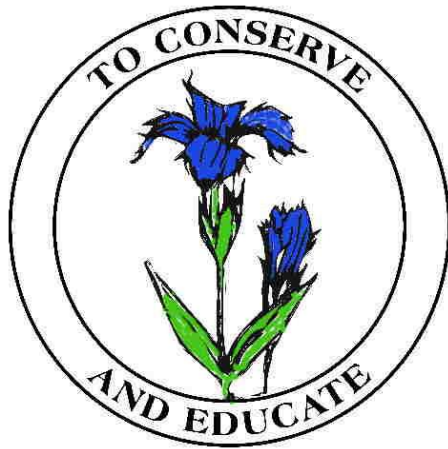


On The Fringe

NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO



Founding Chapter of
**THE OHIO NATIVE
PLANT SOCIETY**

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A MESSAGE FROM THE PRESIDENT

by Tom Sampliner

Just a reminder that dues are due; and coining in slow as usual. Help control expenses and prevent our frustration, renew now.

Your board is pleased to announce that Dr. Jane Forsyth has accepted the speaker's role at this fall's annual banquet; details later.

Please remember to phone field trip leaders BEFORE the * rip to enable both head count and a window of arrival time.

The North American Native Orchid Alliance holds its first annual conference. Dr. Carlyle Leur will attend and speak. See the article on Native Plant Education for details.

Environmentally concerned members should be aware of the efforts of "Friend of Wetlands", a non-profit group, who issue a monthly newsletter on all issues effecting wetlands. Subscriptions start at \$5.00 per year through their editor John Katko, P.O. Box 2016, Elyria, Ohio, 44036. Each issue usually includes preprinted post card messages to legislators in your jurisdiction so all you need do is sign and mail - a great idea and convenience. This February, for example, they wrote regarding threats to Myersville Fen.

If you learn of any activity or group relating to native plants, why not pass it along.

1996 PROGRAM SCHEDULE

by Dr. George J. Wilder

Program Committee Chairman

It is advised that all participants bring a brown-bag lunch on all field trips and to all workshops. Also please call the trip leader to let him know you will be coming. This is very important in case of any last minute changes which participants may need to know about. A trip leader and his phone number will be listed for each event. Please feel free to invite guests.

SATURDAY, APRIL 27 f 10:00 AM - about lunch time. A VIRGIN FOREST OF NORTHEASTERN OHIO: A. B. WILLIAMS WOODS AT NORTH CHAGRIN RESERVATION. Nate Finck will lead this trip. A great variety of wildflower should be visible, e.g., diverse species of violets (*Viola*), trilliums (*Trillium*), and toothworts

(*Dentaria*), as well as old trees of beech, oak, hemlock, magnolia, and hickory. Meet Nate at the parking lot of the Forest Lane Picnic Area of North Chagrin Reservation (located south of the Sanctuary Marsh Nature Center. Please telephone Nate before the trip to notify him that you will attend. His number is (216) 247-6949.

SATURDAY, MAY 25. 9:30 AM - to about lunch time, SPRING WILDFLOWERS OF THE CUYAHOGA VALLEY. Tom Sampliner will lead this trip. Possible highlights of the trip will include Yellow Lady's-slipper (*Cypripedium parviflorum* var. *parviflorum*), Buffalo-berry (*Shepherdia canadensis*), as well as various violets, trilliums and, hopefully, Indian Paint Brush (*Castilleja coccinea*). Meet at the Hike and Bike Trail parking lot at Boston Mills Road. To get there take 1-271 to Route 8 south. Take Route 8 south for several miles to Boston Mills Road. Turn right (west) onto Boston Mills Road. The parking lot is a few miles further down Boston Mills Road on the right side (just beyond the intersection of Boston Mills Road and Akron Peninsula Road). Please telephone Tom before the trip to notify him that you will attend. His number is (216) 371-4454.

