ON THE FRINGE

NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO

Founding Chapter of
THE OHIO NATIVE PLANT SOCIETY

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1995 PROGRAM SCHEDULE
by Dr. George Wilder, Program Committee Chairman

To help insure event success we strongly urge you to call at least the day before an event to let the leader know you are coming, how many you plan to bring, and also to learn of any last minute changes or other requirements. By calling ahead you also gain for yourself a window of waiting time in the event you are late. Help our trip leaders help you! A phone number of each trip leader is listed for each event. Invite guests. It is further advised that participants bring a brown-bag lunch on all field trips and to all workshops.

SATURDAY, JUNE 3. 9:30AAM TO 12:00PM PLANT/NAURE PHOTOGRAPHY WORKSHOP (SHAKER LAKES, COVENTRY ROAD, CLEVELAND HEIGHTS, OHIO) Tom Sampliner will lead this trip. The locality is, approximately, a 15-minute drive from Cleveland. Bring your camera(s), film and ancillary equipment. From Cleveland, drive east on Cedar Rd. ; after the first steep rise of Cedar Rd. , turn right (south) onto Coventry Rd. ; continue on Coventry Rd. , pass Fairmont Blvd. and immediately after that you will encounter a three-way intersection between Coventry Rd. , North Park Blvd., and a small road extending to Shaker Lake. Turn left (east) at this intersection and park along the small road, aforementioned. Hike, approximately, 1/8 mile eastward along the south side of Shaker Lake, to the boat launch area. Tom will meet you there. Telephone Tom Sampliner before the trip, to tell him you will be coming (216) 321-3702 or (216) 371-4454.

SATURDAY, AUGUST 12, 9:00AM TO 12:00PM -WORKSHOP ON THE IDENTIFICATION OF NATIVE FERNS (LANTERN COURT, HOLDEN ARBORETUM, 9203 KIRTLAND-CHARDON RD., KIRTLAND, [LAKE CO.], OHIO) Tom Yates, staff member of the Holden Arboretum, will present this workshop. The locality is, approximately, a 30-minute drive from Cleveland. From Cleveland drive east on Interstate 90 to Exit #193, onto Rt. 306. Proceed southward on Rt. 306, to the bottom of a long hill. Turn left onto Kirtland-Chardon Rd. ; cross Booth Rd. and continue, approximately, 1 mile further on Kirtland-Chardon Rd. ; turn left into the driveway of Lantern Court (the address of Lantern Court in indicated above.) Park to the left of the mansion at the end of the driveway. Telephone Tom Yates before the workshop, to tell him you will be coming (216) 256-3463. [

SATURDAY, SEPTEMBER 23, 9:30AM- ?:OOPM - FIELD TRIP TO OBSERVE SPECIES OF SPIRANTHES (LADIES' TRESSES; ORCHIDACEAE [ORCHID FAMILY]). Tom Sampliner will lead this trip. Participants will travel by automobile to various locations to observe different, and in some cases, rare species of this genus of elegant orchids. Telephone Tom Sampliner before this trip, to tell him you will be coming as well as for meeting place (216) 321-3702 or (216) 371-4454.

SUNDAY, OCTOBER 8. 10:OOAM-2:00PM - FIELD TRIP TO OBSERVE SPECIES OF FALL-BLOOMING COMPOSITAE (SUNFLOWER FAMILY). George Wilder, Professor of Biology at Cleveland State University, will lead this trip. Emphasized, will be the identification of asters and goldenrods. Participants will travel by automobile to various locations to observe diverse species of Compositae. Telephone George Wilder before this trip, to tell him you will be coming (216) 687-2395 or (216) 932-3351. At that time he will tell you where to meet him.

FALL (Exact date to be determined as growing season develops.) FALL - FUNGUS WORKSHOP. (COVENTRY ROAD, SHAKER LAKE, CLEVELAND HEIGHTS, OHIO). Tom Sampliner will present this workshop.
Telephone Tom Sampliner before the workshop, to tell him you will be coming (216) 321-3702 or (216) 371-4454. It is hoped that this trip will constitute a basis for a local fungus society.

