



# NYFA Newsletter

**New York Flora Association - New York State Museum Institute**

**Gerry Moore and Steve Young, Editors**

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## **Report on the Election of Board Members**

**By Andy Nelson**

Election of members of the Board of Directors was announced in the spring 2009 Newsletter. Voting began at the annual NYFA meeting, held during the Northeast Natural History Conference (April 17-18), and continued by mail and email until June 15. This was the first election under the newly adopted bylaws. The names of all current board members as well as those of potential new members were placed in nomination. The nominees were divided into three classes with terms expiring in 2009, 2010, and 2011 respectively. In future years, one third of the board will be up for reelection each year.

Voters approved the entire slate of nominees. The NYFA Board for the coming year is:

For a term expiring in 2009:

1. Robert Ingalls, Rensselaer Polytechnic Institute, Troy, NY
2. Andrew Nelson, SUNY Oswego (retired), Oswego, NY
3. Troy Weldy, The Nature Conservancy, Albany, NY
4. Steve Young, NY Natural Heritage Program, Albany, NY
5. Anne Johnson, field botanist, Lisbon, NY

For a term expiring in 2010:

1. Michael Corey, private consultant, Minerva, NY
2. Ed Frantz, NYS DOT, Utica, NY
3. Gerry Moore, Brooklyn Botanic Garden, Brooklyn, NY
4. David Werier, private consultant, Brooktondale, NY
5. Meg Wilkinson, NY Natural Heritage Program, Albany, NY

For a term expiring in 2011:

1. Bruce Gilman, Finger Lakes Community College, Canandaigua, NY
2. Joseph McMullen, Terrestrial Environmental Specialists, Inc., Phoenix, NY
3. Adam Ryburn, SUNY Oneonta, Oneonta, NY
4. Connie Tedesco, field botanist, Cooperstown, NY
5. Priscilla Titus, SUNY Fredonia, Fredonia, NY

In addition, three names submitted as write-ins each received a single vote and one received two votes. A total of 11 ballots were submitted.

## **New York Flora Association's Northeast Natural History Conference 2008 Botany Related Awards**

At the 2008 Northeast Natural History Conference, NYFA offered three awards: best botany related poster presentation, best student

botany related oral presentation, and best overall botany related oral presentation. The winners of (as well as those that received an honorable mention for) these awards are listed below along with their abstracts.

Congratulations to all the winners and those that received honorable mention!

### **Best Botany Related Poster Presentation**

#### **Winner:**

**Nathali Neal** -Predicting Carbon Exchange in the Red-Stemmed Moss, *Pleurozium schreberi*

Neal, Nathali, Jesse Mango, and Steven K. Rice (Union College, Schenectady, NY)

The red-stemmed moss *Pleurozium schreberi* contributes significantly to carbon balance in boreal forests, yet little is known about the range or underlying causes of variation in its CO<sub>2</sub> exchange. In vascular plants, leaf nitrogen concentrations positively associate with maximal net photosynthesis on an area basis (Aarea) due to the N requirement of photosynthetic metabolism. However, in mosses, the form of this relationship remains unknown. Since moss photosynthesis occurs in a region >5 cm thick, properties of the canopy that influence light attenuation and biomass distribution may impact rates of carbon uptake. We hypothesized that variation in plant N would have a positive relationship with Aarea, although the form of this relationship should be altered by the distribution of N within the moss canopy. To evaluate this hypothesis, we collected 26 samples of *P. schreberi* from northern New York and measured Aarea at optimal water contents in saturating light using a closed-chamber, IRGA-based system. Plant biomass (green and brown tissue separately), shoot area, light attenuation and N contents were assessed in whole canopies and at depth increments within the canopy. Aarea varied by over four-fold (2.2–9.2 μmol CO<sub>2</sub> m<sup>-2</sup> s<sup>-1</sup>). Stepwise multiple linear regression was used to

develop a predictive model of Aarea. The resulting model employed Amax on a mass basis (A<sub>mass</sub>), green and brown tissue weights and the light extinction coefficient and explained 93% of variation.

#### **Honorable Mention:**

**Connie Tedesco** - *Polemonium vanbruntiae* Britton (Jacob's Ladder) Pollination Trials and Point Quarter Transect Survey

Tedesco, Connie, Donna Vogler, and Jen-Ting Wang (State University of New York College at Oneonta, Oneonta, NY).

Although *Polemonium vanbruntiae* Britton (POLEMONIACEAE), Appalachian Jacob's Ladder, is considered to be a rare plant in the northeast United States, little is known about its pollination biology and population demographics. Compounding this problem is the lack of a consistent monitoring protocol for populations spatially and temporally. The population for this study, one of the largest and most robust in its range, is located at the Lordsland Preserve in Roseboom, NY, a Nature Conservancy site. Like many *P. vanbruntiae* populations this isolated wetland experiences beaver activity, periodic flooding, deer herbivory, and variable canopy cover and pollinator activity. Although the flower morphology, protandry, and pollinator activity indicate a primarily out-crossed species, the unpredictable environment and vegetative regeneration suggest a potential for self-pollination for reproductive assurance. Five pollination treatments including pollinator exclusion and hand pollinations were applied to 315 flowers to test this hypothesis. Results indicate that *P. vanbruntiae* is capable of some degree of autogamous selfing and that fruit set, seed number, seed weight, and seed germination rate of self- versus outcross pollinations were not significantly different. To quantify plant density, a point quarter transect survey was utilized. The estimated population

of 4,365 plants covered a 1200 m<sup>2</sup> area, 12% of which flowered in 2006. The ecologically distinct upper and lower sites varied in plant density and plant height. This survey method works well when monitoring populations under heterogeneous strata with a moderately clumped dispersion. *Polemonium vanbruntiae* Britton (Jacob's Ladder). Pollination Trials and Point Quarter Transect Survey.

