NYFA New York Flora Association

Quarterly Newsletter

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New York Flora Association

Address: P.O. Box 122
Albany, NY 12201
Phone: (518)250-6054
Email: editor@nyflora.org
Website: www.nyflora.org
Blog: www.nyfablog.org
Twitter: @newyorkflora
Editor: Anne Johnson

Editor's Note: Thanks for all the field trip reports, starting with the Titus' recap of what sounds like a lovely, though rainy, day in an interesting place. Field trip season may be over, but we can at least look forward to next year's trips and workshops. Anyone reading Scott Ward's article on this past season's sedge workshop could not help but be inspired to take (or re-take!) Tony Reznicek's great workshop. Other articles include another informative one from Michael Hough, this time on *Viburnum opulus* (native or non-native), and a piece on this year's Plant Conservationist of the Year recipient. And finally, congratulations and cheers to David Werier for tackling and completing the monumental task of recording and verifying the known vegetation of New York State. His compilation, based completely on vouchered and verified specimens, is now ready to go to publication.

Articles Inside:

Fredonia College Lodge Nature Preserve Field Trip, July 1st, 2017

by Priscilla and Jon Titus

It was not a day for the faint of heart or those without a mighty thirst for botanical sauntering, but despite the pouring rain, thirteen enthusiastic souls gathered in the parking lot of Fredonia's College Lodge Nature Preserve in Brocton New York. This joint field trip with the Niagara Frontier Botanical Society also attracted members of three local land trusts: the Nature Sanctuary Society of Western New York, the Western New York Land Conservancy, and the Chautauqua Watershed Conservancy. While we waited for a lull in the persistent downpour, we pored over maps and aerial photos on the cozy back porch of the Mackie Camp Lodge, discussing the history of the site and ways that the 200-acre preserve and its old growth hemlock forest might be further protected.

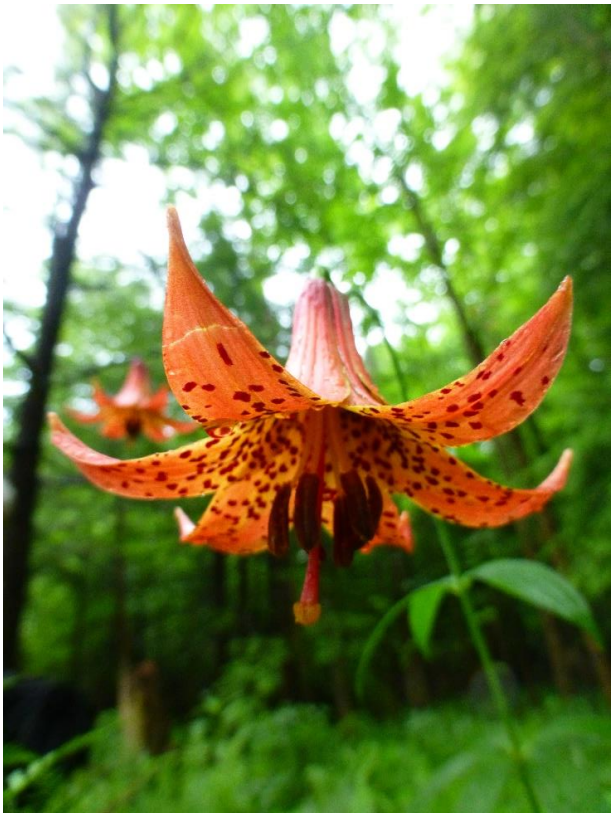
The Preserve was purchased by students in 1939 who agreed to fund it through an increase in their fees. The Science Department began to use the site right away for Biological Research and trees were planted in areas that had been deforested. The lodge was built in 1941 as a means of "promotion of good health through the medium of the out-of-doors", and fostered activities including snowshoeing, tobogganing, wood-cutting, maple syrup production, square dancing, canoeing and music camps. In 1969, the Preserve was deeded to the Faculty Student Association with the obligation to function as a steward and to manage the property in a manner "advantageous to the State University of New York College at Fredonia".

One of the many special features of the Preserve is its unique location at the top of ridge that separates the St. Lawrence and Mississippi watersheds and serves as a major flyway for neotropical migrants and wintering raptors. Habitats are varied and include northern hardwoods, hemlock forests, red pine plantations reverting to young northern hardwoods, meadows, ponds and a 10-acre marsh frequented by bald eagles and wood ducks and impounded by a massive beaver dam.

White trillium (*Trillium grandiflorum*) fruit.

As the rain let up a bit, we all headed out to explore the trails. Six species of clubmosses (*Diphasiatrum digitatum*, *Huperzia lucidula*, *Lycopodium clavatum*, *Lycopodium*

obscurum, *Lycopodium dendroideum*, and *Spinulum annotinum*) that carpet the forest floor muffled the sound of the raindrops. Most of the spring ephemeral species had finished flowering but were busy making seeds, including the three trillium species (*Trillium grandiflorum*, *Trillium erectum*, and *Trillium undulatum*) that the deer had missed. Indian cucumber root (*Medeola virginiana*) still had a few dangling flowers that glistened with raindrops.



Canada lily (*Lilium canadense*).

We were delighted to find Canada lily (*Lilium canadense*) and beebalm (*Monarda didyma)* in full flower. More subtle delights on the forest floor included flowering spotted wintergreen (*Chimaphila maculata)*, common shinleaf (*Pyrola elliptica*), and rattlesnake fern *(Botrychium virginianum)* with a fertile stalk. Pink lady's slipper (*Cypripedium acaule*) and blue bead lily (*Clintonia borealis*) were in full fruit. Colorful fungi were abundant in all shapes and sizes wherever we ventured.

Ed Fuchs admires gigantic fungi.

We visited one of several deer exclosures in the forest that were installed to examine the changes a burgeoning deer population is having on the forests in our region. The exclosures are relatively new but plants are noticeably more vigorous within the exclosure, and we will be interested to see if new species appear as time passes.

At the edge of the marsh, a population of bottle gentian (*Gentiana clausa*) was just forming its blue buds. Blue flag (*Iris versicolor*) had finished flowering, but the yellow pond lilies (*Nuphar advena*) towered colorfully over the diverse aquatic plant community that included two bladderwort species (*Utricularia macrorhiza* and *U. minor*) and was fringed with water willow (*Decodon verticillatus*).

To date, over 400 vascular plant species have been documented within the Preserve. Nearly any time of year it is a delight to visit. If you couldn't join us during the field trip but are interested in visiting another time, send an email to titus@fredonia.edu for a map, directions and a plant list.

Spreading dogbane (*Apocynum androsaemifolium*) was in flower at the edge of the forest (left) and rattlesnake fern (*Botrychium virginianum*) had fertile stalks (right).

The hardiest plant enthusiasts were found on a rainy day in Chautauqua County at the Fredonia College Lodge Nature Preserve.

