

**New York Flora
Association**

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An Update to the 2010 Flora of St. Lawrence County, New York

Anne Johnson, Lisbon, NY

Since our St. Lawrence County flora was published, my co-author, Nancy Eldblom, has moved to the West Coast, while I have continued botanizing in the county. In so doing, I have come upon a number of additional species. I have also attended several workshops, which helped to clarify some of our problem species and to sort out some puzzles collected by us prior to publication.

By the end of 2009 we had recorded, and for the most part documented, 1347 vascular plant taxa (i.e. species, varieties, and subspecies) in 133 families and 530 genera. By the end of 2012, an additional 31 species and five varieties or subspecies were added to the county. Six of the additions were historically known species, meaning they had been collected in the county prior to 1978, but we had not run into them by 2009. Eleven of the additions are non-native species. Six of the species are from the Cedar Lake area, a place that has yielded exciting finds, with probably more to come. Eight of the additions are hawthorns; Arthur Haines' 2009 *Crataegus* workshop opened new horizons and inspired renewed effort on this difficult but enticing genus. No new families were added, but three new genera are now on our list (*Moneses*, *Listera*, and *Sanguisorba*). Two ferns have been added, raising the number to 69. Twelve trees were added

(now 90), four shrubs (now 104), six graminoids (now 315), and 11 other herbs (794).

Hawthorns accounted for the largest number of species added. Who would have thought that *Crataegus* could be so interesting, even exciting?! Especially after having had to crawl and push through thickets of it, being scratched and poked and cut while on the way to look for other, rarer species. In addition, hawthorns are so showy and so fragrant – both when in flower and when in fruit. Exploring our hawthorn thickets has been rewarding, although confounding at times. David Werier encouraged and helped me on the trips he made here to expressly look at hawthorns. After tagging trees in flower and collecting fruit later in the season, we then tried to (more or less!) identify them. We came up with the following additions to the county flora. All were found in fields, old fields, pastures, or hedgerows; mostly in the St. Lawrence Lowland portion of the county.



*Crataegus
coccinea*
Wikipedia



Crataegus coccinea. Quite common, we had recognized this tree previously but did not have the confidence to assign it a species name.

C. cf. cocciniodes. A large flowered and large, hairy-leaved hawthorn found in the vicinity of the St. Lawrence River. Assigning this one a name has been a bit perplexing due to discrepancies in keys.

C. flabellata var. flabellata. Similar in aspect to *C. flabellata var. grayana*, *C. fluviatilis*, and *C. lucorum*.

C. cf. fluviatilis. I suspect we have this species in a couple of spots in the Town of Potsdam. Not noted elsewhere.

C. flavida. An easily recognized small-leaved hawthorn occurring in a few towns.

C. pringlei. As with *C. coccinea*, we had noticed this tree previously and suspected it was *pringlei* but did not have the confidence to say so publicly, but we can now thanks to Arthur Haines.

C. cf. scabrida. Somewhat like *C. macracantha* but flowering earlier, less hairy, and with orange-ish fruit.

C. cf. suborbiculata. There are a few of these in the Waddington vicinity – large spreading trees with very large fruit.

The *Crataegus* workshop was followed the next year by another Haines' workshop, this one on *Rubus* and *Rosa*, two more prickly (both literally and figuratively) groups. I now carry clippers with me wherever I go, and my collecting bags all have holes in them from various sized thorns and prickles. But it has been worth it – there is a lot more variety in those genera than one might think. I've noticed and collected more *Rosa* and *Rubus* and also went through our large pile of pressed *Rubus* with an eye to the new nomenclature in Haines' key and added the following to our flora:

Rosa multiflora, an alien, not common fortunately, only found in one spot at Massena Point.

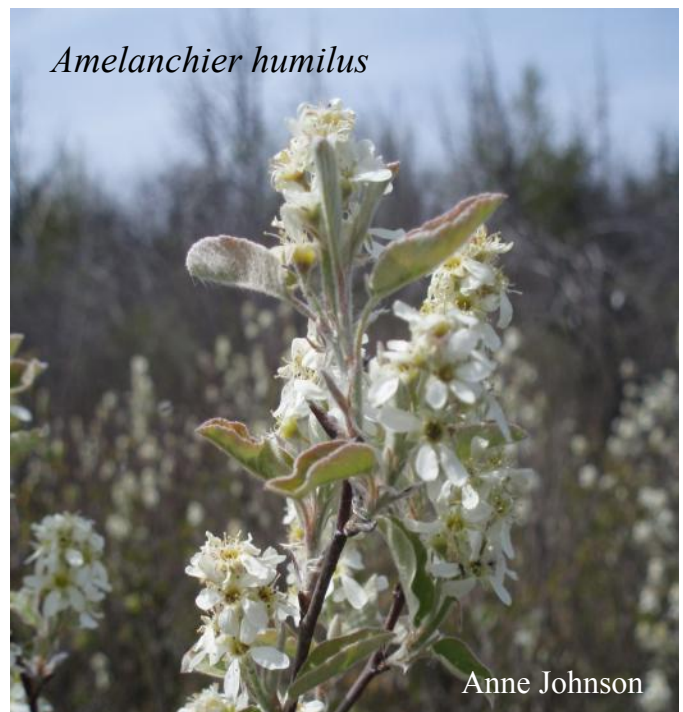
R. rubiginosa, an attractive but sharp escape found here and there in the St. Lawrence Lowlands.