SUNDAY, JUNE 9. 9:30 AM - BOG WALK AT TRIANGLE LAKE BOG STATE NATURE PRESERVE PROBABLY FOLLOWED BY KENT BOG. Tom Sampliner will lead this trip. Highlights of this trip will include Pitcher Plant (*Sarracenia purpurea*), Three-way Sedge (*Dulichium arundinaceum*), Large Cranberry (*Vaccinium macrocarpon*), Buttonbush (*Cephalanthus occidentalis*), and Larch (*Larix laricina*). To get to Triangle Lake Bog, take 1-480 east to Route 14 in Portage County. Take Route 14 east to Lake Rockwell Road where you turn left. At Redbrush Road turn left and follow Redbrush to Route 59 where you turn right. Turn left onto Lakewood. Turn left onto Shady Lake Road. Now look for the unmarked and unnamed dirt road on your right shortly after crossing a creek. Turn onto this road and park at the entrance sign to the preserve. Please telephone Tom at 371-4454 before the trip to notify him that you will attend.

SUNDAY, JULY 28. 2:00 PM - THE FLORA OF INDIAN POINT (LAKE COUNTY). Tom Sampliner will lead this trip. Some of the plants featured on the trip may include big false hellebore (*Veratrum viride*), Canada lilies (*Lilium canadense*), hollow Joe-Pye-weed (*Eupatorium fistulosum*) and one of the finest stands of wild sarsaparilla (*Aralia nudicaulis*). To get to Indian Point, proceed east on 1-90 and exit at Vrooman Road. Turn north on Vrooman for about 1.5 to 2 miles. Indian Point is on the right hand side of the road. Please telephone Tom at 371-4454 before the trip to let him know you will attend.

SATURDAY, AUGUST 17. 9:00 AM - LATE SUMMER IN THE HOLDEN ARBORETUM. Tom Yates, supervisor of Lantern Court at the Holden Arboretum, will lead this trip. A taxonomically broad sample of available species will be observed, e.g., species of trees, herbaceous flowering plants and ferns. Take 1-90 east from Cleveland. Get off at Rt. 306 (Exit 193) and proceed south on Rt. 306 between 1 and 2 miles to the bottom of a long hill. Turn left onto Kirtland-Chardon Road; cross Booth Road and continue, approximately, 1 mile further on Kirtland-Chardon Road; turn left (north) into the driveway of Lantern Court, 9203 Kirtland-Chardon Road, Kirtland, Lake County,

Ohio. Park to the left of the mansion at the end of the driveway. Please telephone Tom at (216) 256-3463 before the workshop, to tell him you will be coming.

SATURDAY, OCTOBER 5, 9:00 AM - THE OAKS AND HICKORIES OF CUYAHOGA COUNTY. George Wilder, Professor of Biology at Cleveland State University (CSU), will lead the day's activities. There will first be a demonstration of herbarium specimens of native oaks and hickories, in the CSU botany teaching laboratory. Participants will then travel by automobile to various locations to observe up to ten species of oaks (plus one hybrid) and five species of hickories. Activities may continue until late afternoon. Participants should meet in Room 226 of the Science Building (at the northeast corner of East 24th Street and Euclid Avenue) of CSU. Please call George Wilder at 687-2395 (days) or 932-3351 (evenings), to tell him you will be coming.

SATURDAY, NOVEMBER 2 r 9:30 AM - LAST-FLING WILDFLOWER WALK. George Wilder will lead this trip in, or near downtown Cleveland. Encountered will be species of Compositae (Sunflower Family), Gramineae (Grass Family), Chenopodiaceae (Goosefoot Family), and of numerous other families. Participants should meet in Room 226 of the Science Building (situated at the northeast corner of Euclid Avenue and East 24th Street) of CSU. Please telephone George Wilder at 687-2395 (days) or 932-3351 (evenings) before this trip to let him know you will be coming.

