defense is knowing the enemy and avoiding it — or acting immediately after a tangle. Within 10 minutes of contact, thoroughly wash yourself with soap and water. Don't forget under your fingernails and rings.

"If there's no soap, just use water," says Dr. Susan Orchard, a dermatologist who researched poison oak and ivy as a graduate fellow at Oregon Health Sciences University in Portland. "Just be sure to take a good shower when you get home." A good shower a few hours later won't prevent an outbreak, but it will help minimize the misery and its spread.

Launder your clothes, too, including your hat. The only way the rash spreads is from the plant's urushiol. Scratching the watery rash doesn't spread the outbreak. "That's a common myth," Orchard says. "The fluid within the bumps is not contagious."

For a couple of reasons, a rash may appear to spread. First, the skin has different levels of sensitivity. A person's arm skin may be more sensitive — and thus break out a day earlier — than the skin on the legs, even though both were exposed at the same time.

Scratching, nevertheless, is a no-no. It can gouge the skin, leading to serious infection and scars.

Think you aren't allergic? Don't be too bold sailing into the bush. Your immune system can decide to become allergic after one exposure or a hundred.

The virulence of the rash is determined by two things: your degree of sensitivity, which is probably genetically determined; and the intensity of exposure. Various studies place 50% to 85% of the general population as allergic, but that includes people who never have contacted enough urushiol to register a reaction.

Dr. Albert Kligman, the man who developed the skin drug Retin-A, also is famed for his definitive study on poison ivy published in 1958. A professor of dermatology at the University of Pennsylvania in Philadelphia, Kligman says that, if pushed, hardly anyone stays immune.

"All you'd have to do is take a new leaf and rub it vigorously across your forearm, and do it two or three days in a row," Kligman says, "and I'd say 95% will be sensitized in two weeks."

If your poison ivy, oak or sumac rash is spreading rapidly or involves the face or genitalia, it is time to visit a doctor, who, unless your health dictates otherwise, can prescribe high doses of the steroid prednisone, a derivative of cortisone, for 10-14 days. If the therapy is too short or the dose too low, you risk a second attack. To get the benefit of the prednisone, get to the doctor as soon as the rash starts to blister and spread.

Cortisone gives remarkable relief. Prednisone's bad reputation comes from abuse, but the reputation is not deserved with short treatments such as for poison ivy, dermatologists agree.

For mild attacks — a few small bumpy, slightly itchy patches — home treatment is fine. Wet compresses are the best way to ease the rash. Dampen a bedsheet or handkerchief, apply to the rash, rewet when almost dry, and repeat until the blisters go down. Preparations with an alcohol base also help to dry the bumps.

Except for a few people who are allergic to them, numbing preparations ending in "-caine" can soothe. Dermatologists are mixed on calamine lotion because it's so messy, but it can help slightly at drying.



Cold showers a few times daily offer relief. Hot water substitutes pain for the itching sensation, but it is bad for the nerves.

Once allergic, can you grow out of it? That's tricky, because of individual circumstances regarding exposure, Kligman says, but generally it is a lifelong sensitivity that diminishes with time. Reactions fade as people age because their immune system declines.

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This article is a reprint from the Cleveland Plain Dealer.

## VIRGINIA BLUEBELLS

Few blues in nature rival the blue of Virginia bluebells, and a single clump in a garden or a stand of thousands along a stream is a beautiful sight.

Flower buds are nestled in the unusual dark purplish-green foliage as it emerges in early spring. The blossoms are pink in bud changing to varying shades of blue as they mature, and returning to pink following pollination. Occasionally a white-blossomed plant appears and the blossoms of a few plants remain pink throughout their blooming period.

Blue bell-shaped flowers hang in nodding clusters from 1-2' stems. Each is about an inch long and has a narrow funnel-shaped tube broadening to a shallow bell with a scalloped edge. Flowering stems are coiled while in bud but straighten to a graceful arch as the flowers expand, a habit typical of the Borage family to which Virginia bluebells belong.

Both stems and leaves of Virginia bluebells are smooth while most Borage family members have hairy leaves. The 8" long succulent gray-green basal leaves and the 2-5" leaves along the stem are oblong and arranged alternately. Lower leaves are supported by long stems or petioles, and upper leaves are usually attached directly to the stem.