The subspecies of Highbush Cranberry (*Viburnum opulus* L.)

by Michael Hough

Chances are you have come highbush cranberry (*Viburnum opulus*) in the field, and odds are that most of the plants you have seen are of European origin. This species is one of several Viburnums that produce two types of flowers in the inflorescence: rather showy sterile flowers on the margins of the cyme for attracting pollinators and inconspicuous fertile flowers taking up most of the center of the inflorescence. Another example in our flora with this type of inflorescence is hobblebush (*V. lantanoides* Michx.). Typical *Viburnum opulus* is widely used as an ornamental plant and many cultivars have been selected for cymes that produce primarily sterile flowers. These cultivars are sold under names like 'Roseum', 'Sterile', and 'Snowball' in reference to the spherical clusters of sterile white flowers ('Roseum' referring to the tendency of the flowers to fade to pink as they age). The common name highbush cranberry is a misnomer as this shrub is a member of the moschatel family (Adoxaceae) and is not related to true cranberries (*Vaccinium* spp., family Ericaceae). However, the fruits are similar to cranberries in that they are red, fleshy, and quite acidic. This comes with a caveat, as the fruit of the European subspecies tends to be bitter and altogether unpalatable.

We also have a native subspecies, formerly treated as *V. trilobum* Marshall, but now widely accepted to be *V. opulus* ssp. *americanum* Ait. The fruit of this taxon is usually less bitter and therefore reasonably edible, albeit sour. As in typical *V. opulus*, there are now several good cultivars of ssp. *americanum* that are often still sold under the old name *V. trilobum*. The cultivar 'Compactum' has a dense growth habit and nice fall color but lacks the mainly sterile flowers of the more popular cultivars of typical *V. opulus* (which could be considered a bonus if you are growing plants to benefit pollinators). It is worth noting that native or naturalized plants of both subspecies will have fertile flowers in the center of the inflorescence as it is only some cultivars that produce strictly sterile flowers.

If you want to know if you are growing or have found the native or introduced subspecies, this is not difficult to determine. Both have opposite, trilobed leaves but the introduced subspecies has disk-shaped or cup-shaped glands on the petiole. In the native subspecies these glands are columnar or club-shaped. A few more subtle characteristics can be found in the included key and may be useful for determining if plants are of possible hybrid origin.

In nature the native taxon seems to prefer moist alluvial soils as might be found in wet meadows, shrub swamps, and river flood plains. I have only observed the native taxon in a few places in NY and come across it most often in the Tug Hill region of NY. The introduced taxon seems to have a much wider ecological amplitude and can be found in a variety of open to partially-shaded habitats provided they are not excessively dry. It may also be found in mature woods but usually does not flower if it does not receive some sun.

It is not too late to identify these subspecies and since the glands of the petiole are pretty distinctive they can be determined even from fallen leaves. You will probably want to look at several leaves before making a determination. Based on experience, you may be disappointed to find what you have been sold as *V. trilobum* is actually typical *V. opulus* (the included image of the petiole glands of typical *V. opulus* are from plants purchased from a County Soil and Water District that shall remain nameless).

Key to the subspecies of *Viburnum opulus*:

Petiole glands columnar or club-shaped, longer than wide, ± rounded at the apex; upper surface of leaf and leaf margin thinly strigose, lobes ± acuminate. ssp. *americanum*

Petiole glands disk-shaped or cup-shaped, wider than long, concave at the apex; upper surface of leaf and leaf margin mostly glabrous, lobes ± acute. ssp. *opulus*

Inflorescence of *Viburnum opulus* showing the enlarged sterile (outer) and fertile (inner) flowers.

Cup-shaped petiole glands of European highbush cranberry (*Viburnum opulus* ssp. *opulus*)

Club-shaped petiole glands of American highbush cranberry (*Viburnum opulus* ssp. *americanum*, syn. *V. trilobum*).

Leaf of *Viburnum opulus* ssp. *americanum*. Note how the apex of the lobes taper. The matte appearance is partially due to the presence of fine hairs on the leaf surface.

Prominent Botanist and Educator Mike Kudish named New York's 2016 Native Plant Conservationist of the Year

Dan Spada, right, presenting Mike Kudish with the Plant Conservationist of the Year award. Photo by Steve Young.

The New York Flora Association (NYFA) held its annual meeting at the Maurice D. Hinchey Catskill Interpretive Center in Mt. Tremper, NY. One of the highlights of the day was the presentation of the Plant Conservationist of the Year award. This year's recipient was prominent botanist Mike Kudish. As author of *The Catskill Forest: A History*, the site seemed fitting to honor Kudish's years of dedication to understanding the flora of the region.

Longtime NYFA Board Member Dan Spada had the honor of presenting Kudish with the award. 'Through a long career as an educator at Paul Smith's College, Mike has excited many students to pursue a career in the sciences and especially botany. His dedication to knowing and getting to understand the plants, their communities and their history in the landscape is commendable and has served as a model for many of us,' said Spada. It should be noted that Spada, a well-known retired botanist from the NYS Adirondack Park Agency and current President of the Adirondack Research Consortium, was one such of those students himself

Kudish has a B.S. in Biology from the City College of New York, an M.S. in Botany from Cornell University, and a Ph.D. in Plant Ecology from SUNY-ESF. His PhD dissertation on a 'Vegetational History of the Catskill High Peaks' began his life-long study of the region's plants. It seems Kudish just kept heading north in New York and helped shape the next generation of botanists during his 30+ years as a professor at Paul Smith's College from 1971-2005 teaching courses on dendrology, plant ecology, forest history and more. An accomplished writer as well, Kudish authored *Paul Smith's Flora, Paul Smiths Flora II, Adirondack Upland Flora, the Catskill Forest: A History*, and *Mountain Railroads of New York State: Where Did the Tracks Go*? He continues to pass on his amazing wealth of knowledge through lectures and field trips for numerous Adirondack and Catskill non-profit groups as well as with regular articles in *Kaatskill Life Magazine*.

Just this past spring, the Michael Kudish Natural History Preserve opened in Stamford, NY. The mission of this 101 acre preserve named in honor of Kudish is to conduct and distribute research, studies and analysis related to the natural history of the Catskill Mountains. You can learn more about the preserve at www.mknhp.org.

Syracuse sedges and limestone ledges

by Scott Ward

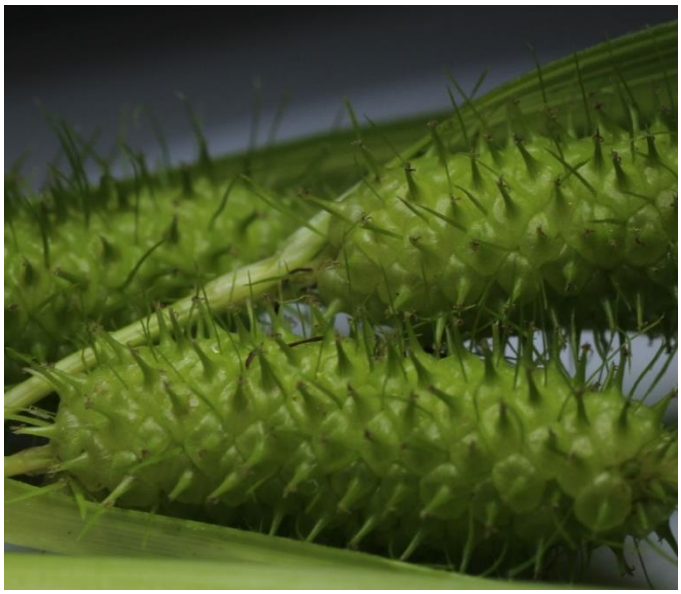
When I registered for the annual sedge workshop of 2017, I could probably count on one hand the number of sedges I felt comfortable identifying and may have needed a third hand to count how many times I had heard "you should do Tony's workshop"; and so, it was this uncomfortable ratio that solidified in my mind why this workshop was a necessity as a northeast botanist.

