

**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](https://twitter.com/newyorkflora)

Editor: Anne Johnson



Editor's Note: First, I'd like to thank all those who have contributed articles for this issue and for past issues, and secondly I have sad news to pass on – St. Lawrence County botanist Nancy Eldblom passed away this past Thanksgiving (see page 7).

Articles Inside:

The Cardinal Flower	1
Leedy's Roseroot	4
Editor's Note	6
In Memoriam	7
The Reach of NYFA	8
St. Law. Co. Additions	11
2016 Field Trip Preview	15

NYFA Board of Directors

Michael Burgess – President

Vice-President - vacant

Joe McMullen – Treasurer

Anna M. Stalter – Secretary

Directors

Steven Daniel

Ed Frantz

C. Eric Hellquist

Eric Lamont

Molly Marquand

Andrew P. Nelson

Richard Ring

Sean Robinson

Dan Spada

Connie Tedesco

David Werier

Steve Young

The Cardinal Flower, *Lobelia cardinalis* L.

by Knowlton Foote, kfoote1@twcnny.rr.com

Lobelia cardinalis L., commonly known as Cardinal flower, is one of the many marvelous herbaceous wildflowers we see in New York State. It is unique in its beauty and in its biology, and is native to New York State (Mitchell and Tucker 1997). This wildflower was selected in 2014 as the “Wildflower of the Year” by the New York Flora Association.

Names

Cardinal flower was introduced into Europe in the early 1600's. Linnaeus named the genus after the Flemish botanist Matthias de L'Obel (1538 - 1616) in 1753. The name “Cardinal” was in use by 1629, likely due to the similarity of the scarlet flower color to the vesture of Roman Catholic Cardinals and the flower shaped like a miter (Fernald 1950). It is a member of the Bellflower or Bluebell family (Campanulaceae).

Range and habitat

The range of Cardinal flower in North America is fairly extensive - from New Brunswick to Michigan and Minnesota south to the Gulf of Mexico (Gleason and Cronquist 1991). It prefers consistently wet soil. I see it bloom in Central New York from August to mid-September but always in low numbers. Wiegand and Eames (1926) interestingly, described this species as “frequent” in the Cayuga Lake Basin in the early 1920s. So perhaps its numbers have diminished over the past half century, at least in Central New York.

Flower structure

A diagram of the flower and its parts is shown in Figure 1 (Cronquist 1981). Each large flower is zygomorphic: the five petals are arranged with two upper and three lower and are up to 4.5 cm in length. In each flower a single style is enclosed in an anther tube formed by the fusion of 5 filaments and 5 anthers (Fig. 1: c, d). Two adjacent anthers have a cluster of small whitish hairs at the tips, which are very important in the pollination process (Fig. 1: d, e). The style itself has a ring of small hairs (rudimentary?) near its tip, which can also be involved in the pollination process.

Life Cycle

This species is a short-lived perennial lasting 7 to 10 years (Devlin and Stephenson 1984). The plant reproduces asexually by producing one or more off-shoots (rosettes) during the season, which then overwinter. In spring each rosette develops into a single stem 5 to 15 dm in length, terminating in a raceme inflorescence 1 to 4 dm. The raceme, which represents the sexual cycle, contains from a few up to 50 scarlet red flowers. The raceme develops acropetally (from the base to the apex). A mature plant in flower can contain developing fruits at the bottom, open flowers in the middle, and developing buds at the top.

Pollination biology

Each flower contains both male and female structures, i.e., it is hermaphroditic. Cardinal flower illustrates dichogamy, the separation in time of pollen maturation and stigmatic receptivity within a flower. The pollen produced by one flower in the raceme may successfully pollinate another flower in the raceme, i.e., it is geitonogamous, but usually not the same flower, i.e., it is not autogamous (Devlin and Stephenson 1984).