and

**Steve Broyles** - Digital Field Guides: An Innovative Technology for Exploring Biology

Broyles, Steve, Jacquelyn Getman, Laurie Klotz, and Larry Klotz (SUNY Cortland, Cortland, NY)

Educational technology provides students with exciting opportunities for hands-on, student-centered learning in the sciences. We have developed innovative digital field guides for aquatic macro invertebrates, aquatic plants, trees, birds, and insects using personal digital assistants. The BIOWISE (<http://acs7.cortland.edu/biowise/>) Digital Field Guides provide students, educators, and field biologists with taxonomic keys, color photographs, glossaries, and audio files for classroom or field use. These educational tools are designed to improve student observational skills, to learn taxon specific terminology, and to facilitate environmental and ecological research projects. The BIOWISE Digital Field Guide software is free and may also be used from classroom computers. Educators interested in enhancing or providing a more structured exploration of the natural world will benefit from the Digital Field Guides.

**Best Student Botany Oral Presentation**

**Winner:**

**Sara Scanga** - How Do Light and Water Levels Affect a Rare Wetland Plant?

Scanga, Sara and Donald Leopold (SUNY College of Environmental Science and Forestry, Syracuse, NY)

*Trollius laxus* (spreading globeflower) is a rare, spring-blooming, perennial herb that occurs in open rich fens and northern white-cedar swamps. Previous studies at several sites have shown that light levels are associated with the vigor of *T. laxus* populations. However, the strength of this association has varied among sites, and observations indicate that the effect of light may be modified by water table depth. Here, we present the results of a two-year observational study conducted at a cedar swamp in central New York. At each of 30 *T. laxus* populations, we measured six variables related to plant vigor. We took hemispherical photographs over each population before and after spring leaf-out, and measured the depth to water at a subset (n=13) of the populations biweekly during the growing season. Of the six vigor variables, flower and stem counts showed the strongest positive associations with light. Overall, diffuse light had a greater effect on vigor than direct light, and despite the phenology of *T. laxus*, spring light did not show a stronger relationship with vigor than summer light. Conversely, spring water level was more strongly associated with stem and flower production than summer water level. We explore the impact on vigor of interactions between specific light and water variables. Our results will also be presented as they relate to observations from a canopy manipulation experiment conducted on *T. laxus* populations at the same site.

**Honorable Mention:**

**Caitlin Quinn** - Characterization of Autecological Requirements of *Carex* Species in Glen Meal State Forest

Quinn, Caitlin and Karl McKnight (St. Lawrence University, Canton, NY)

*Carex* is a large and important group of sedges, nevertheless there exists very little information about why these species grow where they do. By defining the autecological requirements necessary for *Carex* growth we can begin to suggest management policies necessary for *Carex* conservation, including habitat preservation and restoration. Toward this end we began collecting abiotic and biotic measures associated with each species found at Glen Meal State Forest (St. Lawrence County). Sedge densities were measured in one meter<sup>2</sup> focal plots centered around each sedge. Three associated subplots were put out at one, five, and ten meters from the focal plot. At this time other factors were also measured including: soil depth, light intensity, slope, canopy cover, nearest tree species, and density of other sedges in the plot. Soil samples were sieved and silt, sand, and organic matter fractions were weighed. Soil pH was also recorded. Before our research last spring it was thought that 14 *Carex* species occurred in the area. By the end of the summer we had identified 28 species, only six of which were on the original species list. We found differences in species preferences with respect to soil depth, percent of living cover, and various other biotic and abiotic factors that will be discussed at the Natural History Conference.

### **Best Overall Botany Oral Presentation**

#### **Winner:**

**Nishanta Rajakaruna** - Serpentine Outcrops of Eastern North America: Model Habitats for Geocological Studies

Rajakaruna<sup>1</sup>, Nishanta, Tanner B. Harris<sup>2</sup>, and Earl B. Alexander<sup>3</sup> (<sup>1</sup>College of the Atlantic, Bar Harbor, ME, <sup>2</sup>University of Massachusetts, Amherst, MA, <sup>3</sup>1714 Kasba Street, Concord, CA)

While much attention has been paid to serpentine outcrops worldwide, the literature on eastern North America is scant. Although outcrops in the region have been mapped, there have been few intensive mineralogical and pedological investigations. Soil analyses suggest elevated levels of Ni, near-neutral pH, and Ca:Mg <1, characteristic of serpentine soils worldwide. Botanical studies have largely focused on floristic surveys. To date, 750 taxa of vascular plants from 92 families have been reported. Two taxa, *Agalinis acuta* and *Schwalbea americana*, are federally endangered in the United States. Globally, *Adiantum viridimontanum*, *Minuartia marcescens*, *Pycnanthemum torrei*, *S. americana*, *Scirpus longii*, and *Symphytotrichum depauperatum* are listed as imperiled (G2) while *A. acuta*, is listed as critically imperiled (G1). *Cerastium velutinum* var. *villosissimum* is the only recognized serpentine endemic plant for the region, while *A. viridimontanum*, *Aspidotis densa*, *M. marcescens*, and *S. depauperatum* are largely restricted to serpentine. Based on current distributions, we propose that *A. viridimontanum* and *M. marcescens* be considered endemic to serpentine in eastern North America. Studies on cryptogams list 163 species of lichens and 146 species of bryophytes for the region. Compared to other regions of the world, ecophysiological and evolutionary investigations are limited. Plant-soil relations, especially the capacity to hyperaccumulate Ni and the ecological consequences of metal accumulation, are also under explored. One report from eastern Canada lists *Arenaria humifusa*, *M. marcescens*, *Packera paupercula*, and *Solidago hispida* as hyperaccumulating Ni, although the findings have yet to be confirmed. Overall, serpentine geocology in eastern North America remains largely unexplored.