With hot spots of sedge diversity already planned out by Mike Hough and Ed Frantz, it was sure to be a fun and educational workshop to say the least. Thanks to Don Leopold and SUNY-ESF for kindly hosting our group and allowing us to use labs and microscopes.

The first day's sedgeacious activities brought with it a broad mix of wetland sedge species in the Three Rivers WMA in Baldwinsville. We started out with some more common species including *Carex comosa*, *Carex vulpinoidea*, *Carex stipata*, *Carex scoparia*, and *Carex crinita* (with smooth basal sheaths vs. the rough upward prickles on the stem of *C. gynandra*). A neighboring property also within Three Rivers WMA would surprise the group with *Carex frankii* (S1 in New York), in addition to some other common wetland species. Often visited for their wildlife attractions, these WMA properties did not disappoint this group of plant people not looking at the sky for wildlife but on the ground for sedges.

C. vulpinoidea (sect. Multiflorae) on the left, *C. stipata* (sect. Vulpinae) on the right (note more visible sharply winged stem, although still compressible).

Carex cristatella : a super clumped member of the Ovales section. All Ovales have TRUE STEMS.



Carex frankii: bracts much longer than inflorescence, perigynia obconic (cone with narrow ends inward).

After a quick lunch break away from the rain, we ended our sedgetastic day with a botanical stroll through the peatland boardwalk at Beaver Lake Nature Center. This would bring some much-appreciated supplemental information regarding peatland members on sight such as *C. canescens*, *C. seorsa*, and *C. diandra*.

After a late night of dissecting scopes and pizza, the group met once again the following morning to head back out into the field. This day would bring us into more upland habitats, with a focus on the woodland sedge groups.

Before heading out for the day, the group explored the green roof of ESF, where *Carex eburnea* (sect. Albae) seemed to be doing just fine. Fun fact: a "snap-crackle-pop" effect can be achieved by exposing this species' perigynia to fire. We would be delving deep into the Laxiflorae, Careyanae, Ovales, Griseae, and Phaestoglochin on the second day with species like *Carex brevior, C. rosea, C. blanda, C. albursina,* and *C. hitchcockiana* abound, and even a brief cameo appearance by the calcareous-loving *C. jamesii*.

Carex eburnea (sect. Albae).

One species I found particularly interesting was Parasol sedge (*Carex umbellata*), with flowering culms low and hidden by leaf blades and eventually developing into elaisome-like perigynia. Elaisomes are fleshy appendages attached to seeds that attract ants and encourage biotic dispersal (myrmecochory).

James' sedge (sect. Phyllostachyae), S2 in NY showed off its characteristic slender beaks in the lime-rich woods of Onondaga Valley Cemetery.

Parasol sedge (*Carex umbellata*), sect. Acrocystis.

Finishing things along a wet ROW adjacent to where Butternut creek met Route 20, we were able to see *Scirpus microcarpus* with its barber pole-like stem coloration (compared to *S. atrocinctus* with black banding on top), *Carex trichocarpa* with its characteristic red band and inconspicuous lower fertile stems, and others such as *C. lurida, C. hystericina,* and a personal favorite: *C. flava*. The group was able to snap a picture together before dissipating amidst a sudden downpour, taking with them both sedge-filled plant presses and minds.

Thanks again to Mike Hough, Ed Frantz, Don Leopold, SUNY-ESF, and also NYFA for continuing this special workshop each year.

All in all, a sedge-enthusiast would be hard pressed to find a better deal than two jam-packed days out in the field with Tony Reznicek. His easygoing personality and love for field botany is truly infectious, and his expertise cannot be understated. My recommendation: DO THIS WORKSHOP!

Left: *Carex flava*, looks most similar to *cryptolepis* and *viridula* (all sect. Ceratocystis), flip fertile stem upside down to look for distinct coppery brown pistillate scales.
Right: *Carex trichocarpa* (sect. Carex): local, colonial, tall with true stems, look for dark red band on smooth lower stem and down low for fertile stems.

Two members of the Lupulinae, on the left is *Carex lurida* and on the right is *Carex hystericina*. Notice no pedicel below the perigynia of *C. lurida*.

The group poses at a ROW along Butternut creek with pending thunderstorms on the horizon.

May you be as happy as a Reznicek with sedge culms in hand.

Carex species seen on this sedge-filled weekend:

Species	Section
Carex alata	Ovales
Carex albursina	Laxiflorae
Carex aquatilis	Phacocystis
Carex bebbii	Ovales
Carex blanda	Laxiflorae
Carex brevior	Ovales
Carex canescens	Glareosae
Carex careyana	Careyanae
Carex cephaloidea	Phaestoglochin
Carex cephalophora	Phaestoglochin
Carex comosa	Vesicariae
Carex crinita	Phacocystis
Carex cristatella	Ovales
Carex diandra	Heleoglochin
Carex digitalis	Careyanae
Carex eburnea	Albae
Carex flava	Ceratocystis
Carex frankii	Squarrosae
Carex gracillima	Hymenochlaenae
Carex granularis	Granulares
Carex hitchcockiana	Griseae
Carex hystericina	Vesicariae
Carex interior	Stellulatae
Carex intumescens	Lupulinae
Carex jamesii	Phyllostachyae
Carex lacustris	Paludosae
Carex lasiocarpa	Paludosae
Carex laxiflora	Laxiflorae
Carex lupulina	Lupulinae
Carex lurida	Lupulinae
Carex projecta	Ovales
Carex rosea	Phaestoglochin
Carex scoparia	Ovales
Carex seorsa	Stellulatae
Carex sparganioides	Phaestoglochin
Carex swanii	Porocystis
Carex trichocarpa	Carex
Carex trisperma	Glareosae
Carex umbellata	Acrocystis
Carex vulpinoidea	Multiflorae

Field Trip Report: *Plants Along the St. Lawrence*, September 16, 2017

by Steven Daniel

An enthusiastic group of botany buffs led by Anne Johnson and myself visited several sites along the St. Lawrence in what turned out to be a fabulous day full of botanical and other surprises.

