



## QUARTERLY NEWSLETTER

New York Flora Association

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Vol. 23 ~~No. 1 - Winter~~ 2012 e-mail: editor@nyflora.org Dues \$20/Year  
No. 2 Spring

## Wetland Indicator Status Rankings: What do They Mean and Why do we Care

By Joseph M. McMullen

Terrestrial Environmental Specialists, Inc.

In the wetland science field, the limits of jurisdictional wetlands can be very important. One of the parameters used to define an area as wetland or upland is vegetation, particularly whether the dominant plants in the community are wetland or upland species. Anyone who has ever tried to determine whether an area is dominated by wetland or upland vegetation has toiled over the wetland indicator status rankings of plant species. What are these rankings and what do they mean?

Wetland indicator status rankings are a measure of a plant's fidelity or faithfulness to wetland or upland site conditions. A plant species is given a wetland indicator status ranking based on its affinity to wetlands or uplands. A species that is always or almost always found in wetlands is given a ranking of a wetland obligate (OBL). It is assigned to this category because it is considered to be obligated to occur in wetland areas. It has a great fidelity to wetlands; it seldom if ever strays into uplands.



Softstem bulrush and pickerelweed, two obligate wetland plants.

Some examples of wetland obligates in our area are: cattails (*Typha* spp.), skunk cabbage (*Symplocarpus foetidus*), marsh marigold (*Caltha palustris*), soft-stem bulrush (*Schoenoplectus tabernaemontani*), several important manna grass species (*Glyceria* spp.), rice cut grass (*Leersia oryzoides*), buttonbush (*Cephalanthus occidentalis*), and leatherleaf (*Chamaedaphne calyculata*).

A plant species that is always or almost always found in uplands is designated in the indicator status of upland obligate (UPL). A good example in our area is maple-leaved viburnum (*Viburnum acerifolium*). It is a species whose roots would not tolerate venturing into the zone of frequent soil saturation. It would not grow in areas where water is close to the surface, but thrives in deep, well-drained soils free of the anaerobic (without oxygen) conditions found in water-logged soils. Upland obligate species favor areas where they can send their root exploring deep into the soil and still find plenty of oxygen without dipping their fine hairs into an oxygen depleted zone caused by water saturation.

Between the indicator status categories of OBL and UPL, there is a large group of plants that occur in both wetland and upland conditions. The many plants that straddle wetland and upland situations are designated as facultative species. Within the broad facultative category there are three indicator status rankings, which are: facultative wetland (FACW), facultative (FAC), and facultative upland (FACU). Plants are designated in these categories depending upon their frequency of occurrence in wetland or upland conditions. Basically meaning, to what extent they are affiliated with wetlands or uplands.



Our two red-stemmed dogwoods are both FACW species. They are distinguished by the color of the pith, with silky (*Cornus amomum*) being brown and red-osier (*C. sericea*) being white. Red-osier also exhibits larger lenticels.

A facultative wetland (FACW) designation means that a species is usually found in wetlands, but occasionally occurs in uplands. This is the more recent definition promoted by the National Panel in the update of the National Wetlands Plant List (Lichvar and Minkin 2008, Federal Register 2011), but I like the original definitions in the Corps of Engineers Wetland

Delineation Manual (Environmental Laboratory 1987) and used by Reed (1988), which are based on a frequency of occurrence of a species in a wetland or an upland, i.e., how often you see a given species in a wetland or upland situation. Under these definitions, a FACW species occurs 67% to 99% of the time in wetlands, but could occur in uplands up to one-third (33%) of the time.

We have many good examples of FACW species in New York, including: American elm (*Ulmus americana*), silver maple (*Acer saccharinum*), black willow (*Salix nigra*), speckled alder (*Alnus incana*), steeplebush (*Spiraea tomentosa*), winterberry holly (*Ilex verticillata*), common reed grass (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), soft rush (*Juncus effusus*), and sensitive fern (*Onoclea sensibilis*).

The facultative (FAC) status ranking, which is what I would describe as “straight” FAC, means that a plant occurs with equal frequency in wetlands or uplands. Plants in this category are not faithful to wetlands or uplands, but can often be found in either area. Red maple (*Acer rubrum*) is probably the classic example of a straight FAC species. Red maple occurs in more states in the United States than any other tree species. Its broad geographical distribution is perhaps a result of its ability to grow in wet and dry site conditions reflective of its FAC ranking. The only tree species in North America with a broader distribution than red maple is trembling aspen (*Populus tremuloides*), a

FACU species. Other examples of FAC species include box elder (*Acer negundo*), balsam fir (*Abies balsamifera*), and nannyberry (*Viburnum lentago*).

Facultative upland (FACU) species are those considered to usually occur in uplands but occasionally are found in wetlands (Lichvar and Minkin 2008, Federal Register 2011), or as originally defined occur 67% to 99% of the time in uplands, but may be found up to 33% of the time in wetlands (Environmental Laboratory 1987). There are many FACU designated plants in New York, and probably a lot of them should be designated as UPL species.

Examples of FACU species are: black locust (*Robinia pseudoacacia*), sugar maple (*Acer saccharum*), blackberry (*Rubus allegheniensis*), Canada goldenrod (*Solidago canadensis*), tall goldenrod (*S. altissima*), sweet vernal grass (*Anthoxanthum odoratum*), leeks (*Allium tricoccum*), and garlic mustard (*Alliaria petiolata*).

