



Quarterly Newsletter

New York Flora Association - New York State Museum Institute

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Climatically Buffered Wetlands in New York State: Implications for Climate Change and Conservation

By Patrick A. Raney, SUNY-ESF, Syracuse, New York

In the last few years researchers have documented many climate related changes in natural communities around the world. The impacts of these changes have manifested in the form of species range shifts, rapid evolutionary adaptations of some insects, extirpation of populations, and species extinctions (Parmesan, 2006). By the end of the century climate change is expected to outpace direct habitat loss as the number one cause of extinction globally (IPCC, 2007). Thus, the rapid pace of climate change has left conservationists with a difficult job ahead.

The conservation approach for climate change has been largely dominated by a focus on improving migration corridors so species may naturally move to appropriate climate spaces. It may be possible to improve the efficacy of these climate migration corridors with strategically focused climate research and subsequent land acquisitions. Research over the last forty years conducted primarily in Europe and North America suggests that some wetlands may naturally maintain biodiversity during times of large scale climatic changes.



Fens are biologically diverse wetlands fed by cold, mineral rich groundwater that may buffer these ecosystems from the effects of climate change. The groundwater discharge maintains significantly cooler temperatures within fens than in the surrounding mosaic of non-fen wetland and upland natural communities. As a result, some boreal species found much farther north and alpine species generally found at high elevation have persisted within these climatic refugia following post glacial warming over the last several thousand years. The persistence of these species provides some evidence that fens do not respond fully to regional climatic conditions and therefore may serve as important areas for the maintenance of populations during rapid climate change.

In collaboration with The New York Natural Heritage Program and The Nature Conservancy, my advisor, Donald J. Leopold and I have established a network of temperature sensors in four fens in Central New York to quantify the divergence of fen climates from those of the regional environment. Factors influencing the persistence of boreal and alpine plant species are also being investigated as these species usually respond rapidly to climate change. We are also developing models to project future climatic conditions within these fens.

In the next two years we plan to expand these fen climate models to include much of New York State, Pennsylvania and West Virginia. These fen climate projections will allow us to assess the probability for survival of many rare plant species and help to further facilitate prioritization of future conservation acquisitions.

While we are optimistic about the potential to improve migration corridors through acquisition of additional fens, many of these sites are isolated within agricultural areas and face a number of threats including alteration of hydrology and the spread of invasive species. If these sites are to contribute in a more meaningful way to the conservation arsenal to combat the effects of climate change, then increasing protection of these sites is a must.

Citations:

IPCC, 2007: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller eds.]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA

Parmesan, Camille. 2006 Ecological Responses to Recent Climate Change. Annual Review of Ecology, Evolution and Systematics Vol. 37 637-669.



Spreading Globeflower (*Trollius laxus*) occurs in rich fens and northern white cedar swamps throughout much of New York State.

IMPONDERABLES

No answers were sent in for Ruth Schottman's question last month: "Is there a height limit for woody vines that attach themselves to our trees; for example poison ivy, Virginia creeper, grapes. Does it vary from one species to another? What is presumed to be the limiting factor?"

In a quick literature search, I was unable to find the answer to Ruth's question; however, I did learn a few interesting things about vines. The longest known vines in the world are the Rattan palms which occur in the tropics. These species have flexible stems with thorns that hook onto taller plants and allow the palm to ride up the taller plants grow towards the sun.

Because vines usually lack the thick layer of stronger fibers surrounding vascular tissues that allow most woody plants to remain upright without support, they rely on specialized structures including thorns, tendrils, aerial roots, and adhesive hairs to attach them to other plants, rock faces, or structures. Other factors that affect a vine's ability to reach a certain height include availability of water, nutrients, light and support structures.

Most vines are dicots but a few are monocots, which are usually lighter and slower growing with the exception of the climbing palms.

If anyone has a better answer to Ruth's question, please send it to editor@nyflora.org

Questions for the next "Imponderables" column are also sought.



REGIONAL RARITIES



Green-gentian (*Frasera caroliniensis*), a species state-listed as threatened, is flowering in several western New York locations this summer. For more information about this species visit:

<http://newyork.plantatlas.usf.edu/Plant.aspx?id=1538>

Summer Thoughts

Ah, summer, what power you have to make us suffer and like it.

~Russell Baker

In June, as many as a dozen species may burst their buds on a single day. No man can heed all of these anniversaries; no man can ignore all of them.

~Aldo Leopold

Then followed that beautiful season...
Summer....