SATURDAY, NOVEMBER 11. ANNUAL MEETING AND BANQUET, CLEVELAND BOTANICAL GARDEN, 11030 EAST BLVD., CLEVELAND, OHIO. We are exceptionally pleased to announce that Dr. Anton A. Reznicek of The University of Michigan has agreed to be our speaker for the evening. The social hour will be at 5:30 PM, the banquet will start at 6:30 PM, and Dr. Reznicek will begin speaking at 8:00 PM. The Cleveland Botanical Garden is located along Cleveland Oval, across from the Cleveland Museum of Natural History. Parking spaces are available directly outside of, and beneath the building of the Cleveland Botanical Garden.

LETTER TO THE EDITOR
On behalf of Kent State University, thank you for the gift of $150 to Tom and Miwako Cooperrider Herbarium Endowment, in lieu of a speaker's fee for Tom S. Cooperrider. Kent's Biological Science Department continues to receive national recognition. Over the past ten years, Biological Sciences has experienced a 750 percent increase in extramural funding for research. Each year seniors in Biological Science continue to score above the national average in the nationally administered Major Field Achievement Test administered by the Educational Testing Service and more than 90 percent of undergraduates majoring in Biological Sciences and Pre-medicine have gone on to medical school.
I hope that the University will continue to deserve your thoughtful interest and generosity for many years to come. Your support is vital to Kent State University.
Sincerely, Gail J. Hicklin Interim Executive Director

HERBARIUM OMISSIONS

The last issue of "On the Fringe" contained an article on the herbaria of northeastern Ohio. It was brought to our attention by Timothy L. Walters at the University of Toledo that two local herbaria where not included in our listing. They are listed below:

19. JOHN CARROLL UNIVERSITY
20700 North Park
University Heights, OH 44118
(216) 397-3077
Dr. Jeffery R. Johansen, curator
SPECIMENS: about 1,200
STRENGTHS: northeastern Ohio, Utah, Colorado
COLLECTORS: T. L. Walters (OH), J. R. Johansen (UT, CO)
PURPOSE: teaching and reference
ADDING: occasionally

20. LORAIN COUNTY METRO PARKS
12882 Diagonal Road
LaGrange, OH 44050
(216) 458-5121
Grant Thompson, curator
SPECIMENS: about 1,000
STRENGTHS: Lorain County only
COLLECTORS: T. L. Walters
PURPOSE: reference
ADDING: yes

Our apologies for missing these two institutions.

NEW ORCHID JOURNAL

The North American Native Orchid Alliance has announced the publication of a quarterly journal devoted exclusively to the conservation and promotion of native orchids. ***The North American Native Orchid Journal*** sent out its first issue in March. The journal is edited by Paul Martin Brown and Philip Keenan is Editorial Consultant. The journal will include extensive information about the North American Native Orchid Alliance in addition to "informative articles, illustrations, orchid new, book reviews, a checklist of North American orchids and an index to 1994 orchid literature.

Membership/subscriptions are being offered until June 1st of this year for $18.00 per year. After that date the cost will be $22.00 per year. Send subscription information to Nancy Webb, 84 Etna Street, Brighton, MA 02135.

Contributions for all issues are being accepted. Please send submissions to the editor at 15 Dresden Street, Jamaica Plain, MA 02130-4407.

SUMMER LOCAL FLORA COURSE
by Brian D. Gilbert

Cleveland State University is again offering an eight-week summer course on the summer flora of the Greater Cleveland area. The course will be taught by Dr. George Wilder and will meet for eight weeks on Saturdays from 8:00 AM until 3:00 PM. It is designed for serious students. It is double-listed as BIO/174 and BIO/474. Those taking the course as BIO/474 are given more work, i.e. preparation of 35 herbarium sheets, and slightly longer examinations. For students who audit, no exams are required. The final exam is on the 9th Saturday

Each class meeting typically consists of a lecture, laboratory work, and one field trip. The following topics are emphasized: (1) the criteria used in classifying and identifying plants, (2) the characteristics of the more important species, genera, families and higher taxonomic categories of plants, (3) use of taxonomic keys for plant identification, (4) recognition of locally occurring species and (5) some miscellaneous features of plants such as their ecological importance, edibility and toxicity.

Registration is until mid June and the course will begin on June 17th. For Ohio residents the course costs $450.00, for non-residents it is $900.00. You can call Cleveland State University Registration Office at 687-3770 for additional information.