The pollination process of each flower begins with the staminate phase. The five anthers of the anther tube shed copious amounts of pollen (up to 120,000 pollen-grains) internally into the anther tube over 3 to 4 days (Devlin 1989). Pollen is then released to pollinators. After pollen is released the staminate phase is completed. Then the style begins to grow within the anther tube. The single style continues to grow to extend beyond the anther tube by 1-2 mm (Fig. 1: f, g). After full extension, the two stigmatic surfaces then reflex backwards, exposing the surfaces for pollination, and beginning the pistillate phase for 1-2 days. Overall, the staminate phase lasts significantly longer and produces more nectar per day than the pistillate phase (Devlin and Stephenson 1984, 1987).

Hummingbirds

Though insects are known to participate in the pollination process (Bob Dirig recalls seeing the Spicebush Swallowtail butterfly (*Papilio troilus*) on the flowers in the Ithaca area), the main pollinator is however the Ruby-throated Hummingbird (*Archilochus colubris*), who seeks nectar at the base of the flower. Pollen is dispensed from the anther tube when the hummingbird contacts the cluster of white hairs at the end of the anther tube. Hummingbird pollination favors outcrossing. The staminate phase flowers are visited more often than pistillate phase in their quest for nectar. The nectar is primarily sucrose with smaller amounts of fructose and glucose (Devlin and Stephenson 1984). Successful pollination results in 400 to 600 seeds per flower being produced (Fig. 1: i, k) (Devlin 1989).

The reader is encouraged to Google “hummingbird - cardinal flower.” There are several marvelous presentations of the pollination process involving the hummingbird and the Cardinal flower.

Bibliography

- Cronquist, Arthur. 1981. An integrated system of classification of flowering plants. The New York Botanical Garden. Columbia University Press. New York.
- Devlin, B. 1989. Components of seed and pollen yield of *Lobelia cardinalis*: variations and correlations. *Amer. J. Bot.* 76(2): 204-214.
- Devlin, B. and A.G. Stephenson. 1984. Factors that influence the duration of the staminate and pistillate phases of *Lobelia cardinalis* flowers. *Bot. Gaz* 145 (3): 323 - 328.
- Devlin, B. and A.G. Stephenson. 1987. Sexual variation among plants of a perfect flowered species. *Amer. Naturalist* 130. 119 - 218.
- Fernald, M.L. 1950. Gray's Manual of Botany. 8th ed. American Book Company. New York Botanical Garden, New York.
- Gleason, Henry A. and Arthur Cronquist. 1991. Manual of vascular plants of Northeastern United States and adjacent Canada. 2nd ed. The New York Botanical Garden, Bronx, New York.
- Mitchell, Richard S. and Gordon C. Tucker. 1997. Revised checklist of New York State Plants. Bulletin No. 490. New York State Museum, Albany.
- Wiegand, Karl M. and Arthur J. Eames. 1926. The flora of the Cayuga Lake Basin. New York. Cornell University Agricultural Experiment Station. Ithaca, N.Y.





Lobelia cardinalis. Photo by Andrew Nelson.

