



On The Fringe

Journal of the Native Plant Society of Northeastern Ohio

Plant Preservation: An Historical Perspective

by Frances H. Clark and Mary M. Walker

Reprinted from *Wild Flower Notes*, the official publication of the New England Wild Flower Society, Vol. 1, No. 1, Fall/Winter 1985.

Since the 1970s it seems that more and more individuals and organizations have become actively concerned with the protection of native plants. As laudable and necessary as this enthusiasm and support is, little is being said and done now which was not being said or done at least fifty or eighty years ago. Indeed, as one reviews the history of the plant preservation movement in the United States—its purposes and programs, the plants it has worked to save, and the people involved—little has changed except perhaps the intensity of the need for responsible action in an age when our capabilities for destruction are greater than ever.

The initial rallying cry was against those who collected plants from the wild for pleasure and profit:

Flower gatherers are said to rake together huge bales of trailing arbutus (roots and all), which, brought to the city, yield the innumerable little bunches of flowers purchased in the streets by persons who never suspect the ruthless destruction wrought by this trade. (Robinson 1902)

The ubiquitous motorist is so continually penetrating every exquisite bit of woodland, and so frequently destroying what he finds there, that if something is not done now, another generation will find but few of our wild orchids and rarer wild flowers left. (Crosby 1931)

The only locality of the plant [*Magnolia virginiana*] in New England has been well-nigh destroyed by the transplanting of the trees to the lawns of country residences, a practice the more deplorable since rarely accomplished with success. (Robinson 1902)

The loss of habitats due to cities expanding was even more destructive to wild flowers than was collecting:

Woodlands and fields are being rapidly destroyed by real estate companies for small home developments. In many such cases all trees are cut down, hills are leveled and the soil dumped in hollows to secure level ground. (Ricker 1932) ;

Roads were another menace. One writer notes the

ruthless way in which, in mending or widening the roads, the most beautiful wild growth is destroyed through being ploughed up, mowed down, or smothered with stones or gravel. (Clarke 1902)

Other concerns were the "improving" of swamplands by clearing and draining for agricultural production, the operating of pulp mills which "leave nothing but devastation (Grout 1902)," and excessive collection because of the plant's very rarity.

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ANNUAL MEMBERSHIP RENEWAL

You will soon receive your membership renewal form. The rates are the same as last year, and we have added several categories of sponsorship. Please renew at the highest possible level. Kathy Hanratty is our new Membership Chair. Please note the new mailing address:

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Program Schedule Winter 2009

Behind the Scenes of the Rare Book Room – Saturday, January 24, 1:00 p.m. **Cleveland Botanical Garden**, University Circle, 11030 East Boulevard, Cleveland, 44106. Gary Esmonde, Librarian for the Cleveland Botanical Garden, will share how the library operates, including the climate controlled rare book room, bringing out a few select volumes, some going back to the early days of printing. Afterwards, enjoy the botanical garden at your own pace. Group entrance fee \$5 per person, free for Botanical Garden or Holden Arboretum members. Saturday street parking free, fee for underground lot.

Saturday, January 24th at 1PM is a very special time, date, and place. At the Eleanor Squire Library at Cleveland Botanical Garden we will be given a behind the scenes tour including the rare book room. This past year the Urban family collection of rare wildflower volumes was donated to the library. These and the many other occupants of that rare book room are available to scholars and members of CBG upon reservation. Some volumes go back to the dawn of printing. Others are collectors' items of great beauty and value. You will hear what this well kept secret of Cleveland has to offer, what is or will be on-line available, the resources available, of periodic sales, and much more. Why not make a day of University Circle.

– Tom Sampliner

Namibia – Unique Plants and Other Creatures – Sunday, Feb. 1, 1:30 p.m. – **Chagrin Falls Library**. Spend a winter afternoon in sunny Africa. Located at the south west corner of the African continent, Namibia has the oldest desert, stretching savannahs, and some of the most magnificent, pristine sand dunes in the world. This arid country is sparsely populated, which leaves huge tracts of open country of unmolested natural beauty. Ami will present his pictorial impressions of plants and animals adapted to the extreme environmental conditions. Chagrin Falls Library, 100 East Orange Street, Chagrin Falls, 44022, just east of Main Street.

Native Plants and Rain Gardens – Sunday, March 1, 1:30-2:30 p.m. – **Chagrin Falls Library**. Kathryn Hanratty, certified Rain Garden installer, will present a program on how and why to build a rain garden and the best native plants to use in your rain garden. A Rain Garden is a garden usually consisting of a shallow depression with a berm. Plants that can tolerate periodic immersion are used in the shallow depression to allow water to slowly percolate into the soil. This slows runoff and helps to prevent flooding and erosion. Chagrin Falls Library, 100 East Orange Street, Chagrin Falls, 44022, just east of Main Street.



(Plant Preservation, continued from page 1)

Other concerns were the "improving" of swamplands by clearing and draining for agricultural production, the operating of pulp mills which "leave nothing but devastation (Grout 1902)," and excessive collection because of the plant's very rarity.

Several of the plants threatened decades ago are quite commonplace now. In winter Mountain Laurel (*Kalmia latifolia*), ground pine (*Lycopodium* sp.), Winterberry (*Ilex verticillata*), and American Holly (*Ilex opaca*) were popular for Christmas decorations. In spring tourists would take home by the armload branches of Flowering Dogwood (*Cornus florida*), azaleas (*Rhododendron* sp.), and once again the hapless laurel. The most charming of all was the Trailing Arbutus (*Epigaea repens*) "which was gathered more ruthlessly than any other and sold in great quantities in our streets (Crosby 1931)."

Other species of concern then are today listed as endangered or threatened in parts of the northeast: Climbing Fern (*Lygodium palmatum*), Sabatia (*Sabatia kennedyana*), Fringed Gentian (*Gentianopsis crinita*), and the Showy Lady's-slipper (*Cypripedium reginae*). Most precious of all was the Ram's-head Lady's-slipper (*Cypripedium arietinum*). "This delicate orchid is sought by flower bandits as gold nuggets are in a gold field (Young 1934)." The fact that many of these plants can still be seen today—some frequently, others rarely—can be attributed to efforts started decades ago.

The proponents of the plant conservation movement denounced collection in no uncertain terms:

We think the Goths and Huns barbarians to destroy the art treasures of Rome, but we are more barbarous toward our beautiful native trees and plants. (Clarke 1902)

The value of plants ranged from being of sentimental and aesthetic importance to that of ecological and scientific significance:

A walk afield, enlivened by the presence of flowers and birds, leaves behind a memory that may be cherished for years. The ruthless breaking up of this rounded symmetry of nature, simply for the gratification of the moment, leaves a void impossible to fill. (Knowlton 1902)

[The studies] of plant life are powerful contributions to peace of mind, happiness, equanimity, and a broader, more sympathetic outlook upon life. For a lack of a better name we may designate it as the esthetic value of nature, and

I think few persons will deny that in the long run it works for our good. (House 1921)

I think that a very direct connection can be traced between the diminishing wild flowers and the scarcity of many desirable species of birds and animals, as well as the unwelcome increase of undesirable forms of insects. The destruction or wholesale gathering of wild flowers disturbs the balance of nature and their place is taken by weeds....In this readjustment some species of insects, animals and adventive plants become pests, accomplish great damage, and cause the expenditure of large sums of money for control measures. (House 1921)

And stated earliest of all was the overall concern for future scientific investigation:

Climatology, the past, present and future geographical distribution of animals and plants, and the ecology and evolution are so clearly connected that their devotees possess a common interest in the preservation of natural conditions at least until the factors of biological nature shall have been directly ascertained and correlated. (Trelease 1900)

The solution to the destruction of the native flora was to ascertain the facts and then educate and enlighten the general public:

While pure sentiment and aesthetic instincts may well be appealed to in this work, it is obvious that the movement will be harmed rather than aided by effusions which are merely sentimental and not founded upon carefully ascertained facts. (Robinson 1902)

Every effort to educate people...is a distinct aid to diminishing selfishness and in developing the more healthy taste to preserve natural objects rather than to deface or to destroy them. (Britton 1902)

Let us teach them to care for the plants as individuals, to be interested in watching them *in situ*, to study the growth...the way flowers are fertilized...and all curious facts about seed-dispersion. (Clarke 1902)

These noble intentions would have had little effect if caring and educated groups of people did not take actions and strongly motivated, dedicated individuals did not lead. In the United States the plant preservation movement started in 1900 when William Trelease, director of the Missouri Botanic Garden, made a

stirring speech. At the meeting of the American Association of the Advancement of Science, Trelease advocated "the protection and preservation in every way possible of our native and natural vegetation (Trelease 1900)." Given that the scientific world was smaller then and that botanists in New York, Washington, D.C., California, and Boston all knew each other, they probably shared in the alarm over the destruction of the native flora. Trelease's speech motivated them to action.