In what may have been a NYFA first, Anne had arranged with Lee Harper, owner of a consulting company and research equipped boat, to transport the group to a couple of sites along the South Channel, a much more easy access than a land approach would have been. Being on the water was a delight on this beautiful, sunny fall day as we observed vegetation changes along the shoreline, as well as some interesting birds (including a sub-adult bald eagle), a large area of big bluestem (*Andropogon gerardii*), and the large Long Sault dam, where Lee told us that peregrine falcons nest. At the first stop we reviewed some woody plant identifications, including Bebb's willow (*Salix bebbiana*), and we puzzled over an oak, finally deciding it was probably a somewhat aberrant bur oak (*Quercus macrocarpa*).

Lee Harper and Kate Kruesi on the south shore of the South Channel. Photo by Konrad Kruesi.

Our next stop was at a somewhat open floodplain of what had been the Long Sault rapids of the St. Lawrence River until the massive Seaway Project dramatically changed the landscape in the 1950's. Nevertheless, the floodplain was still fairly open, with very calcareous soils. Highlights there included the state-listed rare lesser fringed gentian, *Gentianopsis virgata* and two species of Gerardia (*Agalinis paupercula* and *A. tenuifolia*). Another highlight were a few dozen flowering stems of the state-listed rare Great Plains ladies' tresses, *Spiranthes magnicamporum*, a species only discovered in New York in 2014 (see NYFA News, 2015, Vol 26, No.1 here). Other highlights at the site included slender panic grass (*Panicum flexile*), late flowering *Carex viridula*, and some flowering great blue lobelia (*Lobelia siphilitica*).

Some of the group resting on the boat after returning to the launch. Note power dam in the background. Photo by Konrad Kruesi.

Lee returned us to the dock by the power dam at Hawkins Point and after our picnic lunch we headed a short way down Robinson Bay Road to an open field comprised of dredge spoil from the digging of the St. Lawrence Seaway. There are many interesting plants here, including white goldenrod (*Solidago ptarmicoides*), greater fringed gentian (*Gentianopsis crinita*), heath aster (*Symphyotrichum ericoides*), Pringle's aster (*Symphyotrichum pilosum* var. *pringlei*) as well as a good deal more Great Plains ladies tresses. We observed dozens of painted lady butterflies nectaring primarily at the asters. It turns out we were witnessing the vanguard of one of the largest movements of these beautiful butterflies ever recorded. Many years there are few reports of painted ladies in the northeastern US or Canada, so our group was seeing the beginning of what was to be an incredible southward movement over the next couple of weeks, with reports of large numbers (sometimes large enough to be captured on radar), covering an enormous geographic area from the east coast to the Rockies.

We looked for a different *Spiranthes* orchid that Anne and I had found a couple of years ago and at the time identified it as Case's ladies tresses (*Spiranthes casei*). But we hoped to have another look, as we had found good *S. casei* earlier this summer and there were several characters that we noted that caused us to want to re-find and take a closer look at this particular orchid. After a bit of searching, one of our participants found a small group of four plants near to where we found it two years ago. More searching yielded a total of seven plants. We puzzled and puzzled over these species. Anne and I were certain it wasn't casei, but what was it - a hybrid, perhaps? I recalled reading that there was a Spiranthes in the mid-west that flowered very late, but knew nothing about it. I took a voucher specimen to deposit in a herbarium, and in the evening worked it out - it was *Spiranthes ovalis* - a new species for NY!

We continued to a site a few miles away, where there was a stunning display of Maximilian's sunflower (*Helianthus maximiliani*) where we took our group picture with the creative help of our youngest participant, Nick Filannino, a sophomore at St. Lawrence University and an avid aspiring botanist/naturalist who creatively wedged his smartphone amongst some tree branches for the group shot.

A few of us continued eastward along the St. Lawrence, making a couple of stops where we enjoyed the tiny leaves of the lycophyte hidden spikemoss (*Selaginella eclipes*) as well as the threatened meadow horsetail (*Equisetum pratense*). Also enjoyed were a couple of interesting adventive roadside weeds, including the rayless alkali aster (*Symphyotrichum ciliatum*) as well as the "white mist" along the roadside (scratch grass, *Muhlenbergia asperifolia*). The latter contrasted very artistically with its neighboring "red mist" (purple love grass, *Eragrostis spectabilis*). At this site we also found an uncommonly encountered grass, sand dropseed (*Sporobolus cryptandrus*). Finally we ended with a short stop where we found the

threatened marsh horsetail (*Equisetum palustre*) and could easily compare it to the common field horsetail (*Equisetum arvense*) which was growing nearby.

All in all, a fabulous day to be out looking at plants with a fun and interesting group of people.

We puzzle over a ladies'-tresses. Photo by Brian McAllister.

The group at Hopson's Bay Flats. Missing are Martha Grow and Brian McAllister. Photo by Nicholas Filannino.

The ladies'-tresses in question. Photo by Steven Daniel.

Jones Beach Field Trip. September 9, 2017

By Steve Young, NY Natural Heritage Program.

A group of sixteen plant enthusiasts met at the West End parking field on a beautiful Saturday morning with a brisk wind from the north. From the parking lot the group was guided by Steve Young and Mike Feder west into the dunes and interdunal swales to see a variety of coastal dune shrubs, graminoids, and wildflowers. Out on the beach we were treated to the sight of two globally rare plants seabeach amaranth (*Amaranthus pumilus*) and seabeach knotweed (*Polygonum glaucum*). After lunch we headed out to the beach south of the building through a huge interdunal swale where we saw a large population of the state threatened American saltmarsh bulrush (*Bolboschoenus maritimus* ssp. *paludosus*). Thanks to all the participants in our joint field trip to Jones Beach with the Long Island Botanical Society! The following is a list of plants and fungi for Jones Beach compiled from lists by Andy Greller, Rich Kelly and the NY Natural Heritage Program.

Flower and leaves of *Polygonum glaucum*. Photo by Scott Ward.

Flower and leaves of *Amaranthus pumilus*. Photo by Scott Ward.

Here the group explores the small interdunal swale between the dunes. Photo by Steve Young.

Cumulative Flora of Jones Beach SP (Andrew Greller and Rich Kelly, January-September 2017) with additions from New York Natural Heritage Program 1985-2017 (denoted by an H) and the 9 September NYFA field trip:

ALGAE
Chondrus crispus
Fucus sp.
Nostoc sp., a Cyanobacterium (Blue-Green)
Ulva lactuca

FUNGI
Astraeus hygrometricus, earth-star
Black smut on Pinus thunbergii
Calvatia cyathiformis, purple-spored puffball
Chanterelle-like tiered mushroom on sand
Gymnosporangium juniperi-virginianae
Laccaria trullisata
Lycoperdon sp.?
Mycena sp.?