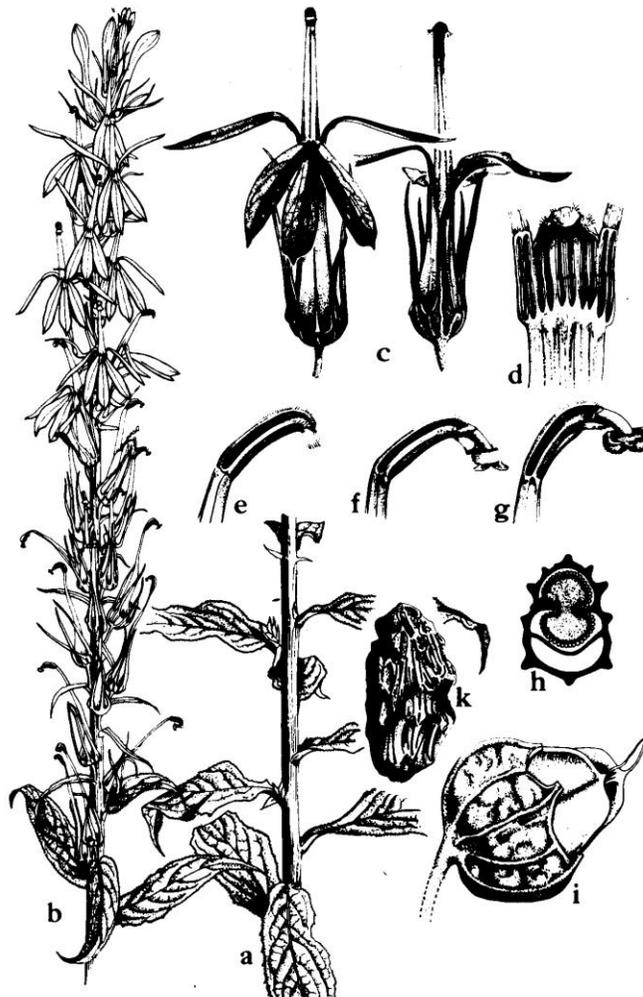


Figure 1. Campanulaceae. *Lobelia cardinalis* L. a, portion of stem and leaves, (x 1/2); b, inflorescence, (x 1/2); c, two views of flower, (x 1 1/2); d, stamen-tube, opened out, (x 3); e, f, g, successive stages of emergence of the style from the anther-tube, (x 3); h, schematic cross-section of ovary, (x 3); i, mature fruit, after dehiscence, with the calyx-lobes removed, (x 3); k, seed, (x 30). From Arthur Cronquist 1981.



New York Flora Association Research Award Project Summary
“Measuring *Rhodiola integrifolia* subsp. *leedyi* microsite”
by Kali Mattingly

New York State is home to 75% of all identified individuals of the rare glacial relict plant Leedy’s roseroot (*Rhodiola integrifolia* subsp. *leedyi*) (Olfelt et al. 1998), a subspecies federally listed as threatened and identified as critically imperiled globally and as an S1 plant in New York State. Leedy’s roseroot (Fig 1.) is a unique long-lived dioecious perennial with some noteworthy adaptations for tolerating stresses associated with the cliffs it inhabits. First, like other members of the family Crassulaceae, it has succulent tissues that perform CAM photosynthesis, a water-conservation strategy. Second, its chunky leptomorph rhizomes (Fig. 2), which look similar to ginger (*Zingiber officinale*) rhizomes, are storage organs (Stapleton 1994) and characterize the genus *Rhodiola* (Ohba 2003). Lastly, marcescent (persistent) flowering stems, another derived trait of *Rhodiola* expressed by Leedy’s roseroot, are thought to be an adaptation to protect buds from winter exposure (Zhang et al. 2014). These fascinating adaptations and the plant’s restriction to cliffs throughout its range of seven disjunct populations suggest Leedy’s roseroot is highly specialized for its niche, consisting of abiotic and biotic factors. This NYFA-funded project intends to test this hypothesis and is part of my Master’s thesis at SUNY-ESF, working with Dr. Donald Leopold.



Figure 1. Pistillate (left) and staminate (right) flowers of Leedy's roseroot. Photos by Kali Mattingly.



Figure 2. Leedy's roseroot, showing the chunky rhizomes. Photo by Kali Mattingly.



In summer 2015, I measured the microsites of Leedy's roseroot on cliffs along Seneca Lake near Glenora, NY. These measurements included: long-term temperature, cliff stability, seep rate, and associated species of Leedy's roseroot. To access plants growing high on cliffs, I used rappelling equipment, which NYFA helped me to purchase (Fig. 3). This was an indispensable aspect of the study, as there would have been no other way to adequately sample Leedy's roseroot's microsites on cliff faces where highly heterogeneous conditions occur (Larson et al. 2000).



Figure 3. The author using the rappelling equipment to access Leedy's roseroot plants. Photo by Mason Clark.