In Boston in 1901, a group of eminent botanists, many of whom were associated with Harvard University, funded the Society for the Protection of Native Plants. Mrs. Asa Gray, wife of the famous New England botanist, was honorary president and Harvard colleagues Benjamin L. Robinson, George L. Goodale, and Merritt Lyndon Fernald were vice-presidents. Women, including many botanists' wives who were interested in plants, were very active in this group, quite possibly because they were excluded from the all-male New England Botanical Club which had been founded in 1896. The New England Society for the Protection of Native Plants was endorsed by the prestigious Botanical Club and the Massachusetts Horticultural Society.

In New York, Olivia and Caroline Phelps Stokes initiated the establishment of a national society. In 1901 the sisters presented \$3000 to the New York Botanical Garden; this was to be used to promote the investigation and preservation of native plants. To this end the Board of Managers sponsored an essay contest on this subject. The winning articles, published in the *Journal of the New York Botanical Garden*, were submitted by Dr. F. H. Knowlton of the U.S. National Museum, Mrs. Cora H. Clarke of Boston, and Dr. A. J. Grout, author of a definitive work on mosses. These essays by prominent scientists in turn persuaded Nathaniel Lord Britton, director of the New York Botanical Garden and co-author of the definitive Britton and Brown flora, and his wife Elizabeth, a noted bryologist, to throw their energies into the cause: they founded the Wild Flower Preservation Society of America in 1902.

These leaders would not have been so successful if they had not used every means possible to promote their message to the general public. Many of the methods used then are still effective today. Of primary educational importance was the publishing of in-depth articles in both popular and scientific journals such as *The Plant World*, *Nature Magazine*, *Horticulture*, *Rhodora*, *Torreya*, and the *Journal of the New York Botanical Garden*. The first periodical devoted

exclusively to the subject of native plants was *Wild Flower*, which was issued by the national organization from 1924-1964. The New England society published *Wild Flower Notes* in various formats from 1966 to 1980.

Other media were used in their campaigns. The national society recruited its first members at a colored lantern slide show in Washington, D.C. "Some Wild Flowers in Need of Protection" was attended by over 700 people. Lectures, lantern shows, and field trips continued to rally support over the years as did the distribution of dozens of different leaflets and circulars to thousands of interested individuals.

Lists of plants "not to pick" were first issued by the New England society and included initially 22 species and then 41. The national organization published an expanded list of 121 plants growing in several states. Radio broadcasts, newspaper articles, booths at county fairs, as well as postcards, posters, and charts were other promotional tools. The audience seemed unlimited, as it was assumed "every living human (Young 1934)" enjoyed wild flowers.

Wanting to discourage the purchase of wild-collected nursery stock, the national society surveyed over 100 nurseries nationwide in 1934. The purpose was to

determine the character of the work and quantity of plants collected or propagated....A tentative list has been issued of dealers who, it is believed, are not contributing to the extermination of rare wild flowers. (*Wild Flower* 1934)

In 1981 the New England Wild Flower Society, thinking it a novel idea, conducted a similar survey and printed the first edition of *Nursery Sources for Native Plants*.

Other objectives of plant preservation societies included designating sanctuaries to protect, propagate, and eventually redistribute native plants. A sanctuary was defined as

a very large landed estate which the public is invited to enjoy, the only condition being that the plants and the animals not be disturbed. (Knowlton 1902)

[and]

[land] where with expert supervision many of the flowers can be sufficiently increased in abundance to enable distribution of some of the rarer species to protected areas where they are

adapted, but are at present rare or little known.
(Ricker 1932)

The creation and enforcement of protective laws as remedies to collection caused some controversy:

In most cases they [laws] have been time and effort wasted....The existing laws in all states covering trespass and theft are a more effective means...if anyone is willing to obtain the necessary evidence and warrant....Few if any...people...are willing to obtain [such] evidence. (Ricker 1930)

The general public responded by the hundreds to this multi-faceted campaign to save native plants, and thereby stimulated further development of the societies. By 1918 Elizabeth Britton asked Dr. P. L. Ricker of the Smithsonian Institution to help her with the mounting correspondence of the national society. Dr. Ricker was so enthusiastic and energetic in his work that in 1925 (by which time Mrs. Britton's energies were flagging) he reorganized the New York-based society into the Wild Flower Preservation Society, Inc., with headquarters in Washington. Mrs. Britton was honorary president and Ricker was president. The society sponsored many state chapters, of which the Ohio Chapter under the leadership of Dr. E. Lucy Braun, author of *The Deciduous Forests of Eastern North America* and the first editor of *Wild Flower*, became the strongest.

Meanwhile, the more locally based New England society worked cordially with the New York society for many years. However, in time the founders aged and their activities declined. In 1922 the society took on new life. The Garden Club of America wanted to establish a New England conservation committee and asked Mrs. S. V. R. Crosby (the second president of the Garden Club, which had been founded in 1913) to head it. After obtaining the nucleus of names and good will from the original organization and the help of the Massachusetts Horticultural Society, which lent more names and office space, Mrs. Crosby launched the New England Wild Flower Preservation Society in 1925.

Despite the Depression in the 1930s, both the New England and national organizations prospered. Hundreds of thousands of people requested information, laws were passed in over twenty states, and state chapters flourished. The two societies could no longer claim credit for the progress of the work; conservation committees of the Garden Club of America, General Federation of Women's Clubs, Daughters of the American Revolution, many local nature and conservation organizations, churches, and schools had become deeply involved.

With the advent of World War II, activities were diverted elsewhere. The members of the national society aged and became inactive. *Wild Flower* was discontinued in 1964, and the society dissolved formally in 1974. However, the New England Wild Flower Preservation Society continued to flourish and grow under such capable leaders as Mrs. Crosby, Kathryn Taylor, and Persis Green. The New England Society acquired Garden in the Woods in Framingham in the mid-1960s and moved their headquarters from Horticultural Hall in Boston to Framingham in 1968. In 1960 the name was shortened to the New England Wild Flower Society, Inc. The society continued to promote wild flower conservation through horticulture and public education with the help of its state chapters and has developed a library devoted to the subject.

After the Vietnam War, the public could once again concentrate on the needs of the environment. In the 1970s and 1980s some thirty state native plant societies have been rejuvenated or newly formed nationwide. Almost all of them produce newsletters and some publish quarterly journals. Few have sanctuaries or library resources. As in the past, the societies seem strongest when there is a good mix of professional botanists, serious amateur field botanists, and gardening enthusiasts in the membership. Also, the volunteer societies tend to flourish under a strong, dedicated individual, but often decline when that individual leaves.

Fortunately, in the 1980s the movement is receiving strong support from professionally administered national and international organizations: The International Union of Conservation of Nature and Natural Resources (IUCN), the World Wildlife Fund, the National Wildlife Federation, and especially the Nature Conservancy and its affiliated state Natural Heritage Programs. The United States government is also working to protect endangered species and their habitats.

In conclusion, what must be remembered is that none of these organizations would be successful without the support of individuals, whether it be their contribution of time and talent, money, or political backing. And as the struggle goes on, one must not forget, in the words of Cora H. Clarke:

One becomes a little weary of this constant warfare [to defend our native plants], but nothing is more certain than that we are not put into the world to avoid action, since it is absolutely impossible to avoid responsibility,...and to consider how we, individually, can aid the warfare. (Clarke 1902)

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All these references and many others are available at the Lawrence Newcomb Library at the Garden in the Woods, Framingham, Massachusetts.

Mary M. Walker is the librarian for the New England Wild Flower Society and is President of The New England Botanical Club. Frances H. Clark is editor of the Society's *Wild Flower Notes*.

Making the "LEAP"

The Lake Erie Allegheny Partnership for Biodiversity (LEAP) is changing how conservation and stewardship of natural areas happen in Northeast Ohio and Western Pennsylvania.

Four years ago, Curator of Botany and Director of Conservation Dr. Jim Bissell decided that Northeast Ohio and Western Pennsylvania needed a more coordinated effort to protect rare habitats.

"The idea to start a biodiversity partnership was based primarily on my having watched too many rare habitats lost to neglect or invasive species over 30 years of inventorying native plants communities in our region," Bissell says.

Conservation organizations were protecting and restoring land in the area, but, with two notable exceptions, the Grand River Basin and upper Cuyahoga River Basin, each was acting independently. He was concerned that important parcels might "slip through the cracks."

Bissell and Assistant Director of Conservation Renee Boronka held a meeting with representatives from those organizations in March 2004. "We floated the idea of creating a partnership that would keep everyone abreast of what was happening in terms of land conservation in the area," Boronka recalls.

Museum Trustee Tom Leiden provided funding to bring the director of Gateway Wildlands, a conservation collaborative (now defunct) in St. Louis, to Cleveland to speak. The response was strong from the 52 people representing more than 40 organizations who attended.

A core group met frequently with Bissell and Boronka over the next two years to write a mission statement and strategic plan and adopt a name, the Lake Erie Allegheny Partnership for Biodiversity (LEAP). The moniker derives from the ecoregion that defines the area in which the group operates: the glaciated land south of Lake Erie from Sandusky east to the Allegheny Mountains.