PLANTS
Acer rubrum
Agrostis cf. capillaris
Ailanthus altissima
Albizia julibrissin
Amaranthus albus
Amaranthus pumilus (9Sept17)
Amaranthus retroflexus
Ambrosia artemisiifolia
Amelanchier cf. canadensis
Ammophila breviligulata
Aronia prunifolia (H)
Artemisia caudata
Artemisia stelleriana
Artemisia vulgaris
Asclepias syriaca
Asclepias tuberosa
Atriplex patula
Baccharis halimifolia
Betula papyrifera
Bolboschoenus maritimus ssp. paludosus (H)
Brassicaceae sp.
Bromus tectorum?
Cakile edentula var. edentula
Calystegia sepium
Carex hormathodes (H)
Carex kobomugi (H)
Celastrus orbiculatus
Cenchrus longispinus
Centaurea stoebe ssp. micranthos
Chenopodium album
Chloris verticillata
Chondrilla juncea
Cladium mariscoides (H)
Clematis terniflora
Convolvulus arvensis
Conyza ramosissima?
Corynephorus canescens
Cuscuta gronovii var. latiflora (H)
Cuscuta pentagona
Cycloloma atriplicifolia
Cyperus bipartitus
Cyperus grayi
Cyperus iria
Cyperus lupulinus ssp. macilentus
Cyperus odoratus (H)
Cyperus polystachyos (H)
Cyperus retrorsus (H)
Datura stramonium
Daucus carota
Dichanthelium sp.
Diplachne fusca ssp. fascicularis (H)
Distichlis spicata
Draba verna
Echinochloa muricata
Elaeagnus angustifolia (9Sept17)
Elaeagnus umbellata
Eleocharis parvula (H)
Eleocharis uniglumis (H)
Eragrostis spectabilis
Erechtites hieraciifolia
Erigeron annuus
Erigeron canadensis var. canadensis
Erigeron canadensis var. pusillus
Erodium cicutarium
Eupatorium hyssopifolium
Euphorbia cyparissias
Euphorbia maculata
Euphorbia polygonifolia
Euthamia caroliniana
Euthamia graminifolia
Festuca ovina
Festuca rubra (9Sept17)

Froelichia gracilis
Hesperis matrionalis
Heterotheca subaxillaris
Hibiscus moscheutos
Hieracium scabrum
Houstonia pusilla
Hudsonia tomentosa
Hypericum mutilum (H)
Hypericum perforatum
Ilex opaca
Ipomoea purpurea
Iva frutescens
Juncus articulatus (H)
Juncus bufonius
Juncus dudleyi
Juncus gerardii (H)
Juncus greenei (H)
Juncus scirpoides (H)
Juncus tenuis?
Juniperus virginiana
Krigia virginica
Lactuca biennis
Lactuca serriola
Lamium amplexicaule
Lechea maritima
Lechea sp.
Lepidium virginicum
Limonium carolinianum
Linaria vulgaris
Lonicera japonica
Lonicera morrowii?
Ludwigia palustris (H)
Lycopus virginicus (H)
Malva neglecta
Matricaria discoidea
Medicago lupulina
Melilotus albus
Mollugo verticillata (H)
Morella caroliniensis
Morus alba
Myosotis arvensis?
Nipponanthemum nipponicum
Nuttallanthus canadensis
Nyssa sylvatica
Oenothera biennis
Oenothera oakesiana (H)
Oenothera cf. parviflora
Oenothera fruticosa
Oenothera laciniata
Ornithogalum umbellatum
Oxalis dillenii
Oxalis sp.
Oxybasis glauca (H)
Oxybasis rubra (H)
Panicum amarum (H)
Panicum virgatum
Parthenocissus quinquefolia
Persicaria hydropiperoides (H)
Persicaria punctata
Phragmites australis
Physalis cf. virginiana
Phytolacca americana
Pinus nigra (H)
Pinus rigida
Pinus sylvestris (H)
Pinus thunbergii
Plantago arenaria
Plantago aristata
Plantago lanceolata
Plantago pusilla
Pluchea odorata
Polygonum arenastrum
Polygonum articulatum
Polygonum aviculare
Polygonum glaucum
Polygonum ramosissimum (H)
Populus alba
Populus deltoides
Portulaca oleracea (H)
Potentilla argentea
Prunus maritima
Prunus serotina (H)
Pseudognaphalium obtusifolium
Ptilimnium capillaceum
Pyrus calleryana
Raphanus raphanistrum
Rhus copallinum
Rhus glabra
Rosa cf. virginiana
Rosa multiflora
Rosa rugosa
Rubus allegheniensis (H)
Rubus laciniatus
Rumex acetosella ssp. pyrenaicus
Rumex crispus
Rumex fueginus (H)
Sabatia stellaris (H)
Salicornia depressa
Salsola kali
Schizachyrium scoparium
Schoenoplectus pungens
Securigera varia
Sedum acre
Senecio vulgaris
Setaria pumila
Setaria viridis
Silene latifolia
Solidago canadensis
Solidago juncea
Solidago sempervirens
Spartina alterniflora (H)
Spartina patens
Spergularia marina
Strophostyles helvola
Suaeda calceoliformis
Suaeda cf. maritima
Suaeda linearis
Symphyotrichum subulatum (H)
Teucrium canadense
Toxicodendron radicans
Tragopogon sp.
Trapa natans (fruit)
Trichostema dichotomum
Trifolium arvense
Trifolium dubium
Trifolium repens
Triplasis purpurea
Verbascum blattaria
Verbascum thapsus
Verbena hastata
Viburnum dentatum var. lucidulum (H)
Xanthium strumarium var. canadense
Yucca filamentosa
Zostera marina

The group looking out over the large interdunal swale. Photo by Steve Young.

Warner Hill Outing, May 21, 2017

by Rich Ring

On May 21st seven plant enthusiasts met at Warner Hill in Washington County for the first NYFA outing of the spring. Much of this site has long been protected by The Nature Conservancy. The western side of the hill consists largely of cliffs, overlooking protected Schoolhouse along the East Bay of Lake Champlain. Owing to the state boundaries following the Bay's meanderings from south to north, it is one of the few places where one can stand on a promontory in New York and face *west*, into Vermont.. While doing so near the start of our hike, we were able to hear the cacklings of Common Gallinules breeding in the marshes far below. Warner Hill is also of note to geologists, famous for its Cambrian-Ordovician era limestone formations, rich in trilobites and other fossil fauna. However we kept our focus on the rich calciphile flora.

We spent a good deal of time at the start of the hike exploring rocky outcrops and small limy cliffs. There we found a trio of smaller *Asplenium* species: *A. ruta-muraria, A. trichomanes var. quadrivalens*, and *A. rhizophyllum*. We did not come upon any *Carex backii or Carex formosa*, both rare calciphiles previously recorded from the site, although the habitat seemed to be right. In the forest above the cliffs we encountered a diverse set of herbs typical of rich forests, along with some more unusual woody species like *Quercus muhlenbergii* and *Staphylea trifolia*.

Asplenium ruta-muraria, photo David Werier.

Near the end of our outing we "lost" David Werier, who went on a successful search to find some *Packera* specimens along the top of the cliffs. These were plants that had previously been determined as *P. anonyma*. He is unclear at present if these specimens represent *P. anonyma* or the morphologically closely related *P. paupercula*. Some of the plants seemed to fit *P. paupercula* while others *P. anonyma*. He is currently

investigating this situation further, based on specimens from Warner Hill and nearby sites.