Preliminary analyses of biotic data suggest Leedy's roseroot may associate with a subset of the species found adjacent to and along the cliff face. This community type was best described as a Finger Lakes red-cedar-oak slope (Mohler et al. 2006). Some common and interesting associated species included: *Cystopteris bulbifera* (bulblet bladder-fern), *Polypodium virginianum* (common polypody), *Asplenium platyneuron* (ebony spleenwort), *Penstemon hirsutus* (northeastern beard-tongue), *Campanula rotundifolia* (harebell), *Geranium robertianum* (herb-robert), and *Draba arabisans* (rock-cress), which is an S2 plant in New York State (names follow Gleason and Cronquist 1991). The invasive species *Vincetoxicum nigrum* (black swallow-wort) and *Polygonum cuspidatum* (Japanese knotweed) may threaten Leedy's roseroot at this site. Identifying indicator species associated with Leedy's roseroot could help assess new sites for out-plantings in the future. Further analysis will help describe impacts and mechanisms of these species interactions with Leedy's roseroot. I look forward to continuing to examine what the data tell us about this interesting plant.





Female Leedy's roseroot flowering on the Gateway Building green roof at SUNY-ESF, Syracuse, NY. These plants were grown from seed collected at Glenora, NY. Photo by Kali Mattingly.

References

- Gleason HA, Cronquist H. 1991. Manual of Vascular Plants of Northeastern United States and Canada. 2nd ed. The New York Botanical Garden, Bronx, New York, USA.
- Larson DW, Matthes U, Kelly PE. 2000. Cliff Ecology. Cambridge University Press, Cambridge. 340 p.
- Mohler CL, Marks PL, Gardescu S. 2006. Guide to the Plant Communities of the Central Finger Lakes Region. Cornell University New York State Agricultural Experiment Station, Communication Services, Geneva, NY. 134 p.
- Ohba H. 2003. *Rhodiola*. In: Egli U (ed.). Illustrated Handbook of Succulent Plants: Crassulaceae. p. 210.
- Olfelt JP, Furnier GR, Luby JJ. 1998. Reproduction and development of the endangered *Sedum integrifolium* ssp. *leedyi* (Crassulaceae). Am. J. of Bot. 85(3):346-351.
- Stapleton C. 1994. Form and function in the bamboo rhizome. J. Amer. Bamboo Soc. 12(1):21-29.
- Zhang J-Q, Shi-Yong M, Wen J, Guang-Yuan R. 2014. Phylogenetic relationships and character evolution of *Rhodiola* (Crassulaceae) based on nuclear ribosomal ITS and Plastid *trnL-F* and *psbA-trnH* sequences. Syst. Bot. 39(2):441-451.

Note from the Editor

Mike Kudish, author of the lead article in the last newsletter, noticed that the print version of his map did not come out as well as the digital version and he would like to offer good (better) copies to anyone that requests one – should you like a better paper copy, he has offered to send one via US Postal Service; email him at mkudish@catskill.net



In Memoriam – St Lawrence County Botanist Nancy Eldblom

I received word that my co-botanist and friend of many years, Nancy Eldblom, passed away this past Thanksgiving, just shy of 81 years of age. She had moved to the west coast to be near her family and at the time of her death was living near her daughter in the state of Washington. She leaves behind her children and grandchildren, a brother, and her husband Lars on the west coast as well as many friends back here in northern New York.

Nancy's greatest passion was exploring the flora of our county; and she was never happier than when she was in the woods and swamps of the North Country, either on foot or in her kayak. She was always on the look-out for plants, enjoying the plants on the roadsides and in sidewalk cracks equally as much as the hard-to-find rare *Rhodora* out in the midst of a blueberry bog. This passion for the natural world, and especially vascular plants, ran deep, and she readily shared her knowledge and enthusiasm for plants with anyone who was interested. She left a lasting legacy and made her mark in her beloved North Country with the publication of the flora she and I had worked on for 27 years – Plants of St. Lawrence County, NY – An Annotated Checklist of Vascular Flora. This was the culmination of decades of botanical exploration, collection, and research. With the flora, Nancy's efforts will not be forgotten and her family can be proud.

One of Nancy's North Country friends, Jon Montan, wrote an especially nice and botanically appropriate note and was kind enough to let me repeat it here: "I like to think that Nancy has gone into the leaves, the young tender leaves that unfurl in the spring, the robust leaves of summer and the beautiful autumn leaves that, having done their work with joy, float down – back to the soil from which they first took form".



Nancy with a wood turtle – not a plant, but nonetheless still an exciting find.