It should be noted that indicator status rankings can vary for a given species by geographic region. A species may be FAC in one region, but FACU in another. This was recognized in the original rankings in Reed (1988), which were assigned by nine different regions in the United States. Many plant species, especially those with a broad distribution, occur in slightly different site conditions in different parts of their range. In the Appalachian uplands where I am from, black cherry (*Prunus serotina*) is a tall growing, majestic tree species of deep upland soils. But in Maine, I have seen it growing as a scrubby floodplain species. Many other species vary in their fidelity to wetlands or uplands in different parts of their range.

So why do some plant species tolerate wet conditions while others do not? A lot of the reason is related to the ability of a species to capture oxygen, especially the ability to move oxygen and other gases to their root system. A good review of the mechanisms involved in how water level changes affect plants is presented in Teskey and Hinckley (1977).

Oxygen is needed by the roots of plants. Water in the soil for an extended period forces the soil oxygen out and creates anaerobic conditions. This is why all the trees die when a new beaver dam results in the long term flooding of a forested area.

Plants that can survive growing in areas where water occurs must have mechanisms or structures to capture oxygen. The classic example of such a structure is a pneumatophore (literally meaning “to carry air”). Pneumatophores are best exemplified by cypress knees, which occur on bald cypress (*Taxodium distichum*), a southern, narrow-leaved deciduous tree species whose natural range extends north into Delaware. Cypress knees are woody projections that extend up vertically above the surface



Cypress knees, a good example of pneumatophores.

of the water from the underlying roots. Because the tops of these cypress knees are exposed to the air they can “carry air” back down into the roots under the water surface. (Actually, I think a better name for these projections would be cypress shins; if you have

ever waded through a flooded bald cypress forest you end up constantly smacking your shins against these knees.)

Good examples of pneumatophores are also displayed by species of mangrove, especially black mangrove (*Avicennia germinans*) and red mangrove (*Rhizophora mangle*). Red mangrove is the species that you probably commonly associate with the intertidal areas of subtropical and tropical regions. Interestingly, mangrove thickets are the most important intertidal community in the world; in subtropical and tropical zones these thickets replace the intertidal *Spartina* marshes we find in our temperate zone.

The pneumatophores of mangroves are cigar-shaped structures that project up from the soil/substrate surface. During low water their exposed surfaces gather oxygen for the underlying roots. If you get a chance to visit these communities, you will find these upward projecting pneumatophores carpeting the ground.

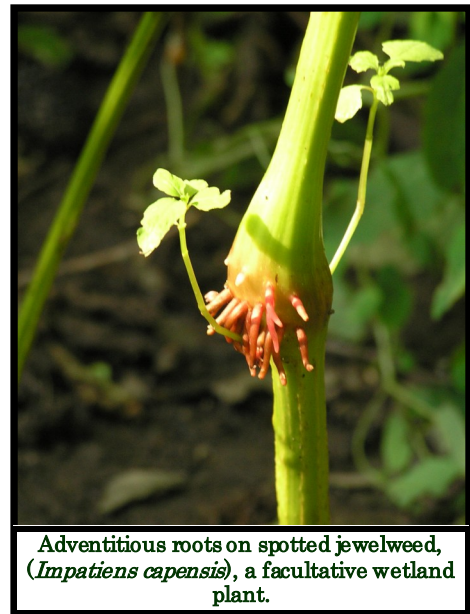
In New York and the rest of the northeast we do not have a tree species that will tolerate extended periods of water inundation during the growing season. There is no companion species to bald cypress with pneumatophore capabilities in the northeast. In our area there are actually very few woody species that tolerate extended periods of inundation. One of our few good examples is buttonbush.

While we don't have many inundation-tolerant woody species in the northeast, we do have many wetland and floodplain species that have the ability to produce adventitious roots when wet conditions persist during the growing season, which helps these species to survive when flooding occurs.

Adventitious roots are different than pneumatophores in that they originate on the trunk or stem of a plant usually above the root system. Technically, true roots are produced from the meristematic (actively dividing) tissue called the pericycle. Roots not formed by the pericycle are called adventitious roots. These "water roots" develop on plant stems where roots are not normally found.



Pneumatophores on red mangrove photographed in Antigua.



Adventitious roots on spotted jewelweed, (*Impatiens capensis*), a facultative wetland plant.

When flooding or other wet conditions occur during the growing season and the roots are deprived of oxygen, some plant species can produce these adventitious roots. It is important to note that the presence of adventitious roots tells us that the water inundation occurred when the plant was active (i.e., during the growing season).

Most people think of willows (*Salix* spp.) when it comes to woody species growing in wet conditions and this group can produce adventitious roots, but there are many other species in our area that have this ability. Black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), silver maple (*Acer saccharinum*), and even silky dogwood (*Cornus amomum*) can produce adventitious roots. In interior Alaska I have seen adventitious roots projecting out from the base of 3-foot diameter balsam poplar (*Populus balsamifera*). This ability helps these species survive in wet conditions; it broadens their fidelity range and extends their wetland indicator status ranking into wet situations.

Wetland obligates that grow in areas of constant water inundation, some of which grow submerged below the surface of the water, usually have other abilities to capture air in some way. Some have aerenchymous tissue (spongy tissue with air passages) that traps air. Next time you are in a patch of soft-stem bulrush take a look at a cross-section of one of the stems and note the air filled cavities within. This is aerenchyma tissue that provides pathways for air to submerged portions of the plant, and this type of tissue is common in many wetland species.