HEIDI ELIZABETH HANSEN
January 11, 1971 - January 25, 1996
by Dr. George J. Wilder

I am very saddened to announce the death of Heidi Hansen, a member of our Society. I came to know Heidi last year when she took both of my Local Flora courses (and earned "A" grades in each of them) . At the time of her death Heidi was enrolled in, and doing extremely well in my Introductory Botany course. Heidi was a special person: a deeply principled individual with a magnetic and beautiful personality and profound intelligence. She loved organismal botany and believed strongly in conservation. Over time she made it her goal to undertake graduate work in botany and to ultimately become a botany professor. I believe that she would have realized these goals, because of her pronounced ability, strength of character, and evident aptitude for teaching. Her family, friends, classmates and I will miss her greatly.

**NATIVE PLANT EDUCATION:
Workshops, Classes and Conferences
by Brian D. Gilbert**

I. GRASS CLASS

Dr. **George Wilder**, Professor of Biology at Cleveland State University, is considering teaching a two-credit-hour, 500 level course this Fall, on the identification of grasses. He asks that anyone desiring to take the course contact him within the next month or so.

The class will meet on five successive Saturdays, for four (or maybe more) hours per Saturday. There will be lecture, laboratory exercises, and field work. Greatest emphasis will be placed on teaching students how to key out, and recognize common species, general and tribes of grasses of our area. Importance will also be attached to understanding basic aspects of grass morphology and the relevance of grasses to humanity. In addition, each student will be asked to independently collect, identify, and prepare herbarium specimens of fifteen species of locally occurring grasses.

You may reach Dr. Wilder by telephone at his office (216) 687-2395 from about 7:45 AM to 5:45 PM Monday through Friday or at his home (216) 932-3351 from about 7:30 PM to 10:00 PM.

II. NATIVE PLANTS LANDSCAPE CONFERENCE

We have received notice of a conference devoted to the use of native plants in the landscape. This "Native Plants in the Landscape Conference" has been scheduled for June 13-15, 1996, at Millersville University, Millersville, PA. This will be the sixth annual native plant conference held at Millersville University which is near Lancaster, PA. The conference cost including registration, room and board is \$150.00 (single occupancy). Over a dozen native plant groups are affiliated with this conference including the Virginia and New England native plant organizations.

The conference is aimed at amateur gardeners, professional designers, growers, educators and other landscape management professionals to encourage the expanded use of native plants. This years keynote speakers include **Rich Darke**, Curator of Plants for Longwood Gardens, who will speak on and direct a learning tour of his latest project - the restoration of Pierce's Woods, a section of Longwood Gardens; **Richard Lightly**, Director of the Mt. Cuba Center for the Study of Piedmont Flora; **Darrel Morrison**, with the School of Environmental Design at the University of Georgia, will speak on "Plant Communities: In Nature and by Design"; **Ann Rhodes**, of the Morris Arboretum; and noted author **Sara Stein** who will present her latest work *Planting Noah's Garden*. In addition, 19 other speakers are scheduled.

For more information you can contact Tom Sampliner, (216) 371-4454 or Guy Steucek, Conference Director (717) 872-3789.

III. NATIVE PLANT CERTIFICATE PROGRAM

The Holden Arboretum will be offering a course which provides credit toward its Native Plant Certificate Program. The course, Native Herbaceous Perennial I (NPC103), will be taught by **Brian Parsons**, Natural Areas Coordinator for Holden. It is the first of three plant identification courses and will focus on the native herbaceous perennial of our

area. It will include classroom and field sessions. Its focus will be to acquaint the student with the scientific classification of plants through the understanding of taxonomic terms and the use of keys. The recommended text for the course (and subsequent courses) is "Vascular Plants of Ohio" by Clara Weishaupt. This class will meet Tuesday, April 11th: 7:30PM - 9:00PM and Saturday, April 13th, May 4th and May 18th; 9:00 AM - Noon. The fee for the class is \$45.00 for Arboretum members and \$55.00 for non-members. Call Holden Arboretum at (216) 946-4400 to make reservations.

IV. ORCHID CONFERENCE

The First Annual North American Native Orchid Conference has been scheduled for July 19th - 21st, 1996, at the Carnegie Museum of Natural History in Pittsburgh, Pennsylvania.