ALL TRESSED UP, BUT NO PLACE TO GO
or Local Ladystress Orchids
by Tom A. Sampliner

According to Carlyle A. Leur, in his monumental effort entitled, "The Native Orchids of the U. S. & Canada, excluding Florida" 1975, the Spiranthes genus consists of over 300 species ranging from temperate to tropic regions. Few species occur in the old world. Only 1 species each occurs in Japan, Australia and New Zealand. Africa, as of 1975, was not known to have any.

In addition to Leur, the other written sources consulted for this article were: Frederick W. Case Jr.'s "Orchids of the Western Great Lakes Region" 1987; R. T. Whiting & P. M. Catling's "Orchids of Ontario" 1986; and Paul Martin Brown's "A Field and Study Guide to the Orchids of New England & New York" 1993.

The initial discussion will contrast the keys from each work with an emphasis as to their treatment of local species. This article is intended to be a preparation and quick reference source for our fall field trip when we hope to see as many of our local species as one day will permit.

Sadly, I must note that it will be too late in the year to see *Spiranthes lucida,* the shining ladystress. Probably, the same will hold true for Spiranthes *lacera* both var. *lacera* and var. *gracilis* as well as Spiranthes vernal is.

Spiranthes romanzoffiana may well be holding out, but time limitation will probably prevent a visit if we are to see as many of the others as one day trip will allow.

Whiting & Catling select as the initial feature for their dichotomous key, lip size, the choice is between florets exhibiting lip size 4-7 mm in length versus 8-11 with an additional trait for some species in the first category of being loosely spiralled while all

under the 2nd choice are to be densely flowered. Therefore, in our area, *casei*, *lucida*, *ovalis* and both varieties of *lacera* would fall within the first division. It should be noted that as of their writing, *tuberosa* had not yet been found in their region.

Case uses lip size for his first choice as well. However, he opposes lip less than 6 mm long versus those 6-11 mm. No companion trait accompanies his first division. Case does include *tuberosa*.

Leur covers the widest geographical and climatological areas so his first division includes such traits as spiral appearance, ranking of the spirals, the growth called a tuberosity, and climate. Obviously, this was done to separate the tropical, subtropical, southern, and western U.S. species. We will, therefore, pass over these features and proceed to the first relevant for the Great Lakes region. This is examination of the spiral feature. He opposes secund (appearing one sided) to conspicuously coiled, florets appearing in one rank verses tightly spiralled flowers appearing in more than one rank. However, he has a caveat under both choices that occasional specimens can appear under the other heading.

Paul Martin Brown opposes leaves narrow and grass-like at flowering time versus leaves orbicular or absent at flowering.

Immediately, based upon the practicality of using a key in the field in any region, but especially ours, I note a real problem with Leur's key and an apparent conflict between the size traits as used by Whiting & Catling versus Fred Case's. I do not mind trying to follow Leur in his spiral patterns, but if he finds need to caveat the separating traits, how useful is it? Keys that conflict as to how to separate lip size are a real problem. I do not see how Case's 6 mm versus larger can be helpful if Whiting & Catling can distinguish lowest florets of an inflorescence of 4-7mm versus 8-11. What do the rest of you say? Let's take small rulers with us to see what we encounter this fall.

I must say, I find Brown's first trait much more usable than these others. Shape of and presence or absence of leaves is readily visible in the field! Let's continue to see more of who did what and how well.

Under the small floret species, Whiting & Catling next oppose rostellum and viscidium lacking, cauline (stem) bracts with long, spreading, recurved blades versus the parts present and bracts being bladeless. Choice one keys out (*S. ovalis* var. *erostellata.)* The other choice requires further trait selection for species we will not see this trip. For September in Cleveland unless we find some of the varieties of *lacera* or *casei* this key is of limited value on the small species. Frankly, even if we found these species, how practical for field use are such esoteric features?

Case, under small flowered species, next uses lip color. Floor of the lip with bright yellow or green in the center versus white or pale creamy yellow throughout the lip with no strong central coloration. This is usable. Under lip color he has the two varieties of *lacera* as well as the June blooming *lucida*. Under the white color we only find *tuberosa*. This latter species is so distinctive by size alone that either way we finish up the locally expected species.