## Honorable Mention:

**Nava Tabak** - Jewel or Weed: Research on an Early Detection Species

Tabak, Nava (Hudsonia Ltd., Red Hook, NY)

Research on the potential invasiveness of species that are not yet widespread in their introduced range can be particularly informative for resource managers who must prioritize invasive species control efforts. A study of the invasive potential of *Impatiens glandulifera* (Ornamental jewelweed) in New England provides an example of research methods that can be applied to such “early detection” species. Germination and growth characteristics of *Impatiens glandulifera*, an annual native to the Himalayan region, were experimentally compared with those of the common and widespread native congener *Impatiens capensis* (Spotted jewelweed). The two species had generally similar responses to light and moisture gradients, but *I. glandulifera* plants had greater above-ground biomass and relative growth rate, and survived drier soil conditions than *I. capensis*. *Impatiens glandulifera* seeds also had higher overall germination rates, and contrary to the seeds of *I. capensis*, were tolerant of desiccation prior to the necessary dormancy-breaking cold period. Large scale models using climatic variables and the plant’s current distribution in New England predicted a larger range than is currently known in these states. Observations of naturalized populations of *I. glandulifera* did not reveal any limiting factors such as heavy herbivory or a lack of pollinators. Given these results, it is likely that *I. glandulifera* will continue to expand its range in the northeast. While not a substitute for a precautionary approach to new plant introductions, such research can be invaluable for informing management decisions.

and

**Rebecca Jordan** - Using Citizen Scientists to Collect Plant Distribution Data in NY/NJ Forest Land

Brooks<sup>1</sup>, Wesley R., David T. Mellor<sup>1</sup>, Joan Ehrenfeld<sup>1</sup>, Edwin McGowan<sup>2</sup>, Edward Goodell<sup>3</sup>, and Rebecca Jordan<sup>1</sup> (<sup>1</sup>Rutgers University, New Brunswick, NJ, <sup>2</sup>Palisades Interstate Park Commission, Bear Mountain, NY, <sup>3</sup>New York New Jersey Trail Conference, Mahwah, NJ )

Citizen science experiences provide the general public with the opportunity to learn ecology in non-traditional settings.

We employed citizen scientists in a scientific study documenting the occurrence and habitat conditions of invasive plant species in Northern New Jersey and Southern New York. We studied both ecological learning and invasive plant distribution along trails. Specifically, we investigated the change in knowledge about plant invasions and related ecosystem concepts. Data were collected through the use of questionnaires that combined Likert-type questions with open-ended responses. Qualitative analysis followed standard methods of verbal data categorization. In addition, we collected distribution data from 88 miles of trail. With these data, we analyzed participant accuracy and we generated a predictive multivariate model of plant invasion. While participants were initially limited in their foundational knowledge about ecosystems and plant invasions, we found them to be particularly motivated to find solutions to environmental problems. By the end of the study, however, these participants felt less able to contribute to problem solutions. In spite of this loss in efficacy, we found these participants were able to collect accurate data sufficient for the generation of our predictive model. Our model along with its implications will be discussed with respect to future ecologically-oriented citizen science programs.

**The Rare Hart's-tongue Fern  
First Discovered in North America  
200 Years Ago in Onondaga County,  
New York**

**by Joseph M. McMullen  
Terrestrial Environmental Specialists, Inc.  
Phoenix, New York**

On July 20, 1807, just over 200 years ago, a young German botanist named Frederick Pursh discovered Hart's-tongue fern (*Asplenium scolopendrium* var. *americanum*) in Onondaga County, New York. It was the first discovery of the species in North America. Hart's-tongue fern remains today as one of the rarest ferns in North America. It is the only fern species listed in New York under the federal Endangered Species Act. Incredibly, after over 200 years, the largest population of the species known to occur in the United States remains in Onondaga County, New York.

In 1807 Frederick Pursh, a friend of Dr. Benjamin S. Barton of Philadelphia, embarked on a botanical exploration of the northeastern portion of Pennsylvania and New York State under Dr. Barton's direction. Pursh's journal, which detailed his exploits, was discovered many years later among papers accompanying the herbarium of Dr. Barton given to the American Philosophical Society. It was discovered by William Beauchamp, the acting librarian of the Society, who first published the

journal in 1869 as "*Journal of a Botanical Excursion in the Northeastern Parts of the States of Pennsylvania and New York during the Year 1807*" (Beauchamp 1869).

Beauchamp published the journal as written stating that:

"To alter and anglicize its idiomatic phrases-to correct the many misspelt words, or change the structure of the sentences, would deprive it of half its interest. I therefore purpose giving it

*verbatim et literatim*, and conceive the perusal cannot fail to please, amuse, and instruct."

Pursh started his journey in Philadelphia, leaving there on May 27, 1807.

"At 4 o'clock this morning we left Philadelphia, the stage being remarkable full of passengers and goods, which made it very disagreeable travelling; the road about 25. m. from the city got bad and hilly; we brok down the stage twice, but lukyly without any injury to us; arrived at 10 o'clock in the evening at Easton. Took up lodging at Abraham Horn's Sign of the Golden Swan."

Pursh traveled up through northeastern Pennsylvania into New York, spent about two months in central New York in Onondaga and Oswego Counties, made his way east across New York to Saratoga and Fort Ann at the southern end of Lake Champlain and then to Rutland, Vermont. In late September, out of money and in need of warmer clothes, he sold his "fowling piece" (a shotgun carried by many early scientists, including Audubon, to shoot birds for food and identification). He left Rutland on September 23 and traveled south to Troy, Catskill, Kingston, and arrived in New York City on October 1. He then traveled by boat back to Philadelphia going ashore on October 5, 1807, ending an incredible four month journey of botanical excursion.

Anyone interested in the botanical history of New York should review Pursh's journal. It is not only informative about the plants he encountered, but it is also instructive as to the means of travel and conditions of the time. He traveled by horseback, wagon, carriage, and boat, but walked a considerable amount of the time.