When you are out in the field this summer, assess what plant species you see growing in wetlands or upland conditions. Make a note of what wetland indicator status ranking you would place these species in and compare them to the existing or proposed rankings. It is an interesting exercise.

The current indicator status rankings of plants are being revised. Lichvar and Minkin (2008) explains the concepts of the changes and Federal Register (2011) explains the process. If you are interested in the currently proposed changes, just go to: <https://rsgis.crrel.usace.mil/apex/f?p=703>.

### References

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# NYFA 2012 Field Trips

19 May  
(Saturday)

Taconic Foothills Woods and Wetlands (Washington Co.) led  
by Rich Ring

We'll visit a state forest near the NY/VT border outside Cambridge, NY. There are a variety of habitats here: rich calcareous forests (moist and dry), rock outcrops, and some headwater swamps and vernal pools. Expect some off-trail, rocky walking (at a slow, botanical pace). *Carex backii* is known from the site, and we'll look for other early sedges, spring ephemerals, (late), and whatever else we can discover. Bring water, lunch, and insect repellent.

To register, contact Rich Ring:  
[richardmring@gmail.com](mailto:richardmring@gmail.com)

We'll meet at 10:00 AM near Cambridge, NY, and finish up mid-late afternoon - more details will come with registration.

23-24 June  
(Saturday &  
Sunday)

Chemung River Valley (Chemung Co.) led by David Werier

Joint Trip with Field Botanists of Ontario.

We will be spending the weekend exploring the large Chemung River Valley in south-central New York, from Waverly to Elmira and to Corning. This is the backyard of Stanley J. Smith's hometown of Erin and was the stomping grounds of an even earlier prominent botanist, Thomas F. Lucy. The area is botanically rich, with many southern species occurring nowhere else in New York. From dry, steep south- and west-facing slopes and summits, to the floodplain of the Chemung River, to cool microclimates on north and east-facing slopes, this area is diverse and rich. This trip should excite those interested in the flora of this interesting region. Some species of interest in this area that we may encounter during our explorations include *Allium cernuum*, *Amelanchier amabilis*, *A. humilis*, *Calamagrostis porteri*, *Carex conjuncta*, *C. siccata*, *Doellingeria infirma*, *Elymus macgregorii*, *E. wiegandii*, *Galium pilosum*, *Hydrangea arborescens*, *Lathyrus ochroleuca*, *Liatris scariosa* var. *nieuwlandii*, *Paronychia fastigiata*, *Spiranthes ochroleuca*, *Quercus ilicifolia*, *Q. prinoides*, *Vicia caroliniana*, *Viola subsinuata*, and many, many more.

To register and for  
clarification, contact David  
Werier:

[Nakita@lightlink.com](mailto:Nakita@lightlink.com)

*Pre-registration is required  
and numbers are limited so  
register early.*

# NYFA 2012 Field Trips (cont.)

**14-15 July  
(Saturday &  
Sunday)**

**Lake Ontario Coastal Dunes and Fens at Deer Creek  
(Oswego Co.) led by Andy Nelson**

Join us for a day of exploring coastal fens and dunes on Saturday and, if you wish, an additional exploration of red maple and red maple-tamarack swamps and fens on Sunday. On Saturday we will visit dunes and some relatively accessible fens. Sunday's trip into the red maple swamp will be more strenuous. Dress for wet (knee deep or more) swamps and marshes. Bring water, lunch, and insect repellent.

**To register, contact Andy  
Nelson:**

**(315) 343-9277**

**or**

**[andrew.nelson@oswego.edu](mailto:andrew.nelson@oswego.edu)**

Saturday's trip will convene at 9:00 AM in the parking lot of Brandy's Sunrise Restaurant on Rt. 3 at the junction of Brennan Beach Road (West of Pulaski, north of Port Ontario). A list of local accommodations will be provided for those who wish to stay overnight.

**29 July 2012  
(Sunday)**

**Cryptogamic Field Trip to Burroughs Cave (Essex Co.)  
led by Scott LaGreca.**

This trip was postponed from 2011. The Cryptogamic field trip will take place on Sunday, July 29 at Burroughs Cave, near Minerva, NY on North Woods Road in the Adirondacks. Bring your hand lens (10X is okay but 15X is better) because we'll be hunting for mosses and lichens! The cold, fertile rock ledges around the cave support a diverse moss and lichen flora and, undoubtedly, further exciting cryptogamic discoveries await us.

**To register and for directions,  
please contact Scott LaGreca:**

**[sal66@cornell.edu](mailto:sal66@cornell.edu)**

**or**

**607-255-2777**

# NYFA 2012 Workshops

20-21 June

(Wednesday-Thursday)

19 June (optional Tuesday evening)

**Sedge workshop led by Tony Reznicek and based out of SUNY ESF Ranger School in Wanakena, NY**

This workshop will focus on sedges, but rushes and grasses will also be discussed. The classroom portions will be held at the SUNY ESF Ranger School in Wanakena, NY, which is approximately 1.25 hours east of Watertown off of NYS Route 3. Field sites will be explored in the Western Adirondacks and the Alvar Pavement Barrens in Jefferson County.

The main part of the workshop will be held on June 20th & 21st. There will also be an optional evening session on June 19 from 6:30-10:00 for identification of your plants. The workshop will be valuable for a wide range of experience and will benefit botanists, ecologists, wetland delineators, restoration ecologists, and more. The workshop will include both lab and field exercises. Dr. Tony Reznicek (University of Michigan), the renowned *Carex* expert and author to various FNA Cyperaceae treatments, will lead the workshop. All participants are encouraged to bring plant material from their areas of interest for evening ID and discussions with the instructor.