Brown's key ignored size and started with leaves. Next he uses bright yellow central to the lip taking you immediately to *lucida*. Lip otherwise sends you next to flowers white versus otherwise. Other than white florets sends you to the same point in his key that the 2nd choice for his first trait sent us (leaves orbicular or absent at flowering time). Therefore, Brown's key will lump: *lucida, romanzoffiana*, praecox and

cernua as all having leaves narrow and grass-like at flower time; lucida keys out at strong yellow in lip central, fiddle (pandurate) shape lip keys out *romanzoffiana*, and multiple ranking keys out *cernua* from the praecox as well as there habitat differences. Very usable in the field! Especially since *cernua* is quickly removed from *ochroleuca* and *casei* with which it can be confused.

Leur's third key trait under the small flowered species contrasts leaves that are narrow or linear, lanceolate to oblanceolate verses leaves ovate, but often fugacious (withering early). This is a useful trait for field work. Just to list the species that fall under linear-like leaves shows how useful; *vernalis*, *praecox*, *graminea*, *laciniata*, *intermedia*, *longilabris*, *ochroleuca* and *tortilis*. Sorting through what we may find here, this separation is very helpful. Assuming that *vernalis* is still possible, *ochroleuca* is the only other likely local species and lip color in *vernalis* easily will separate these two. Since *ochroleuca* is one of those that is in the original *cernua* complex, it is extremely valuable if we can depend upon fugacious leaves to quickly sort out Spiranthes *ochroleuca*, the yellow ladystress.

Next, let us look at the largest flowered species. In order to get to Leur's treatment of the largest floret species, we first looked at the spiral traits; then under tight spiral, multi-ranked if we select narrow leaves, we find a choice for lip size. Leur divides the species from those under 9 mm to those above. Just what we needed. Remember Case versus Whiting & Catling? I can see it now this fall: Is it between 4-7? More or less and 6 mm? Or more or less 9 mm? If the experts can't agree what can we do?

If we can get beyond this problem, continuing with Leur, his under 9 mm next requires selection for lip color and then habitat, including only *ovalis* among species we are likely to find. Therefore, we have a clear shot by using his larger than 9 mm lip to find our local species. He next opposes lip constricted near the center and northern or northeastern distribution versus lip ovate and usually not constricted near the center. If the lip is oblong to ovate and only slightly constricted near the center you are left with *cernua* or *ochroleuca*. If the lip is pandurate (fiddle shaped) dilated apex and white flower you have either *romanzoffiana* or a cross called *X steigeri*. In our area we need be concerned only with the first two. *Cernua* will have the lip base dilated, tuberosities small and flowers uniformly all white. *Ochroleuca* will not be dilated at the base, tuberosities large and flowers will have a yellowish cast.

Back to Whiting & Catling for their larger flowered species. Select between basal portion of the rachis glabrous, hairs sparse and only 1 mm long: lateral sepals 3 mm or wider, lip pandurate, perianth veins prominate; which immediately identifies *romanzoffiana*. Opposing these features would be: basal portion of rachis pubescent with capitate hairs 0.3 to 0.5 mm, lateral sepals 2-3 mm wide, lip not pandurate, perianth veins not prominent.

Next under the second choice, we select between: leaves absent at flowering, cauline bracts 4-7 mm, flowers white but central portion of lip is yellowish and thickened, flowers fragrant, lateral sepals diverging, calli 0.5 mm long which keys out *magnicamporum*. The alternative is: leaves present, cauline bracts, 2-4, flowers white or cream color, no strong fragrance, lateral sepals appressed, calli 0.7 - 1.5 mm. This requires a further choice to separate *ochroleuca* from *cernua*.

If flowers are cream color, dorsal and ventral curvature of the flower pronounced measuring a separation of between 0.5 to 1.5 mm between dorsal and lateral sepals, lip thick, fleshy centrally, often with slight basal dilation you have *ochroleuca.*

Opposite choice require white flowers, moderate curvature resulting in dorsal from lateral sepal separation of 0.1 to 0.9 mm, lip not thick nor centrally fleshy, and without distinct lip dilation you are led to *cernua*. Rather than looking for these features which are somewhat difficult in the field I find helpful a habitat observation whereby *ochroleuca* will be in the sandier more well drained site which can easily be above the wetter area, including ditches, preferred by *cernua*.

Case classifies large flowered species as lip 6-11 mm. The first choice is lip pandurate (fiddle-shaped), small basal callosites, sepals and petals connivent forming a hood. Inflorescence heavy and thick, not strongly spiraled, secund in rank. This keys *romanzoffiana.*

Opposite is not pandurate prominent basal callosities, no hood, strongly spiraled spikes.