"No boat being ready to go this morning, I took my way on foot as far as Liverpool, 3 miles; the road was good and I was acquainted with it; here I took breakfast; and from here a path

beginns, cut through the woods, leading down the river to Oswego.”

Pursh documented many plants along the path of his journey and sent many specimens back to Barton. Although he didn't realize it at the time, his most significant find was the discovery of Hart's-tongue fern in Onondaga County, where he arrived by stage on July 10, 1807.

“I concluded to take a seat in the stage, which would bring me to Onondaga this night yet, which I would not have been able to accomplish until tomorrow night, the distance being 22 or 23 miles. Here I observed the first plants of the *Myosotis lappula* for this season, growing along the road side in great plenty as a common weed. At Skeneatiles lake we took dinner. This is a most charming situation. At evening we arrived at Onondaga Hollow.”

While in Onondaga County, Pursh spent time with Squire Geddes (James Geddes, father of the Town of Geddes) and Ephraim Webster. He was quite interested in the salt springs around Onondaga Lake and the salt marshes found there. He noted many species from these areas. Pursh was also interested in the Onondaga Native American names and uses of plants.

On July 20, 1807, Geddes took Pursh to an area of jumbled limestone rock west of Onondaga Lake; an area now called Split Rock.

“Mr. Geddes brought me to a deep valley about 1 m. from his house, where we ascended a steep, very rocky hill; here large masses of rocks seem to be piled up, or tumbled over one and another in such a confused manner, that it has left large chasms between them, which sometimes appear like caves: as it has a north aspect and overshadowed with trees, all the rocks are covered with moss and vegetables: and I suppose this must be a very interesting place for the botanists in the spring; the walking is

very precarious, as, in some places, large holes are hid by weeds and bushes, and every step one is in danger of breaking a leg or falling into a gulph.”

In this treacherous, jumbled valley, Pursh recorded many common species in a very scientific manner.

“...the blue Cohosh likewise grows in plenty here: *Xylosteum tartaricum* is in abundance, *Ptelea trifoliata*, *Geranium Robertianum*, *Lonicera glauca*, with very narrow leaves, *Taxus baccata* or *procumbens*, called Ground Hemlock-*Polypodium Dryopteris*, -a species of *Clematis* seemingly new to me...”

Among his notations, in a matter-of-fact manner he wrote:

“*Asplenium rhizophyllum*, and what I thought the most of, *Asplenium Scolopendrium*. -This fern, which I don't find mentioned by anyone to grow in America I allways had a notion to be here; and indeed I was quit enjoyed to find my prejudice so well founded in truth. It appears to be the same as the european, only smaler; is the european auriculated at the base, like this species? The Choak cherry is plenty on these rocks...”

While Pursh does state that *Asplenium scolopendrium* is a find he thought most of and that no one had mentioned it from America, his account of this discovery is rather mundane; a species noted in passing among the plentiful “choak” cherry.

Hart's-tongue fern (*Asplenium scolopendrium* L. var. *americanum* (Fern.) Kartesz and Gandhi [syn. *Phyllitis scolopendrium* var. *americana*]) is a pteridophyte in the family Aspleniaceae and is rare throughout its range in North America. It is so named because the frond apparently resembles a Hart's (a male red deer) tongue. It was formally separated as a variety from the European species by Fernald (1935)

based on several morphological features, with the American variety later found to differ by being tetraploid (Britton 1953). It is listed as threatened under the federal Endangered Species Act, and as threatened in New York under the Protected Plant Act (Section 9-1503 of the Environmental Conservation Law). The New York Natural Heritage Program lists it in the state at an S2 level (6-20 sites or few remaining individuals) (Young 2007).

According to Steve Young, given the extremely limited habitat, small population size of most occurrences, and high threat from both invasive species and development, a Heritage rank of S1 and state protection status of endangered may be justified. New York certainly bears the greatest responsibility for conserving this species' presence within the United States.

Hart's-tongue fern is easily recognized from any other fern in the northeast. It has large, shiny, leather-like, strap-shaped, evergreen fronds. As Pursh noted, it has an auricled base; it also has a scaly stem. When I see it, I think it resembles the house plant known as "mother-in-law tongue" or the sword ferns found in bald cypress sloughs in Florida.

According to the Recovery Plan for the species (USFWS 1993), Hart's-tongue fern is known from 21 locations in the United States (2 in Alabama, 1 in Tennessee, 6 in Michigan and 12 in New York), although some of these records may no longer be extant (USFWS 1993). Others have reported a total of 16 locations in New York, which would make a total of 25 locations in the United States. The New York stations are in Onondaga and Madison Counties and represent the largest populations in the United States. It is also known from Canada, particularly in Grey and Bruce Counties, Ontario (Argus and Pryer 1990); most of the world's population exists in the province where there are approximately 70-80 occurrences (Austen 1990).

Hart's-tongue fern only occurs on or in close association with dolomitic limestone (limestone high in magnesium) and appears to require high humidity, shaded conditions, and a moist substrate (USFWS 1993). In the southern portion of its range, it only occurs at the mouth of limestone caves or pits that trap cool air. Habitat characteristics and vegetation associated with Hart's-tongue fern in central New York are presented in Cinquemani-Kuehn and Leopold (1993).

The several populations of Hart's-tongue in central New York vary from a few plants to an impressive expanse covering an amphitheater-shaped limestone slope. The populations are well known and have been intensively studied and counted over the years. They are documented in several publications (e.g., Benedict 1914, Hunter 1922, Faust 1960, and Cinquemani-Kuehn 1992) and tracked in detail by the New York Natural Heritage Program from information provided by Don Leopold of SUNY ESF and his graduate students. In the summer and fall of 1990 the New York Natural Heritage Program sponsored a search for new populations by Don Leopold. Twenty-six likely sites in Onondaga, Oneida, and Madison counties were thoroughly searched, but no new populations were found (Leopold 1990).