Fast forward to April of this year, and a press conference held by the National Fish and Wildlife Fund (NFWF) and its federal agency partners, the U.S. EPA, Fish and Wildlife Service, Forest Service and National Oceanic and Atmospheric Administration. They announced that LEAP was one of 16 recipients of more than \$1 million in funding through the ArcelorMittal

Great Lakes Restoration Program. LEAP's portion was \$100,000.

It was a major step for the collaboration, and key to its future. The money was not meant for LEAP itself, but to seed a Regional Biodiversity Fund within NFWF. This fund will fill a longtime need for a regional entity capable of equitably distributing grants locally. Soon, conservation organizations will be able to apply to LEAP for money from the fund to pursue projects that will conserve and restore biodiversity in the region.

Just what those projects are plays into another major LEAP initiative: to create a regional biodiversity plan. This will be an integrated, scientific, data-based plan that will provide a regional vision and strategy that member organizations can use to prioritize goals and pool resources. A recently concluded two-year contract with NatureServe, a conservation planning company, laid the groundwork for the plan by creating a model conservation plan for the Chagrin River.

"LEAP could exist nicely as an information-sharing group," says David Beach, director of the Museum's GreenCityBlueLake Institute, who has been involved in LEAP from its inception. "But its full potential will be realized by helping to articulate a larger vision of biodiversity."

The impetus for both the Regional Biodiversity Fund and Plan originated within the three key issue areas defined by LEAP's strategic plan. The first of these is to help member organizations with staffing issues, stewardship needs and biological inventories. The second is to facilitate communication among members to keep current on new land acquisitions and

land management techniques. And the third is to raise public awareness about the importance of biodiversity and the need to protect and restore habitat.

Subcommittees have been organized to address each issue area. In addition to the Regional Biodiversity Fund, Local Advisory Committee, and Regional Biodiversity Plan Steering Committee, there is a Public Outreach and Education Committee to publicly promote LEAP and update its Web site; a West Virginia White Committee to address the conservation of the West Virginia White Butterfly, a species of special concern in the region; and a Native Plant Promotion Committee to focus on educating the public and the nursery and landscaping trade on the importance of buying, selling, propagating and planting native plant species.

Though LEAP has only existed for four years, it already is making a difference in the region. A three-year initiative to remove invasive garlic mustard from a 9-mile stretch of the Grand River has put a dent in the plant's presence there. The group's bimonthly meetings allow members to talk about new land protection and stewardship projects and invite others to collaborate. Many close working relationships have evolved as a result.

"Everyone's always talking about regionalism," Beach comments. "Well, here's a great example of it: 30-some organizations coming together for the benefit of the region."

To learn more about LEAP, visit www.leapbio.org.

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The St. Louis Declaration On Invasive Plant Species

The Native Plant Society of Northeastern Ohio has signed a voluntary code of conduct with regard to invasive plants, as requested by LEAP. In an effort to slow the spread of invasive species, the Center for Plant Conservation in Missouri has promulgated a set of voluntary codes of conduct to curb the use and distribution of invasive plant species. These Voluntary Codes of Conduct are for government, nursery professionals, landscape architects, botanic gardens and arboreta, and the gardening public, and were developed recognizing that education must accompany all efforts to address the problem. These codes are now being considered for endorsement by the major professional societies and organizations representing each of the groups covered. If endorsed they will be tested and revised as necessary to improve their utility and effectiveness. The code that best fits our organization is Gardening Public.

Please see the Center for Plant Conservation website at

<http://www.centerforplantconservation.org/invasives/codesN.html>
for a complete explanation of this issue.

Findings

People are major dispersers of plants.

1. The magnitude of this dispersal is unprecedented and has allowed dispersal of species that manifest aggressive traits in new areas.
2. Plant introduction and improvement are the foundation of modern agriculture and horticulture, yielding diversity to our supply of plants used for food, forestry, landscapes and gardens, medicinal and other purposes.
3. A small proportion of introduced plant species become invasive and cause unwanted impacts to natural systems and biological diversity as well as economies, recreation, and health.
4. Plant species can be invasive in some regions, but not in others.
5. The impacts of invasive plant species can occur at times and places far removed from the site of introduction.
3. Prevention and early detection are the most cost effective techniques that can be used against invasive plants.
4. Research, public education and professional training are essential to more fully understanding the invasive plant issue and positively affecting consumer demand, proper plant use, development of non-invasive alternatives, and other solutions.
5. Individuals from many fields must come together to undertake a broad-based and collaborative effort to address the challenge, including leaders in horticulture, retail and wholesale nurseries, weed science, ecology, conservation groups, botanical gardens, garden clubs, garden writers, educational institutions, landscape architects, foundations and government.
6. A successful invasive plant species strategy will make use of all available tools including voluntary codes of conduct, best management practices, and appropriate regulation. Codes of conduct for specific communities of interest are an essential first step in that they encourage voluntary initiative, foster information exchange, and minimize the expense of regulation.

Principles

1. Plant introduction should be pursued in a manner that both acknowledges and minimizes unintended harm.
2. Efforts to address invasive plant species prevention and management should be implemented consistent with national goals or

Invasive Plant Short List

Some of the most Invasive species in Ohio's Natural areas:

Common Name	Scientific Name	Type
Garlic Mustard	<i>Alliaria petiolata</i>	Herb
Purple Loosestrife	<i>Lythrum salicaria</i>	Perennial
Multiflora Rose	<i>Rosa multiflora</i>	Shrub
Phragmites (Common Reed Grass)	<i>Phragmites australis</i>	Grass
Common or European Buckthorn	<i>Rhamnus cathartica</i>	Shrub
Glossy Buckthorn	<i>Rhamnus frangula</i>	Shrub
Reed Canary Grass	<i>Phalaris arundinacea</i>	Grass
Japanese Honeysuckle (vine)	<i>Lonicera japonica</i>	Vine
Bush Honeysuckles:		
Amur Honeysuckle	<i>Lonicera maackii</i>	Shrub
Tatarian Honeysuckle	<i>Lonicera tatarica</i>	Shrub
Morrow Honeysuckle	<i>Lonicera morrowii</i>	Shrub
Japanese Knotweed	<i>Polygonum cuspidatum</i>	Perennial
Autumn Olive	<i>Elaeagnus umbellata</i>	Shrub /Tree
Russian Olive	<i>Elaeagnus angustifolia</i>	Shrub/ Tree

Why are Invasive Non-Native Plants a problem?

Invasive plants often form dense stands that out compete native species for space, light and water. Natural enemies that keep these plants in check in their natural environment are not present here. Many of the problematic invasive species listed below also have characteristics that allow them to choke out native plants, such as a tendency to leaf out early, spread aggressively by seed and/or root or even to alter soil chemistry.

Often native insects cannot eat the invasive non-native plants. As invasive plants become more widespread and choke out native plants, food becomes less available to native insects, causing reverberations through the food chain.

Voluntary Code of Ethics for the Gardening Public

1. Ask for only non-invasive species when you acquire plants. Plant only environmentally safe species in your gardens. Work towards and promote new landscape design that is friendly to regional ecosystems.
2. Seek information on which species are invasive in your area. Sources could include botanical gardens, horticulturists, conservationists, and government agencies. Remove invasive species from your land and replace them with non-invasive species suited to your site and needs.
3. Do not trade plants with other gardeners if you know they are species with invasive characteristics.
4. Request that botanical gardens and nurseries promote, display and sell only non-invasive species.
5. Help educate your community and other gardeners in your area through personal contact, and in such settings as garden clubs and other civic groups.
6. Ask garden writers and other media to emphasize the problem of invasive species and provide information. Request that garden writers promote only non-invasive species.
7. Invite speakers knowledgeable on the invasive species issue to speak to garden clubs, master gardeners, schools and other community groups.
8. Seek the best information on control of invasive plant species and organize neighborhood work groups to remove invasive plant species under the guidance of knowledgeable professionals.
9. Volunteer at botanical gardens and natural areas to assist ongoing efforts to diminish the threat of invasive plants.
10. Participate in early warning systems by reporting invasive species you observe in your area. Determine which group or agency should be responsible for reports emanating from your area. If no 800 number exists for such reporting, request that one be established, citing the need for a clearinghouse with an 800 number and website links to information about invasive plant species.
11. Assist garden clubs to create policies regarding the use of invasive species not only in horticulture, but in activities such as flower shows. Urge florists and others to eliminate the use of invasive plant material.

Geauga Park District**Burton Wetlands Nature Preserve**

15681 Old Rider Road, Burton Township

Burton Wetlands Nature Preserve is a 287-acre system of boreal forest, glacial relic ponds, and wetlands located in Burton Township. The preserve is made up of several sub-units, including 22-acre Lake Kelso, and the Charles Dambach Preserve. The Lake Kelso property had been previously owned by Eric and Florence Westgren, who had managed it during the 1950s as a private fishing club. The Charles Dambach Preserve, west of Old Rider Road, was purchased from The Nature Conservancy, and in 1985, the land was dedicated to Charles A. Dambach, a renowned Ohio conservationist and Burton resident during his youth. This pristine area was officially dedicated in 1999 as an Ohio State Nature Preserve in accordance with provisions of the Natural Areas Preservation Act of 1970.