Cost: \$145 for NYFA members and students; \$175 for non-members. Participants are encouraged to become NYFA members (see the NYFA website [www.nyflora.org](http://www.nyflora.org)).

Workshop fees do not include lodging or meals. The SUNY ESF Ranger School is offering lodging and meal options for participants. The cost for lodging is approximately \$25.00 per person per night and meals are approximately \$35.00 for 4 meals. If preferred, there are hotel and camping options near the Ranger School.

Participation is limited so please sign up early. To register send an email with contact information to Ed Frantz: [efrantz@dot.state.ny.us](mailto:efrantz@dot.state.ny.us) You must also send a check made out to the New York Flora Association for the full amount with the name of the workshop in the memo line to the New York Flora Association / PO Box 122 / Albany, NY 12201-0122 or pay by credit card using the form at the bottom of the field trip and workshop page on the NYFA web page (see [www.nyflora.org/field-trips-and-workshops](http://www.nyflora.org/field-trips-and-workshops)).

For questions by phone you can contact Ed Frantz at (315) 793-2421.

**4 August (Saturday)**

**Algae workshop led by Larry Liddle at Montauk.**

Details To Be Announced.



## NYFA 2012 Workshops (cont.)

18 August (Saturday)

### **Aquatic Plant identification workshop led by C. Barre Hellquist and based out of Albany, NY.**

This workshop will focus on the Potamogetonaceae (Pondweeds), of which we have about 35 taxa in New York. It will start with a morning classroom introduction and work with fresh and pressed specimens. In the afternoon, we'll explore a freshwater tidal marsh along the Hudson River south of Albany, observing not only pondweeds but other aquatics of this unique habitat. (We will likely be in canoes and kayaks for part of this excursion; let us know if you are able to bring a boat of your own). Please bring lunch, a hand lens and whatever plant manuals you prefer, and be prepared for sun, bugs, and mud.

Dr. Hellquist has been studying aquatic plants for 40 years with special interest in the Potamogetonaceae. Presently he is working on water lilies of Australia and North America, Potamogeton hybrids, and the aquatic flora of Yellowstone N.P. He co-authored "The Aquatic and Wetland Plants of Northeastern North America", aquatic families in the "Flora of North America", "Flora of China", and the "Jepson Manual of California".

The workshop fee is \$50 for NYFA members or \$80 for non-NYFA members. Participants are encouraged to become NYFA members (see the NYFA website [www.nyflora.org](http://www.nyflora.org)). The fee covers the cost of instruction only. If we need to rent boats there will be an added cost but we hope to have enough boats brought by participants to cover this need.

The workshop will begin at 10:00 am and conclude late afternoon. Registration is required and participation is limited so please sign up early. Send any questions you may have and registration requests by email to Rich Ring at [richardmring@gmail.com](mailto:richardmring@gmail.com). Also send a check made out to the New York Flora Association for the full amount with the name of the workshop in the memo line, payable to the New York Flora Association (PO Box 122 / Albany, NY 12201-0122) or pay by credit card using the form at the bottom of the field trip and workshop page on the NYFA web page (see [www.nyflora.org/field-trips-and-workshops](http://www.nyflora.org/field-trips-and-workshops)).

## NYFA 2012 Workshops (cont.)

7-9 September (Friday-Sunday)

***Juncus* (rush) workshop led by Wesley Knapp-Co-sponsored by Biology Dept.,  
Monroe Community College-and based out of Rochester (Monroe Co.), NY**

Rushes (*Juncus*) are a diverse and difficult group, often considered intimidating due to the highly reduced floral characters, the confusing terminology encountered in keys, and the ease with which they may be overlooked in the field. There are approximately 31 species known from New York. Yet, rushes are a common and often important genus of flowering plants in wetland ecosystems. This workshop will focus on the identification of rushes that occur in New York. The majority of the course will be spent in the field, but some lab time will familiarize participants with the morphology of the group.

Wesley Knapp is a botanist with the Maryland Natural Heritage Program. He is keenly interested in the Flora of the region, in particular grasses, sedges, rushes, and rare species. He has authored regional treatments on the identification of rushes and has taught a number of identification workshops. His intention for the workshop is that participants will walk away with the knowledge and skills to readily identify rushes they encounter in New York and be familiar keying members of the genus themselves.

This workshop will be based out of Monroe Community College, Rochester, New York, and will begin at 7 pm (optional lab session) Friday September 7th and finish mid-afternoon on Sunday. It (Monroe Co.)

The cost for the workshop includes the instructional program. The fee is \$100 for NYFA member or \$130 for non-NYFA members. Participants are encouraged to become NYFA members (see the NYFA website [www.nyflora.org](http://www.nyflora.org)) Meals and housing are not included. Registrants will be provided with a listing of nearby motels.

Registration is required: Participation is limited so please sign up early to assure a slot. To register or if you have questions please send an email to Steven Daniel at [natdisc\[at\]gmail.com](mailto:natdisc[at]gmail.com) and a check made out to the New York Flora Association for the full amount with the name of the workshop in the memo line, to the New York Flora Association / PO Box 122 / Albany, NY 12201-0122 or to pay by credit card, please see the bottom of the field trip and workshop page on the NYFA web page (see [www.nyflora.org/field-trips-and-workshops](http://www.nyflora.org/field-trips-and-workshops)).