The Conference is sponsored by the North American Native Orchid Alliance and is limited to 75 registrants. The registration fee is only \$35.00. A full list of speakers, workshops, and field trips will be sent upon registration. To register send a check made out to the Native Orchid Alliance to Philip Keenan, 31 Hillcrest Drive, Dover, NH 03820.

A TALE OR TWO ABOUT *TIPULARIA* AND A FAVORITE SITE by Tom Sampliner

As I gaze out of my window here in late December as another year closes along this the south shore of Lake Erie, two feet of snow still lingers and glistens brightly in the warm tones of late afternoon sun. The pleasant scene takes on an ethereal, perhaps even narcotic role. I begin to think of wonderful things. Surely native orchids will be among my thoughts.

This was a good bloom year for a patch of cranefly orchid (*Tipularia discolor*) that I know of. If snow cover was not so deep, even now in the dead of winter I could go out and find those tell-tale single ovate leaves that formed in fall marking the spot of orchid tubers. As the forest canopy gave way to the vigorous winds in late autumn, sun penetrated to the forest floor causing the leaves to arise. Topside, the ovate basal solitary leaves are gray-green often blotched with purple. The latter is the only color underside, often taking on a satin-like finish according to some observers. As late spring arrives, the leaves frequently take on a reddish color before completely withering away and disappearing until another season after flowering. The tubers are of spongy consistency oval shaped and often in a series or row.

My day dream has taken me to a site about one hour drive to the east. It is a natural area owned by the Cleveland Museum of Natural History, called the Grand River Terraces adjacent to the river of that name. There I know I can depend upon a modest population of this fascinating terrestrial orchid. Perhaps the charm of the orchid site is the mini-habitat where the orchid seems to most enjoy. It grows in and all around a stunning patch of shining club moss (*Lycopodium lucidulum*) . The combination of the two is an

impressive sight. The only distracting feature is the nine or ten foot high wire deer enclosure fence nearby. Can you believe the orchids still thrive outside such protection?

Now the pastels of a setting sun work their magic on me and transport me to the site at a different time of the year. I can already feel the oppressive 90 plus degree heat along with similar percentile humidity, which seems to be the norm for our area this time of the summer. Late July and throughout August it often feels like it should rain any minute but for some reason can not. Here I am at the Terraces putting on my full length black backpack and picking up my huge Bogan tripod for the trek from parked car to the orchids. I think I need a porter. The weight of the equipment in such heat and humidity takes a rapid toll. Just when I feel as if I can not manage another step, I can see the earth tone spires identifying the flowering racemes of crane-fly orchid (*Tipularia discolor*). Some arise to 60 or 70 cm. Only a few of the orchids flower in any season.

Carlyle A. Leur describes the inflorescence in his 1975 epic, *The Native Orchids of the U.S. & Canada*. He writes of a slender, loose-flowered raceme of 20 to 40 florets featuring sepals and petals in various pale shades of green, tinged or mottled in purples and gray. Florets are arranged asymmetrically with one petal always overlapping the dorsal sepal. The lip is three lobed. The two laterals are rounded and very small while the middle lobe is long, narrow and larger than the two lateral lobes.

Leur has an excellent overall depiction of the inflorescence which he describes as a flimsy little lopsided stalk of flowers that hang loosely out from a slender stem, giving an overall impression of a parade of crippled crane-flies.

Even in the oppressive heat, I can appreciate the insect mimicry manifest by each floret. After photography is finished, I take the time to sit back and just wait and observe the insect visitors. It is fascinating to watch the insect movements in exploring a floret.

Every so often, a shaft of light penetrates the heavy forest canopy to bathe the inflorescence in light. Sometimes, the light merely backlights the subject. Other times it selectively shines on one or more florets. To photographers, botanists, or those simply aesthetically astute, the scene is memorable.