According to Don Leopold and Steve Young, the type locality at Split Rock and at least one of the six populations at Clark Reservation are now threatened by the invasion of black swallowwort and control measures are presently being considered. The remaining populations are also being monitored to prevent their extirpation by black swallowwort.

Once about 25 years ago I was out botanizing with Anne Johnson and Barbara Root in an undisturbed portion of a highway right-of-way and I "discovered" a few Hart's-tongue fern plants growing 2 or 3 feet below the surface in a crevice of fractured limestone. Thinking that I had found a new population, I relayed the



siting to Mildred Faust. She, of course, knew the exact location of this small population and was pleased to know that it had persisted over the years.

I guess we can't all have the opportunities of making discoveries like Frederick Pursh, but like most of you, I continue to look for new botanical finds.

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## Report on the 2008 Violet Workshop May 9-11

By Steve Young

Dr. Harvey Ballard led this excellent workshop in the Ithaca area from May 9-11, organized by David Werier. Eleven participants enjoyed an evening and full two days of seeking out and identifying scores of violet species and hybrids. We also enjoyed a delicious dinner at a Thai restaurant in Ithaca on Saturday night. Participants were Martha Grow, Anne Johnson,

Susan Lorbeer, Rich Ring, Kim Smith, Elizabeth Spencer, Andrew Stuart, Connie Tedesco, David Werier, Robert Wesley, and Steve Young.

On Friday evening Dr. Ballard gave an illustrated talk about the different species in New York and described the characters identifying each one. He also handed out a new key for the species in New York, something members will want to have on hand next spring. It will be available on our new website as soon as the redesign is complete, hopefully by the end of the year.

We began our trip in the fields and woods behind the Hospice and Home Care Center at 172 E. Kings Rd. Here we saw the following species (followed by their GPS locations in UTM coordinates zone 18, first East than North).

*Viola sagittata* var. *ovata* 377529, 4695907 and 377672, 4696511

*Viola septentrionalis* 377612, 4696279 and 377672, 4696511

*Viola subsinuata* 377605, 4696172

Next we visited Buttermilk Falls State Park and saw good diversity of species along with beautiful stands of bluebells and other spring wildflowers. After getting together at the parking lot and looking at *Viola sororia*, we followed the creek upstream and looked at violets along the floodplain, had lunch by the creek, then followed the upland trail back down to the parking lot. Along the loop trail we saw:

*Viola labradorica* (*conspersa*) 375621, 4696159

*Viola rostrata* 375569, 4696002

*Viola x brownei* (*rostrata x striata*) 375560, 4695948

*Viola pensylvanica* 375555, 4695929

*Viola striata* 375521, 4695898

*Viola canadensis* 375502, 4695796

*Viola x eclipes* (*labradorica x striata*) 375502,

4695796, lunch spot at the creek

*Viola blanda* var. *palustriformis* 375489, 4695713, upland woods

*Viola x malteana* (*labradorica x rostrata*) 375482, 4696237

During the afternoon we followed the trail across the road down to Owl Gorge to look for *Viola reniformis*. Along the trail down we saw more *Viola sororia*, *Viola septentrionalis*, *Viola rostrata* and the white flowered *Viola sororia* (forma *priceana*, 375148, 4697245). In the Gorge we saw *Viola selkirkii* at 375245, 4697124 but no *Viola reniformis*.

Around five in the afternoon we stopped at Alan Treman State Park and looked at some interesting violets on the slopes above the parking lot at 371819, 4695232. We saw *Viola subsinuata*, *Viola palmata* and *Viola sororia*. Many leaves showed a diversity in lobing leading Dr. Ballard to think there may be a hybrid swarm here.

On Sunday morning we began our trip at the Ringwood Reserve which contains a variety of upland and wetland habitats. Here we saw:

*Viola labradorica* 387747, 4700644

*Viola pubescens* 387724, 4700648

*Viola cucullata* 387697, 4700616

*Viola rostrata* 387684, 4700624

*Viola blanda* 387626, 4700625

*Viola rotundifolia*, early flowering with purple black capsules 387620, 4700564

We ended our trip at Hammond Hill State Forest where we saw *Viola septentrionalis* and *Viola cucullata* along the roadside at 393843, 4699591. The *Viola cucullata* had us fooled because of its location on a roadside instead of its usual wetland habitat.

Thanks go to Dr. Ballard and David Werier for organizing a beautiful and informative workshop. We look forward to another one sometime in the future.



**Participants of the 2008 violet workshop, left to right: kneeling, Bob Wesley, Harvey Ballard; standing, Rich Ring, Kim Smith, Susan Lorbeer, Elizabeth Spencer, Steve Young, Andrew Stewart, David Werier; sitting, Anne Johnson, Martha Grow, Connie Tedesco**



**Running the violets through Harvey's key**



***Viola striata* at Buttermilk Falls State Park**

## Telling *Impatiens* Without Flowers

By Steve Young

The difference between *Impatiens capensis* (spotted jewelweed) and *Impatiens pallida* (pale jewelweed) is often hard to discern when they are only in leaf, especially early in the season. However, if you count the number of teeth on the margin of the leaves *I. capensis* usually has up to nine teeth and *I. pallida* usually has ten or more. For me this difference seems to hold up. See if it does for you.



Leaf of *Impatiens capensis* with 8 teeth.



Leaf of *Impatiens pallida* with 16 teeth

## Report on the Sedge Workshop

July 9-11

by Steve Young

Participants included Steve Young, Ed Frantz, Alidia Gerritsen, Anne Johnson, Bob Ingalls, David MacDougall, Donna Vogler, Jillian Post, Karl McKnight, Kim Smith, Lemuel Hegwood, Martin Crosson, Matthew Seranno, Mark Burnham, Rich Ring, Rick Koval, Nancy Eldblom, Rocky Gleason, and Judy Sullivan.