## NYFA 2012 Workshops (cont.)

**15 September (Saturday)**

**Goldenrod Workshop, ed by Eric Lamont in Northville, Suffolk Co., Long Island., NY,**

In conjunction with the LIBS (Long Island Botanical Society) and Torrey Botanical Society.

The purpose of this free workshop is to teach participants how to identify goldenrods in the field. The workshop will begin with an introduction by Eric who will explain how to use a key to the goldenrods of Long Island. Participants will key out a few species together and then try their skills keying out live specimens on their own or with a partner. We will then ID all of the species together, check our determinations, and explain where participants might have gone wrong in the key. The workshop will end with a walk through North Fork Preserve, Northville (purchased in 2011 by Suffolk County & Riverhead Township, these 300+ acres were the largest unprotected tract of open space remaining in Suffolk County).

Registration is required: The workshop will be limited to 24 participants. Please email Eric to register and for directions [Eric Lamont: [elamont@optonline.net](mailto:elamont@optonline.net)]. It's important that participants be on time for the intro lecture, but then people can leave or stay as long as desired; the day will end in the afternoon, maybe 3-4 pm. Bring water, lunch, and insect repellent. Dress for potentially moist or muddy habitats in North Fork Preserve.

Eric Lamont has been studying composites for more than 30 years and was a graduate student of Arthur Cronquist at the New York Botanical Garden.

**6-7 October (Saturday - Sunday)**

**Crustose Lichen Workshop led by Scott LaGreca at Cornell University Plant Pathology Herbarium, Tompkins Co., Ithaca, NY**

Of the roughly 800 species of lichens that occur in New York State, more than half are crustose. Many of these species are notoriously difficult to identify for even the most experienced lichenologist. This workshop is intended for botanists who already have a firm grasp on New York State macrolichens and wish to know more. The weekend will begin at 10AM on Saturday morning, with an overview of the crustose lichens commonly found in the Cayuga Lake Basin, and the main characters used for identifying them. An introduction to the relevant literature will also be provided. Participants will then key out a few specimens from the herbarium together. After a brief demonstration of collection methods, a field trip to a nearby lichen site will take place. Participants will spend Sunday keying out specimens they collect on Saturday, and/or unidentified, local crustose lichen specimens from the CUP Herbarium. The workshop will end at roughly 3PM that day.

Scott LaGreca is the Curator of Cornell University's Plant Pathology Herbarium. He has been a professional lichenologist for over twenty years, authoring over 30 papers on lichens, non-lichen fungi, and bryophytes.

The cost for the workshop includes the entire weekend instructional program – indoor lab work and field outings. Meals and housing are not included. Workshop fee is \$100 for NYFA member or \$130 for non-NYFA members. Participants are encouraged to become NYFA members (see the NYFA website [www.nyflora.org](http://www.nyflora.org))

Registration is required: The workshop will be limited to 15 participants. Please email David Werier ([Nakita@lightlink.com](mailto:Nakita@lightlink.com)) to register and send a check made out to the New York Flora Association for the full amount with the name of the workshop in the memo line, to the New York Flora Association / PO Box 122 / Albany, NY 12201-0122 or to pay by credit card, please see the bottom of the field trip and workshop page on the NYFA web page (see [www.nyflora.org/field-trips-and-workshops](http://www.nyflora.org/field-trips-and-workshops)).

# NYFA NEWS

## NEW YORK FLORA ASSOCIATION'S 2012 NEW YORK NATIVE PLANT CONSERVATIONIST AWARD

The New York Flora Association (NYFA) is seeking nominations for a new award: The New York Native Plant Conservationist Award. The award is meant to honor a person who has worked towards the conservation of the native flora of New York. To nominate a candidate send the following information to Anna Stalter (chair of the NYFA Native Plant Conservation Committee) at [ams15@cornell.edu](mailto:ams15@cornell.edu).

Name, address, email, and phone number of nominator and nominee.

Why you believe this nominee deserves the award.

What the nominee has done to work towards the conservation of the native flora of New York.

Deadline for submissions for the 2012 award is Dec. 31, 2012. The NYFA Native Plant Conservation Committee will determine the winner of the award, which will be announced sometime in 2013.

## NYFA MEMBERS MEETING AND BOTANY PRESENTATION AWARDS

We hope you will be joining us for this year's NYFA Annual Member's Meeting at the NENHC conference on Tuesday, April 17, at 12:30 pm.

The New York Flora Association will announce the Northeast Natural History Conference 2012 Botany Awards and the 2012 NYFA Research Awards at the NENHC Conference. For more information about the conference, please visit the New York Flora Association website at:

<http://www.nyflora.org/>

or the Northeast Natural History website at:

[http://www.eaglehill.us/NENHC\\_2012/NENHC2012](http://www.eaglehill.us/NENHC_2012/NENHC2012).

## SEEKING NEWSLETTER EDITOR

NYFA is seeking a volunteer newsletter editor. Duties include working with others to plan the newsletter, soliciting articles and announcements for the newsletter, and producing draft and final newsletter for quarterly production. NYFA also continues to seek your ideas for the newsletter and will be developing a newsletter committee in the coming months. If you or someone you know is interested in assisting in NYFA newsletter production, please send your ideas, photos and articles to:

[editor@nyflora.org](mailto:editor@nyflora.org)

## WHAT MAPLE IS THAT?



In our last newsletter we asked if you could identify the two maple species shown below. The Norway maple on the left looks similar to the sugar maple on the right, but the two can be often distinguished by close examination of the length of the central lobe of the leaves; however, a more foolproof method of identifying a Norway maple during the growing season is by removing a leaf and observing the white sap. In the fall, Norway maples show less brilliant colors and generally change colors and drop their leaves

later in the season than the sugar maple. Both have a similar smooth grayish brown bark when they are young, but as they age, sugar maple bark becomes scaly whereas the bark of the Norway maple develops prominent vertical furrows.