Filled was the air with a dreamy and magical light; and the landscape Lay as if new created in all the freshness of childhood.

~Henry Wadsworth Longfellow

A rainy day is the perfect time for a walk in the woods.

~Rachel Carson

CAREX LUPULIFORMIS: A VERNAL POOL SPECIALIST?

By Laurie Swift, New York Natural Heritage Program

Carex lupuliformis (false hop sedge), a rare plant in New York State, was found in three vernal pool complexes from three different counties in 2008. The New York Natural Heritage Program (NYNHP) ranks this species as G4, S2 meaning it is relatively secure globally but quite rare in New York. Plants were found at vernal pools in Wilcox County Park in Dutchess County, Highland Lakes in Orange County and Black Creek Forest in Ulster County. Previously, there were only 19 known occurrence of this species in New York State. This is the first known occurrence of this species in Dutchess County. Field work has begun for the 2009 growing season and it appears that *C. lupuliformis* has been found in another vernal pool. This time it was located in a vernal pool near the village of Nassau in Rensselaer County.



Vernal Pool, Dutchess County, with *Carex lupuliformis* scattered through the moist leaf litter.



Good habitat for *Carex lupuliformis* along the moist margins of a vernal pool.

The habitat that this species seems to prefer is the moist edge (not submerged) of vernal pools. These edges are usually somewhat barren of other species and the surface typically covered with leaf litter. The plant occurs singly and can be spaced about one to two meters apart from each other. This is a large *Carex* species with leaves over one cm wide and an inflorescence up 8 cm long. The stems of individual plants can be up to 1.2 m high. It can be confused for *C. lupulina* but the shape of the mature achene is diagnostic. It is best identified in late summer or early fall.

How many other vernal pools is this species in? Field work this coming summer by NYNHP biologists will focus on surveys of this plant at additional vernal pool sites.

UPCOMING EVENTS

GENERA QUEST 2009

If you weren't able to participate in the Mount Skylight Genera Quest Field Trip in June, you can assuage your envy by attending the upcoming events below:

Railroad Mills and Mendon Ponds, Rochester area

August 22, 2009. 9 AM-4 PM

Description: We will meet at the Burroughs Audubon Nature Club in the morning for a leisurely walk along an old railroad right-of-way full of interesting plants and 3 rare genera. In the afternoon we will hike around Mendon Ponds Park to see calcareous upland and kettlehole vegetation and search for the rare *Chamaelirium*. Trip will be limited to 25 people so you must pre-register to attend.

Directions: Exit Thruway exit 45 (I-490), then after toll booth exit immediately in right lane, turning right (north) on Rt. 96. Pass Eastview Mall. Approximately 2 miles after mall go under I-490 and Fishers Road is on left at traffic light (Lenel Systems on the right). Left on Fishers Road (bearing right at Y [Benson Road] staying on Fishers) approximately 1.5 miles. Right on Railroad Mills Road. Parking area for the Burroughs Audubon Nature Club at Railroad Mills is on right near bottom of hill and before creek.

Preparations: bring comfortable shoes for walking that may get wet. Pack a lunch and long pants and insect spray for the mosquitoes. Bring plenty of water and sunscreen if it's hot.

Registration: Contact Steve Daniel natdisc@rochester.rr.com. Phone 585-586-8250

Napeague Area, Long Island

September 12, 2009 9:30 AM-4:30 PM

Description: In association with the Long Island Botanical Society we will explore the beautiful beaches, dunes and swales of Napeague Beach State Park in the morning and continue with the dunes and salt marsh of Napeague Meadows State Park. We will look for the beach genera of *Ammophila*, *Cakile*, and *Salsola* and the dune and swale genera of *Hudsonia*, *Arctostaphylos*, *Polygonella*, *Rhexia*, *Pityopsis*, *Schizaea* and *Pseudolycopodiella* among others. In the marsh we should see the uncommon *Fimbristylis*, *Salicornia*, *Suaeda*, and *Sabatia*.

Directions: For the first stop take Montauk Highway east from Beach Hampton and go just under 1 mile from Cranberry Hole Road and park along the south side of Montauk Highway just after Whalers Lane. Our next stop will be Napeague Beach State Park where we will park on the south side of Montauk Highway 0.7 miles east of Shipwreck Lane at the park entrance sign and walk to the beach. After lunch at Hither Hills State Park Campground our third stop will be the salt marsh at Napeague Meadows State Park where we will park along Napeague Meadow Road just south of Cranberry Hole Road.