In all, we recorded 108 vascular plant species in the relatively small area of rocky woods and outcrops we explored, moving at typical NYFA-outing snail's pace. The site bears more exploration in other seasons, and illustrates the benefits of conservation efforts in this unique area along the edge of Lake Champlain.

Packera habitat near the top of west-facing dolomite cliffs at Warner Hill, Whitehall, NY. Photo David Werier.

Vascular Plants observed on Warner Hill NYFA outing, Washington County, 5/21/2017. List compiled by Kyle Webster.

Acer nigrum
Acer rubrum
Acer saccharum
Acer spicatum
Actea rubra
Adiantum pedatum
Amphicarpaea bracteata
Anemone virginiana
Aquilegia canadensis
Arabidopsis lyrata
Aralia nudicaulis
Aralia racemosa
Arisaema triphyllum
Asclepias quadrifolia
Asplenium rhizophyllum
Asplenium ruta-muraria
Asplenium trichomanes var. qaudrivalens
Athyrium filix-femina
Betula nigra
Betula papyrifera
Botrychium virginianum
Campanula rotundifolia
Carex blanda
Carex communis
Carex deweyana
Carex eburnea
Carex laxiflora
Carex peckii
Carex pedunculata
Carex pensylvanica
Carex platyphylla
Carex rosea
Carya glabra
Carya ovata
Caulophyllum thalictroides
Ceanothus americanus

Clematis occidentalis var. occidentalis
Comandra umbellata
Cornus alternifolia
Cornus racemosa
Cornus rugosa
Corylus cornuta
Cystopteris tenuis
Cystopteris bulbifera
Dryopteris marginalis
Erythronium americanum
Fagus grandifolia
Fragaria vesca ssp. americana
Fraxnus americana
Galium aparine
Galium circaezans
Galium lanceolatum
Galium triflorum
Geranium robertianum
Geum fragarioides
Hackelia virginiana
Hepatica acutiloba
Hepatica americana
Hieracium sp.
Juglans cinerea
Juniperus communis
Maianthemum canadense
Maianthemum racemosum
Micranthes virginiensis
Mitella diphylla
Onoclea sensibilis
Oryzopsis asperifolia
Osmorhiza claytonii
Ostrya virginiana
Parietaria judaica
Parthenocissus quinquefolia
Patis racemosa
Phryma leptostachya
Pinus strobus
Poa compressa
Polygala paucifolia
Polygonatum pubescens
Polypodium virginianum
Polystichum acrostichoides
Populus tremuloides
Prunus serotina
Quercus alba
Quercus muehlenbergii
Ranunculus abortivus
Ranunculus allegheniensis
Rhamnus cathartica
Rosa carolina
Rubus occidentalis
Rubus odoratus
Sambucus canadensis
Sanguinaria canadensis
Schizachne purpurascens
Sanicula marilandica
Solidago caesia
Staphylea trifolia
Thuja occidentalis
Tiarella cordifolia
Tilia americana
Toxicodendron radicans
Trillium erectum
Tsuga canadensis
Tussilago farfara
Ulmus americana
Uvularia grandiflora
Viola canadensis var. canadensis
Viola pubescens var. pubescens
Viola rostrata
Vitis riparius

Flowers of long spur violet (*Viola rostrata*), left and wild ginger (*Asarum canadense*), right.

New York Flora Association Annual Meeting August 20, 2017
The Catskill Center, Mount Tremper, New York

Article and photos by Steve Young, NY Natural Heritage Program

This year's annual meeting was held in the Catskills for the first time - at the beautiful new Catskill Interpretive Center. The attendees assembled outside at the picnic tables before a morning walk led by Michael Kudish across the road down to the Esopus Creek floodplain. The group returned for a lunch provided by NYFA at the picnic area followed by a business meeting. The 2017 Plant Conservationist Award was presented to Dr. Michael Kudish by Dan Spada for his work in plant conservation in the Catskills and Adirondacks. An additional tribute by Anne Johnson was read by Anna Stalter. Molly Marquand presented the board member nominations and welcomed new board member Daniel Atha who talked about his career at NY Botanical Garden. After working in other countries, he decided he needed to know more about the plants of NY and has concentrated on the flora of NYC. Ed Fuchs from Buffalo was nominated and voted in as a new board member. Four returning board members were also approved. Joe McMullen gave the treasurer's report which was approved by voice vote. The business part of the meeting was brought to a close and Steve Young conducted the annual botanical quiz which was quite challenging this year. After the quiz the participants walked the woodland trail at the facility and the trail to the top of the ridge. A list of the plants we saw was compiled by Mike Hough and presented below.

Acer pensylvanicum
Acer platanoides
Acer rubrum
Acer saccharum
Achillea millefolium
Actaea pachypoda
Aegopodium podagraria
Ageratina altissima
Alliaria petiolata
Amaranthus hybridus
Ambrosia artemisiifolia
Amelanchier arborea/laevis
Amphicarpaea bracteata
Aralia nudicaulis
Arisaema triphyllum
Artemisia vulgaris
Asclepias syriaca
Barbarea vulgaris
Berberis thunbergii
Betula lenta
Betula papyrifera
Bidens frondosa
Boehmeria cylindrica
Calystegia sepium
Carex appalachica
Carex hirsutella
Carex lurida
Carex pedunculata
Carex platyphylla
Carex radiata
Carex swanii
Carex virescens
Carpinus caroliniana
Carya ovata
Catalpa sp.
Celastrus orbiculatus
Cephalanthus occidentalis
Cerastium fontanum
Chamaecrista fasciculata
Chelidonium majus
Chenopodium album
Chenopodium sp.
Circaea canadensis
Clematis virginiana
Clinopodium vulgare
Collinsonia canadensis
Cornus amomum
Cornus florida
Cornus sericea
Cuscuta sp.
Cyperus esculentus
Daucus carota
Dennstaedtia punctilobula
Desmodium rotundifolium
Dianthus armeria
Dichanthelium latifolium
Diervilla lonicera
Digitaria sp.
Dryopteris carthusiana
Dryopteris intermedia
Dryopteris marginalis
Echinochloa crus-galli
Echinocystis lobata
Elaeagnus umbellata
Eleusine indica
Elymus repens
Elymus virginicus
Epifagus virginiana
Epilobium sp.
Epipactis helleborine
Erechtites hieracifolia
Erigeron annuus
Erigeron canadensis
Euphorbia maculata
Euphorbia nutans
Eurybia divaricata
Euthamia graminifolia
Fagus grandifolia
Fallopia cilinodis
Fraxinus americana
Fraxinus pennsylvanica
Galeopsis tetrahit
Galium album
Gaultheria procumbens
Geranium robertianum
Geranium sibericum
Geum canadense
Hackelia virginiana
Hamamelis virginiana
Hedeoma pulegioides
Hesperis matronalis
Hieracium paniculatum
Houstonia caerulea
Humulus japonicus
Huperzia lucidula
Hydrophyllum virginianum
Hypericum perforatum
Impatiens capensis
Impatiens pallida
Juncus tenuis
Juniperus virginiana
Kalmia latifolia
Lactuca sp.
Laportea canadensis
Leersia oryzoides
Leersia virginica
Leucanthemum vulgare
Ligustrum obtusifolium
Linaria vulgaris
Lindera benzoin
Liriodendron tulipifera
Lobelia cardinalis
Lobelia inflata
Lonicera morrowii
Lotus corniculatus
Ludwigia palustris
Luzula multiflora
Lysimachia borealis
Lysimachia ciliata
Lysimachia quadrifolia
Lythrum salicaria
Maianthemum canadense
Maianthemum racemosum
Matteuccia struthiopteris
Medicago lupulina
Melampyrum lineare
Melilotus officinalis