Dr. Tony Reznicek offered up another excellent sedge workshop, this time in beautiful Lewis and St. Lawrence counties. The sold-out workshop began with a keying session the evening before our first day in the field. This was really helpful to all of us who saved up a bunch of *Carex* specimens that we couldn't identify during the field season.

On Thursday morning we began our field studies along the Grasse River near Potsdam where we explored the floodplain meadow vegetation and the adjacent uplands (species followed by a GPS location in UTM zone 18, first east then north). Here we saw:

at GPS point 505687, 4974279

*Carex lacustris*

*Bolboschoenus fluviatilis*

*Scirpus microcarpus*

*Scirpus cyperinus*

*Carex grayii*

*Carex cristatella*

*Carex bromoides* 505639, 4974241

*Carex radiata* 505639, 4974241

*Carex rosea* 505581, 4974207

*Carex crinita* 505585, 4974190

*Eleocharis palustris* 505649, 4974182

*Eleocharis erythropoda* 505649, 4974182

*Eleocharis acicularis* 505649, 4974182

*Carex emoryi* 505659, 4974197

*Carex tribuloides* 505744, 4974309

From the river we travelled north to Robert

Moses State Park at the St. Lawrence seaway where we had a picnic lunch. From the parking lot we entered the woodland trail and followed it west to an open field. This section had:

*Carex scoparia*  
*Carex vulpinoidea*  
*Carex tenera*  
*Carex tribuloides*  
*Carex gracillima* 513090, 4982077  
*Carex rosea*  
*Carex arctata*  
*Carex normalis* 513059, 4982235  
*Carex peckii* 512830, 4982519  
*Carex blanda* 512826, 4982523  
*Carex sparganioides* 512822, 4982529  
*Carex pallescens* 512810, 4982523  
*Carex digitalis* 512740, 4982519  
*Carex laxiflora* 512724, 4982518  
*Carex deweyana* 512716, 4982513  
*Carex pedunculata* 512602, 4982447  
*Carex alopecoidea* 512433, 4982320  
*Carex pensylvanica* 512397, 4982377

From here we walked down the slope to the rich wetland areas along the river and walk east to our starting point. Along the river we saw:

*Schoenoplectus pungens* 512404, 4982417  
*Carex viridula*  
*Carex stricta* 512449, 4982436  
*Carex buxbaumii* 512452, 4982438  
*Carex aquatilis* 512621, 4982529  
*Carex pellita*  
*Carex aurea* 512741, 4982569  
*Carex hystricina*

On Friday we made our way south from Potsdam to Hogsback State Forest with a stop at the Fullerville sands where we saw *Carex tonsa* and *Cyperus lupulinus* var. *macilentus*. GPS point 471831, 4900914.

At the State Forest we hiked down through the forest from the road, got lost for a while, but finally reached the beautiful inland poor fen at Fitzgerald Pond. In the forest there was:

*Carex plantaginea* 467364, 4882357  
*Carex pedunculata*  
*Carex projecta* 467178, 4882394  
*Carex crinita* 467178, 4882394

Once in the fen we saw:

*Eriophorum virginianum* 467447, 4882603  
*Eriophorum vaginatum*  
*Carex exilis* 467444, 4882605  
*Carex pauciflora*  
*Carex lasiocarpa*  
*Trichophorum alpinum* 467471, 4882610  
*Carex chordorrhiza* 467491, 4882598  
*Carex limosa*  
*Carex diandra*  
*Carex leptalea*  
*Carex interior* 467605, 4882632

After we made our way back to the road in the State Forest we had a quick lunch and drove to Bonaparte Swamp, a short distance away. We walked north on the railroad into this beautiful complex of swamp, marsh, and fen. Besides a nice stand of native Phragmites we observed:

*Eriophorum gracile* 470619, 4887356  
*Eriophorum viridicarinatum* 470776, 4887442  
*Rhynchospora alba* 470847, 4887473  
*Carex tenuiflora*  
*Carex flava*  
*Carex hystricina*  
*Carex bebbii*

In addition to all of the great sedges we saw there were many other beautiful wildflowers to see including 17 species of orchids, one of them rare (*Listera australis*) and one of them exotic (*Epipactis*). Many thanks to Ed Frantz and Ann Johnson for all their work setting up the workshop and to Tony Reznicek for his unparalleled expertise in the knowledge and teaching of sedges. Videos of Tony describing some of the species on our trip will be available in the future. We will let you know when and how those become available.



**Participants from left to right: Martin Crosson, Mark Burnham, Jillian Post, Kim Smith, Nancy Eldblom, David MacDougall, Rick Koval, Judy Sullivan, Rich Ring, Lemuel Hegwood, Bob Ingalls, Rocky Gleason, Tony Reznicek, Donna Vogler, Karl McKnight, Ed Frantz, and Anne Johnson. Photo by Steve Young.**



**Classroom instruction at SUNY Potsdam**



**IDing sedges at the Fullerville Sands**

## 2008 New York Rare Plant Status Lists Available

By Steve Young, New York Natural Heritage Program

There have been 26 changes in status and nomenclature since the June 2007 Rare Plant Status Lists were published. The new lists are available at:

<http://www.dec.ny.gov/animals/29396.html>.

See the changes on page viii.

You may also obtain a hard copy by emailing a request to Steve at [syoung@tnc.org](mailto:syoung@tnc.org) or by phone at 518-402-8951.

## Report on Genera Quest 2008

by Steve Young

South of the Glen, Warrensburg June 7

Participants included Steve Young, Anne Johnson, Kim Smith, Julie Lundgren, Evelyn Green, Bob Fisher and Bibi Wein.

It was a hot and humid day with thunderstorms in the forecast which never really materialized. We started at Warrensburg Park and explored the ice meadows on the east side of the river before driving over to the Nature Conservancy meadows on the west side. I had compiled a list of species we might see from past surveys and we were able to find 14 additional species for the list! We saw a total of 91 genera along the ice meadows and the trail to the parking lot. A great start in our quest to see all the genera of New York. After the ice meadows Evelyn Green, Kim Smith, and Steve Young hauled Hornbeck boats to an isolated pond where we paddled to a beautiful inland poor fen and added *Arethusa*, and *Menyanthes* to the list.