A designated National Natural Landmark, Burton Wetlands, and the White Pine Bog system south of Pond Road, is widely considered to be the most ecologically significant area in Geauga County, and among the most significant in Ohio.

Natural Features

This 287-acre parcel is part of a larger 700-acre complex of kettle holes, lower slope seeps, and wet flats referred to by The Nature Conservancy as The Cuyahoga Wetlands. The habitat has remained relatively undisturbed since its formation when the glaciers melted 17,000 years ago.

Burton Wetlands Nature Preserve supports several rare and endangered plants, including the northern rein orchid, cranberry plants, and the carnivorous pitcher plant. Park visitors should be

wary of the lush growth of poison sumac along Lake Kelso.

Wildlife

Some of the rare animal species are the nesting brown creepers, northern waterthrush, veery, spotted turtles, and four-toed salamanders. Birdwatchers will not be disappointed, as bald eagles, osprey, tundra swans, common loons, merlins, and a wide variety of migrating waterfowl may be observed lounging or feeding on Lake Kelso.

Recreational Uses

The one-mile long Kettle Trail, on the western side of Old Rider Road, enables hikers and cross-country skiers to have a closer look at the rolling glacial topography of a large prairie/meadow and an oak, beech, maple forest. Visit an active beaver wetland, and observe tamarack, native white pines, highbush blueberries, and lush ferns on the eastern edge of the bog.

Hikers and birdwatchers will enjoy the short walk down the Glacier Trail that leads to Lake Kelso. This fully accessible trail follows a natural grade and provides a picturesque walk through a meadow. A floating dock system was installed for Park District canoes and programs only. Burton Wetlands is open to the public from 6:00 a.m. until 9:00 p.m. daily, however visitors must remain on trails or boardwalk at all times.

Reprinted from the Geauga Park District web site: www.geaugaparkdistrict.org



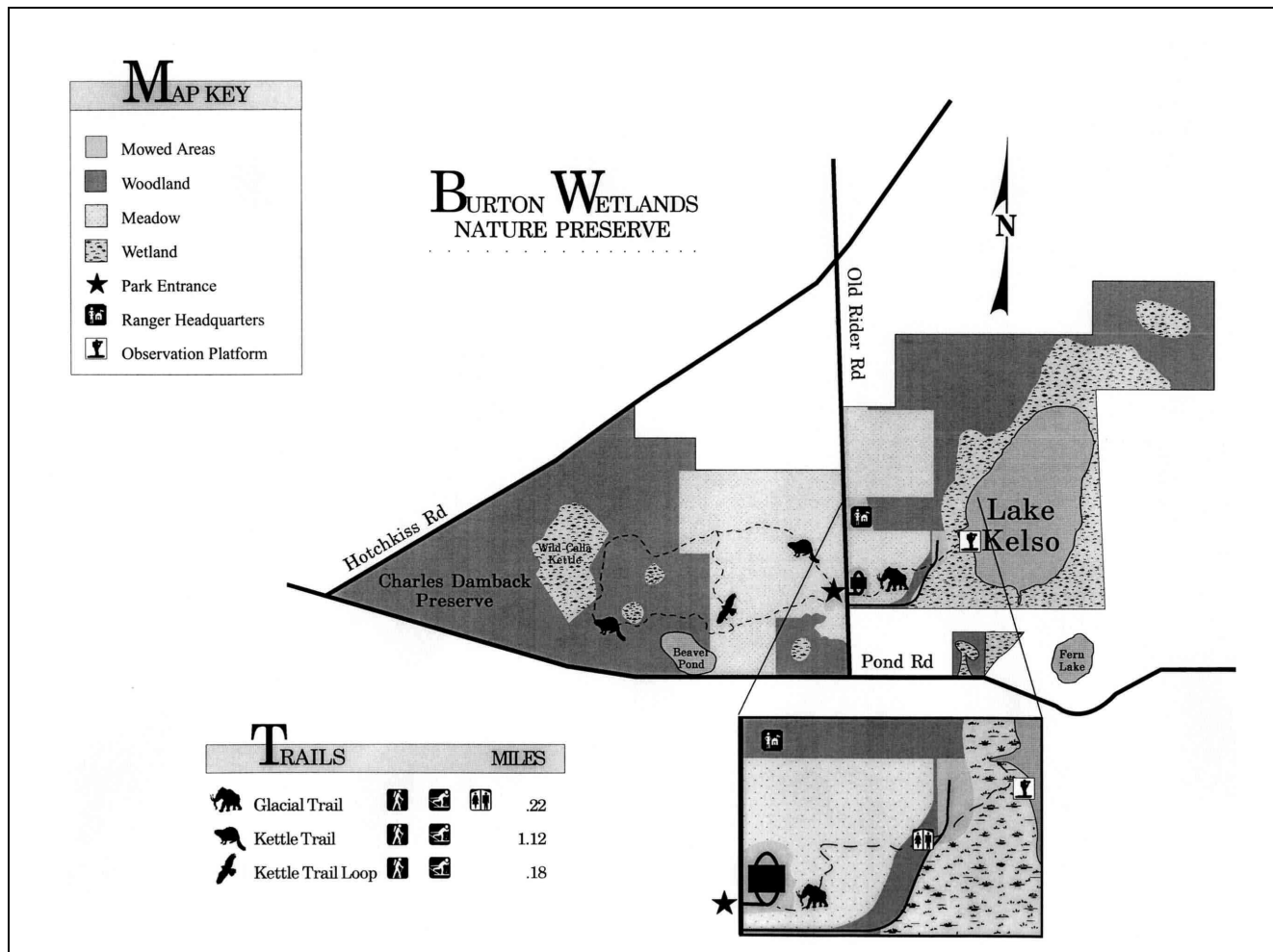
Highbush blueberry



Pitcher plant



Poison sumac



Drainage, Dirt, and DNA . . . My Love Affair With Native Plants

Nancy Hill

I'm a city mouse with country tastes. I love wildflowers and native plants, but I have an urban cottage garden. I enjoy my old-fashioned and decidedly domestic bleeding hearts next to the incredible blue of Virginia bluebells. And sensitive fern bends itself gracefully over many of my hostas. But it wasn't that long ago when I didn't know celandine from celery. My love affair with native forbs, ferns, grasses, trees, and shrubs came about because of drainage, dirt, and DNA.

Drainage was a factor because of our desire to dig a wildlife pond on a weekend getaway piece of land my husband and I had outside Cataract, Indiana. When the dozer man arrived, he tested the soil and declared it too sandy to hold water. Our dreams of watching deer sipping at sunset were over. But all was not lost. It was on this land that I first really noticed wildflowers. One August I was amazed to see two dozen swallowtail

butterflies on a clump of tall, mauve-purple, big-headed plants. Yep, Joe-Pye Weed. The next spring one of the hillsides turned white with Dutchman's breeches. I bought my first wildflower guide.

In the fall of 1992, we started looking for a piece of land with better pond-potential and stumbled across something richer than we had imagined. It was land in Owen County, by Patricksburg, with an established 4-acre pond. We were sold instantly. The property also had woods, a sandstone ravine (with bats!), a creek, and a wetland meadow. The realtor told us she had seen unusual wildflowers on the property. The names didn't mean anything to me, but my interest was definitely piqued.

During our first winter there we worked on the cabin. It had been a fishing and hunting outpost and was in sore need of rejuvenation. Come spring, my

field guides got a workout. I saw spring beauty, trout lily, rue anemone, and bloodroot. We came to know eastern phoebes, spring peepers, and our resident beaver. (There was a brief period of time when the beaver was cute. He had not yet taken down the serviceberries.) A couple weeks later I saw drifts of prairie trillium and Virginia bluebells and deeper in the woods was struck by a trail of golden-yellow flowers on plants with large round leaves. Marsh marigolds, I learned, growing contentedly in the runoff of a spring. Nearby was a deliciously scented mound of blue phlox.

Beginners like me are full of wonder and naiveté. In the front meadow I really liked the wash of white when the multiflora roses were in bloom. Like the beaver, they enjoyed a narrow window of admiration before they were banned from my garden.

I found smooth Solomon's seal, cut-leaved toothwort and celandine poppy on the side of the ravine. Nearby, I discovered a nodding trillium. We have white turtlehead in the meadow, bottle gentian, rose pink, butterfly weed, and swamp milkweed. We have purple fringeless orchid, sedges and arrowhead around the pond and fire pink in the woods. After eight years, I'm still seeing things I haven't seen before. I felt and still feel blessed by the abundance on this land.

During this time, dirt was working on me as well. In my 20's and 30's I gardened for the same reason someone paints her house: necessary maintenance. Tend the row of peonies, prune the yews, plant the bulbs. Thankfully, I managed to keep alive some hand-me-downs I now treasure – my Grandmother's pink phlox, her sweet-smelling hyperion daylilies and my mother's bearded iris. But I wasn't passionate about gardening.