The Reach of the New York Flora Association

by Joseph M. McMullen (joymcmullen2@msn.com)

The New York Flora Association (NYFA) was recently required to file a more detailed form to satisfy the requirements of the state Charities Bureau. One of the questions on the form involved listing the major programs the organization sponsored and how many people benefited from each program. As I was filling out this form, this question struck me and I did some investigation to find the answers. After some digging, I was amazed at how many people the NYFA reaches. A summary of our main programs and the extent of our reach within each program are provided in this article.

New York Flora Atlas

The Flora Atlas (Fig. 1) is one of the premier products provided by the NYFA, and it is tremendously popular. In 2014, the number of unique users of the Atlas was 20,828 and in 2015 it was 23,502. Unique users are the number of computers that were used to sign on to the Atlas, which probably roughly equates to the number of individuals using the Atlas. What was even more impressive was the number of pageviews to the Atlas, roughly 250,000 **each year** in 2014 and 2015. A quarter of a million inquiries to the Atlas each year demonstrates the critical importance of the Atlas to the botanical community and general public. To me, that is a lot of botanical information sharing provided free by the NYFA.

The roots of the Atlas stem from the plant distribution information compiled by Homer House in the early 1900s, which was later furthered by Stanley Smith, both of the NYS Museum. From this information, and with support from the Museum and NYFA, the Atlas got its start. Dick Mitchell, Bob Ingalls, and Troy Weldy initially produced an online flora Atlas map in 2002. In 2005 Troy, with assistance from David Werier, set up the basic dynamic Atlas we see today (We have surpassed the 10th anniversary of the Atlas.). More recently Andy Nelson has been instrumental in adding photographs of species in the Atlas. These three individuals are the thrust behind the product you currently view.

Financial support to maintain the Atlas and to keep it free for everyone comes from the NYFA. The Atlas web hosting cost alone is \$2,750 per year, which the NYFA has solely paid the last five years (prior to that we had help from the NYS Museum). Membership dues and donations pay for the Atlas maintenance and we are thankful for the support, but if you use the Atlas frequently, we always appreciate additional donations (<http://www.nyflora.org/donate>).

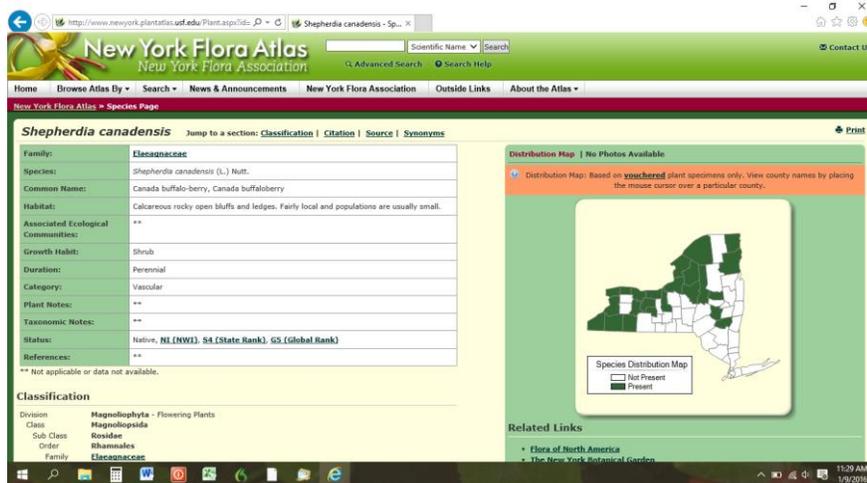


Figure 1. A sample page of the online NY Flora Atlas.



NYFA Newsletter

Our quarterly Newsletter is another very popular NYFA product available to our membership, with complimentary copies provided to academic institutions and cooperating flora associations. According to Anna Stalter, NYFA Secretary, we currently distribute about 350 Newsletters. The geographical extent of the Newsletter distribution is provided on the attached map developed by Anna (Fig. 2). Most are distributed to members in New York, but a lot go to other states as well as to Canada. Our membership distribution across North America was summarized in Anna's article in the Winter 2014 NYFA Newsletter.