Our native bluebells are known botanically as **Mertensia virginica**. Linnaeus named the genus **Mertensia** to honor 18th century German botanist Franz Martens, and the species name **virginica** referred to the Colony of Virginia. The plant has a host of other common names including Virginia cowslip, Roanoke bells, lungwort, and oysterleaf. In his correspondence with Peter Collinson of London between 1734 and 1746, John Custis of Williamsburg referred to the Virginia bluebell as the "Mountain blew cowslip." Thomas Jefferson grew them at Monticello, and 19th century garden writers sometimes called them "Jefferson's blue funnel flowers." The name lungwort probably comes from its use in treating pulmonary disorders, and oysterleaf from the oyster-like flavor of its leaves.

### ... IN THE WILD

As surely as rivers rise and spring is fleeting, Virginia bluebells spill across the landscape blooming for two to three weeks in May. Like other spring ephemerals, they bloom as the days lengthen and the sun warms the forest floor, and by early summer as the tree canopy closes they have completely disappeared.

Streambanks, low moist woods, and floodplains are Virginia bluebell's native habitat. They like moist, medium to rich alluvial soils that are neutral to slightly acid. They grow both singly in multi-stemmed clumps, and in large colonies; a single plant may light up a streambank, or a carpet of blue may roll across a riverbottom.

Other wildflowers that grow and bloom with Virginia bluebells include spring beauty, Dutchman's-breeches, toothwort, rue anemone, troutlily, wild ginger, and violets. Redbud, serviceberry and dogwood also celebrate spring with the bluebells.

Virginia bluebells grow and spread from rhizomes, persistent underground stems that store energy collected during the plant's brief growing season. They also increase

by seeds, stored in 1/8" nutlets, that mature as the green growth yellows and plants go dormant. Often seeds carried downstream by floodwaters establish new colonies.

Because they reseed freely, Virginia bluebells are considered among the more secure of our wildflowers; however, the wetland habitats where they flourish have diminished. Leave bluebells and all other wildflowers and native plants undisturbed in the wild. Dig neither plants nor dormant rhizomes, and avoid clearing, draining, or disturbing their habitat. Virginia bluebells are blessings in the blue that were here before the settlers arrived; protecting their habitats will insure they are still here for future generations to enjoy.

### ... IN THE GARDEN

Bluebells are among the easiest wildflowers to grow and have been a favorite of American and European gardeners since colonial days. They can be grown with bulbs, in partially shaded perennial borders, and in clumps or drifts in a woodland garden. In the garden, as in their native habitat, they need a humus-rich soil, adequate moisture in spring, and sun before the trees leaf out. Soil that is moist to wet in spring but dry in summer suits them fine since they go dormant soon after blooming. (Dying foliage should be left to mature naturally.) Their fleshy rhizomes will rot in a poorly drained soil that stays boggy year-round.

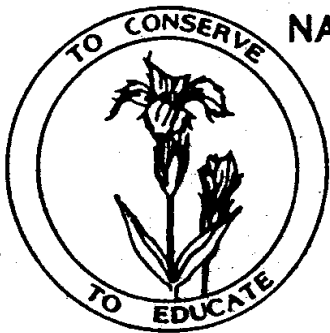
The lovely soft blue of Virginia bluebells combines so well with the yellows, pinks, and whites of early spring that it is hard to come up with a bad combination. The gardener's main challenge is finding companions that share the bluebells' growing condition and whose foliage remains to take their place. In well-drained soil that stays moist during summer months try ferns, wild ginger, and fall-blooming asters are good choices as are non-native astilbes and hostas. In soil that becomes somewhat dry in summer try alumroot, green and gold, and cream violets.



Bluebells self-sow in spots where they are growing well and are easily propagated by division when the foliage is dying back. Seed sown in an outdoor bed immediately after collection receives the moist cold period needed for spring germination. Seed can also be started in a flat of moist growing medium, covered with plastic, and kept in the refrigerator for six weeks. Remove to a warm room or outdoors for germination.

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This article is a reprint from Virginia NPS publication.



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