Then slowly, the black, loamy soil around our 1906 house worked its magic. Everything I plopped in it thrived. I moved an ancient lilac and peonies to sunshine. I bought a few plants. My mother gave me several. You know how it goes. As I came to really feel like a gardener, my plants found fertile soil in me and wormed their way into my affections.

I confess I talk to plants. Both ones in my garden that I tend and natives at the cabin that I don't. It's not conscious or scripted. It's mostly a spontaneous "Well, look at you!" or "Aren't you just wonderful!" Gardening is like raising children. Our care and attention truly matter, but a big part of it is to sit back and enjoy what unfolds naturally.

During my growing love of gardening and wildflowers, the DNA factor kicked in. My mother is a gardener. Her plants glow in her attention and delight. But it goes back further – to her father, a man of many

interests, who passed to us the condition C.S.– Curiosity Syndrome. I can't walk through a nursery without buying a new plant. I can't see a flower or grass on our land without needing to know its name. On a recent visit to my uncle, he pointed out the old postage-stamp backyard of their childhood and said, "Would you believe my Dad planted 100 varieties of plants in here?" Yes, I would.

My grandpa was fishing and hunting well into his 80's. He died when he was 94. There was just too much going on to die any earlier.

When I come into the cabin after a walk, trying to remember and identify the several new plants I just saw, or when I spend an hour by the pond, watching the soft shell turtles nose to the surface, I feel Grandpa looking over my shoulder.

When I meet a new plant, I have fun learning a little of its past – its importance to pioneers and Native Americans and its colorful common names. Celandine or wood poppy had so many medicinal uses it is still found concentrated in areas where local healers and doctors lived years ago. Boneset leaves were tucked into splints in the hope that its perfoliate leaves would transfer their "growing together" power to a broken bone. Pussytoes really do feel like the soft-firm pads of a cat's paw on your cheek. How can you top names like hairy goldaster, fairy candles, turtlehead, doll's eyes, rattlesnake master, sneezeweed, and inside-out flower?

One summer our sixteen-year-old nieces from England lived with us. They loved being at the cabin, even though swimming with dragonflies, horseflies and water spiders was a new and testing experience. Even the "nice bugs," fireflies and butterflies, are rare to non-existent in urban Yorkshire. I can still see them standing in our front meadow circled by hundreds of tiger swallowtails floating between the buttonbush, milkweed and Joe Pye. We picked bouquets of blue vervain, jewelweed, monkey flower, boneset, sundrops and mountain mint. We watched the hummingbirds chatter at the feeders and a nest of baby phoebes on top of the front porch light. What a delight to see this world through young eyes.

Native plants have given me a connection to the world on both a small and large scale. My love of the flora in Indiana makes me keenly interested in wildflowers wherever I go. I buy field guides to a region's plants and seek out anyone who knows the flowers. I've gotten tremendous enjoyment in learning about seaside rosemary on gulf sand dunes, tillandsia and orchids in south Florida swamps, wild foxglove and red valerian on the coastal paths of southwest England and bluebells in the highlands of Scotland. I've

already purchased "Wildflowers of Southern Europe" by Davies and Gibbons, for this summer's trip to Italy.

Finally, I love wildflowers for their predictability and stability. They occupy and adorn their piece of earth year after year, bending (but rarely snapping) with adversity. They are the life force. Our front meadow is a fifteen-acre, low-lying patch that some would call a wetland. To me, it's a miracle of nature. When the snow melts and is closely followed by torrential spring rains, Fish Creek spills over its banks in the blink of an eye and the entire meadow becomes a rushing river. The brown stalks of last year's grasses and forbs are flattened, laid out west to east under the strong current.

After a week of this hydropower the meadow looks awful. It's a muddy, deeply furrowed wasteland. You can't believe anything could grow there again. But one March day you walk through and see one sprig of growth; in April it's a soft, low carpet of green; then by June you're waist-high in grasses, reeds and dozens of

wildflowers. The red-winged blackbirds and marsh wrens have settled in and summer is well in hand.

By late August the meadow is six feet tall, awash in purples, mauves and yellows, with sunflowers, evening primrose, blue vervain, wild bergamot, and Jerusalem artichoke. The Joe-Pye weed, ironweed, and bull thistle are nearly 8 feet tall. Every year I see it and every year I can't believe it.

In later fall, most of the forbs are spent and the meadow begins to pull on its drab winter coat. A few spots of color remain – the cobalt-blue bottle gentian peeks out from behind the brown grasses. There are nodding ladies' tresses, purple gerardia, great lobelia, asters, and goldenrod. I sit on the porch, listening to cicadas and smelling fall. A bit sad to say goodbye to green, but content to accept the cycle. Perhaps this is the greatest gift wildflowers give us – loyalty to a clock our hectic world can't change.

Reprinted from the *Indiana Native Plant and Wildflower Society News*, Summer 2001

American Ginseng & "Vulnerable" Plants in Pennsylvania

By Eric Burkhart

In the late 1980s, the Wild Resource Conservation Act directed Pennsylvania's Department of Environmental Resources (DER) — the predecessor of the current Department of Conservation and Natural Resources (DCNR) — to identify endangered, threatened, and vulnerable wild plant species and to issue regulations governing their taking, possession, transportation, exportation, processing, and sale.

The DER issued regulations in 1987 under "Conservation of Pennsylvania Native Wild Plants," which established a special status for wild plants recognized as *Pennsylvania Vulnerable* to include plant species "in danger of population decline within this Commonwealth because of their beauty, economic value, use as a cultivar or other factors that indicate that persons may seek to remove these species from their native habitats." Three species presently in this category are goldenseal (*Hydrastis canadensis*), yellow lady-slipper orchid (*Cypripedium calceolus*), and American ginseng (*Panax quinquefolius*). Many other plants could join this list.

Pennsylvania law prohibits buying, trading, or bartering *Pennsylvania Vulnerable* plants without a vulnerable plant license. This annual license is available to individuals willing to comply with record-



American Ginseng, *Panax quinquefolia*

keeping requirements. The DCNR oversees this program and uses information collected by licensed dealers to track the quantities of vulnerable plants commercially collected from Pennsylvania. It is important to recognize that these data do not in themselves indicate anything about the status of these species in the state, only that commerce is increasing, decreasing, or remaining the same.



Goldenseal, *Hydrastis canadensis*

Finding the "middle ground"

Pennsylvania Vulnerable connotes some underlying reason motivating people to remove these species from their habitats. In many cases, the motivation is personal consumption or for sale into a medicinal marketplace (e.g., American ginseng, goldenseal); in other cases, it is for horticultural purposes (e.g., lady-slipper orchid). Whatever the motivation, the encouragement of enterprises and industries based on sustainable and responsible exploitation of these species can be a mechanism for assisting in their conservation.

The process begins by recognizing that programs aimed at exploiting native biological heritages are not necessarily anti-conservation. Instead, such programs can play a positive role in species conservation by highlighting their plight and building public interest around being part of a solution. As Pennsylvania's most well-known vulnerable plant, American ginseng serves an example for which this approach is now being taken.

American ginseng: a future native plant industry?

American ginseng is a native forest plant that occurs throughout Pennsylvania. A modest plant, in terms of appearance, it is prized in the herbal trade for its root. Today, most commercially available American ginseng root is produced intensively in fields under wooden lath or nursery cloth shade. The bulk of this growing occurs in the upper Midwest (Wisconsin, Minnesota) and Canada. However, East Asian consumers, who import an estimated 90-95% of ginseng root from North America, prefer forest-grown ginseng. Though it is difficult for those unfamiliar with ginseng to appreciate, forest-cultured ginseng is quite different in appearance (and perhaps other qualities) from field-grown root. While ginseng is grown efficiently and successfully under field conditions, there is greater value and appreciation for ginseng root from forestlands. This difference in quality represents a

substantial pricing disparity in the wholesale marketplace with field-grown root fetching \$15-25 per pound and forest grown root garnering anywhere from \$100-450 per pound.

There is also a growing market for ginseng in the United States and other countries around the world. These traditional and expanding markets provide an opportunity for small-scale production of forest grown ginseng. The possibility of growing ginseng for pleasure or profit is open to anyone with access to suitable forestland in Pennsylvania. The market will continue to favor roots that have wild characteristics in terms of shape, size, color, and so on. Thus there are benefits to adopting less intense growing practices that do not use tillage, pesticides, or fertilizers. One type of forest production, referred to as *wild-simulated*, is an ideal method for growing high-quality product, with little forest disturbance. As the name implies, one simply tends (if plants are already present) or establishes (if none are present) plants in an appropriate forest setting to grow as "wild."

For Pennsylvanians, ginseng husbandry on forestlands represents an income-generating opportunity that takes advantage of the productivity and diversity of Pennsylvania's forested ecosystems. Ginseng is an excellent specialty forest "crop" for landowners interested in diversifying income by growing a native plant in native habitat.

Institutional support – the missing link

Native plant-based industries benefit and develop with institutional support such as research, outreach and appropriate policy. In the case of American ginseng, the Penn State School of Forest Resources and Pennsylvania DCNR initiated a ginseng research and education program in 2004. The program seeks to answer important questions about the status of this species within the state as well as develop relationships with the Pennsylvania public to help build and sustain responsible ginseng trade by encouraging stewardship.