In the canopied summer forest, the dappled light can easily obscure these delicate flowering spires. In fact, it is interesting to watch the racemes as you either approach or retreat to see how they come in or out of view depending upon the light. It's as if they are creatures electing to either appear or hide; as curious about us as we are of them. With this in mind, it is appropriate to consider R. E. Whiting & P. M. Catling's treatment of crane-fly orchid (*Tipularia discolor*) in their *Orchids of Ontario* in 1986 which lists the species among those "possible future additions to our flora". They acknowledge findings from New York, Ohio and southwest Michigan near 42 degrees N. Latitude which is on line with Point Pelee, Ontario. They advise looking in rich deciduous woods; this certainly portrays my site.

Frederick W. Case, Jr. in his "Orchids of the Western Great Lakes Region", 1987 has some interesting comments to contribute. First he states that the orchid genus is named for "Tipula" which is the genus for the crane fly pollinators of *Tipularia*. He also informs us that of the three worldwide species, eastern North America has one while Asia has the other two. He continues, the species is widely distributed in the U.S. but barely enters our western Great Lakes area. To those of us who know Cincinnati's Dr. Victor Soukup, it was pleasant to see an acknowledgment of his simultaneous discovery of the species in Michigan with another botanist.

This site is impressive throughout the spring. Though my intent in this article is to share the experience of *Tipularia*, you may want to keep in mind that spring along the Grand River at this location offers a solid mat of pastel wildflowers. Early, you can enjoy hepatica, blue cohosh, trilliums white and red, violets yellow and white, and then dwarf ginseng, marsh marigold, Solomon's plume and seal, Jacob's ladder and much more.

If you expect to be in the area, call the Botany Department at the Cleveland Museum of Natural History for permission to enjoy a refreshing experience at Grand River Terraces.

A REVIEW

A Guide to Wildflowers in Winter

by Carol Levine, illustrations by Dick Rauk,

Yale University Press, 1995

by Tom Sampliner

Having chosen a difficult task, it is pleasing to report Ms. Levine has done well with a book intended to represent a selective but representative coverage of herbaceous plants most common to northeastern U. S. and adjacent Canada. She covers west to Illinois, Wisconsin and Tennessee; Virginia and Kentucky are south and Quebec on the north.

Each plant is described as to what she calls "key impressions", the fruit, leaves, stem, life cycle (annual, biennial or perennial), habit and range. It was great to see a botanical glossary at the end as nothing is so frustrating to lay folks as to be confronted with description beyond your repertoire.

The line drawings are excellent, both large enough and detailed enough to help a lay person. The occasional photographs, part due to being black and white as to contrast and composition are much less helpful.

The categories used for keys is well planned considering the limits to coverage. To exemplify what Levine has done I'll review her first two categories.

First comes plants of salt marshes and beaches subheading (marine edge habitat). Under this heading are some botanical names with page references to other text divisions. This heading lists 39 species with her descriptive categories. Some species variations are noted. Three species appear on a page opposite of which is a full page of line drawings depicting overall winter appearance, leaf remnant depictions and details of the fruit and remnant flower parts for each species. The line drawings are the real value in this work. Picking one of the nine in category #1 (*Artemisia stelleriana* Besser), commonly called Dusty Miller or beach-wormwood, is briefly described for each trait. However, as with any other category and plant species, the plant could just as easily fit into other categories demonstrating the weakness in this kind of identification by habitat or important keys.

The difficulties with imposed groupings is immediately apparent in the very next category. Plants of fresh water wet or damp areas, freshwater marshes, swamps and bogs is both overly broad and useless including common arrowhead (*Sagittaria latifolia*), northern pitcher plant (*Sarracena purpurea*), skunk cabbage (*Symplocarpus foetidus*),

and sundew (*Drosera*) as a genus. Considerable confusion can occur in trying to initially categorize your winter specimens into those provided.

However, on the whole, an interesting and for the lay person, probably very useful enough winter guide.