R. rugosa, only noticed escaped in one spot; a couple of plants along the fence line of a hayfield in Stockholm.

Rubus jaysmithii. One specimen in our *Rubus* pile turned out to be this species, like an *R. flagellaris*, but with hairy leaf undersides. I suspect it is not as common as that species, but need to pay attention in the future.

R. recurvicaulus. A different looking *Rubus* noticed in a sandy spot with low growing vegetation. Only identified after learning more about *Rubus* and using Arthur Haines' key.

R. jaysmithii, I suspect it may not be common, but I am only beginning to pay closer attention to the *Rubus* species in Haines' key and their distribution and abundance.



And while waiting for hawthorns to flower in the early spring, I found it was impossible not to notice shadbushes (*Amelanchier*) that did not seem to fit the four we had on our original list. They had been too daunting in the past to tackle all out, but after hawthorns, why, they couldn't be that bad, could they? (Well, they might just be!) It appears that we have three additional species as listed below.

Amelanchier amabilis. A very long-petaled, showy shad with leaves like *A. sanguinea*. Observed only in the town of Oswegatchie, along River Road.

A. humilis. Seems to be found in limey spots, generally a low growing plant. Perhaps not uncommon but we had confused it with low *A. spicata* in the past.

A. intermedia. Found in a wet spot in the eastern, sandy portion of the county (Hopkinton) and possibly also in Macomb.

Other woody additions include the following:

Viburnum lantana (Wayfaring Tree). Historically known from Massena, n.d. Now found south of Massena in the town of Stockholm, in a roadside hedgerow adjacent to a hayfield on CR 49.

Robinia hispida var. *fertilis* (Rose-Acacia). Growing in mine tailings near the Village of Edwards, not many plants present. Persisting from presumed planting.

Graminoid additions to the flora are as follows:

Bromus japonicus (Japanese Chess). Found along riprap at Robert Moses State Park marina.

Carex canescens var. *disjuncta* (Silvery Sedge). Not too uncommon, known from a few spots; very wet, sandy, *Sphagnum* areas.

C. chordorrhiza (Creeping Sedge). Historically reported near Ogdensburg by Dr. Crawe, n.d. One of the exciting additions to the county from the Cedar Lake area.

C. echinodes (Bristly Sedge). Reznicek collected this recently named species at Massena Point in 2004.

Dichanthelium acuminatum. Three subspecies of this Panic Grass were in our *Dichanthelium* pile: ssp. *implicatum*, ssp. *lindheimeri*, and ssp. *fasciculatum*, all found in rocky locations.

Two exciting ferns were found.

Botrychium oneidense (Blunt-lobe Grape-fern). Historically known from near Parishville, 1942. Now found along an old road near Pyrites in the Town of Canton. Only noticed this one and was able to identify it thanks to the *Botrychium* workshop led by Art Gilman in 2011.

B. tenebrosum (Least Moonwort). Historically known as *B. simplex* from a number of locations: Phelps, 1915 and 1916, and St. John, 1943. Thanks to Steven Daniel for noticing this tiny plant in a cedar swamp near Edwards.



The remaining additions are as follows:

Amaranthus blitum (Livid Amaranth). Found on a tiny, wind and wave swept island in the St. Lawrence River close to the shipping channel.

Bidens aristosa (Beggar-ticks). Attractive when in flower, found in Massena in a moist field just SW of the U.S.-Canada border facility on NYS Route 37.

Goodyera repens (Dwarf Rattlesnake-plantain). Historically reported by Phelps; 1914 Canton, 1918 Colton. Tiny! Thanks to Steven Daniel again for noticing this tiny plant in a cedar swamp.

Lathyrus ochroleucus (Pale Vetchling). Historically reported from Massena Point in 1936. I was keeping Kim Smith company as she re-surveyed an *Equisetum pratense* location at the Point, happened to go down a steep bank to the river, and there it was in the dense herbaceous shoreline vegetation. The previous 1936 report was before the seaway had been built, so it was a bit surprising to see it was still there!

Listera cordata (Heartleaf Twayblade). Tiny! Another Cedar Lake find.

Moneses uniflora (One-flowered Wintergreen). Another tiny plant, from a cedar swamp near Cedar Lake.

Sanguisorba minor (Garden Burnet). Found along roadside at Cedar Lake, noticed in only one spot so far but it may be on other roadsides as well.

Solanum rostratum (Buffalo-bur). I thought this was a watermelon vine at first, because it was near an old garden, but when the strange, multiple flowers appeared, it was obviously a *Solanum*.

It seemed to be a good year for *Solanum* this past year – *S. carolinense* was abundant in many places as well, a plant that had not often been encountered previously.

Verbena stricta (Hoary Vervain). A few roadside plants were growing on a very seldom traveled dirt road through a state forest, not near any house or old house site.