Outreach is a central component in the Penn State-DCNR partnership and below are listed some of the available educational resources that have resulted from this collaborative effort.

Publications

Informational bulletins available from Penn State include:

- *Opportunities from Ginseng Husbandry in Pennsylvania*. 2004 (updated and expanded version available January 2007). Jacobson and Burkhart. Forest Finance Series #5. Discusses the different methods for

producing ginseng on Pennsylvania forestlands and provides economic considerations.

- *American ginseng*. Burkhart and Jacobson. 2004. Non-timber Forest Products from Pennsylvania #1. Reviews collection and stewardship considerations along with state and federal regulations governing collection and commerce.

- *Goldenseal*. Burkhart and Jacobson. 2006. Non-timber Forest Products from Pennsylvania #2. Reviews collection and stewardship considerations along with state and federal regulations governing collection and commerce. Also discusses different methods for producing goldenseal on forest lands.

Internet

Penn State has been working with PA DCNR to create a *Pennsylvania Vulnerable* website that contains information and pictures of vulnerable plants, as well as stewardship and commerce guidelines. The site is updated frequently and is available at: <http://www.dcnr.state.pa.us/forestry/wildplant/vulnerable.aspx>

Conclusion

In today's world, with increasing human populations, it is often accepted that plant conservation requires a "hands off" approach, backed up with regulations and enforcement. This approach to

conservation is indeed appropriate in many instances but it behooves us to consider other means to foster conservation — including programs that stimulate more, rather than less, human involvement with plants.

Pennsylvania's vulnerable plants represent an ideal set of candidate species with which to solicit greater public involvement and interest in native plant conservation. These are species generating great interest in newspapers and nurseries, and many can provide income through their management and stewardship. With public cooperation and adoption of stewardship practices such as forest cultivation, many of these plants might form the basis of future industries established on the sustainable ideal of native plants grown in native habitats.

About the author: Eric is an ethnobotanist, horticulturalist and agroforester. His interests and work center on people and plant relationships, including the utilization, cultural role(s), and husbandry of plants by people. Requests for the publications mentioned in this article (and any other communications) may be directed to Eric Burkhart via email at epb6@psu.edu, mail at 207 Forest Resources Building, University Park, PA 16802 or by phone through the Penn State Forest Resources Extension Office at 814-863-0401.

Reprinted from *Notes of the Pennsylvania Native Plant Society*, Jan-Mar 2007

Photos courtesy of Ami Horowitz

Ginseng Replaced PA Tea Industry in 1864

Harrisburg — Tues. March 24, 1953 [newspaper article, but the name of the newspaper not known]

Henry W. Shoemaker, PA State Folklorist, today said that gathering of ginseng replaced the tea industry in PA when Chinese imports returned to this country at the close of the Civil War.

When the tea gatherers and manufacturers realized that the American tea shortage was to be eliminated with the return of the Oriental products they began looking around for another plant of approximate value, Shoemaker said.

The PA tea industry chemist, Dr. Bonsai, told the tea industry leaders that "while tea may play out, you have an American ginseng plant as closely resembling the Oriental as does the PA tea.

The ginseng plant was badly needed in China as the native plant there was about depleted. The tea industry group decided that as tea went out, ginseng would come in as a replacement.

Dr. Bonsai was selected to direct the new industry and he agreed to pay three dollars a pound for ginseng

roots and more if the demand for ginseng should increase.

The tea workers, says Shoemaker, took the hint and went to work locating and gathering ginseng roots so that by December 1864 they had delivered over 600 pounds to Dr. Bonsai. From other states he received an additional supply of 400 pounds and then he set sail around Cape Horn for San Francisco. From that port he set sail for China in 1865.

In China he sold his cargo but not at the price he hoped for as Chinese clients were skeptical of the value of the American product. However the price was high enough to enable him to pay his expenses and before he left China he arranged for further shipments. In 1865 he sold a ton.

Ginseng of good quality generally occurs in hard, rather brittle, translucent pieces, about the size of the little finger and varying in length from 2 to 4 inches, Shoemaker said. The root is frequently forked making it resemble somewhat the form of the human body. It is probably due to this circumstance that the medicinal properties were attributed to ginseng. Today it ranges in

price in this country from \$6-12 an ounce with some pieces ranging as high as \$300-400 for perfect roots.

The demand for ginseng was so great that the quantity was rapidly depleted, resulting in efforts to cultivate the plant.

One of the principal growers of cultivated ginseng in PA was the late Henry K. Delsher, former custodian

of the State Museum. His best year was 1898 when he sold \$10,000 in ginseng to New York City dealers. Later his plants deteriorated and he did not have the time to hunt for new specimens to improve his crop.

Reprinted from *Notes of the Pennsylvania Native Plant Society*, Jan-Mar 2007

Book Review by Lisa Gilgenbach

Our First Family's Home: The Ohio Governor's Residence and Heritage Garden.

Edited by Mary Alice Mairose. photographs by Ian Adams; botanical art by Dianne McElwain. Athens, Ohio: Ohio University Press, 2008. 131 pp. \$35 (hardcover); \$20 (paperback).

With gas prices climbing ever higher Ohioans may be looking for places to visit closer to home. For those who have never visited the Ohio Governor's Residence and Heritage Garden, this book is a true inspiration to do so. Detailed and interesting essays about the design and history of the house are included in the opening chapters. Subsequent chapters focus on the Heritage Garden and the plants that make up these gardens. Beautiful photography by Ian Adams is found throughout the book.

The house, located in Bexley, has served as Ohio's executive residence since 1957 with nine governors and their families having lived there. Barbara Power's essay on the architecture of the residence not only highlights the design elements of the house, but also anchors the house in the historical period in which it was built. Mary Alice Mairose's narrative on the history of the residence is especially interesting as it documents the decorative styles and changes that each family who lived in the home has made.

The remainder of the book is centered on the plants and gardens of the Residence. An historical account of the gardens and how they have progressed to the present day Heritage Garden is included. The Heritage Garden was conceived by First Lady Hope Taft in 2001. The garden reflects the diverse landscape of Ohio with a focus on native Ohio plants and Ohio's horticultural industry. Readers unable to visit the garden can experience a tour of the garden via landscape architect Gary Meisner's description of each of the garden areas. Readers interested in creating their own distinct Ohio gardens in their own yards will find lots of ideas for plants to include in the chapter entitled,

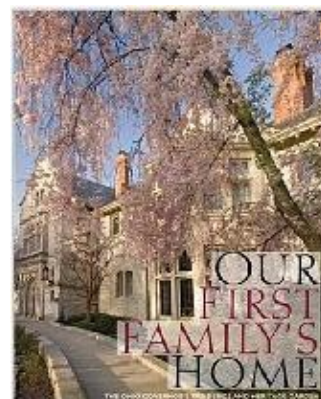
"A Tour of the Ohio Heritage Garden" by Dewey Hollister.

Educators interested in teaching their students about the unique physiographic regions of Ohio may want to use Guy Denny's appendix on Ohio's botanical heritage as an informal introduction to the subject.

One of the most beautiful aspects of this book is the chapter of botanical art drawn by award-winning botanical artist Dianne McElwain. Each of the paintings depicts native plants of Ohio that can be found in the Heritage Garden. Readers will also find a description of each of the plants depicted in the prints, including Latin names, in the appendix by Dewey Hollister entitled "Native Plants of Ohio."

This wonderful book of Ohio history, architecture, and horticulture ends with an inspiring afterword by Hope Taft. In the essay, she reflects on the importance of sustainability and how understanding the plants used in the Heritage Garden can help us to accomplish that goal. She also discusses some of the sustainable practices that have been incorporated into the Residence such as composting and the use of solar panels. She concludes, "[w]e invite you to join in our efforts to sustain a better future for all living things by using native plants in your landscape and maintaining an ecologically friendly home. Only by doing so will we be successful in our human struggle to endure."

Reprinted from NOBS Newsletter, a quarterly publication of the Northern Ohio Bibliophilic Society, Summer 2008.



Sources of Ohio Native Seeds and Plants

From the Ohio Governor's Residence and Heritage Garden

The following is a short list of nurseries offering native and nursery-propagated plants or seeds. Many nurseries offer plants that have been rescued with proper approval and this type of wild digging is ethical and is a good source of native plants. Supporting nurseries that propagate their own stock or sell properly rescued plants helps conservation efforts.

Nurseries that offer wild-collected plants should not be supported since this leads to habitat destruction. In addition, some nurseries use a loophole and "hold" plants for 3 months and then call them "nursery grown" even though they are actually wild-collected.

It is hard to verify the accuracy of this list, so inquire about the identity of the plant's origin.