Norway maple is perhaps the most overplanted tree in the State and is much more commonly offered in large home, landscaping and garden store chains. Sugar maples are more often carried by specialty nurseries that cater to local landscaping contractors rather than the general public. Both trees make excellent shade trees, but the shade cast by a mature Norway maple is much more dense and the roots that radiate far from the trunk just below the surface, which can discourage understory plants. Sugar maples are slower growing and more deeply rooted and are more permissive in terms of allowing lawn grasses to be cultivated beneath their branches.

The information included herein was gleaned from a fine article entitled “Know Your Maples” By Edward Moran. To view the entire article, see:

<http://www.northshorewx.com/maples.asp>

## HEADS UP FOR THE FIELD SEASON: LYME’S DISEASE IS ON THE RISE



The mild winter we experienced throughout the northeast this year resulted in the welcome sight of unexpectedly early spring ephemeral flowers and migrant birds. But there could be a particular downside that we all need to remember when venturing out on our explorations. Ticks and other insects that are normally dormant in the winter have already resumed activity with the warmer temperatures. Although there may not yet be an increase in the number of ticks present, nymphal ticks, which are often responsible for the spread of Lyme’s disease, may appear earlier this year also. That coupled with good production of acorns and mouse populations last year are anticipated to result in an increased risk in the number of these arachnids spreading the disease ([http://ecostudies.org/reprints/Ostfeld and Keesing 2000 Cons Biol 14 722-728.pdf](http://ecostudies.org/reprints/Ostfeld_and_Keesing_2000_Cons_Biol_14_722-728.pdf)).

So before you venture into the field this spring, think about wearing long pants and some type of repellent, and shower when you return home checking carefully for the small nymphs that are so easy to overlook. For more information about Lyme’s disease see:

<http://www.cdc.gov/lyme/>

<http://www.aldf.com/>

# New York State Botanical Discoveries

## New Endemic Yellow-eyed Grass, *Xyris bracteicaulis*, Described From Long Island

50

HARVARD PAPERS IN BOTANY

Vol. 16, No. 1

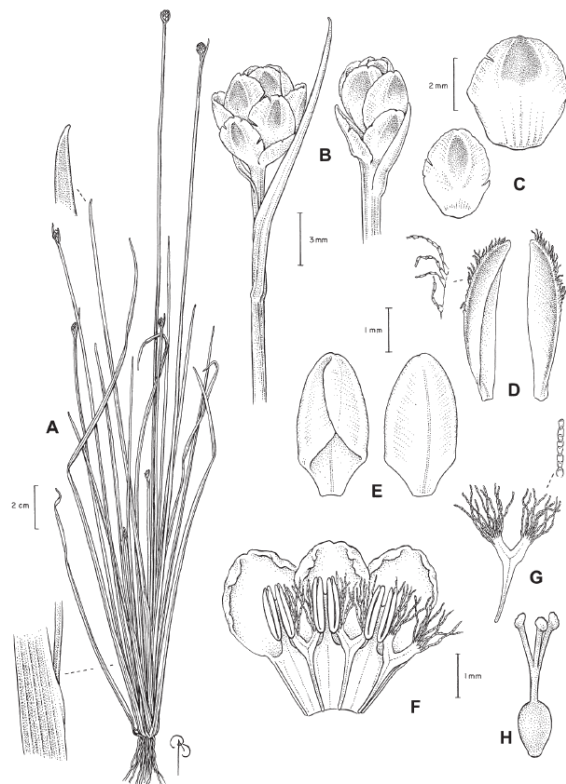


FIGURE 1. *Xyris bracteicaulis*. A, Habit, with detail of the inflorescence sheath. B, A spike with subtending bracts (left), and close-up with the lowest cauline bract removed (right). C, Floral bracts. D, Adaxial (lateral) sepals, abaxial (left) and adaxial (right) views, and detail of the fimbria. E, Abaxial sepal, adaxial (left) and abaxial (right) views. F, Corolla and androecium expanded. G, Staminoidea with detail of a moniliform hair. H, Gynoecium. Drawn by B. Angell from the holotype.

A new yellow-eyed grass, *Xyris bracteicaulis* (Xyridaceae) has been described by Dr. Lisa Campbell of the New York Botanical Garden. It is known only from a single historical collection from Lake Ronkonkoma on Long Island which also makes it a new endemic plant for the state. The Coastal Plain pondshore habitat in New York supports dynamic plant communities with species rare for the state. The new species is described, illustrated, and compared to morphologically similar specimens in the June 2011 issue (Vol. 16, No.1) of Harvard Papers in Botany.

The article is available for purchase at:

<http://www.bioone.org/toc/hpib/16/1>

# Selected Regional news and Happenings

## Finger Lakes Native Plant Society

### Upcoming Meetings



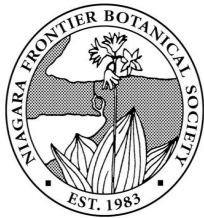
All FLPS presentations take place from 7-8:30 PM and are free and open to the public. The locations for the presentations will be held at the Ithaca Unitarian Church annex (corner of Buffalo and Aurora, enter side door of annex on Buffalo Street and go up the stairs). For more information, regarding the meetings and upcoming field trips and other events, contact [info@flnps.org](mailto:info@flnps.org).