### New York Rare Plant Status Lists June 2008

Edited by Stephen M. Young



*Silene caroliniana* ssp. *pennsylvanica*

 New York Natural Heritage Program  
A Partnership between The Nature Conservancy and the NYS Department of Environmental Conservation  
625 Broadway, 5th Floor Albany, NY 12233-4157 (518) 402-8955 Fax (518) 402-8923 www.nyhsp.org



*Arethusa bulbosa* at the pond near  
The Glen

**Genera seen at The Glen included:**

*Acer*  
*Achillea*  
*Alnus*  
*Amelanchier*  
*Andropogon*  
*Anemone*  
*Antennaria*  
*Aquilegia*  
*Aralia*  
*Arctostaphylos*  
*Arethusa*  
*Arisaema*  
*Asclepias*  
*Betula*  
*Calystegia*  
*Campanula*  
*Carex*  
*Ceanothus*  
*Celastrus*  
*Centaurea*  
*Cicuta*  
*Cladium*  
*Clematis*  
*Clintonia*  
*Comandra*  
*Comptonia*  
*Cornus*  
*Dasiphora*  
*Dichantheium*  
*Drosera*  
*Dryopteris*  
*Eleocharis*  
*Equisetum*  
*Euthamia*  
*Eutrochium*  
*Fagus*  
*Fragaria*  
*Fraxinus*  
*Geranium*  
*Glyceria*  
*Helianthemum*  
*Helianthus*  
*Hemerocallis*  
*Houstonia*  
*Hydrocotyle*  
*Ilex*  
*Iris*  
*Leucanthemum*  
*Lysimachia*  
*Maianthemum*  
*Minuartia*  
*Myrica*  
*Oenothera*  
*Osmunda*  
*Oxalis*  
*Parthenocissus*  
*Pinus*  
*Plantago*  
*Poa*  
*Polygala*  
*Populus*  
*Potentilla*  
*Prunus*  
*Quercus*  
*Rosa*  
*Rubus*  
*Sanguinaria*  
*Sanguisorba*  
*Sarracenia*  
*Saxifraga*  
*Scirpus*  
*Scleria*  
*Sisyrinchium*  
*Smilax*  
*Solidago*  
*Spiraea*  
*Thalictrum*  
*Thelypteris*  
*Thuja*  
*Toxicodendron*  
*Triadenum*  
*Triantha*  
*Trichophorum*  
*Tsuga*  
*Turritus*  
*Utricularia*  
*Vaccinium*  
*Veratrum*  
*Verbascum*  
*Viburnum*  
*Viola*  
*Zizia*



## Alley Pond Park, Queens July 26

Participants included Cesar Castillo, Rose Chin-Hong, Lorraine Cohen, Barbara Connolly, George Dadone, Virginia Dankel, Aline Euler, Andy Greller, Donald House, Rich Kelly, Gillian Nemheart, Leonard Miller and Steve Young.



**Participants of July 26 Genera Quest trip to Alley Pond Park, Queens. From left to right: Cesar Castillo, Gillian Nemheart, Andy Greller, Donald House, Aline Euler, Barbara Connolly, Steve Young, and Rich Kelly.**

This group was really fired up to see if Alley Pond could become the site where the most genera could be seen. We started the morning on the trails around the Alley Pond Environmental Center and saw a large number of genera in a variety of habitats including freshwater and saltwater wetlands. After a brief break we took Northern Blvd. across the Cross Island Parkway to Oakland Lake along 23rd St. We walked the trail around the lake and again saw a large number of genera in the wetlands and the surrounding upland. Around 5 p.m. we started walking south from Oakland Lake on the trail along the Cross Island Parkway and, after crossing the bridge over the Long Island Expressway, we walked through the mature forest to the kettlehole ponds at the south end of the park. We were able to see some spring wildflowers still holding on like trillium and bloodroot and each kettlehole pond had its own distinct assemblage of vegetation. Seven hardy souls finished the warm and humid day around 7 p.m., ending about 10 hours of an exciting and fruitful trip. We were able to see a total of 242 genera, an amazing total that sets the standard for the rest of our quest. The park is a great place to see many interesting plants in an area where it's possible to imagine you're not in the middle of the largest metropolitan area in the country.

**Genera seen at  
Alley Pond  
included:**

*Acalypha*  
*Acer*  
*Achillea*  
*Actaea*  
*Aesculus*  
*Ageratina*  
*Agrostis*  
*Ailanthus*  
*Ajuga*  
*Albizzia*  
*Alliaria*  
*Allium*  
*Alnus*  
*Amaranthus*  
*Ambrosia*  
*Amelanchier*  
*Ampelopsis*  
*Apios*  
*Apocynum*  
*Aquilegia*  
*Aralia*  
*Arctium*  
*Arisaema*  
*Artemisia*  
*Atriplex*  
*Baccharis*  
*Barbarea*  
*Berberis*  
*Betula*  
*Bidens*  
*Boehmeria*  
*Cabomba*  
*Callitriche*  
*Calystegia*  
*Carex*  
*Carpinus*  
*Carya*  
*Catalpa*  
*Celastrus*  
*Celtis*  
*Cephalanthus*  
*Ceratophyllum*  
*Chamaecrista*