Editor of our Newsletter is Anne Johnson, who personally knows all the plants in St. Lawrence County. Anne does a great job putting together a Newsletter chocked full of interesting, informative articles. I have made some contributions to the Newsletter over the years, and to me it offers a perfect venue for observational and technical floristic articles alike. Anne welcomes submissions for inclusion in the Newsletter; even short notes or unusual plant photographs are of interest.

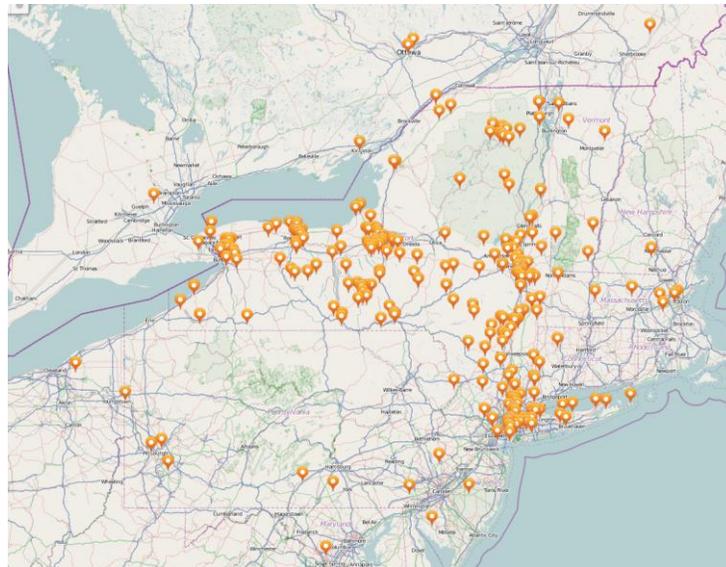


Figure 2. NYFA membership distribution in the Northeast. Another dozen members are scattered from Florida to the State of Washington. (Provided by Anna Stalter).

Workshops and Field Trips

Two other spectacular programs at the core of our public educational outreach activities are our technical workshops and field trips. Collectively, the workshop and field trip programs had around 180 participants each year in 2014 and 2015. Steven Daniel chairs our workshop and field trip committee, which comes up with great programs every year. Suggestions are always welcome.

Our workshops are paid technical educational courses that usually focus on a specific group of plants, often one of those botanically-challenging groups like sedges, grasses, or rushes. Ed Frantz has coordinated the sedge workshop, taught by Tony Reznicek, each year for the last ten years and it remains very popular. We have also offered workshops on ethnobotany and more general groups of plants, such as aquatic vegetation and mosses.

All of our workshops are taught by an expert, and can be intense affairs that immerse the participants in information about the plant group being studied. However, you will find that there is a great sharing of knowledge among workshop participants, which make the workshops beneficial to individuals of varying botanical skill levels. As Treasurer, one thing I do know is that the cost of our workshops is extremely reasonable compared to the fees charged by other groups offering such courses.



The numerous field trips we sponsor each year are open to the public at no cost. We like to have them spread around across the state. They can be focused on a specific endangered or threatened species, a specific area with a collection of interesting species, an interesting geological formation, or just a nice place for people to get together to look at plants. Our field trips are often joint with regional groups, such as: Niagara Frontier Botanical Society, Catskill Native Plant Society, Finger Lakes Native Plant Society, Adirondack Botanical Society, Long Island Botanical Society, Friends of Poke-O-Moonshine, and others.

Field trips are led by very knowledgeable botanists, but on these trips you will often find your attention directed to the many wonders of a naturalist's world: a nice crop of edible mushrooms, a rare butterfly, a slime mold with unusual properties, or a bird not often seen in the area. Is that a wood turtle? Are you familiar with fox fire? There is no end to the trail you might find yourself being carried down on these field trips.

Social Media Outreach

Within the last few years, the NYFA has also maintained a presence online via our web site, Facebook page, and Twitter feed. Steve Young has promoted this presence. We have about 700 friends on Facebook and nearly 400 on twitter. On our Facebook page you can find interesting plant-related news, stories, photos of our workshops and field trips, and other interesting content, such as our Flora Friday posts. We can be found on the following: Website: www.nyflora.org; Facebook: New York Flora Association; and Twitter: [newyorkflora](https://twitter.com/newyorkflora).