**Wednesday, April 18-7:00pm:** Non-Native Species in Our Midst: A Curse or a Blessing?  
By Susan Cook

**Wednesday, May 16-7:00pm:** Tiny Mite Homes & Extrafloral Nectaries: The Miniature  
Drama on Your Garden's Viburnums by Marjorie Weber

## Niagara Frontier Botanical Society

### Upcoming Meetings



General meetings are held on the second week of each month, September--May, at the Harlem Road Community Center, 4255 Main St, (one block south of Main St.) in Snyder. All General Meetings are open to the public and free of charge. .

**May 8 7:30 p.m.** Dr. Mary Bisson, Professor of Biology at SUNY-Buffalo. Dr. Bisson will present a program on Charophytes, a group of algae, and describe their importance in our local ecosystems.

### Upcoming Field Trips

**Saturday, April 21 or 28 (TBD):** Heartland Nature Center, a 100-acre private preserve on the outskirts of Niagara Falls, Ontario, featuring areas of mature Carolinian forest, wetlands with boardwalk, and vernal pools. Meet at 9:00 A.M. under the Boulevard Mall sign on Niagara Falls Blvd. Bring passport & lunch. Leader: Joanne Schlegel, 835-6042.

**Saturday, May 21:** Turkey Point Provincial Park (near Long Point Ontario). Meet at 8:30 AM at Front Park adjacent to the Peace Bridge. Bring passport and lunch. This will be a trip to see rare Bird's-foot Violets in bloom. This date will be adjusted if the violets decide to bloom early. Leader: Joanne Schlegel, 835-6042.

**Saturday, May 26:** Harriet Hollister Spencer State Recreation Area, on west slope of Honeoye Lake. This will be a return trip to a place we raved about when we visited in October 2010. Meet at 8:30 A.M. in East Aurora at the parking lot that is behind the movie theatre on Main St. Bring lunch. Group leader: Michael Siuta, 822-2544.

**2012 Joint Field Meeting of the:  
Botanical Society of America, Northeast Section  
Torrey Botanical Society and the Philadelphia Botanical Club  
June 10 - 14, 2012 (Sunday-Thursday)  
Slippery Rock University, Slippery Rock, PA**

The 2012 Field Meeting will explore the botany of Western Pennsylvania near the Ohio border. We will be staying at Slippery Rock University. The program will include the usual three days of field trips and evening lectures. Accommodations will be in dormitory rooms mostly arranged in a variety of suites with two beds per bath, microwaves and refrigerator in each room. Linens will be extra or bring your own. The same rooms can be equipped as VP rooms with linens, TV, coffeemaker, alarm clock, ironing board and popcorn (!) for a higher price. See registration form for prices. Day-trippers are welcome but please contact us for price details.

Field trips by air-conditioned school buses will include Presque Isle State Park where there is one of the best preserved wetlands in Pennsylvania, sand dunes and dry sand plains along with shoreline on Lake Erie to sub-climax forest systems. It is also considered a birding paradise. Another trip will be Jennings State Park Environmental Education Center, a unique 300-acre prairie and forest ecosystem including a variety of prairie plants. Plans for the third day are incomplete at present.

Leaders will include Dr. James K. Bissell, curator of botany and director of conservation at the Cleveland Museum of Natural History and Steve Grund, botanist for the Western Pennsylvania Conservancy. For the cost of the field excursion, registration or further information: Contact Nan Williams, 413-339-5598 or E-mail: [nnwrowe@gmail.com](mailto:nnwrowe@gmail.com)

**Student Conference on Conservation Science New York (SCCS-NY)  
American Museum of Natural History, New York City  
October 10-12, 2012**

The American Museum of Natural History invites you to participate in the third annual Student Conference on Conservation Science-New York (SCCS-NY), to be held in New York City on October 10-12, 2012. The conference is designed for graduate students, post-doctoral fellows, and early-career professionals pursuing or considering the field of conservation science. (Undergraduate students conducting thesis-level research may also apply.) Meet with fellow conservation students and professionals from around the world to network, exchange ideas, and receive feedback from leaders in science, policy, academia, and management at one of the world's preeminent scientific and cultural institutions.

The 2012 SCCS-NY is hosted by the Center for Biodiversity and Conservation at the American Museum of Natural History (AMNH). Collaborating institutions include Cambridge University, Columbia University Earth Institute, Yale School of Forestry and Environmental Studies, and Princeton University.

To learn more, visit the SCCS-NY site at: <http://symposia.cbc.amnh.org/sccsny/>





### Lines Written in Early Spring

I heard a thousand blended notes,  
While in a grove I sate reclined,  
In that sweet mood when pleasant thoughts  
Bring sad thoughts to the mind.

To her fair works did nature link  
The human soul that through me ran;  
And much it grieved my heart to think  
What man has made of man.

Through primrose tufts, in that sweet bower,  
The periwinkle trailed its wreaths;  
And 'tis my faith that every flower  
Enjoys the air it breathes.

The birds around me hopped and played:  
Their thoughts I cannot measure,  
But the least motion which they made,  
It seemed a thrill of pleasure.

The budding twigs spread out their fan,  
To catch the breezy air;  
And I must think, do all I can,  
That there was pleasure there.