Preparations: Bring comfortable shoes for walking on sand that may get wet. Pack a lunch for Hither Hills and long pants and insect spray for the mosquitoes and ticks. Bring plenty of water and sunscreen if it's hot.

Registration: Contact Steve Young syoung@tnc.org Phone 518-588-8360.

NYFA WORKSHOPS

Grass Identification workshop at the Albany Pine Bush Saturday, August 1, 2009

As described in our last newsletter, Dennis McGee will be leading a grass workshop that will cover basic terminology and concepts necessary to identify grasses and use dichotomous keys. Half of the workshop will be indoors for presentation of the lecture and examination of specimens and the other half outdoors identifying local grasses. A ten power lens, note pad, and a basic understanding of field botany are recommended. Bring a bag lunch.

The workshop will be held from 9:00-4:00 at the Albany Pine Bush Discovery Center at 195 New Karner Rd., Albany NY 12205. The cost will be \$35 for NYFA members, and \$50 for non-members. To register please send a check made out to the New York Flora Association, 3140 CEC, Albany, NY 12230 and send an email to Connie Tedesco tedec117@oneonta.edu to confirm registration, for directions to the APB Discovery Center, or for any other information. Sign up soon for this unique opportunity to improve your identification skills!



Selected Regional Events

Field identification of Sedges (the genus *Carex*) of Northwestern Connecticut: a 2-day Workshop: July 7-8, 2009

This workshop will focus on field identification, ecology, and indicator value of wetland *Carex* species. The workshop will emphasize development of field identification skills, as opposed to collection and keying out of specimens in the lab. On the first day, we will visit wetlands in and around White Memorial Conservation Center, in Litchfield, CT. The second day will begin at Aton Forest, a research forest in Norfolk and Colebrook, CT, that is especially rich in northern-affinity wetlands, followed by visits to several calcareous wetlands in the marble districts of northwest Connecticut. Field days will begin at 09:00 and end ~18:00. There will be an optional lab session on the evening of the 7th, on the first floor of the dormitory at White Memorial Conservation Center. Enrollment is limited to 15 people, so those who are sure they want to take the workshop should contact Bill Moorhead (contact info below) as soon as possible to reserve their space.

For more information contact Instructor: Bill Moorhead, Consulting Field Botanist, 486 Torrington Rd, Litchfield, CT 06759. Telephone: 860-567-4920. Email: whmoorhead@optonline.net

The 5th Mid-Atlantic Exotic Pest Plant Council Conference August 11-12, 2009

Complicating factors in invasive plant management: Circumstances beyond our control?

The Mid-Atlantic Exotic Pest Plant Council (MA-EPPC) provides regional leadership to effectively address the threat of invasive plants to the native flora, fauna, and natural habitats of the Mid-Atlantic. The council coordinates regional efforts to gather and share information on the identification, management and prevention of invasive species, provide training and volunteer opportunities and to identify research needs. The Council is represented by members from Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia, and the District of Columbia.

Flora Association Annual Membership Meeting Recap

By David Werier

On May 16, 2009 NYFA held its annual meeting on a parcel of land owned by Joe McMullen that is adjacent to the Pharsalia State Wildlife Management Area in Chenango County, NY. A total of eight members attended. The business part of the meeting was intentionally kept short and mainly consisted of concluding the annual elections. While lunch was being prepared some of us started to botanize the immediate surroundings. An informal *Crataegus* sharing began in preparation for the NYFA *Crataegus* workshop with Arthur Haines, which was to be held in two weeks. Soon, numerous calls could be heard coming from the picnic area calling the wayward plant seekers to lunch. An exquisite lunch including a barbeque which had been prepared by Joe McMullen and Connie Tedesco was enjoyed by all.



Steve Young, Connie Tedesco, Don Windsor, Rich Ring, Joe McMullen, David Werier, and Joe O'Rourke botanizing the tip-up mounds and other interesting spots at NYFA's Annual Membership Meeting.

After lunch we headed out for an afternoon excursion. We started on Joe's land and continued into the wildlife management area. The area walked contains a very rich forested slope, a few forested seeps, a more acidic forested upper slope and summit, and a small swamp. A few highlights included seeing *Viola selkirkii*, *Panax quinquefolius*, *Galearis spectabilis*, and heaps of *Viola canadensis* in full bloom. A list of some of the species seen follows.