Note: This listing below is not necessarily exhaustive; nor is it intended to constitute an endorsement of the businesses listed

Bluestone Perennials

7211 Middle Ridge Rd.
Madison, OH 44057-3096
800-852-5243
440-428-7198 (Fax)
Catalog free

Chadwick Arboretum

The Ohio State University
Plant sale first weekend in May just east of SR 315 on the OSU campus,
Lane Avenue & Fred Taylor Drive (north of Dakan Hall).
Phone: 614 688-3479

Companion Plants

7247 North Coolville Ridge Road
Athens, OH 45701
Phone: 740 592-4643
complants@frognet.net
Native plants, herbs, seeds, roots, and mushrooms.

Earthscapes, Inc.

10403 S State Route 48
Loveland, OH 45140-6625
Phone: 513 683-0144 ext. 107
Earthscapes has a comprehensive list of locally grown trees and shrubs. It grows containerized woody and herbaceous, indigenous native plants.
Contact: Peter J. White
Nursery outlet open 7 days a week, 9 am-6 pm.

Envirotech Consultants, Inc.

5380 TWP 143 NE
Somerset, OH 43783
Phone: 740 743-1669
Fax: 740 743-1644
E-mail: info@envirotechcon.com
Specializes in prairie plant propagation and design and creation of prairie habitats, wetland restoration, and wetland enhancement. All container and bare-root prairie and wetland plant species offered are native to Ohio and the Midwest.
Catalog of over 160 species of native prairie and wetland plants is on-line.

Five Springs Farm

Landscaping and Nursery
12691 Dutch Creek Road
Athens, OH 45701
Phone: 740 594-6030
Columbus phone: 614 299-8116
E-mail: fivesprgs@aol.com
Native trees, shrubs, wildflowers, and grasses

Holden Arboretum

9500 Sperry Road
Kirtland, OH 44094-5172
Phone: 440 946-4400
E-mail: holden@holdenarb.org
Holds a plant sale (featuring spring wildflowers) the first weekend in May.

JFNew

8080 Beckett Center Drive, Suite 226
West Chester, OH 45069
Phone: 513 942-3446
Fax: 513 942-3447
Contact: Dr. Craig A. Straub (cstraub@jfnew.com)
A native plant nursery located in the Cincinnati area.

Kitty Todd Nature Preserve

The Nature Conservancy
10420 Old State Line Road
Swanton, OH 43558
Phone: 419 867-1521
Oak Openings native plants are sold on the first weekend from May to October.

Land Reformers Nursery & Landscapes

35703 Loop Road
Rutland, OH 45775
Phone: 740 742-3478
Ohio native plants, herbs and seeds. Propagates native perennial wildflowers from seed, does not collect from the wild, and is certified organic. It focuses on prairie wildflowers but also sells native grasses and seed mixes.
Free catalog (phone and leave name and address).
Lucas soil and water conservation Lucas county
Specialties – oak openings

Marvin's Organic Gardens

2055 S US Route 42
Lebanon, OH 45036-8879
Phone: 513 932-3319

Mary's Plant Farm

2410 Lanes Mill Road
Hamilton, OH 45013
Phone: 513 894-0022
E-mail: sales@marysplantfarm.com
Native forbs, ferns, vines, shrubs, and trees that are grown from cuttings or seeds, not collected from the wild.

Naturally Native Nursery

13737 State Route 582
Bowling Green, OH 43402
Phone: 419 833-2020
E-mail: nnn@naturallynative.net
Contacts: Tom Webb and Jan Hunter
Over 130 species of Ohio forbs, grasses, shrubs and trees, including native plants of the Oak Openings region and Great Black Swamp. Nursery propagated plants and seeds. Wholesale and retail sales. Free weekend workshops on native gardening.
Hours: 10 am-4 pm, Wednesday-Friday; 10 am-6 pm, Saturday-Sunday.

Ohio Prairie Nursery Ltd.

PO Box 174
Hiram, OH 44234
Phone toll-free: 866 569-3380
Fax: 330 569-7090
Email: info@OhioPrairieNursery.Com
A native prairie seed nursery for the Ohio region. "We are an Ohio based company supporting native prairie and wetland plants. We can also provide some native shrubs and trees. We do consulting, site preparation and planting as well as seed and plug sales".

Ohio River Grass

Specializing in ornamental and native grasses
Cooper & Anne Burchenal
220 Wenner St.
Cincinnati, OH 45226
Phone: (513) 871-1158

Integration Acres

Chris Chmiel
160 Cherry Ridge Rd
Albany, OH 45710-9370
Phone: 740 698-2124
E-mail: pawpaw@frognet.net
Pawpaw trees and stratified seeds; tools, tours, teaching, and products.

Pipkin's

5035 Cooper Road
Cincinnati, OH 45242
Phone: 513 791-3175
Good selection of spring ephemerals.

The Propagation House

7111 Beechmont Avenue
Cincinnati, OH 45230
Phone: 513 231-5405 or 513 702-6526 (cell)
Contact: Neil Zureick, nursery, propagation, and tree specialist

Scioto Gardens

3351 SR 37 West
Delaware, OH 43015
Phone/fax: 740 363-8264
E-mail: sales@sciotogardens.com
Contacts: Michael and Linda Johnson Specializes in native plants and grows a wide selection of perennials and shrubs.

Seeds of the Tall Grass

1961 Buttermilk Hill
 Delaware, OH 43015
 Phone: 740 369-5625
 Contact: Robert Harter

Stucker Meadow

7851 TR 562
 Homesville, OH 44633
 Phone: 330 695-2123
 E-mail: beam.10@osu.edu
 Contact: Don Beam

Toledo Botanical Gardens

5403 Elmer Drive
 Toledo, OH 43615
 Phone: 419 936-2986
 Growers of Oak Openings natives. Spring and Fall
 plant sales, or by appointment

Wild Birds Unlimited

5400 Riverside Drive
 Columbus, OH 43220
 Phone: 614 766-2103
 E-mail: wbuwvohio@aol.com
 Ohio genotypes are available in May every year.

Klyn Nurseries, Inc

3322 South Ridge Road
 P.O. Box 343
 Perry, OH 44081
 Phone: 440-259-3811

Scarff's Nursery, Inc

411 North SR 235
 New Carlisle, OH 45344
 Phone: 937-845-3821

Herman Losely & Son, Inc.

3410 Shepard Road
 Perry, OH 44081
 Phone: 440-259-2725

Deeter Nurseries, Inc

8150 Hoke Road
 Clayton, OH 45315
 Phone: 937-836-5127
 Email: deeternurs@juno.com

Brotzman's Nursery, Inc

6899 Chapel Road
 Madison, Oh 44057
 Phone: 440-428-3361
 Email: brotzmnnrsy@ncweb.com

Sunleaf Nursery

P.O. Box 639
 Madison, OH 44057
 Phone: 440-428-4108

The Ohio Governor's Residence and Heritage Garden
 is located at 358 North Parkview Ave., Columbus, Ohio
 43209

Taken from the web site of the Ohio Governor's
 Residence and Heritage Garden:

<http://www.governorsresidence.ohio.gov/garden/nurseries.aspx>

Labrador Tea

Gordon Mitchell

During the American Revolution, England's Royal Navy imposed blockades at all of the American ports and attempted to halt foreign imports into America. One foreign import that many Americans enjoyed was tea from the East Indies. Because of this blockade, the Americans could not get their tea and had to rely on native plants as a substitute for their imported tea. One such substitute plant was the Labrador Tea (*Ledum groenlandicum* Oeder).

Labrador Tea is a member of the Heath Family (*Ericaceae*). The generic name, *Ledum*, is from the

Greek word, *ledon*, which was another name for one of their native plants, the Rockrose (*Cistus*). The specific epithet, *groenlandicum*, is Latin for Greenland, where the plant is also found. Previous scientific names for this plant have been *Ledum latifolium* Aiton (or Jacquin), *Ledum pacificum* Small, and *Rhododendron groenlandicum* (Oeder) Kron & Judd. Some other common names for this plant are Bog Labrador Tea, *Bois de savane*, Country Tea, Crystal Tea, Gowiddie, Greenland Tea, Hudson's Bay Tea, Indian Tea, James Tea, Muskeg Tea, Rusty Labrador Tea, St. James Tea,

Swamp Tea, *Thé du Groenland*, *Thé veloute*, and Wishakapucka Tea.

The Labrador Tea is a shade-intolerant plant. It can only be found in open or partially open areas.

This plant also contains a lot of tannin and other chemicals, such as arbutoside and ursolic acid. Because of those chemicals, this plant is resistant to many types of viruses and bacteria.

Uses of the Labrador Tea

Both the Native Americans and the early European settlers had numerous uses for the Labrador Tea. Various parts of this plant were used both internally and externally.

A tea was made from the dried leaves of this plant. These leaves are best picked when their underside color is rusty. They may be picked any time of the year, but spring is the best time to pick them and winter is the worst time to pick them. These leaves are then steeped for about 5-10 minutes.

This tea is used as a beverage or as a folk medicine. It is rich in vitamin C. It was used as an analgesic, a cathartic, a diaphoretic, a diuretic, an emetic, an expectorant, a febrifuge, a pectoral, and as a tonic. The tea was used for treating asthma, bronchitis, the common cold, congestion, coughs, dyspepsia, dysentery, headaches, indigestion, kidney ailments, rheumatism, scurvy, and tuberculosis. Even chewing upon the young leaves is used as a stimulant.