Microstegium vimineum
Mimulus ringens
Monarda didyma
Monarda fistulosa
Monotropa uniflora
Myosoton aquaticum
Oenothera biennis
Onoclea sensibilis
Origanum vulgare
Osmorhiza claytonii
Osmunda claytoniana
Oxalis montana
Oxalis stricta
Panicum capillare
Parthenocissus quinquefolia
Penstemon digitalis
Persicaria extremiorientalis
Persicaria hydropiper
Persicaria lapathifolia
Persicaria maculosa
Persicaria pensylvanica
Persicaria sagittata
Persicaria virginiana
Phegopteris hexagonoptera
Phytolacca americana
Pilea pumila
Pinus strobus
Plantago lanceolata
Plantago major
Platanus occidentalis
Poa compressa
Polygonatum pubescens
Polygonum aviculare
Polypodium virginianum
Polystichum acrostichoides
Populus deltoides
Populus grandidentata
Populus tremuloides
Potentilla simplex
Prenanthes altissima
Prunella vulgaris
Prunus serotina
Prunus virginiana
Quercus alba
Quercus montana
Quercus rubra
Ranunculus recurvatus
Reynoutria japonica
Rhus typhina
Robinia pseudoacacia
Rosa multiflora
Rubus allegheniensis
Rubus occidentalis
Rubus odoratus
Rudbeckia hirta
Rumex crispus
Rumex obtusifolius
Salix bebbiana
Saponaria officinalis
Sassafras albidum
Setaria sp.
Silene vulgaris
Solanum nigrum/ptycanthum
Solidago altissima
Solidago bicolor
Solidago caesia
Solidago canadensis
Solidago flexicaulis
Solidago gigantea
Solidago juncea
Solidago rugosa
Spiraea sp.
Symphyotrichum cordifolium
Symphyotrichum lateriflorum
Syringa reticulata
Tanacetum vulgare
Taraxacum officinale
Teucrium canadense
Thelypteris noveboracensis
Thymus pulegioides
Tilia americana
Toxicodendron radicans
Trifolium campestre/aureum
Trifolium hybridum
Trifolium pratense
Trifolium repens
Tsuga canadensis
Ulmus americana
Uvularia sessilifolia
Vaccinium angustifolium
Vaccinium pallidum
Verbascum thapsus
Verbena urticifolia
Verbesina alternifolia
Veronica officinalis
Viburnum acerifolium
Viburnum dentatum
Viburnum opulus var. americanum
Vitis aestivalis var. bicolor
Vitis riparia
Zizia aurea

The group descends from the ridge trail at the end of the afternoon hike.

The participants gather in front of the Catskill Center for the afternoon walk.

Chenango Valley State Park Field Trip- August 26, 2017

by Connie Tedesco

On August 26, 2017 over 20 botany enthusiasts met at Chenango Valley State Park in Broome County for a joint field trip with NYFA and the Leatherstocking Botanical Society. The trip was led by Dr. Julian Shepherd, with support from his colleagues at SUNY Binghamton, Drs. John Titus and Dick Andrus. Chenango Valley State Park, 1,137 acres located in Chenango Forks NY, is a glacial dump area with plains and numerous kettle holes now occupied by two lakes with acidic boggy mats, an alkaline swamp, and several fens, both open and shrubby. The Park has been protected for close to 100 years, with mature oak forests on a sandy, gravelly substrate. Several of the group ventured on to the bog mat while others enjoyed the flora around Lily Lake. Observations included *Isotria verticillata* and six species of *Vaccinium*. After lunch we explored Chenango Lake and the Chenango River bottomlands, noting populations of *Corallorhiza odontorhiza* and *Arisaema dracontium*. Special thanks to Michael Hough for recording over 250 native species and to the SUNY Binghamton Biology professors whose discussions about the local flora fascinated so many new participants.

Exploring the bog on Lily Lake.

List of plants recorded on the field trip, plus some photographed on prior trips by Michael Hough and Ken Hull:

Acalypha rhomboidea
Acer nigrum
Acer pensylvanicum
Acer rubrum
Acer saccharinum
Acer saccharum
Actaea pachypoda
Actaea racemosa
Adiantum pedatum
Ageratina altissima
Agrimonia gryposepala
Alnus incana ssp. rugosa
Ambrosia artemisiifolia
Amelanchier arborea/laevis
Amphicarpaea bracteata
Andropogon gerardii
Anemone canadensis
Anemone quinquefolia
Antennaria plantaginifolia
Apios americana
Apocynum androsaemifolium
Apocynum cannabinum
Aralia nudicaulis
Arisaema dracontium
Arisaema triphyllum
Aronia melanocarpa
Asarum canadense
Asclepias exaltata
Asclepias incarnata
Asplenium platyneuron
Athyrium filix-femina
Aureolaria pedicularia
Betula alleghaniensis
Betula lenta
Bidens frondosa
Bidens tripartita ssp. comosa
Boehmeria cylindrica
Brachyelytrum aristosum
Brasenia schreberi
Bromus ciliatus
Carex aquatilis
Carex lasiocarpa
Carex lurida
Carex pensylvanica
Carex rosea
Carex stricta
Carex trichocarpa
Carya cordiformis
Carya glabra/ovalis
Castanea dentata
Caulophyllum sp.
Celastrus scandens?
Celtis occidentalis
Cephalanthus occidentalis
Chamaedaphne calyculata
Chara sp.
Cicuta bulbifera
Cinna arundinacea
Circaea canadensis
Cirsium muticum
Clematis virginiana
Clinopodium vulgare
Collinsonia canadensis
Comptonia peregrina
Coptis trifolia
Corallorhiza odontorhiza
Cornus alternifolia
Cornus amomum
Cornus racemosa
Corylus americana
Corylus cornuta
Cyperus sp.
Cypripedium acaule
Danthonia spicata
Decodon verticillatus
Dendrolycopodium obscurum
Dennstaedtia punctilobula
Desmodium paniculatum
Dichanthelium clandestinum
Dichanthelium latifolium
Diervilla lonicera
Diphasiastrum digitatum
Doellingeria umbellata
Drosera rotundifolia
Dryopteris carthusiana
Dryopteris cristata
Dryopteris intermedia
Dryopteris marginalis
Dulichium arundinaceum
Echinochloa sp.
Echinocystis lobata
Eleocharis acicularis
Elymus riparius
Elymus virginicus
Epifagus virginiana
Epigaea repens
Equisetum arvense
Equisetum hyemale
Erechtites hieracifolia
Erigeron canadensis
Eupatorium perfoliatum
Eurybia divaricata
Euthamia graminifolia
Eutrochium maculatum
Fagus grandifolia
Fallopia sp.
Fraxinus americana
Galium circaezans
Galium triflorum
Geranium maculatum
Geranium sibericum
Geum fragarioides
Goodyera pubescens
Hackelia virginiana
Hamamelis virginiana
Helianthus divaricatus
Hieracium gronovii
Hieracium venosum
Hylodesmum glutinosum
Hylodesmum nudiflorum
Hypericum punctatum
Ilex verticillata
Impatiens capensis
Impatiens pallida
Iris versicolor
Isotria verticillata
Juglans cinerea
Juncus effusus
Juncus tenuis
Laportea canadensis
Leersia oryzoides
Leersia virginica
Lemna minor
Lespedeza hirta
Lespedeza intermedia
Lindera benzoin
Lobelia inflata
Lobelia siphilitica
Lonicera dioica
Lycopus uniflorus
Lyonia ligustrina
Lysimachia borealis
Lysimachia ciliata
Lysimachia quadrifolia
Lysimachia terrestris
Maianthemum racemosum
Matteuccia struthiopteris
Mentha arvensis
Menyanthes trifoliata
Mitchella repens
Monotropa uniflora
Muhlenbergia sp.
Myosotis laxa
Nabalus trifoliatus
Najas flexilis
Nuphar variegata
Nymphaea odorata
Onoclea sensibilis
Osmunda claytoniana
Osmundastrum cinnamomeum
Ostrya virginiana
Parthenocissus quinquefolia
Persicaria amphibia
Persicaria hydropiper
Persicaria hydropiperoides
Persicaria pensylvanica
Persicaria sagittata
Persicaria virginiana
Phryma leptostachya
Pilea pumila
Pinus resinosa
Platanus occidentalis
Podophyllum peltatum
Polanisia dodecandra
Polygala paucifolia
Polypodium virginianum
Polystichum acrostichoides
Populus grandidentata
Populus tremuloides
Potamogeton amplifolius
Potamogeton richardsonii
Potamogeton zosteriformis
Prunus serotina
Pteridium aquilinum
Quercus alba
Quercus coccinea
Quercus ilicifolia
Quercus prinoides
Quercus rubra
Quercus velutina
Ranunculus recurvatus
Rhizomnium punctatum
Rhododendron prinophyllum
Rhynchospora alba
Ribes cynosbati
Rosa palustris
Rosa virginiana
Rubus hispidus
Rubus occidentalis
Rubus repens
Rudbeckia laciniata
Sagittaria latifolia
Sambucus canadensis
Sanicula canadensis
Sarracenia purpurea
Sassafras albidum

Schoenoplectus tabernaemontani
Scirpus atrovirens
Scirpus cyperinus
Scrophularia marilandica
Scutellaria galericulata
Scutellaria lateriflora
Sicyos angulatus
Silene stellata
Smilax herbacea
Solanum carolinense
Solidago bicolor
Solidago caesia
Solidago gigantea
Solidago juncea
Solidago rugosa
Sparganium eurycarpum
Spiraea alba
Symphyotrichum cordifolium
Symphyotrichum lateriflorum
Symphyotrichum prenanthoides
Symplocarpus foetidus
Teucrium canadense
Thalictrum dioicum
Thelypteris noveboracensis
Thelypteris palustris
Tilia americana
Toxicodendron radicans
Triadenum fraseri
Triosteum aurantiacum
Tsuga canadensis
Turritis glabra
Typha latifolia
Ulmus americana
Ulmus rubra
Utricularia intermedia
Uvularia perfoliata
Uvularia sessilifolia
Vaccinium angustifolium
Vaccinium corymbosum
Vaccinium macrocarpon
Vaccinium oxycoccos
Vaccinium pallidum
Vaccinium stamineum
Vallisneria americana
Verbena hastata
Verbena urticifolia
Veronica americana
Viburnum acerifolium
Viburnum nudum var. cassinoides
Vitis riparia
Zannichellia palustris

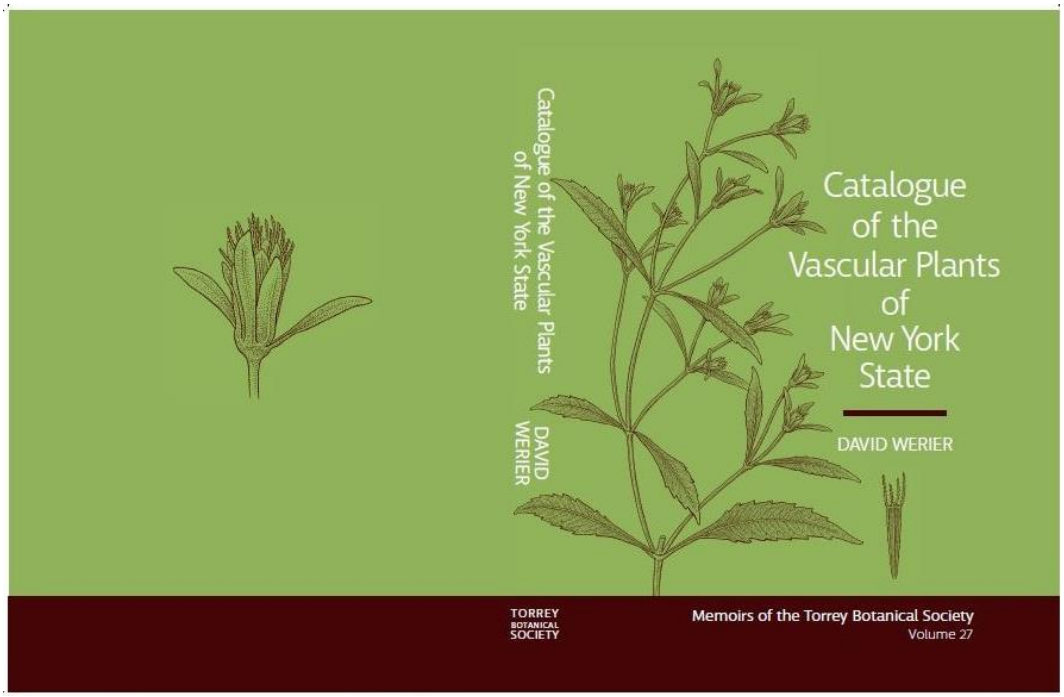
From 2015 and 2016:
Aureolaria virginica
Botrychium oneidense
Cystopteris tenuis
Mimulus ringens
Orobanche uniflora
Sericocarpus asteroides

Dr. John Titus discussing wetland species.

One of the many painted lady's passing through St. Lawrence County this past September. Photo by Natalie Aldrich.

Monumental Upcoming New York Flora Checklist

A new publication entitled Catalogue of the Vascular Plants of New York State by David Werier will be published as the latest volume in the Memoirs of the Torrey Botanical Society series. The anticipated publication date is late 2017.



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