List of some of the species seen at the Flora Association Annual Membership Meeting

<i>Acer pensylvanicum</i>	<i>Dryopteris goldiana</i>	<i>Sambucus racemosa</i>
<i>Acer rubrum</i>	<i>Dryopteris intermedia</i>	<i>Scutellaria lateriflora</i>
<i>Acer saccharum</i>	<i>Epilobium parviflorum</i>	<i>Solidago caesia</i>
<i>Actaea rubra</i>	<i>Equisetum arvense</i>	<i>Solidago rugosa</i>
<i>Adiantum pedatum</i>	<i>Equisetum sylvaticum</i>	<i>Streptopus lanceolatus</i>
<i>Ageratina altissima</i>	<i>Erythronium americanum</i>	<i>Taraxacum officinale</i>
<i>Allium tricoccum</i>	<i>Eurybia macrophylla</i>	<i>Thelypteris noveboracensis</i>
<i>Amelanchier laevis</i>	<i>Fagus grandifolia</i>	<i>Tiarella cordifolia</i>
<i>Aralia nudicaulis</i>	<i>Fragaria virginiana</i>	<i>Tilia americana</i>
<i>Arisaema triphyllum</i>	<i>Fraxinus americana</i>	<i>Toxicodendron radicans</i>
ssp. <i>triphyllum</i>	<i>Fraxinus nigra</i>	ssp. <i>negundo</i>
<i>Asarum canadense</i>	<i>Galearis spectabilis</i>	<i>Trientalis borealis</i>
<i>Athyrium filix-femina</i>	<i>Galium triflorum</i>	<i>Trillium erectum</i>
ssp. <i>angustum</i>	<i>Gymnocarpium dryopteris</i>	<i>Trillium undulatum</i>
<i>Betula alleghaniensis</i>	<i>Huperzia lucidula</i>	<i>Tsuga canadensis</i>
<i>Brachyelytrum aristosum</i>	<i>Hydrocotyle americana</i>	<i>Uvularia grandiflora</i>
<i>Caltha palustris</i>	<i>Hydrophyllum virginianum</i>	<i>Uvularia sessilifolia</i>
<i>Cardamine diphylla</i>	<i>Impatiens capensis</i>	<i>Veratrum viride</i>
<i>Cardamine pensylvanica</i>	<i>Leersia virginica</i>	<i>Veronica chamaedrys</i>
<i>Carex appalachica</i>	<i>Lindera benzoin</i>	<i>Viola blanda</i>
<i>Carex arctata</i>	<i>Lycopus uniflorus</i>	<i>Viola canadensis</i>
<i>Carex bromoides</i>	<i>Maianthemum canadense</i>	<i>Viola cucullata</i>
<i>Carex communis</i>	<i>Malus pumila</i>	<i>Viola labradorica</i>
<i>Carex deweyana</i>	<i>Medeola virginiana</i>	<i>Viola pubescens</i>
<i>Carex gracillima</i>	<i>Milium effusum</i>	var. <i>pubescens</i>
<i>Carex gynandra</i>	<i>Mitchella repens</i>	<i>Viola pubescens</i>
<i>Carex laxiculmis</i>	<i>Myosotis</i> sp.	var. <i>scabriuscula</i>
var. <i>laxiculmis</i>	<i>Oclemena acuminata</i>	<i>Viola rostrata</i>
<i>Carex leptonevia</i>	<i>Onoclea sensibilis</i>	<i>Viola rotundifolia</i>
<i>Carex pedunculata</i>	<i>Osmunda cinnamomea</i>	<i>Viola selkirkii</i>
<i>Carex plantaginea</i>	<i>Osmunda claytoniana</i>	<i>Viola septentrionalis</i>
<i>Carex prasina</i>	<i>Ostrya virginiana</i>	<i>Viola sororia</i>
<i>Carex scabrata</i>	<i>Oxalis montana</i>	
<i>Carpinus caroliniana</i>	<i>Packera aurea</i>	
<i>Caulophyllum giganteum</i>	<i>Panax quinquefolius</i>	
<i>Chrysosplenium americanum</i>	<i>Panax trifolius</i>	
<i>Circaea lutetiana</i>	<i>Picea abies</i>	
<i>Coptis trifolia</i>	<i>Polystichum acrostichoides</i>	
<i>Cornus alternifolia</i>	<i>Prenanthes altissima</i>	
<i>Crataegus coccinea</i>	<i>Prunus pensylvanica</i>	
<i>Crataegus holmesiana</i>	<i>Prunus serotina</i>	
<i>Crataegus schuettei</i>	<i>Prunus virginiana</i>	
var. <i>cuneata</i>	<i>Ranunculus abortivus</i>	
<i>Danthonia compressa</i>	<i>Ranunculus caricetorum</i>	
<i>Dendrolycopodium obscurum</i>	<i>Ranunculus recurvatus</i>	
<i>Dennstaedtia punctilobula</i>	<i>Rubus allegheniensis</i>	
<i>Deparia acrostichoides</i>	<i>Rubus idaeus</i>	
<i>Dicentra cucullaria</i>	ssp. <i>strigosus</i>	
<i>Diphasiastrum digitatum</i>	<i>Rubus odoratus</i>	
<i>Dryopteris clintoniana</i>	<i>Rubus pubescens</i>	