If this belief from heaven be sent,  
If such be Nature's holy plan,  
Have I not reason to lament  
What man has made of man?

- William Wordsworth

# Hot off the Presses

## **BARK: A Field Guide to Trees of the Northeast by Michael Wojtech**



Although there are many guides to aid in identifying trees by their leaves, and there are some that use twigs or fruit as methods for identification, few guides offer comprehensive help for the seasons in which leaves or fruit are absent. This new guide provides detailed information and illustrations that include many stages in the lifecycle of trees and a means of identification by using bark.

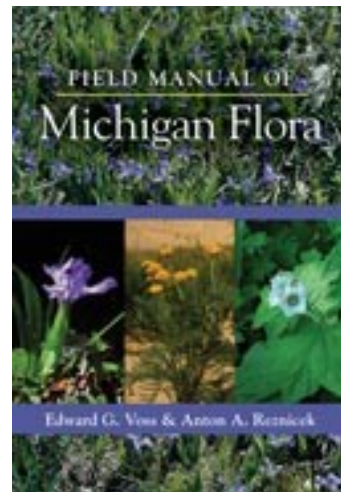
Chapters on the structure and ecology of tree bark, descriptions of bark appearance, an easy-to-use identification key, and supplemental information on non-bark characteristic is enhanced by inclusion of over 450 photographs, illustrations, and maps.

Pick up an autographed copy at a workshop on Saturday July 14th at the Mountain Top Arboretum in Tannersville, New York. For more information, see the author's website at: [www.knowyourtrees.com](http://www.knowyourtrees.com).

## **Field Manual of Michigan Flora Edward G. Voss and Anton A. Reznicek**

The *Field Manual of Michigan Flora* was released in February 2012, just days after botanists and friends around the world mourned the passing of lead author Edward Voss. Dr. Voss was professor emeritus of Ecology and Evolutionary Biology at the University of Michigan, curator emeritus of vascular plants at the University Herbarium, and a legendary teacher at the University of Michigan Biological Station. The volume was co-authored by Dr. Anton A. Reznicek, curator of vascular plants at the University Herbarium and world-renowned experts in plant systematics.

This book is the most up-to-date guide available for all seed plants growing wild in Michigan, but its appeal extends to systematic botanists and anyone interested in plant biodiversity. The relatively compact layout manages to incorporate 1008 pgs and 2,676 maps.



Field Manual of Michigan Flora can be ordered at the University of Michigan Press at:

<http://www.press.umich.edu/titleDetailDesc.do?id=345399>



Countless individuals and institutions have provided data, effort, and funding to make the New York Flora Digital Plant Atlas available, incorporating information from over 70 herbaria. Why not take advantage of this unparalleled resource and explore New York's floral riches by visiting the website at:

<http://newyork.plantatlas.usf.edu>

Please note that all programs and trips are posted on the NYFA calendar at:

<http://www.nyflora.org/calendar-of-events/>

Do you have a photograph, article or poem, or pondering that you would like to share with other NYFA members? We are always looking for interesting contributions for our newsletter and blog.

Please send your contributions and suggestions to:  
**EDITOR@NYFLORA.ORG**

### NYFA Board of Directors

David Werier – President: Term Expires: 2013  
Steve Young – Vice-President: Term Expires: 2012  
Kimberly J. Smith – Treasurer: Term Expires 2013  
Anna M. Stalter – Secretary: Term Expires: 2013  
Ed Frantz– Past President: Term Expires: 2013

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Aissa L. Feldmann - 2014  
Ed Frantz - 2013  
Eric Lamont -2013  
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Joseph M. McMullen - 2014  
Andrew P. Nelson - 2012  
Richard Ring - 2012  
Connie Tedesco - 2014  
Priscilla Titus - 2014  
Troy Weldy - 2012

### Go Green with an Electronic Newsletter

**PLEASE** consider receiving the NYFA newsletter electronically in .pdf format in order to cut down on our operating expenses and to minimize resource use. It is easy to switch; just send an e-mail to:

**membership@nyfa.org**

and put "NYFA electronic newsletter" in the subject line. **We appreciate your efforts** to save paper, money, and time by receiving your newsletter electronically. An electronic membership has the added advantage of delivery before paper copies are sent out and includes full color photographs. To date more than half of our members receive the newsletter electronically. In the future, we hope to convert most of our members to the electronic newsletter format!



## NEW YORK FLORA ASSOCIATION MEMBERSHIP FORM 2012

Annual Membership dues:

\_\_\_\_\_ New \$20

\_\_\_\_\_ Renewal \$20 per year

\_\_\_\_\_ New Student Members Free the First Year. School: \_\_\_\_\_

\_\_\_\_\_ Additional donation to support NYFA efforts like botany presentation awards and small grants.

\_\_\_\_\_ **Total \$**

Name: \_\_\_\_\_

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We encourage you to receive your newsletter electronically. If you can, please enter your email address here: \_\_\_\_\_

Check here if you already receive your newsletter electronically: \_\_\_\_\_

Make checks payable to the **New York Flora Association**

**We are only accepting credit card payments through PayPal at this time. If you would like to use a credit card, please use the link on our website: <http://www.nyflora.org/join-make-a-donation/>**

**Mail this form to: NY Flora Association, PO Box 122, Albany, NY 12201-0122**

*Thank you for supporting NYFA and the flora of New York State*



**NY Flora Association**

**PO Box 122**

**Albany, NY 12201-0122**

To: NYFA Member