Hopefully I and others will continue to add to the county's flora in future years as well. In particular I hope to find a number of historically known plants, such as *Amelanchier bartramiana* (Mountain Juneberry), *Viola affinis* (LeConte Violet) *Malaxis monophyllos* (White Adder's-mouth), and of course, the *Calypto* that was collected in the county in 1934!



Listera cordata Steven Daniel



Crossbills and Sweetgum Trees

by Steven Daniel, Rochester, NY

Although sweetgum (*Liquidambar styraciflua* L.) is only native in our state in southeastern New York, it is occasionally planted elsewhere. This past fall I observed a flock of white-winged crossbills feeding on sweetgum fruits in planted trees in Holy Sepulchre Cemetery, along the Genesee River in Rochester. As I write this in December 2012, the crossbills have been actively feeding at the same two sweetgum trees for the past month. I wondered what the crossbills (and other finches – pine siskins, common redpolls, and goldfinches) were actually eating.

I took home some of the pendant "balls", which are in fact heads of hardened capsules, the fruits of individual female flowers from earlier in the season. It was inside these capsules that the finches were inserting their bills and feeding. But when I looked inside them under a little magnification, I didn't see what looked like seeds at first - rather hard, bony bits that reminded me of broken teeth. These were often lined up in a row. According to Fernald in the 8th edition of Gray's Manual (1970 printing), these are aborted seeds - ovules that never developed properly. Many capsules I looked at did have a couple good seeds, but mostly they were filled with aborted ones. Fernald states sweetgum typically produces many aborted seeds and only one or two of good ones in each capsule. When I went back to the cemetery I noticed that the ground under the trees was littered with these aborted seeds. When I could get a good look at a feeding bird in my scope, in good light and at the right angle, it did appear that these aborted seeds were what the crossbills (and the other finches) were mainly feeding upon.

This brings up some interesting questions - both about the biology of and dispersal of the sweetgum (in its native range), as well as the birds, given that this year seems to be a poor one for many cone crops on which crossbills typically feed. One would think that for the birds to be feeding so actively, these aborted seeds must be quite nutritious. I could find no research on this topic. It's curious - and it makes you wonder what's in it for the sweetgum, if in fact it does put energy into producing nutrient-rich aborted seeds?



Sweetgum, Pelham Bay Park, Bronx. *S. Young*



Balls of multiple fruits with seeds. *Wikipedia.*



The Breakup Was Rough

by Steve Young, NY Natural Heritage Program

We knew it was coming. We tried to ignore it. But in the end we had to accept it. When it was all over the once mighty snapdragon family consisted of only three genera. The breakup was rough but it all turned out for the better. Now we just have to get used to *Agalinis* and *Aureolaria* being in the Broom-rape family and *Chelone* and *Linaria* among others being in the Plantain family. How did it happen? Modern techniques of plant classification like DNA sequencing showed that the snapdragon family consisted of genera that really didn't belong together. A rearrangement was in order. If you would like to read a more detailed description of the breakup, it can be found in the publication "Whatever Happened to the Scrophulariaceae?" by Richard G. Olmstead, 2002. It can be accessed on the internet if you Google the title.

There are at least seven families worldwide that now contain genera that were in the Scrophulariaceae. The new family groups in New York are listed below with their included genera. Most of the genera went to the Plantaginaceae and the Orobanchaceae (obligate parasites, holoparasites or green hemi-parasites). The Orobanchaceae went from three to fourteen genera and the Plantaginaceae from two to eighteen genera. What a change! *Verbascum* will now be the most common Scroph you will run into in the field along with *Scrophularia marylandica* and *S. lanceolata*. *Limosella* is a rare aquatic plant in New York that was moved into the Scrophulariaceae from the Plantaginaceae. *Callitriche* is another aquatic moved into the Plantaginaceae from its own family. *Phyrma* was moved from the Verbenaceae into its own family with *Mazus* and *Mimulus*. So retool your memories before spring and remember these new associations. Along with other changes like the Aster family and Clubmoss family, field botanists have had a lot to keep up with lately. We hope to keep you up-to-date with other changes that occur in the future so you can continue to amaze your friends in the field with your new taxonomic knowledge. Flash cards anyone?



Steve Young

Chelone glabra, now in the Plantaginaceae.

Orobanchaceae

Agalinis
Aureolaria
Buchnera
Castilleja
Conopholis
Epifagus
Euphrasia
Melampyrum
Odontites
Orobanche
Orthocarpus
Pedicularis
Rhinanthus
Schwalbea

Scrophulariaceae

Limosella
Scrophularia
Verbascum

Phymaceae

Phyrma
Mazus
Mimulus

Linderniaceae

Lindernia
Micranthemum

Plantaginaceae

Antirrhinum
Callitriche
Chaenorhinum
Chelone
Collinsia
Cymbalaria
Digitalis
Gratiola
Kickxia
Leucospora
Linaria
Littorella
Misopates
Nuttallanthus
Penstemon
Plantago
Veronica
Veronicastrum



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Food, Fun and a walk in Nelson Swamp.

Details in the April Newsletter along with our field season workshops and field trips.

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