HANDY RESOURCES

WRITTEN MATERIALS Two New Publications on *Carex*

*Wetland Carex of the
Upper Midwest*
by Linda Curtis 2006
\$22.95

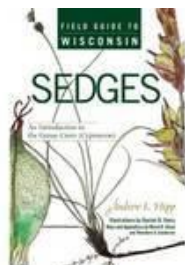
www.curtistothethird.com

&

*A Field Guide to Wisconsin
Sedges*

by Andrew Hipp,

Illustrations by Rachel D. Davis
University Of Wisconsin Press \$18.45



Sedges of the genus *Carex* are our most common sedges and any new guides that deal with them are always welcome, especially when it comes to understanding the wide variety of characters that are used to identify them. These two publications go a long way to providing that knowledge.

The Wisconsin guide uses watercolor illustrations and more technical language and keys, while the upper Midwest guide uses less technical terms (i.e. sac instead of perigynium) and photographs. It also shows more comparisons among species.

If you want to learn more about *Carex* species, I would recommend purchasing both of these guides. Most of the species included also occur in New York State.



Common Native Trees of Virginia

The Virginia Department of Forestry recently produced a booklet describing the most common native tree species found in Virginia's forests. This tool for tree identification uses non-technical descriptions, with images of leaves, twigs, flowers and/or fruit to aid in identification. It is available both as a free .pdf download at for a nominal cost of \$2.00 plus shipping from the Virginia Department of Forestry at: <http://www.dof.virginia.gov/info/index-forms-docs.shtml#Management>

AVAILABLE ON THE WORLD WIDE WEB



Between newsletters don't forget to check our New York flora blog to keep abreast of workshops, classes, find out what's blooming and what's invading, and to stay informed about other matters of our state flora that are not included in our newsletter because of time constraints. There are also links to other important websites that deal with our flora. You can access our blog at nyflora.wordpress.com

Update on Biodiversity Research Institute Program & Biennial Report, 2007-2008

A copy of the recently completed Biennial Report is now available as a pdf on the BRI website: <http://www.nysm.nysed.gov/bri/>.

The report highlights the activities of the past two years and provides a glimpse of what BRI plans to accomplish in the next few years.

Selecting Plants for Pollinators

The North American Pollinator Protection Campaign has put online the first of their series of ecoregional guides (using Bailey's Ecoregions) on plants for pollinators. See:

<http://www.pollinator.org/guides.htm>

ALERTS

Emerald Ash Borer Detected in New York State



The moment many of us have been dreading has arrived: the Emerald Ash Borer (EAB) was detected for the first time in New York State in an ash tree from a location near Randolph, in western Cattaraugus County. The detection of this insect is of grave concern because this beetle infests and kills all native North American ash tree species. According to a press release issued by NYS Department of Environmental Conservation and NYS Department of Agriculture and Markets, New York has more than 900 million ash trees, representing about seven percent of all trees in the state, and all are at risk should this invasive, exotic pest become established.

Many resources have quickly been mobilized in order to educate the public about this issue and a few of these are provided below.

- In response to the new detection, the NY Invasive Species Clearinghouse immediately produced a new EAB webpage at <http://nyis.info/Insects/EmeraldAshBorer.aspx>. The page contains links to numerous state, regional, federal, research and educational resources regarding the insect.
- An excellent identification brochure for the Emerald Ash Borer is available from the U.S. Forest Service at: http://www.fs.fed.us/r9/wayne/images/beaver_wildlife/What_is_the_Emerald_Ash_Borer.jpg
- A webinar presentation by Mark Whitmore of the Cornell University Department of Natural Resources about Emerald Ash Borer is available at <http://breeze.cce.cornell.edu/p16366720/>
- A multinational effort in Michigan, Illinois, Indiana, Kentucky, Maryland, Minnesota, Missouri, New York, Ohio, Pennsylvania, Virginia, West Virginia, Wisconsin, Ontario and Quebec to bring you the latest information about emerald ash borer is available at <http://www.emeraldashborer.info/index.cfm>

NYFA members can help by reporting observed damage to ash trees that is consistent with the known symptoms of EAB infestation by calling DEC at 1-866-640-0652.