Closing Thoughts

My ruminations into the programs provided by the NYFA and the number of individuals that benefit from these programs have renewed my belief in the importance of our organization. Our reach is far, wide, and in depth. Take advantage of the opportunities we offer to you each year.



2015 Additions to the St. Lawrence County Flora

by Anne Johnson

We've had an exciting season of botanical exploration up here in St. Lawrence County and have added another 19 species to the county. The county total now stands at 1420 plant species (including subspecies and varieties). Many of the new species are due to the "fresh eyes" of Steven Daniel and others (see below). Added this year were the following (an asterisk (*) denotes a non-native species).

Agrostis capillaris* (**Rhode Island Bent**). This grass appears to be more common to our south. Most of our roadside *Agrostis* is either *A. stolonifera* or *A. gigantea*. For us, *A. capillaris* seems to occur only in very sparse patches in heavily travelled areas.

Arethusa bulbosa (**Swamp Pink**). Steven Daniel was fortunate enough to come across *Arethusa* in bloom in the far southern portion of the county, growing in a nice boggy assemblage that included *Calamagrostis pickeringii*, *Trichophorum alpinum*, *Platanthera blephariglottis*, *Calopogon tuberosus*, and *Pogonia ophioglossoides*.



Arethusa bulbosa. Photo by Steven Daniel

Asclepias exaltata (**Poke Milkweed**). Growing on the rocky shore of Mud Lake in the Pleasant Lake State Forest. I was very surprised when Steven Daniel began calling from his kayak that he had some poke milkweed. I thought he must mean pokeweed, which is also an exciting plant for us to come across as it is only very sparsely found in the western portion of the county, but no, he was saying Poke Milkweed, a plant I had no idea could possibly exist in our county, so this was quite an exciting find for me.





Asclepias exaltata. Photo by Steven Daniel.

Brachyelytrum erectum (Long-awned Woodgrass). David Werier and Steven Daniel have come across this grass in a few places in the county; it may prefer more calcareous habitats than its more northern counterpart, *B. aristosum*. Perhaps more common in our area than originally thought.

Bromus kalmii (Wild Chess). Another exciting find from the Pleasant Lake State Forest, also growing on the rocky shore of Mud Lake.

Dichanthelium latifolium (Broad-leaved Witchgrass). Found in the western portion of our county. I had been keeping an eye out for this *Dichanthelium* for a few years and was finally lucky enough to see some growing on high and dry rocky knobs near Rossie.

Dichanthelium oligosanthes ssp. scribnerianum (Scribner's Panic Grass). Yet another find in the western portion of the county, found growing on the high rocky knobs above Mud Lake in the Pleasant Lake State Forest.

Diphasiastrum x habereri. David Werier noticed this hybrid growing on a sand bank on the edge of the Parishville Desert.

Elymus hystrix var. bigeloviana (Bottlebrush Grass). Not really new to the county, but an addition to the database. Previously we had not paid attention to the varieties that we had here. We also have *E. hystrix* var. *hystrix*.

Isoetes septentrionalis (Northern Quillwort). One of our most exciting expeditions of the year was when Dan Brunton, quillwort expert extraordinaire, came down from Ottawa to take a look at our *Spiranthes magnicamporum* sites and to search for historic locations of *Isoetes septentrionalis* (previously filed as *I. echinospora* ssp. *braunii* in the NYS museum card catalog). Things were looking bleak as we explored Black Lake in what we hoped was the vicinity of the historic (1922) Fernald et al. location, but then Dan started wading out a bit deeper and he found one! Then another, and then more.



Muhlenbergia asperifolia* (Alkali Muhly). One day while driving I saw a whitish haze on the side of the road and said "Oh, what is that large whitish patch?". I hopped out and took some to bring home. I was initially puzzled until I realized it looked like a *Muhlenbergia uniflora* (which does not look like a *Muhlenbergia* at all), and then I opened Voss and Reznicek's Field Manual of Michigan Flora and read that *M. asperifolia* forms large whitish patches on salted roadsides! This grass must be very new to the county as it is very noticeable and would have been noticed earlier if it was there, as it was growing in an area I often pass through.