*Chamaesyce*  
*Chelidonium*  
*Chenopodium*  
*Chicorium*  
*Chimaphila*  
*Circaea*  
*Cirsium*  
*Clethra*  
*Collinsonia*  
*Commelina*  
*Convallaria*  
*Conyza*  
*Cornus*  
*Corylus*  
*Cryptotaenia*  
*Cuscuta*  
*Cynanchum*  
*Cyperus*  
*Dactylis*  
*Daucus*  
*Decodon*  
*Dennstaedia*  
*Deparia*  
*Desmodium*  
*Dianthus*  
*Dichantherium*  
*Digitaria*  
*Dioscorea*  
*Dipsacus*  
*Distichlis*  
*Dryopteris*  
*Duchesnea*  
*Echinochloa*  
*Eclipta*  
*Eleagnus*  
*Eleocharis*  
*Eleusine*  
*Elymus*  
*Epifagus*  
*Epilobium*  
*Epipactis*  
*Equisetum*  
*Erechtites*  
*Erigeron*  
*Euonymus*  
*Eupatorium*

*Eurybia*  
*Euthamia*  
*Eutrochium*  
*Fagus*  
*Fallopia*  
*Frangula*  
*Fraxinus*  
*Galinsoga*  
*Galium*  
*Geranium*  
*Geum*  
*Gleditsia*  
*Glyceria*  
*Hamamelis*  
*Hedera*  
*Helianthus*  
*Hemerocallis*  
*Hibiscus*  
*Holcus*  
*Hydrocotyle*  
*Hypericum*  
*Ilex*  
*Impatiens*  
*Iris*  
*Iva*  
*Juglans*  
*Lactuca*  
*Lapsana*  
*Leersia*  
*Lemna*  
*Leonurus*  
*Lepidium*  
*Leucanthemum*  
*Leucothoe*  
*Lindera*  
*Lindernia*  
*Liquidambar*  
*Liriodendron*  
*Lobelia*  
*Lolium*  
*Lonicera*  
*Lotus*  
*Ludwigia*  
*Lycopus*  
*Lysimachia*  
*Lythrum*

*Maianthemum*  
*Malus*  
*Malva*  
*Matricaria*  
*Mazus*  
*Medicago*  
*Melilotus*  
*Menispermum*  
*Metasequoia*  
*Miscanthus*  
*Mitchella*  
*Monarda*  
*Monotropa*  
*Morus*  
*Myrica*  
*Myriophyllum*  
*Nasturtium*  
*Nuphar*  
*Nymphoides*  
*Nyssa*  
*Oenothera*  
*Onoclea*  
*Osmorhiza*  
*Osmunda*  
*Osmundastrum*  
*Ostrya*  
*Oxalis*  
*Pachysandra*  
*Panicum*  
*Parthenocissus*  
*Pastinaca*  
*Pawlonia*  
*Peltandra*  
*Penstemon*  
*Persicaria*  
*Phragmites*  
*Phytolacca*  
*Pilea*  
*Pilosella*  
*Plantago*  
*Platanus*  
*Pluchea*  
*Polygonatum*  
*Polygonum*  
*Polystichum*  
*Populus*

*Portulacca*  
*Potamogeton*  
*Potentilla*  
*Prenanthes*  
*Prunella*  
*Prunus*  
*Pseudosasa*  
*Pyrola*  
*Quercus*  
*Ranunculus*  
*Rhododendron*  
*Rhus*  
*Ribes*  
*Robinia*  
*Rosa*

*Rubus*  
*Rumex*  
*Sagittaria*  
*Salicornia*  
*Salix*  
*Sambucus*  
*Sanguinaria*  
*Sanicula*  
*Sassafras*  
*Schoenoplectus*  
*Scirpus*  
*Scrophularia*  
*Setaria*  
*Silene*  
*Smilax*

*Solanum*  
*Solidago*  
*Sonchus*  
*Sorbus*  
*Spartina*  
*Spirodela*  
*Strophostyles*  
*Symphyotrichum*  
*Symplocarpus*  
*Taxus*  
*Thalictrum*  
*Thelypteris*  
*Tovara*  
*Toxicodendron*  
*Trifolium*

*Trillium*  
*Typha*  
*Ulmus*  
*Uvularia*  
*Vaccinium*  
*Verbascum*  
*Verbena*  
*Veronica*  
*Viburnum*  
*Vinca*  
*Viola*  
*Vitis*  
*Wisteria*  
*Wolffia*  
*Xanthium*



**Oakland Lake, Alley Pond Park, Queens.**

**Join us for the next trip in the series:  
Niagara Falls State Park, September 20, 2008**

The last time NYFA was at Niagara Falls was August 1993 where they saw 165 genera. As in 1993 we will meet at the Goat Island parking lot at 10 a.m. and assemble at the first bridge to the Three Sisters Islands. We will be meeting with our fellow plant enthusiasts from the Niagara Frontier Botanical Club and hope to see some of the unusual plants that can be seen in few other places in the state like *Gentianopsis virgata (procera)*. In the afternoon we will hike down to the bottom of the gorge to see the amazing cliff communities and riverside plants like *Liatris cylindracea* and *Oligoneuron album*. Join us for some spectacular plants in a spectacular setting.

**Please contact Steve Young at [syoung@tnc.org](mailto:syoung@tnc.org) if you plan to attend.**  
Carpools and hotel rooms can be arranged.



**Calcareous Shoreline Outcrop at the Whirlpool Woods**

**Seeking Herbaria Information**

NYFA will soon be supporting activities of the newly created New York Herbaria Network. If you are affiliated with an herbarium in New York State and would like to be a part of this organization, please contact **Adam K. Ryburn**, Curator of the SUNY Oneonta Herbarium (SUCO) at [ryburnak@oneonta.edu](mailto:ryburnak@oneonta.edu).



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3140 CEC, Albany, NY 12230 **Thank you for supporting NYFA and the flora of New York State!**

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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](mailto:young@nynhp.org) and put "NYFA electronic newsletter" in the subject line. Thanks very much as we would like to continue to convert all our members to the electronic form by 2009. 20% have converted so far.

An electronic membership has the advantages of receiving the newsletter, field trip, and workshop announcements before a paper copy arrives. Photographs are also in full color.