“Rock Snot” is Becoming Established in New York State Streams

Didymo (*Didymosphenia geminata*), also known as "rock snot," is a non-native invasive algae that threatens aquatic habitat, biodiversity and recreational opportunities. Recently Didymo has been documented in five streams traversing three New York State Counties. Didymo is spread primarily by anglers, kayakers, canoeists, tubers, and boaters because the algae can cling to waders, boots, boats, clothing, lures, hooks, fishing line and other equipment and remain viable for several weeks under even in seemingly dry conditions. Unfortunately, there are currently no known methods for controlling or eradicating didymo once it infests a water body. For more information see: <http://www.dec.ny.gov/animals/54244.html>

Eastern North America Yarrow Study Needs Your Help

Assistant Professor Justin Ramsey from the University of Rochester is studying eastern North American Yarrow (*Achillea*) species. He would like to do some chloroplast sequencing and cytotyping of populations to distinguish native vs. introduced plants.

If interested people stumble across *Achillea* populations this spring/summer, he would like to incorporate their collections into his sampling. He would be interested in populations from natural grassland environments (alpine, lakeshores, rocky outcrops) as well as more disturbed areas (roadsides, old fields, ditches) throughout the northeast U.S. and Canada.

He is hoping to measure leaf/stem traits in a common garden experiment next summer so would be interested in live plants if possible—small leafy stems with a bit of rhizome and root material transport really well. He could provide collection suggestions, boxes and pre-paid FedEx receipts if that would be helpful.

Thanks again for any assistance you can provide and he will keep you informed of his findings regarding the eastern yarrows.

Justin Ramsey
Assistant Professor
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Fax: 585-275-2070
Email: justin_ramsey@mac.com
Website: http://web.mac.com/justin_ramsey/

Report on NYFA Board Elections

Election of members of the Board OF Directors was announced in the last NYFA Newsletter, and votes were received by mail and at the annual member meeting held May 16th. This was the second election under the bylaws adopted in 2008. The new slate of directors was unanimously approved. The two new members joining the board will be Richard Ring from the New York Natural Heritage Program and Christopher Martine from SUNY Plattsburgh.

NYFA is Seeking Member Involvement

As a member-owned, non-profit group dedicated to the promotion of field botany and greater understanding of the plants that grow in the wild in New York State, NYFA is dependent on member-involvement to make the organization vital and meaningful for all. A small number of dedicated volunteers devote their free time to ensuring that workshops and field trips are planned and offered to the membership, that the newsletters go out, and that the board of directors functions to maintain society business.

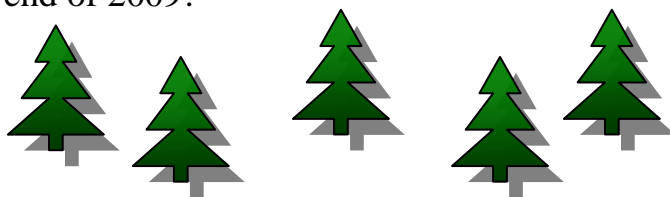
In the near future, the board would like to raise awareness regarding NYFA and the importance of New York State's native plants. To this end, we are seeking members who would be interested in developing educational materials and representing NYFA at regional events, or writing newsletter articles. In addition we are always seeking people who are willing to plan, organize or lead field trips, presentations and workshops. And finally, we welcome ideas from members to let us know how the society can better serve the membership. If you can offer to be more involved in NYFA affairs, please contact Ed Frantz at efrantz@dot.state.ny.us





Go Green with an Electronic Newsletter

If you don't need to renew at this time and would like to receive the newsletter electronically in .pdf format, please send an e-mail to young@nynhp.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, over 60 of our members (more than 30%) receive the newsletter electronically. We hope to convert most of our members to the electronic form by the end of 2009!



New York Flora Association Membership Form 2009

Annual Membership dues:

New \$20

Renewal \$20

New Student Members Free the First Year. School: _____

Additional donation to support NYFA's efforts like botany presentation awards and small grants.

Total \$

Name: _____

Address: _____

Address: _____

City: _____ State: _____ Zip Code: _____

I would like my newsletter electronically. email: _____

I receive my newsletter electronically

Make checks payable to the **New York Flora Association** and mail to:

NY Flora Association

3140 CEC, Albany, NY 12230

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