The Labrador Tea can also be used externally as a medicine. The tea may be used as a wash or the leaves and flower heads may be used as a poultice for treating burns, chafings, dandruff, insect bites and stings, leprosy, Poison Ivy rashes, and skin ulcers.

Although the Labrador Tea has its medical uses, it also has some medical risks. Excessive steeping may release the harmful alkaloid, andromedotoxin, which is a diterpene derivative, from the leaf. According to the *U.S. National Dispensatory* in 1916, excessive consumption of this tea may cause deliriums, drowsiness, headaches, intoxication, restlessness, and vertigo.

Some species of animals will eat the leaves and some will not. The White-tailed Deer (*Odocoileus*

virginianus [Boddaert]) may eat these leaves. However, these same leaves may be toxic to livestock.

Labrador Tea had other uses as well. It was used as a brown dye for wool and as an insect repellent. The leaves have also been used as a tobacco substitute.

Labrador Tea was mentioned in the works of some of America's most famous authors. It was listed in Constantine Samuel Rafinesque's 1828-1830 botanical works, *Medical Flora; or, Manual of the Medical Botany of the United States of North America*. In 1858, Henry David Thoreau wrote: *It has a rather agreeable fragrance, between turpentine and strawberries. It is rather strong and penetrating, and sometimes reminds me of the peculiar scent of a bee. The young leaves, bruised and touched to the nose, even makes it smart.*



Labrador Tea, *Ledum groenlandicum*

Description of the Labrador Tea

A low-lying perennial shrub.

Height: 1-5 feet.

Stems: Smooth or hairy. The young stems are hairy and orange-brown and the older stems are smooth and gray to purple to red-brown.

Twigs: Hairy.

Leaves: Evergreen. Simple. Alternate. The leaves are usually clustered near the top of the twig. Each leaf is stiff, thick, succulent, and leathery. It is about 1-3 inches long, about 1/4-1/2 inch wide, elliptical, linear, oblong, oval, and has rounded or tapered base and a blunted or rounded tip. Its midveins are sunken. The margins are entire and are rolled inward. The top of the leaf is smooth,

shiny, hairless, and dull dark green and its underside is hairy or wooly. On the young leaves, the hair is white, and on the older leaves, the hair is rusty brown. Its petiole is short. When crushed, these leaves emit a fragrant aroma.

Flowers: Creamy white. These flowers are arranged in densely rounded or umbelled clusters at the tips of the stems and the branches. Each flower is on a long, slender, and finely hairy stalk. Each flower is also radially symmetrical, about ½ inch wide, and has a corolla of 5 rounded and spreading petals, a 5-lobed calyx, 10 slender and upright stamens, and a finely hairy pistil with a thin and upright style. These flowers are insect-pollinated. Flowering season is usually May to July.

Fruit: Dry capsule. Each capsule is about 1/5 inch long, slender, elliptical, lanceolate, oblong, or oval,

has a long slender stalk, and has a persistent slender style at its tip. When the capsule opens, it splits upwards from the base and splits into 5 chambers. Each chamber has many seeds. The empty capsule may remain upon the twig for many years.

Roots: These roots are only found in the organic layers. Their rhizomes may reach a depth of 6-20 inches. These roots also have a symbiotic relationship with mycorrhizal fungi.

Habitat: Bogs, acidic sphagnum peat soils, wet forests. Usually found along the dry edges or in the high hummocks of the bogs.

Gordon Mitchell works for the Columbus, Ohio, Metroparks and is a member of the Columbus Native Plant Society.

No Mow If You Want To Have Any Mo

By Tom Sampliner

It sure seemed reasonable at the time. After all, I had just walked that trail last week. What could happen to them within a week? It sure had been a good bloom year for them. What I am talking about is one of the lady's tress orchid species. The species is the oval, (*Spiranthes ovalis*). This far north it would be variety *erostellata*. The month I am referring to is September [the year is 2005].

For those of you not quite familiar with this species, here are a few lay-friendly traits to help sort things out. The species is primarily a woodland grower, especially in light woods and adjacent areas. It can also wander out along the berms of trails in lightly covered land. Flowers are bright hot white on all six perianth parts. The lip comes to a triangular point with ruffled margin. Stem leaves exist and are fully expanded rather than being mere bracts as one expects from a spiranthes.

This had been an unusually prolific year for a number of the lady's tress orchids. Among the happy campers was this species. I was finding them places where they had not ventured before, including the sparsely vegetated berms along an

all purpose trail running in the Cuyahoga Valley National Park located between Akron and Cleveland. After seeing how prolific the species was this year I renewed my long outstanding offer to various park officials to communicate the whereabouts of various species, especially those listed as rare in our state. The oval tress is one such species since it carries a "P" which stands for potentially threatened.

Today I had an appointment to rendezvous with a Summit County botanist who had the job of tracking listed species as well as trying to protect them and coordinate such efforts with various maintenance workers at both the county and federal levels. Rob and I met and began to walk. We couldn't believe our eyes. Fresh mowing had clearly taken place. I had presumed that based upon our phone conversations of where we would go, what we would see, and other logistics, Rob would immediately put a hold on any mowing. After all, it was the previous month when I stopped one of his county mowing employees in the same area from cutting another orchid species within the same genus. The young man was very receptive and interested in what I had to say about

the slender lady's tress, (*Spiranthes lacera* var. *gracilis*) The bright green spot upon the resupinate lip really grabbed his attention, just as it did mine years ago upon seeing my first. He was so concerned he took it upon himself to lift the blade and pass over the blooming scapes wherever he encountered one. He further put me in touch with the proper office which led to my meeting with Rob.

Rob and I did see some of the other species that bloom in the same area. There was lots of the Great Plains Lady's Tress, (*Spiranthes magnicamporum*); this also carries a state listing of "P". There were the common nodding lady's tress orchids, (*Spiranthes cernua*), but this year none of the little, (*S. tuberosa*) nor yellow (*S. ochroleuca*).

The unfortunate part about the recent mowing, was not the depletion of those few specimens that had ventured too close to the pathway berm, but that there had been one unusual configuration that apparently no one else can tell me they have seen before. This unique specimen started innocently enough with a robust stalk with leaves toward the base. However, it split or bifurcated by turning in opposite directions horizontally to the ground only to resume vertical growth with equal blooming scapes giving a natural replication of a

football goalpost. Never had I seen such a configuration in any other orchid. Of those who responded to my note on our website message board, no one else has either. Had I suspected overlapping jurisdiction for maintenance was going to be an issue I would have made more contacts and calls. At least I would have persevered until I could document the phenomenon with a picture or two.

Rob then explained to me that the public will complain about the appearance of the vegetation alongside trails. Certain folks think a trail should look groomed. Others resent plants touching them as they walk or bicycle or rollerblade. If enough people complain, or if the park staff is of a certain mindset or has nothing else to do, mowing will occur. It was suggested that those of us who find rare things next to trails should call, write, etc. and make our voices heard so that at least during critical times for the plant, a no mow policy will be followed. No mow if you want to see any mo. Certainly, I want to see more orchids. I want to come back find the goalpost specimen in bloom and take lots of pictures. Furthermore, I need to come back out of curiosity. I have got to know if those orchids kick field goals.

Tom Sampliner is a past president of NEONPS and currently a board member, photographer, and tour guide

Arthur Herrick – a footnote

"My most conspicuous claim to fame," [Arthur Herrick] modestly admits, "is that one of my pictures of a strawberry leaf was sent into outer space on NASA's Voyager space expedition in 1977."

That same photo ran in one of *Life Magazine's* publications and, to this day, Herrick still receives royalty checks from all over the world for that particular photo.

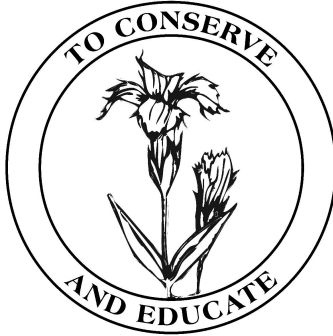
"Over the winter, I was paid 100 Euros from a television company in the Netherlands for use of the strawberry leaf photo," says Herrick.

Years ago, he donated his camera equipment and slides, along with other memorabilia, to the Cleveland Museum of Natural History. A museum curator said the slides are still used today by museum curators and instructors.

From the *Hudson Monthly*, August 2005

Thanks to Tom Cooperrider for sharing this with us.





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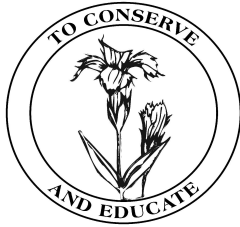
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- Promote conservation of all native plants and natural plant communities through habitat protection and other means
- Encourage public education and appreciation of native plants
- Support proper ethics and methods of natural landscaping
- Encourage surveys and research on natural plants and publication of the information
- Promote cooperation with other programs and organizations concerned with the conservation of natural resources

On The Fringe

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