Under this later choice the next selection will key out *magnicamporum* with leaves absent at flowering, lip deflexed giving a gaping appearance, central lower lip yellow, above thick white, callosities short, conical, as wide as high, lateral sepals free and spreading, flowers strongly fragrant.

Opposite is leaves present at flowering, lip color uniform white or creamy, basal callosities longer than wide, lateral sepals appressed.

Under this latter category we elect between: flowers pale cream, yellow or faint green tone , upper lip surface deeper yellowish cream versus flowers white, crystalline in multiple ranks, lip white throughout, dorsal sepal laterals and petals approximate, slightly recurved but gaping or a 2 lipped aspect, leaves present in good condition at flowering immediately identifies *cernua.*

Under the first choice above he separates the last two — easel from *ochroleuca*. *Casei* is lip 6-7 mm dorsal sepal and lateral petals directed forward, scarcely upcurved, lateral sepals forward, flowers spaced so that groups appear as florets of 2 -3 in loose spiral lower leaves shrivelled upper most persist at flowering. Finally *ochroleuca* under Case's key is lip 7-10 mm dorsal sepal and lateral petals connivent recurved providing a 2 lipped appearance, lateral sepals ascending prominent basal lip callosities, lowermost leaves present in good condition at flowering.

We left Brown's key at point #6. The choice is flowers with green central portion versus not. The aforementioned leaves to #7 wherein *lacera* is identified with loose spike, few twists and those near the spike summit, basal leaves present at flowering. *Gracilis* calls for dense florets on spike, regular twisting on the spike, basal leaves withered at flowering.

Without green central lip pushes us to #8 wherein flowers purest white is *tuberosa* versus pale cream, yellowish white or bicolor moves us onward to choice #9. Here flowers yellowish/white keys *ochroleuca.* Flowers white with yellow/beige lip send you back to choice #9 again. I fail to understand this.

The last choice is #10. Flowers slender, never fully expanded, plants of northern areas identifies *casei*. Flowers fully expanded, lip contrasting to petals and sepals identifies *vernalis*.

There are obvious strengths and weaknesses in each key. Comparisons are difficult but some I've shared with you already. Since we are Ohioians, I should mention in passing that due to limited species recognized at their times of publication there is no point trying to use either Clara G. Weishaupt's "Vascular Plants of Ohio" or E. Lucy Braun's "The Monocotyloneae" 1967. The only species covered are*: vernalis, gracilis, tuberosa, romanzoffiana, lucida, cernua & ovalis.*

WANTED: TRILLIUM SEEDS

by Brian D. Gilbert

This summer I will begin a three year study to determine the dormancy periods of the seven extant species of Ohio Trillium. This study is supported in part by a grant from the Geauga Park District. The Ohio Department of Natural Resources, Division of Natural Area and Preserves, and the Cleveland Metroparks are also supporting the study by allowing me to collect a limited number of Trillium seed capsules from their properties. Since I have promised not to collect any more than 10% of the seeds at any given location, it will be difficult to collect enough seeds for some species. Therefore, I am asking Native Plant Society members to help me find other populations of Trillium which may be collected without endangering the viability of any population. I am particularly in need of sites where the following species can be collected:

Trillium erectum & Trillium sessile(1995) *Trillium recurvatum & Trillium undulatum*(1996) If you know of any site where these species can be collected, please contact me at 729-9448 (mornings) or 486-8765 (evenings). I will secure the formal written permission of all property owners before collecting.

Seedlings successfully germinated in this study will be offered back to the site owners after the study is complete. It is hoped that this study will result in learning the requirements to successfully germinate Trilliums from seed and that this will eventually lead to increased propagation by nurseries and decreased collecting from natural areas.

ON THE FRINGE
Quarterly Newsletter of the
NATIVE PLANT SOCIETY OF NORTHEASTERN OHIQ
2651 Kerwick Rd.,
University Heights., OH 44118

MEMBERSHIP APPLICATION/RENEWAL
Annual Dues and Membership Category - Check One
( ) Active $10.00
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Make Check Payable to the NATIVE PLANT SOCIETY OF NORTHEASTERN OHIO and mail with this form to:
Thomas A. Sampliner, President
Native Plant Society of Northeastern Ohio
2651 Kerwick Road
University Hts., Ohio 44118

Name:_____
Phone:_____
Address:_____
City/State:_____ZipCode:_____

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