BOTTLE GENTIANS by Dr. James Pringle Part I of II

"I must come over here again and see them when they are open," said Thornton Burgess's Peter Rabbit upon encountering *Gentiana andrewsii* in September. "They are lovely just as they are, but they must be lovelier still, when they are open." "You'll wait a long time if you wait for these flowers to open, Peter Rabbit," was the response of Lady Bumblebee. "I mean," she explained, "that they will never open. They are in full bloom now." This passage was brought to mind recently by a similar conversation between two of the students in one of my university classes, when I introduced them to this species by the shore of Ontario's Lake Opinicon. The corollas of *Gentiana andrewsii* will remain as tightly closed as they are shown in Fig. 1. For this reason, *G. andrewsii* is called the closed gentian or bottle gentian.

One might suspect that these permanently closed flowers were self-pollinating, as some nineteenth-century botanists alleged that they were, but pollination actually depends on bumblebees. Experiments in which bottle gentian flowers were enclosed in bags have shown that pollination does not occur if bees are prevented from entering.

Bumblebees push open the top of the corolla and collect pollen from the anthers and nectar produced by a ring of glands at the base of the pistil. Lady Bumblebee, who must have represented one of the larger-bodied species in her genus, did not go completely inside the corolla; her hind legs and the tip of her body remained outside. Mr. Burgess thought that if she had gone completely inside, the corolla would have closed over her and imprisoned her, but that would not have happened. Smaller bumblebees, and even some relatively large ones, do go completely inside the corolla, disappearing from view, but, although the corolla closes over them, they're not trapped inside. After gathering the nectar, the bee turns around inside the corolla and again pushes it open, to emerge head first. Large bumblebees that do not go completely inside the corolla simply back out. These flowers produce pollen and nectar in abundance, but collecting these floral products requires a considerable effort on the part of a bumblebee,

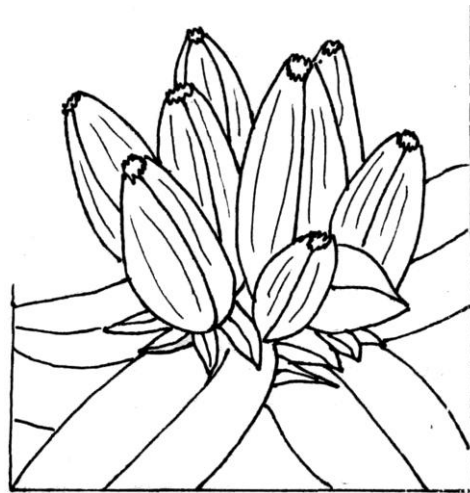


Fig. 1

Illustration by Brian D. Gilbert from photo by James Pringle

and may be too much for the smallest bumblebees, or an unattractive prospect if other flowers are available. At the site where I took the photograph, a few large bumblebees visited the gentians, while their smaller relatives passed over the gentians and concentrated on the water-horehound and wild mint that surrounded them.

The stamens of the bottle gentian have separate filaments, but the anthers are united in a ring around the short style of the pistil. The pollen sacs split lengthwise, exposing the pollen, before the lobes of the stigma have expanded and become receptive. Thus, although the flowers are bisexual, they are at first functionally staminate or male only. This sequential development increases the likelihood of cross-pollination, but only to a limited extent, because flowers at different stages of development are likely to be present on the same plant. Experimental pollination has shown that, although bottle gentians are not self-pollinating, they are self-compatible.

The ovary, instead of being at the base of the pistil, is elevated on a short stalk that bears the nectar glands. As the seeds ripen, this stalk elongates, elevating at least the upper part of the ovary — which has by that time become a capsule or seedpot, splitting open toward the summit — above the persistent remains of the corolla. Thus, rather than being wrapped in the corolla, the capsule is-exposed to passing breezes that shake out the seeds. Before becoming mature seeds, however, the ovules may fall prey to small moth larvae (genus *Endothenia*), which sometimes live inside the tubular corollas and bore into the young fruits. These moths over-winter as larvae rather than as pupae, the persistent remains of the gentian corollas providing a cocoon-like shelter during the cold weather. After maturity, whole clusters of fruits may be taken by browsing mammals. The fruits that escape predation produce as many as several hundred seeds per capsule. The seeds are small and light, with the seed coat forming a wing around the body, adapting them to dispersal by wind.

Part II will appear in the next issue.