Panicum tuckermanii (Tuckerman's Panic Grass). Found on the drawdown shores of Black Lake in the vicinity of the above mentioned *Isoetes*, and also a 1922 record from Fernald et al. Not currently recognized in the atlas, but a very distinct, sprawling plant in the field.

Parthenocissus quinquefolia (Virginia Creeper). Steven Daniel was sure we should have this more southern *Parthenocissus* in our county and after paying close attention to all the vines he saw as he drove, he finally spotted what he thought was different and sure enough it was.



Parthenocissus quinquefolia. Note the high climbing habit. Photo by Steven Daniel.

Polygonum ramosissimum var. prolificum* (Bushy Knotweed). Found with other salt tolerant vegetation on the verge of NY 37 near Ogdensburg.

Rubus elegantulus (Showy Blackberry). A pile of hard-to-identify *Rubus* had been cluttering up my workspace waiting for some form of divine intervention to occur, but when none came I finally decided to put a name on them and send some in anyway. This one seems to occur here and there throughout the county and seems to best fits the name *R. elegantulus*.

Rubus vermontanus (Vermont Blackberry). This *Rubus* was in the same pile as the above (hard-to-identify blackberries). It was found in the more boreal portion of the county and appears to key out to *R. vermontanus*. I have also seen a similar entity in the sandy boreal portion of Franklin County.



Sanguisorba canadensis (Canada Burnet). Steven Daniel found this on one of his expeditions down a long dirt road into the heart of the Adirondack portion of the county.



Sanguisorba canadensis. Photo by Jackie Donnelly.

Shepherdia canadensis (Soapberry). Another very exciting (to me) find on Mud Lake in the Pleasant Lake State Forest.

Spiranthes casei (Case's Ladies' Tresses). A bonus found when surveying the many *S. magnicamporum* in a field in Massena, this one growing on a dry mound.



Spiranthes casei flowers. Photo by Steven Daniel.



Preview of Upcoming 2016 Field Trips and Workshops (more detail to follow in the next issue of the newsletter).

May 7: View the Spring wildflowers of Poke-o-Moonshine.

May 15: Chemung County botany with (with FLNPS).

May 21: Botany weekend at West Point.

May 28: Round Lake botany by bike (Petal Pedal).

June 4-5: NYFA Annual Meeting with NEBC in Hudson Valley.

June 18: Sugarloaf Mountain in Hudson Highlands.

June 28-30: The very popular sedge workshop with Tony Reznicek will be in in the Plattsburgh area.

July 9: Mike Kudish and others will host a Catskill Forest History Walk.

July 30-31. Altona Flat Rock; vascular plants, lichens, and bryophytes.

August 6: The yearly jaunt to Whiteface Mountain.

August 12-14: Aquatic Workshop in Ithaca with David Werier.

Sept 23 - 25: Sphagnum workshop at Paul Smiths.

And more, be sure to check the Spring issue of this newsletter as well as the NYFA website.



Find us on [Facebook](#)



Follow us on [@newyorkflora](#)

And check out what's On Our Website and Blog
Find them at www.nyflora.org and www.nyfablog.org

We now have over 700 likes! Thanks for your support.



NEW YORK FLORA ASSOCIATION MEMBERSHIP FORM 2016
We are a 501C3 Tax Deductible Organization!

Annual Membership dues:

- New \$20 Make checks payable to the **New York Flora Association**
- Renewal \$20 per year
- Renewal with paper option \$30 per year (**only** for those already receiving printed newsletters)
- New Student Members (Free the First Year) School: _____
- Student Members (continuing) \$10 School: _____
- Additional donation to support NYFA efforts like botany presentation awards and small grants.
- Total \$**

Name: _____

Address: _____

Address: _____ County: _____

City: _____ State: _____ Zip Code: _____

E-mail address: _____

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

Mail this form to: NY Flora Association, PO Box 122, Albany, NY 12201-0122
Thank you for supporting NYFA and the flora of New York State

NY Flora Association
PO Box 122
Albany, NY 12201-0122

